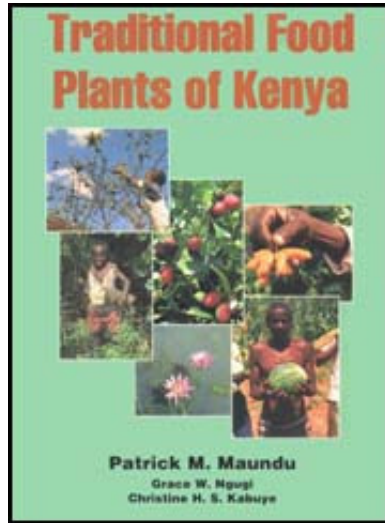













[Home](#) > [ar](#).[cn](#).[de](#).[en](#).[es](#).[fr](#).[id](#).[it](#).[ph](#).[po](#).[ru](#).[sw](#)



-  Traditional Food Plants of Kenya (National Museum of Kenya, 1999, 288 p.)
-  *(introduction...)*
-  Foreword
-  Acknowledgements
-  Introduction
-  Local names
-  Colour plates
-  Species accounts
-  Appendix: Nutritional composition of edible parts of plants
-  Glossary
-  Bibliography



List of families and species Back Cover

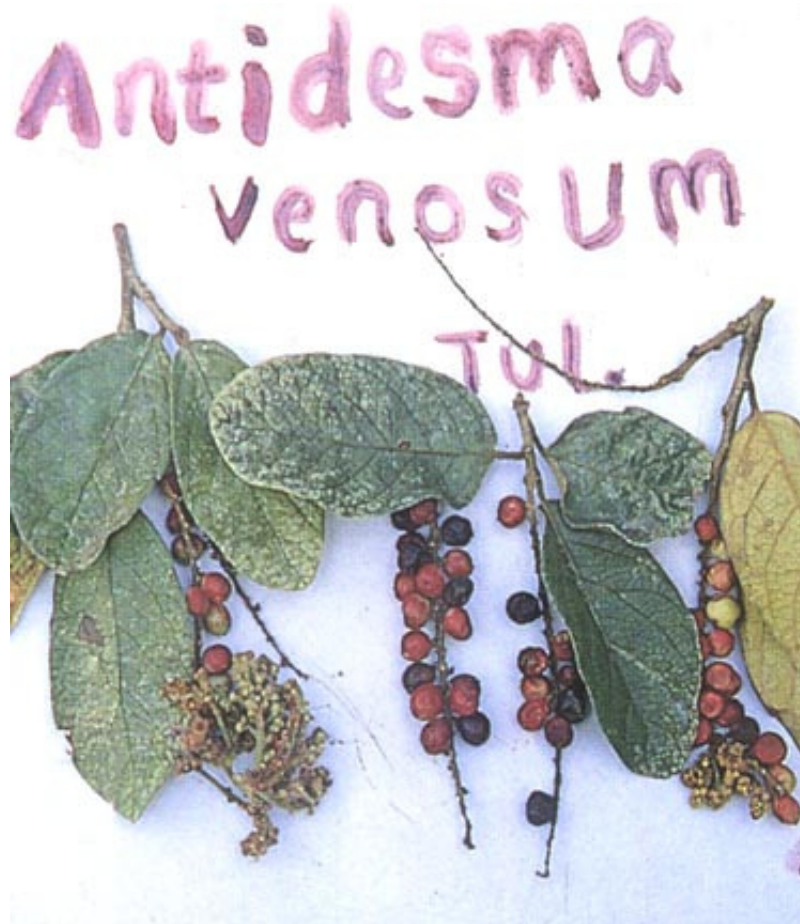
Colour plates



A rural market scene, Kalundu, Kitui



Orperelong'o, *Albizia amara*, Kajiado. The gum is edible



Antidesma venosum. The ripe fruits are a source of dye



Basella alba, a leafy vegetable and an ornamental plant



Acokanthera oppositifolia. Ripe fruits are edible



Annona senegalensis, near Museve, Kitui hills



19/10/2011

meister12.htm



D:/cd3wddvd/NoExe/.../meister12.htm

9/1235

Boscia coriacea, an important food plant of the arid lands of northern Kenya





Boscia coriacea



Carissa edulis. Flowers are occasionally picked as a snack



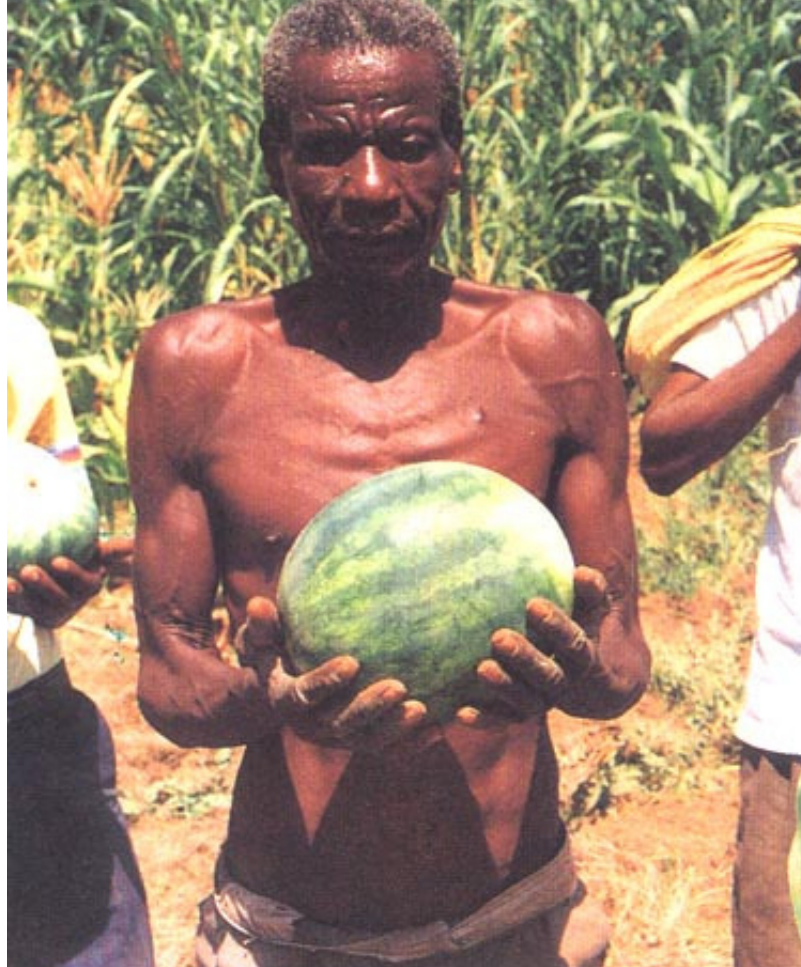


A herdsboy displays a favourite fruit, *Coccinia grandis*, Lokwar village, south Turkana



Boscia coriacea cotyledons ready for boiling, Kaputir, south Turkana







A local cultivar of water melon (*Citrullus lanatus*), Lodwar



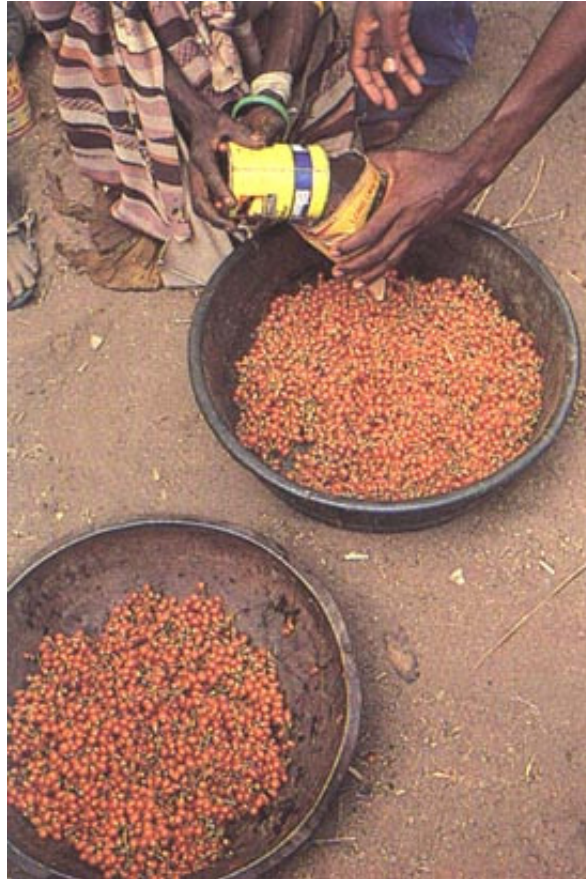
Commelina forskaolii







Ng'ikebootok women feasting on water melon along the Turkwel River, south Turkana



Selling *Cordia monoica* fruits, Lodwar market



Crotalaria ochroleuca



Dioscorea minutiflora, a common yam in Central Province



Finger millet, *Eleusine coracana*, a favourite for making porridge



Eriosema shirens. Small tubers are edible



Cyphia glandulifera. The leaves and tubers are used for food



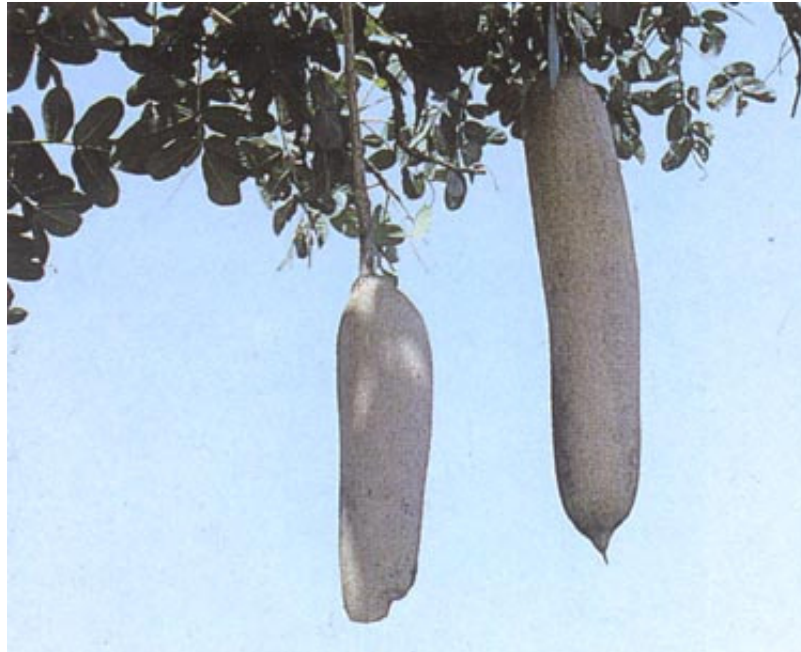


Hyphaene compressa, Lodwar





Grewia villosa



Kigelia pinnata (*K. africana*)



Lablab bean *Lablab purpureus*



Landolphia buchananii



Collecting *Nymphaea nouchali*, Magarini, Malindi



An edible cultivar of the gourd *Lagenaria siceraria*, south-east Makueni



Lantana trifolia



Nymphaea nouchali







Bulrush millet, *Pennisetum glaucum*





Saba comorensis



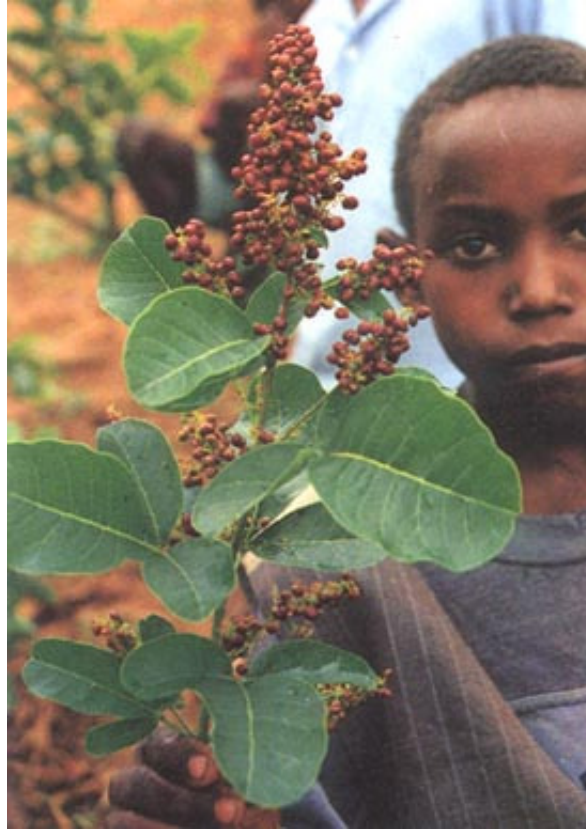


Solanum villosum





Piliostigma thonningii. The fruit pulp is edible



Rhus vulgaris



Ndendela, Salacia sp. This species may be new to science but not to the locals in Thui, near Mukuyuni, Makueni



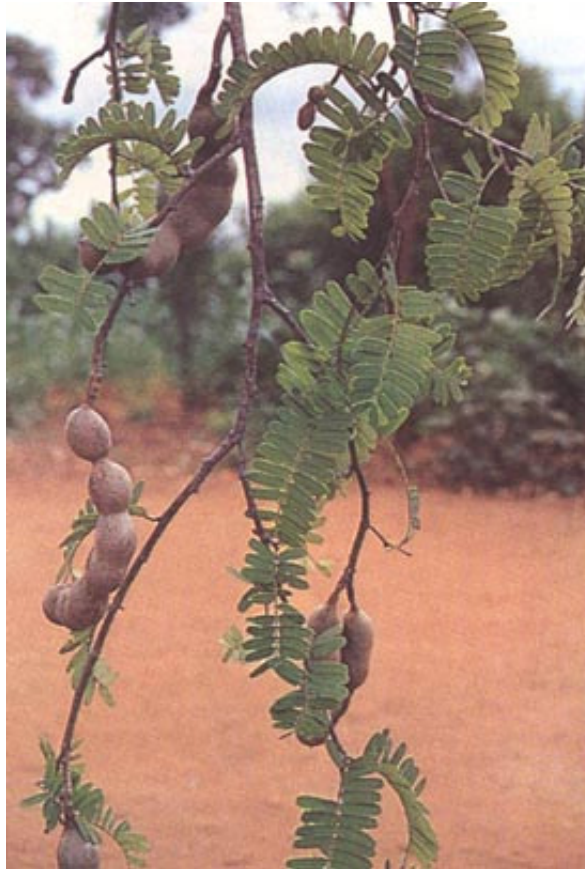
Sorghum, *Sorghum bicolor*



Stathmostelma propinquum, plains near Kajiado



Tamarindus indica



Tamarindus indica



Edible fungi, *Termitomyces* species, on a termite mound, north Kajiado



Strychnos spinosa



Edible fungi and *Corchorus* in a market in Siaya



A boy carrying a tuber of *Thylachium thomasii*



Stinging nettle, *Urtica massaica*. Leaves are used as a vegetable



Vatovaea pseudolablab. The seeds in these pods are edible



Ripe fruits of *Vitex payos*, Wikililye, Kitui



Uvaria scheffleri fruits, Mbui Nzau, near Kibwezi



Young plant of *Vatovaea pseudolablab*. The tuber is edible



A boy picking *Vangueria infausta* fruit, Kajiado

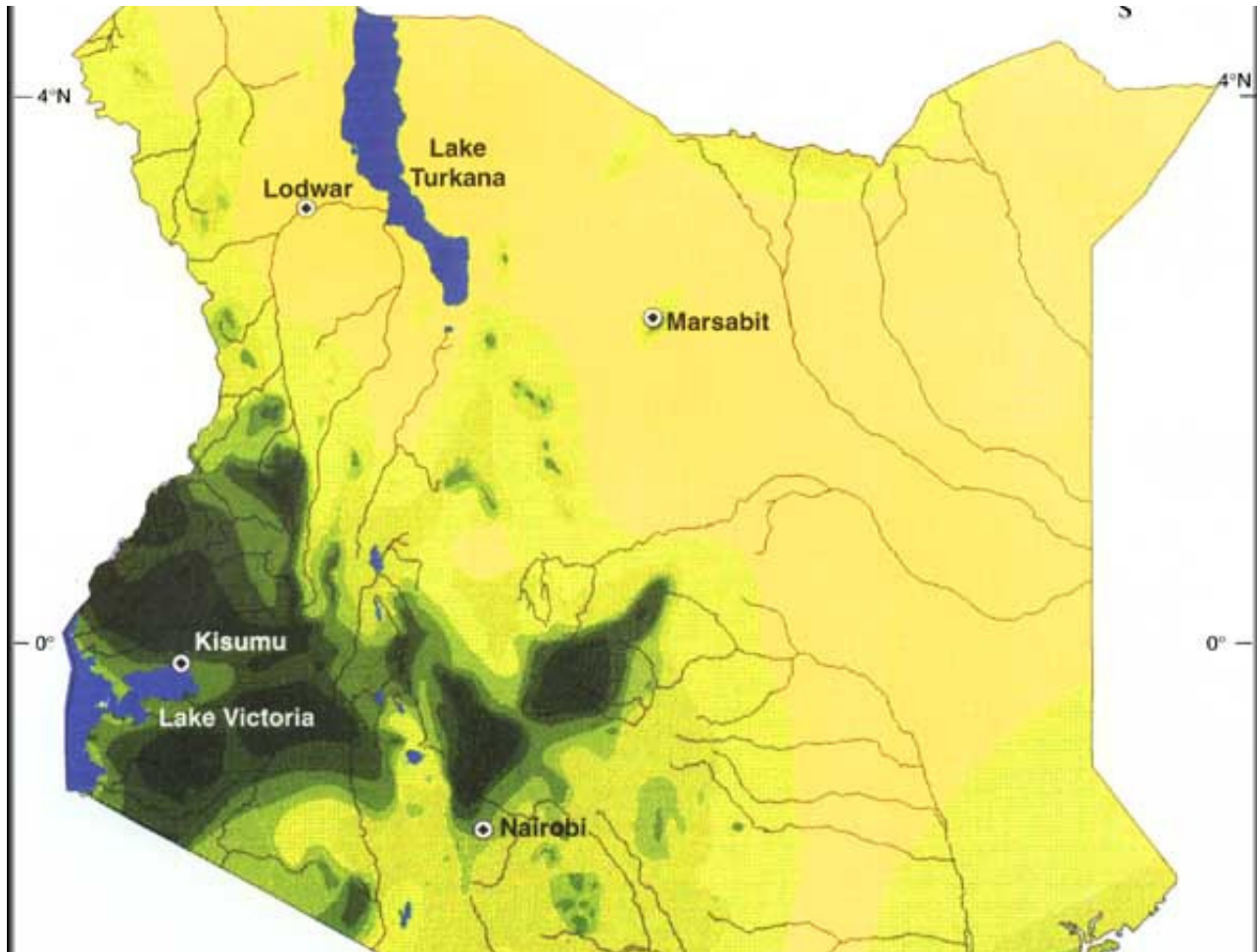


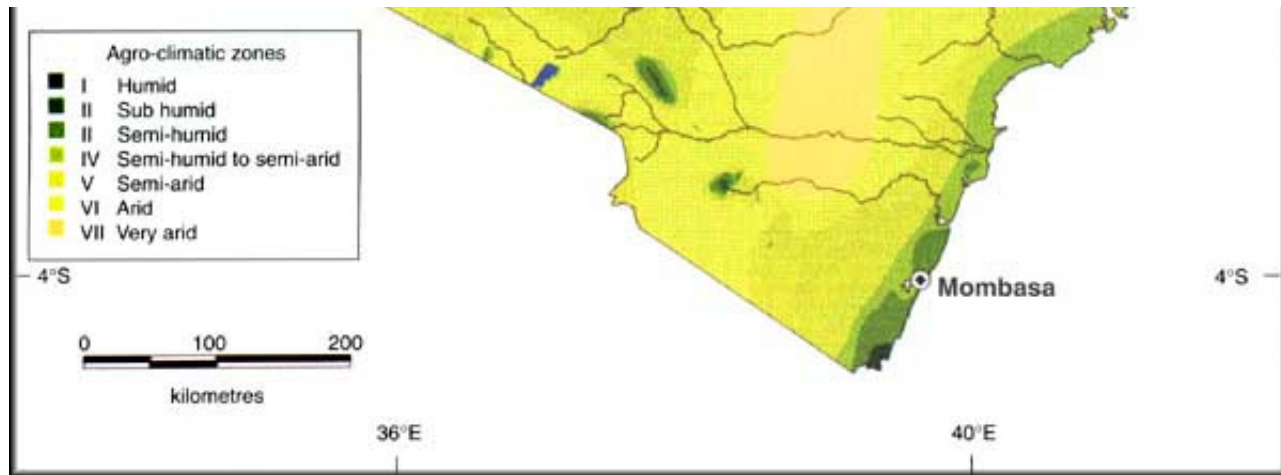
Vigna membranacea ssp. *caesia*, a leafy vegetable



Members of a women's group sowing traditional leafy vegetables. Kamuwani, near Muumandu, Makueni







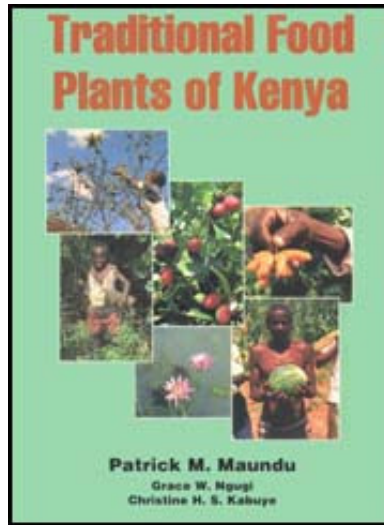
Map 3. Agro-climatic zones of Kenya



[Home](#) > [ar](#).[cn](#).[de](#).[en](#).[es](#).[fr](#).[id](#).[it](#).[ph](#).[po](#).[ru](#).[sw](#)







Traditional Food Plants of Kenya
(National Museum of Kenya, 1999,







288 p.)


- ➔ ☐ Species accounts
 - 📄 (*introduction...*)
 - 📄 *Acacia drepanolobium* Sjstedt
 - 📄 *Acacia hockii* De Wild.
 - 📄 *Acacia nilotica* (L.) Del.
 - 📄 *Acacia senegal* (L.) Willd.
 - 📄 *Acacia seyal* Del.
 - 📄 *Acacia tortilis* (Forssk.) Hayne
 - 📄 *Acokanthera schimperi* (A. DC.) Schweinf.


 - 📄 *Adansonia digitata* L.
 - 📄 *Aerva lanata* (L.) Schultes
 - 📄 *Albizia amara* (Roxb.) Boivin
 - 📄 *Amaranthus blitum* L.*













-  *Amaranthus dubius* Mart. ex Thell.*
-  *Amaranthus graecizans* L.
-  *Amaranthus hybridus* L.*
-  *Amaranthus sparganiocephalus* Thell.











-  *Amaranthus spinosus* L.*
-  *Annona senegalensis* Pers. ssp. *senegalensis*






-  *Antidesma venosum* Tul.
-  *Asystasia gangetica* (L.) T. Anders.









-  *Asystasia mysorensis* (Roth) T. Anders.







-  *Azanza garckeana* (F. Hoffm.) Exell & Hillcoat


-  Balanites aegyptiaca (L.) Del.
Balanites pedicellaris Mildbr. &
Schlecht.
-  Balanites rotundifolia (Van
Tiegh.) Blatter
-  Basella alba L.
-  Berchemia discolor (Klotzsch)
Hemsley
-  Borassus aethiopum Mart.
-  Boscia coriacea Pax
-  Boswellia neglecta S. Moore
-  Brassica carinata A. Br.
-  Bridelia taitensis Vatke & Pax
-  Cajanus cajan (L.) Millsp.
-  Canthium glaucum Hiern
-  Canthium lactescens Hiern





-  *Carissa edulis* (Forssk.) Vahl
Catha edulis Forssk.
-  *Citrullus lanatus* (Thunb.)
Mansf.
-  *Cleome gynandra* L.
-  *Coccinia grandis* (L.) Voigt
-  *Coffea arabica* L.
-  *Commelina africana* L.
-  *Commelina benghalensis* L.
-  *Commelina forskaolii* Vahl
-  *Commiphora africana* (A. Rich.)
Engl.
-  *Commiphora rostrata* Engl.
- *Commiphora schimperi* (O.
Berg) Engl.
- *Corchorus olitorius* L.

-  Corchorus trilocularis L.
-  Cordia monoica Roxb.
-  Cordia sinensis Lam.
-  Crotalaria brevidens Benth.
-  Crotalaria ochroleuca G. Don

-  Cucumis dipsaceus Spach
-  Cyperus blysmoides C. B. Cl.
-  Cyphia glandulifera A. Rich.
-  Dactyloctenium aegyptium (L.) Willd.
-  Dactyloctenium giganteum Fischer & Schweick.
-  Dialium holtzii Harms
-  Dialium orientale Bak. f.
-  Digera muricata (L.) Mart.

-  Dioscorea bulbifera L.
-  Dioscorea dumetorum (Kunth)
Pax
-  Dioscorea minutiflora Engl.
-  Diospyros mespiliformis A. DC.
-  Dobera glabra (Forssk.) Poir.
-  Dovyalis abyssinica (A. Rich.)
Warb.

-  Dovyalis macrocalyx (Oliver)
Warb.

-  Eleusine coracana Gaertn.
-  Eragrostis tef (Zucc.) Trotter
-  Eriosema shirensense Bak. f.
-  Erucastrum arabicum Fisch. &
Meyer



Euclea divinorum Hiern
Ficus sycomorus L.



Ficus thonningii Bl.



Flacourtia indica (Burm. f.)
Merr.



Flueggea virosa (Willd.) J. Voigt



Garcinia livingstonei T.
Anderson



Grewia bicolor Juss.



Grewia tembensis Fres.



Grewia tenax (Forssk.) Fiori



Grewia villosa Willd.














Hoslundia opposita Vahl
















Hydnora abyssinica Schweinf.














Hyphaene compressa H. Wendl.













-  *Hyphaene coriacea* Gaertner
-  *Ipomoea aquatica* Forssk.
-  *Ipomoea lapathifolia* Hall. f.
-  *Ipomoea longituba* Hall. f.
-  *Ipomoea mombassana* Vatke
-  *Ipomoea oenotherae* (Vatke)
Hall. f.
-  *Kedrostis pseudogijef* (Gilg) C.
Jeffrey
-  *Kigelia pinnata* (Jacq.) DC.
-  *Lablab purpureus* (L.) Sweet
-  *Lagenaria siceraria* (Molina)
Standley
-  *Landolphia buchananii* Stapf













-  *Landolphia kirkii* Dyer




-  Lannea alata (Engl.) Engl.
-  Lannea edulis (Sond.) Engl.
-  Lannea rivae (Chiov.) Sacleux
-  Lannea schimperii (A. Rich.)
Engl.
-  Lannea triphylla (A. Rich.) Engl.
-  Lantana trifolia L.
-  Launaea cornuta (Oliv. & Hiern)
Jeffr.
-  Leptadenia hastata (Pers.)
Decne.
-  Lippia carviadora Meikle
-  Lippia kituiensis Vatke
-  Maerua decumbens (Brongn.)
De Wolf
-  Manilkara mochisia (Baker)




-  Dubard
Manilkara sansibarensis (Engl.)
Dubard
-  Manilkara sulcata (Engl.)
Dubard
-  Meyna tetraphylla (Hiern)
Robyns
-  Mimusops fruticosa Bojer
-  Mimusops kummel A. DC.
-  Momordica rostrata A. Zimm.
-  Mondia whitei (Hook. f.) Skeels
-  Moringa oleifera Lam.
-  Myrianthus holstii Engl.
-  Nymphaea nouchali Burm. f.
var. caerulea (Savigny) Verdc.
-  Oxygonum sinuatum (Meisn.)




Dammer




-  Pachystigma schumannianum (Robyns) Bridson & Verdc.
-  Papea capensis Eckl. & Zeyh.
-  Parinari curatellifolia Planch. ex Benth.
-  Pennisetum glaucum (L.) R. Br.
-  Phoenix reclinata Jacq.
-  Piliostigma thonningii (Schum.) Milne-Redh.
-  Portulaca oleracea L.
-  Rhus natalensis Krauss
-  Rhus tenuinervis Engl.
-  Rhus vulgaris Meikle
-  Rubus apetalus Poir.
-  Rubus pinnatus Willd.





-  *Rubus volkensii* Engl.
-  *Rumex usambarensis* (Damm.)
Damm.
-  *Saba comorensis* (Bojer) Pichon
-  *Salacia madagascariensis*
(Lam.) DC.
-  *Salvadora persica* L.
-  *Sclerocarya birrea* (A. Rich.)
Hochst.
-  *Scutia myrtina* (Burm. f.) Kurz
-  *Sesamum calycinum* Welw.
-  *Sesamum orientale* L.
-  *Solanum nigrum* L.
-  *Sorghum bicolor* (L.) Moench
-  *Sorindeia madagascariensis* DC.






-  Stathmostelma propinquum (N. E. Br) Schltr.
-  Strychnos henningsii Gilg
-  Strychnos madagascariensis Poir.


-  Strychnos spinosa Lam.
-  Syzygium cordatum Krauss
-  Syzygium guineense (Willd.) DC.








-  Tamarindus indica L.
-  Thylachium thomasii Gilg
-  Tylosema fassoglense (Schweinf.) Torre and Hillc.




-  Urtica massaica Mildbr.
-  Uvaria acuminata Oliv.
-  Uvaria scheffleri Diels.

-  *Vangueria apiculata* K. Schum.
-  *Vangueria infausta* Burch. ssp.
rotundata (Robyns) Verdc.
-  *Vangueria madagascariensis*
Gmel.
-  *Vangueria volkensis* K. Schum.
var. *volkensis*

-  *Vatovaea pseudolablab* (Harms)
J. B. Gillett
-  *Vernonia cinerea* Less.
-  *Vigna friesiorum* Harms var.
angustifolia Verdc.
-  *Vigna membranacea* A. Rich.
-  *Vigna subterranea* (L.) Verdc.

-  *Vigna unguiculata* (L.) Walp.

-  Vitex doniana Sweet
-  Vitex ferruginea Schum. & Thonn.
-  Vitex mombassae Vatke
-  Vitex payos (Lour.) Merr.
-  Ximenia americana L
-  Zanthoxylum chalybeum Engl. var. chalybeum
-  Ziziphus abyssinica A. Rich.

-  Ziziphus mauritiana Lam.
-  Ziziphus mucronata Willd.
-  Termitomyces-mushrooms (edible fungi)

Traditional Food Plants of Kenya (National Museum of Kenya, 1999, 288 p.)

Species accounts

Key

Species importance

The importance of a specific species for a particular use is indicated as follows:

- +++ Locally very important
- ++ Locally important
- + Locally less important

Acacia drepanolobium Sjstedt

Mimosaceae (Fabaceae)

English: whistling thorn, black-galled acacia **Kamba:** kiunga,

iunga (plural) **Kikuyu:** muruai **Kipsigis:** mukuruit, muguruit
Luo: dunga, adugo, dugna, oduga **Maa:** eluai, eluaai, iluaa
(plural) **Mbeere:** mugambu, mugunga **Pokot:** sitowonyon,
stoghon (singular), stoghoonei (plural) **Rendille:** fulaay
Samburu: luai, luoi **Somali:** flai **Swahili:** mbalibali **Teso:**
eyelel **Turkana:** eyelel

Description: A spiny bush, shrub or small tree to 6 m high with an open spreading crown, flat-topped at maturity. More commonly a small shrub 1.5-3.5 m. **BARK:** Grey, usually smooth, older bark finely fissured. **THORNS:** White, straight, some galled at their base. Galls fleshy, hollow, up to 5 cm in diameter, dark green to reddish purple when fresh, turning dark grey to black and usually inhabited by black or brown ants as they dry. **FLOWERS:** Numerous, in white heads. **FRUIT:** A narrow reddish brown pod.

Ecology: Grows in eastern and Central Africa, e.g. Uganda,

Tanzania, Ethiopia, Sudan, Somalia and the Democratic Republic of Congo (Zaire). Found in Kenya in, e.g. Kaputei plains, Loita plains, Kedong valley, Lambwe Valley, Ndaragwa, Naivasha and Morupus (West Pokot), commonest at 1,300-2,400 m. Most common in open black clay plains, dry rocky hillsides or wooded grassland. Often the dominant shrub in plains with black cotton soil at medium altitudes; less often in red clay soil and rocky areas. Rainfall: 500-1,300 mm. Zones III - V.

Uses: FOOD: Fresh soft fleshy galls edible (+). Galls have a sweet, often slightly bitter taste. Very young galls are green to dark green, bitter and filled with fluid. As they mature they turn reddish purple and hollow. This is the right stage to eat them. Also at this stage stinging ants bore into them at the thorn base and inhabit them. With age, the galls harden, become fibrous, greyish-black and unpalatable. Inner bark fibre, which has a sweetish bitter taste, may be chewed

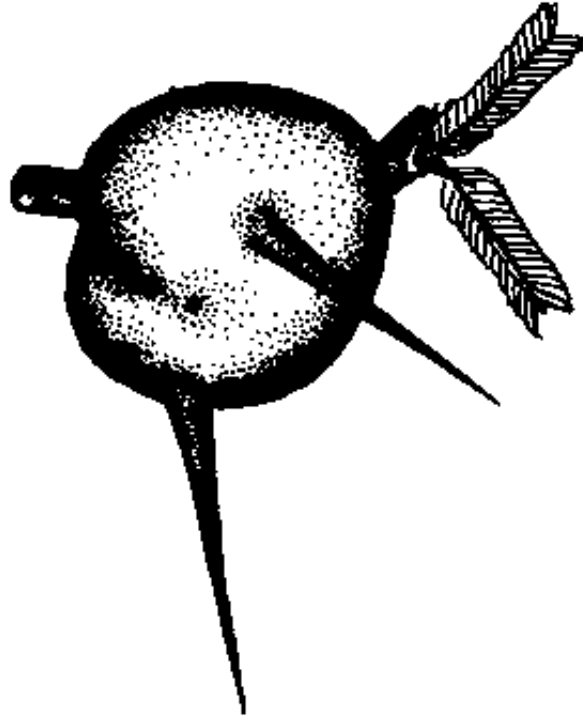
(Machakos). Galls are a favourite food for herdsmen.

OTHER: Branches are used in fencing. Mature plants are a good source of fuelwood (++) . Leaves, shoots and fresh soft galls are good fodder for goats, camels (+++), cattle and donkeys (+). Giraffes like browsing on this plant.

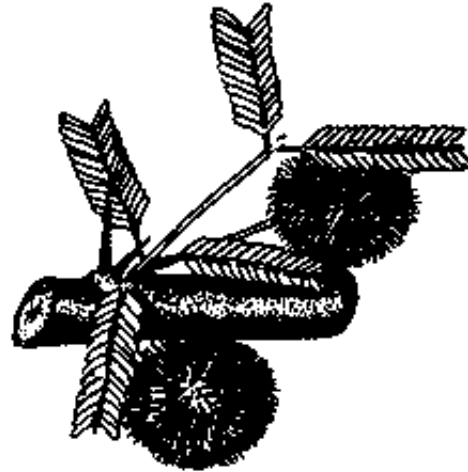
Season: Fresh galls found during active growth, mainly after rainy season. Flowers in October-November in Naivasha and Kajiado.

Status: Locally very common.

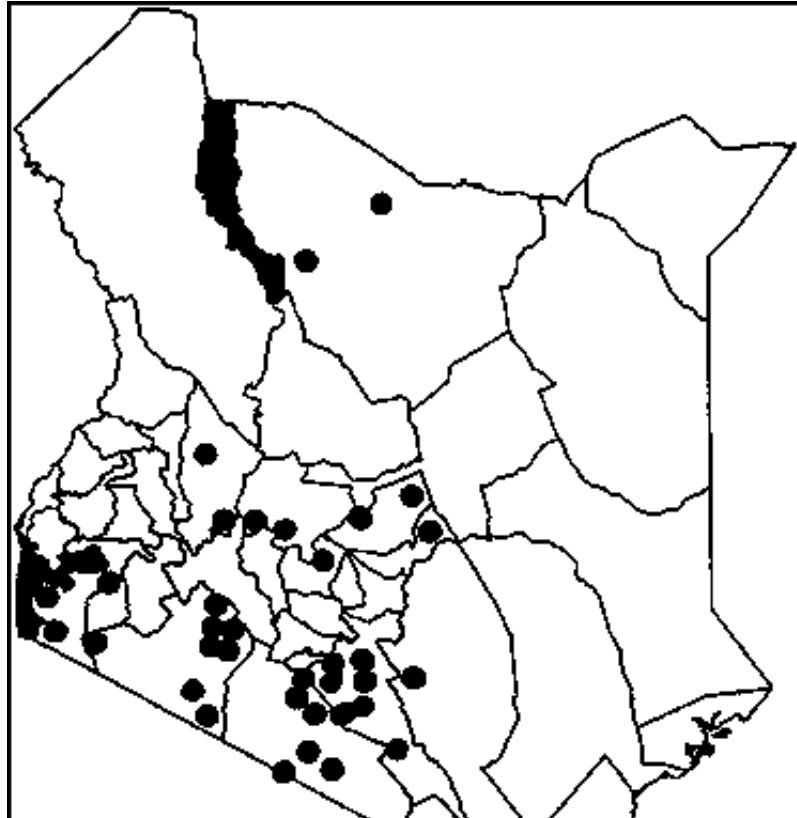
Remarks: A quite variable species in Kenya.



Figure



Figure





Figure

Acacia hockii De Wild.

Mimosaceae (Fabaceae)

Kamba: kinyua **Kikuyu:** mugaa **Luo:** arumbe, oriang' **Maa:** enchapalani, orcharpalani (Ngong) **Mbeere:** munyua **Pokot:** chuwan **Teso:** ekisim **Tugen:** tilatil

Description: A usually small acacia, 2-4 m high with a rather open crown. Occasionally a tree to 8 m. **BARK:** Yellow to greenish yellow, peeling. **THORNS:** Paired, straight on relatively few branches. **FLOWERS:** In yellow or orange

heads. **FRUIT:** Pods reddish brown, narrow, straight or crescent shaped.

Ecology: From West Africa east to Sudan and south to Mozambique. Widely distributed in most parts of Kenya and common on sloping rocky bushed grassland, 0-2,400 m. Associated with poor soils, especially sands. Often the dominant shrub. Rainfall: 650-800 mm or occasionally more. Zones III-V.

Uses: FOOD: Inner bark fibre chewed for its juice which has a sweet taste (+++) (Kamba, Maasai, Mbeere). The gum is edible (Kamba, Maasai, Mbeere).

OTHER: Fuelwood (++), fodder, fence.

Status: May be locally common.

Remarks: The acacia with the sweetest bark string in Kenya.

Season: Flowers in December-February (Kitui, Machakos, Kajiado).



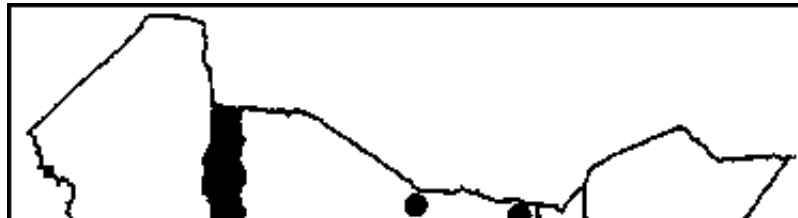


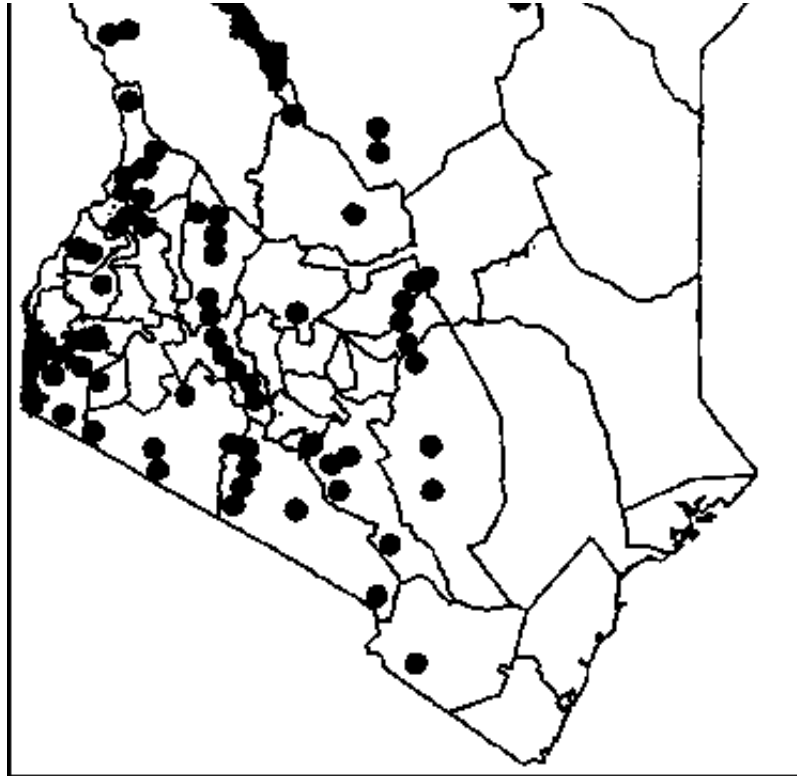
Figure





Figure





Figure

Acacia nilotica (L.) Del.

Mimosaceae (Fabaceae)

Borana: burquqe, burquqis **Chonyi:** mtsemeri, munga **Digo:** kigundi, chigundigundi **English:** Egyptian mimosa, Egyptian thorn **Gabra:** burquqe, burq'uq'e **Giriana:** msemeri, munga, muhegakululu **Ilchamus:** Ikiloriti, Ikilorit **Kamba:** kisemei (Machakos), musemeli (Kitui) **Kambe:** mtsemeri, munga **Keiyo:** kiprutyot **Kikuyu:** mugaa **Kipsigis:** chebitet, kopko **Maa:** olkiloriti **Mbeere:** mucemeri **Orma:** chalado **Pokot:** kopko, kapka **Rendille:** ilgiliti **Samburu:** Ikiloriti **Somali:** marah, guider, langid, marai, tuwer **Swahili:** mgunga, mjungu, mtetewe **Taita:** shighiri **Teso:** ekapelimen **Tharaka:** mwemba **Tugen:** chebiwo, chebiwa **Turkana:** ekapilimen, ekapelimen

Description: A small- to medium-sized acacia, usually 3-5 m,

with scattered branches (especially in young plants) or with a spreading umbrella-shaped crown and low branches (in older plants). **BARK:** Dark brown to black on the trunk. Branches reddish brown. **THORNS:** Branches armed with paired strong spines. **FLOWERS:** In bright yellow to orange heads. **FRUIT:** A grey to purple-black, straight or slightly curved indehiscent pod up to 12 cm long by 1.2 cm wide, with a whitish bloom and a gummy pulp.

Ecology: A species widely spread in tropical and subtropical Africa and east to India, from Ethiopia and Sudan to north-eastern South Africa and northern 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. Soils variable from sandy to black cotton. Seems to prefer gravelly red soils. Rainfall: Commonest at 500-800 mm. Zones III - VI.

Uses: FOOD: Bark (Kamba, Maasai, Mbeere) and the gummy fruit pulp (Pokot, Turkana, Rendille) boiled in water, sugar added and drunk as tea (+++). Pods are a famine food (Mbeere).

FOOD/MEDICINAL: Bark and roots boiled in milk, blood (Rendille) or soup, especially by warriors for appetite and general fitness (Maasai, Rendille, Samburu). Tea made from fruit drunk for stomach problems. Boiled root extract drunk as a tea for chest pain, abdominal pain and tuberculosis (Samburu). Root or bark extract taken alone or boiled in soup for indigestion (constipation), stomach upset (Maasai, Samburu), as an emetic (Samburu) and for hepatitis (Samburu).

MEDICINAL: Bark and root used in the treatment of venereal diseases (Maasai, Kamba, Tharaka). Cold bark infusion drunk to treat nausea caused by drinking milk. Chewed leaf or boiled

bark applied on wounds, burns and sore eyes (Samburu). Inner bark chewed or boiled as cure for stomach-ache and diarrhoea (Pokot). Inner bark chewed for sore throat and cough (Maasai). Boiled leaf extract used for chest pain or pneumonia (Maasai). Bark and roots used as an aphrodisiac, and roots for gonorrhoea, impotence and chest diseases (Maasai). Bark decoction given to children for fever (Maasai). Sap from twigs (Pokot) and squeezed pods (Turkana, Pokot, Tharaka) applied to infected eyes. Bark infusion used against "malaria" (Pokot) and for stomach problems in goats (Pokot). Infusion of any plant part used to treat headache (Somali, Boran). Root bark (Mbeere) and fruit (Kamba) decoction used for coughs; boiled bark with fat used for painful joints, backache and stomach ulcers (Pokot).

OTHER: Fencing material, fuelwood (+++), charcoal (+++), fodder for all livestock (+). Bark boiled with meat to soften it (Pokot). Bark used for tanning (Mbeere). Bark and roots are a

source of dye for baskets (Machakos). Thorns used for piercing ears (Kamba, Tharaka), removing jiggers (Mbeere) and as plugs for gourds (Kamba, Mbeere). Gum from fruit or bark used for attaching feathers to arrows (Mbeere). Wood hard and durable, used as posts for grain stores (Kamba).

CULTURAL/BELIEF: Ground bark used for rituals (Maasai). Fresh juice from fruit rubbed on eyelids to make them black during dances (Digo). Gum from fruits rubbed on hair by old men (Digo).

Season: Flowers in January (Kitui), May-June (Laikipia) or September-October (Naivasha, Kajiado). Fruits in August-September (Kitui) or October (Laikipia).

Management: Best propagated by direct sowing at site.

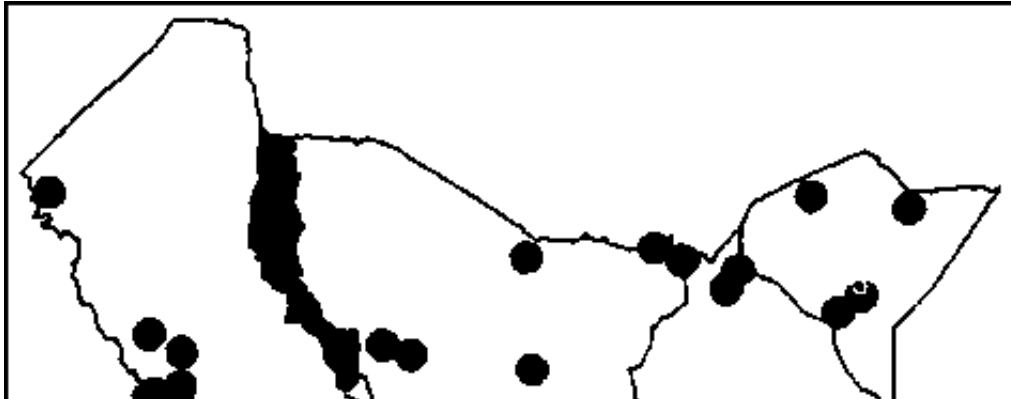
Status: Very common.

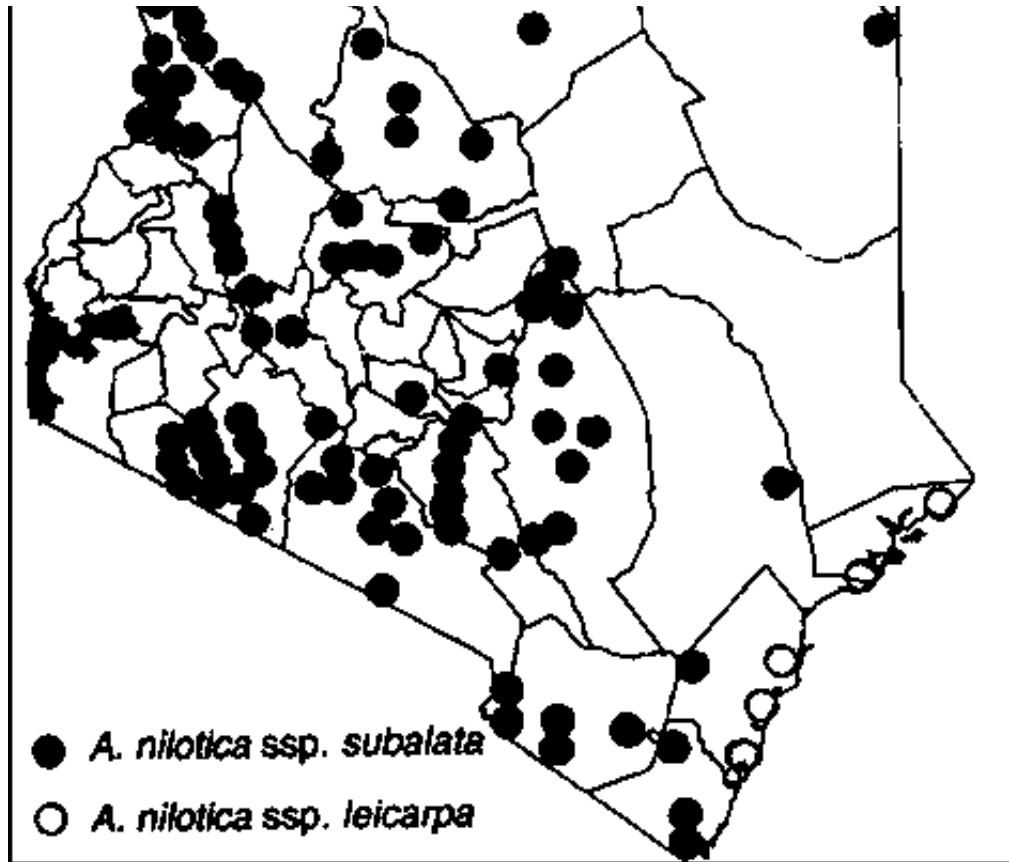
Remarks: This species is quite variable. Two subspecies occur in Kenya: *ssp. subalata* (Vatke) Brenan (syn: *A. subalata* Vatke) which is by far the commonest; *ssp. leiocarpa* is a coastal subspecies (Malindi, Pate Islands, Kiunga, into Somalia) with hairless fruit and young branches. At least seven subspecies are recognized, the others being found outside Kenya.



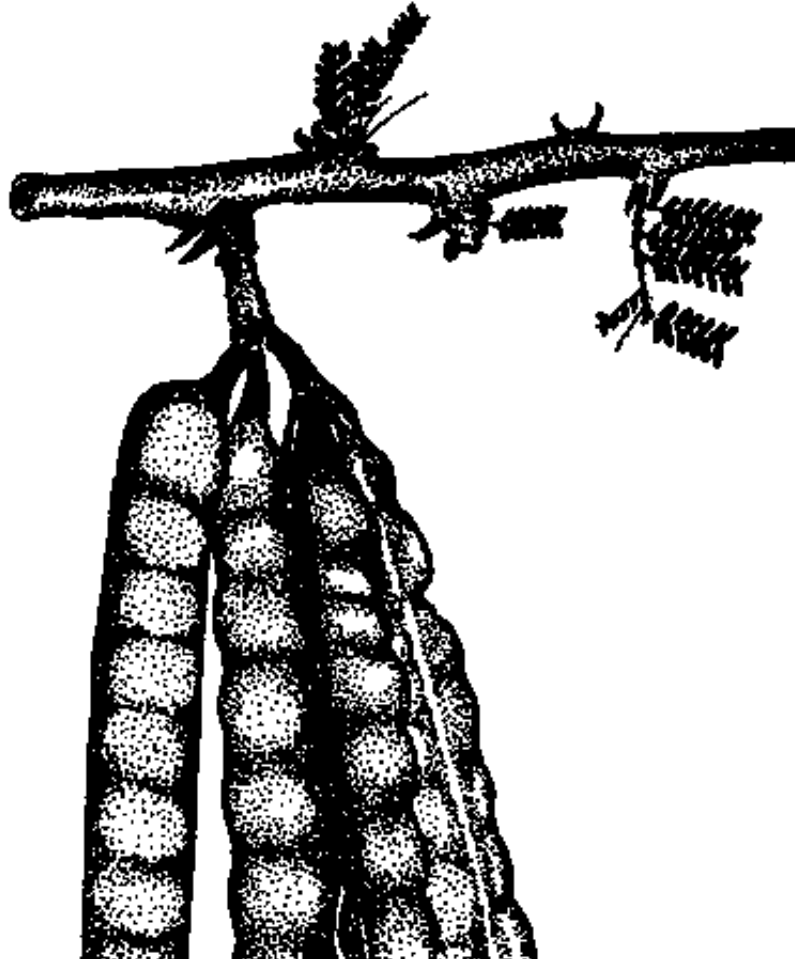


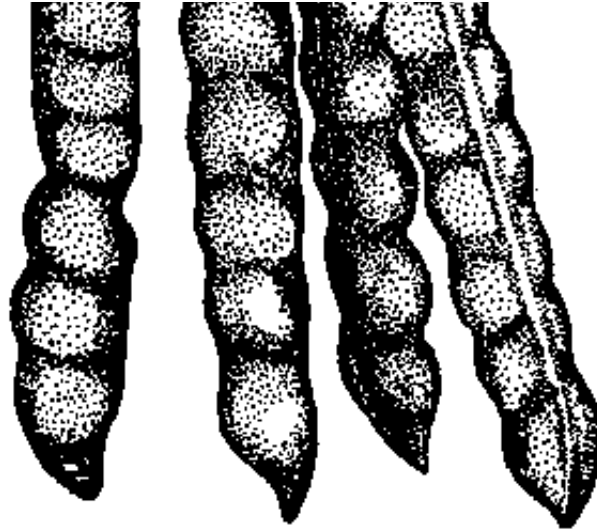
Figure





Figure





Figure

Acacia senegal (L.) Willd.

Mimosaceae (Fabaceae)

Borana: burra diima, sadeema, sapans diima, iddado, baabido

(gum) **Daasanach:** dang'ite **Digo:** kikwata **English:** gum arabic tree, Sudan gum arabic **Gabra:** iddaad'o **Ilchamus:** Iderkesi **Kamba:** king'ole (Machakos), kikole, king'olola (north Kitui) **Luo:** kiluor, otiep **Maa:** olderkesi, enderkesi, interkes (plural), olbida **Mbeere:** mung'othi **Orma:** bura-diima **Pokot:** chemanga, chemankayan **Rendille:** hadhaadh, mirgi-abah (gum) **Samburu:** Iderkesi, manok (gum) **Somali:** edad, edad-geri, adad, edaad **Swahili:** kikwata, mgunga **Teso:** ekunoit, ekodokodoi **Turkana:** ekunoit

Description: Shrub or small tree up to 9 m tall, more often 2-4 m high. Crown flat in mature trees. **BARK:** Scaly, yellowish brown or grey-brown. Branches armed. **THORNS:** Spines brown-black, usually arranged in threes at the leaf nodes, the middle one recurved, the others directed forwards. **FLOWERS:** Buds red, opening to long white or cream spikes, borne in twos or threes or singly. **FRUIT:** A flat brown, papery, prominently veined dehiscent pod to 10 cm long by 2 cm broad, often

slightly constricted between some or all seeds. Seeds usually 3-5, greenish brown, flattened with a circular outline.

Ecology: From West Africa east to Egypt, south to South Africa and Namibia. Also found in Asia. Grows in Kenya, e.g. on Homa Hill, in the Rift Valley, Lokitaung and Mutha hill in dry *Acacia-Commiphora* bushland and wooded grassland, often forming a pure stand on raised rocky ground in very dry areas, 100-1,700 m. Prefers well-aerated soils, especially rocky, loam or sandy soils. Rainfall: 200-800 mm. Zones III-VII.

Uses: FOOD: A clear edible gum is produced by this tree (+++). This is the best acacia gum in Kenya, much treasured by pastoralists. To induce gum formation, a section of the bark is wounded or stripped off. In the wild state gum production is induced by natural factors. Plants in arid areas or in the dry season tend to produce better gum. This species produces the well-known gum arabic used in pharmaceutical, food and

confectionery industries and in the manufacture of glue.

MEDICINAL: Juice obtained from fruits is used as eye medicine (Ilchamus).

OTHER: Fuelwood (++) , charcoal, house poles (+), fencing. Bark a source of fibre. Leaves are goat (+++) and camel (++) fodder.

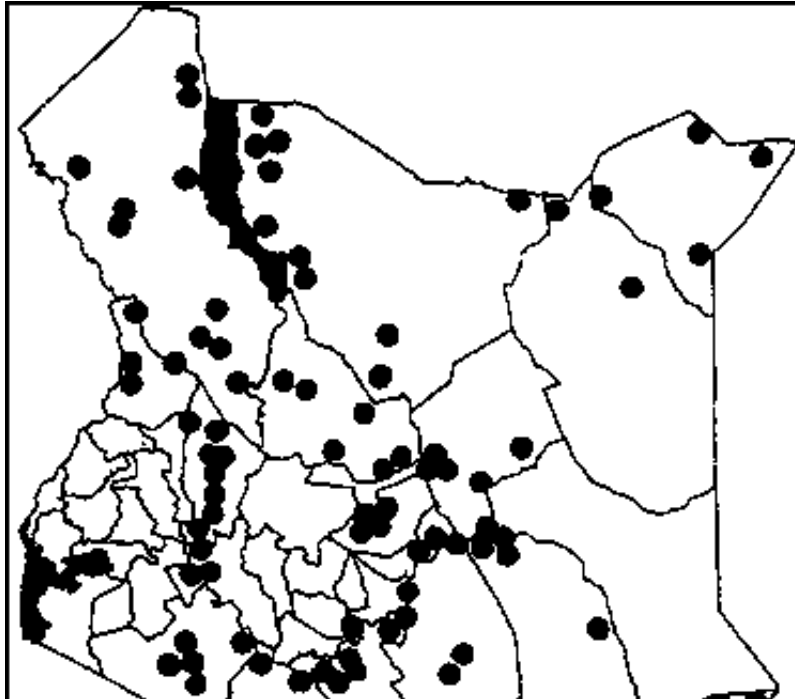
COMMERCIAL: Commercial gum is collected from the wild (Wajir, Mandera, Isiolo, Marakwet, Garissa, Samburu) mainly by children and women. It is usually picked for export to the Far East and Europe. The gum trade in Kenya is less lucrative than in Sudan and Somalia. The main reason is the poor quality of the gum, mainly due to the fact that various grades and types are mixed.

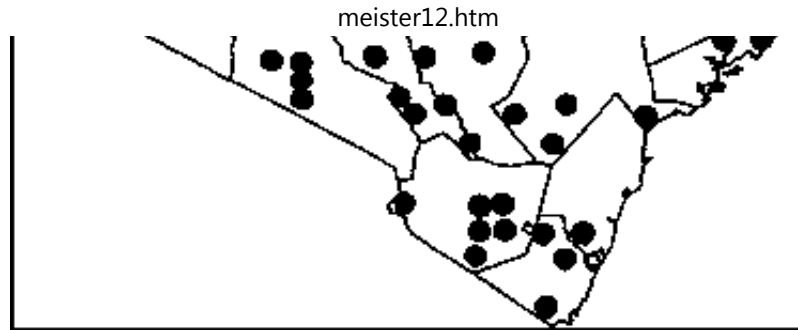






Figure





Figure

In Kenya, the gum exudes from the tree mainly as a result of natural causes or stress. In the Sudan, the business is old and well established. Here the plant is purposely injured during tapping to induce gum formation. The gum is ready for harvesting about a month after tapping. Collecting can be done over two or more months. Tapping may begin when the tree is four years old and a tree may produce gum up to the age of 15-20 years. Tapping tends to destroy the bark thus lowering production. In the Sudan, tapping is done with a

small axe, mainly by removing a long strip of the outer bark from the branches, and is normally done in the dry season when the plant is in stress. The tappers are experienced and hence the quality is good. Kenyan gum, on the other hand, is traditionally collected by pastoralists. Until recently, the business only attracted a few Somali traders, but now the business is attracting full-time collectors and thus the quality of gum is improving.

The potential for development exists. High densities and sometimes pure stands of this species have been found in parts of Turkana and Baringo Districts, especially in northern Baringo, in Kakuma and along Kapedo-Lokichar road. Training of collectors, improved collecting methods and more organized marketing would be the way forward in developing this resource as the market for gum arabic is far from saturated. Currently the Sudan is the largest producer. Others include Mali, Senegal, Mauritania, Chad, Ethiopia and Somalia.

Season: Gum production is highest in August-September and February-March. Flowers in July (Kitui); fruits in August-September (Turkana, Baringo, Ngong).

Management: Best propagated by seed. Soaking in water for a day or nicking may improve germination.

Status: Locally common.

Remarks: This species is extremely variable. At least three varieties are found in Kenya:

- var. *Senegal*. Distribution: Moyale, Homa Hill, 100-1,700 m.
- var. *kerensis* Schweinf. Distribution: Lokitaung, Baringo, Mutha, 460-1,130 m. Gum of less superior quality than that of var. *senegal*.

- var. *leiorachis* Brenan. (Orma: *bura-diima*, Somali: *adad-gher*). This species often hybridizes with *Acacia mellifera* in Kajiado.

Acacia seyal Del.

Mimosaceae (Fabaceae)

English: whistling thorn **Borana:** waachu, waachu-adi, waaqu-hallu **Gabra:** iddaado, iddad'o **Ilchamus:** lerai, lera **Kamba:** kisewa (Machakos), mweya **Kikuyu:** mugaa **Kipsigis:** mugurit **Luo:** ali, ale, arombe **Maa:** olerai, elereta, elereta-nanyokie, oljerai, olerai-oibor (Ngong) **Marakwet:** rena, renon (plural) **Mbeere:** mureera **Pokot:** rena, chowogh, chuwugh **Rendille:** fulai **Samburu:** lerai, lera **Somali:** fullai (Mandera), fulai **Teso:** ekoramai **Turkana:** ekoromait, echekereng

Description: Thorny tree up to 10 m high with an open flat-topped crown at maturity. Trunk often with many bulging knots. **BARK:** Yellowish to greenish white or orange-red and powdery on the surface, green inside. **THORNS:** White, long, straight, in pairs. They may or may not be galled. **FLOWERS:** In bright yellow to orange fluffy heads. **FRUIT:** A slightly curved, narrow dehiscent pod.

Ecology: Widespread in eastern Africa from Egypt in the north to Malawi and Zambia in the south. In Kenya, absent in the coastal zone but widespread in the drier parts of the country in open or bushed grassland and woodland, especially at the foot of hills and on plains, 200-2,200 m, more common at about 1,500 m. Often found forming pure stands. Common on black cotton and rocky soils, less frequently on red soils. Zones III - V.

Uses: FOOD: Inner bark fibre chewed for its nice rather sweet

taste (++)). The tree produces an excellent clear gum (+++). Bark is ground and used to make tea (Maasai).

OTHER: Poles, fodder (++)), bee forage, fuelwood (++)), dye, charcoal (++)).

COMMERCIAL: Gum occasionally exported along with gum arable but is less valuable as it cracks with time.

Season: Flowers in September-October (Naivasha, Kajiado).

Management: Best propagated by seed. Soaking in water for a day or nicking may improve germination.

Status: Common.

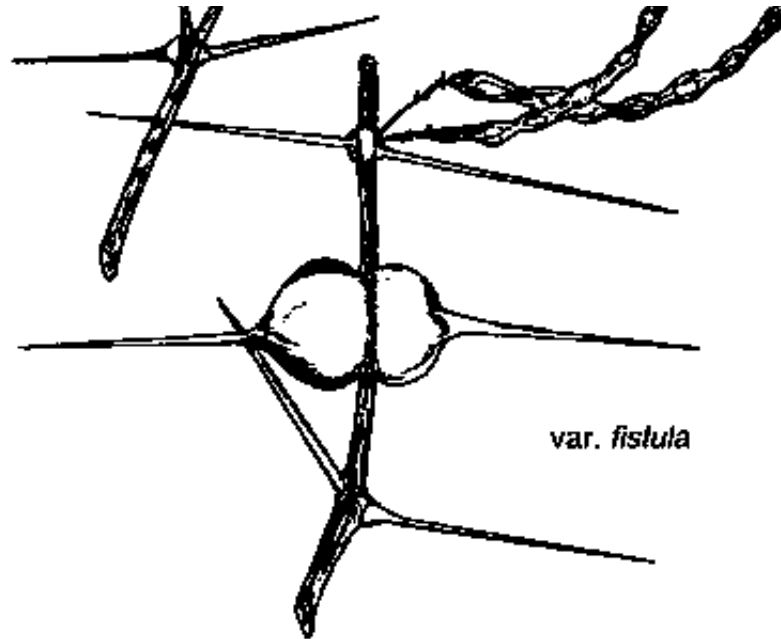
Remarks: Two varieties of this species occur in Kenya:

- var. *seyal* is the more common of the two and has no

galls. Distribution: From Uganda and Tanzania north to Egypt. Altitude: 550-2,200 m.

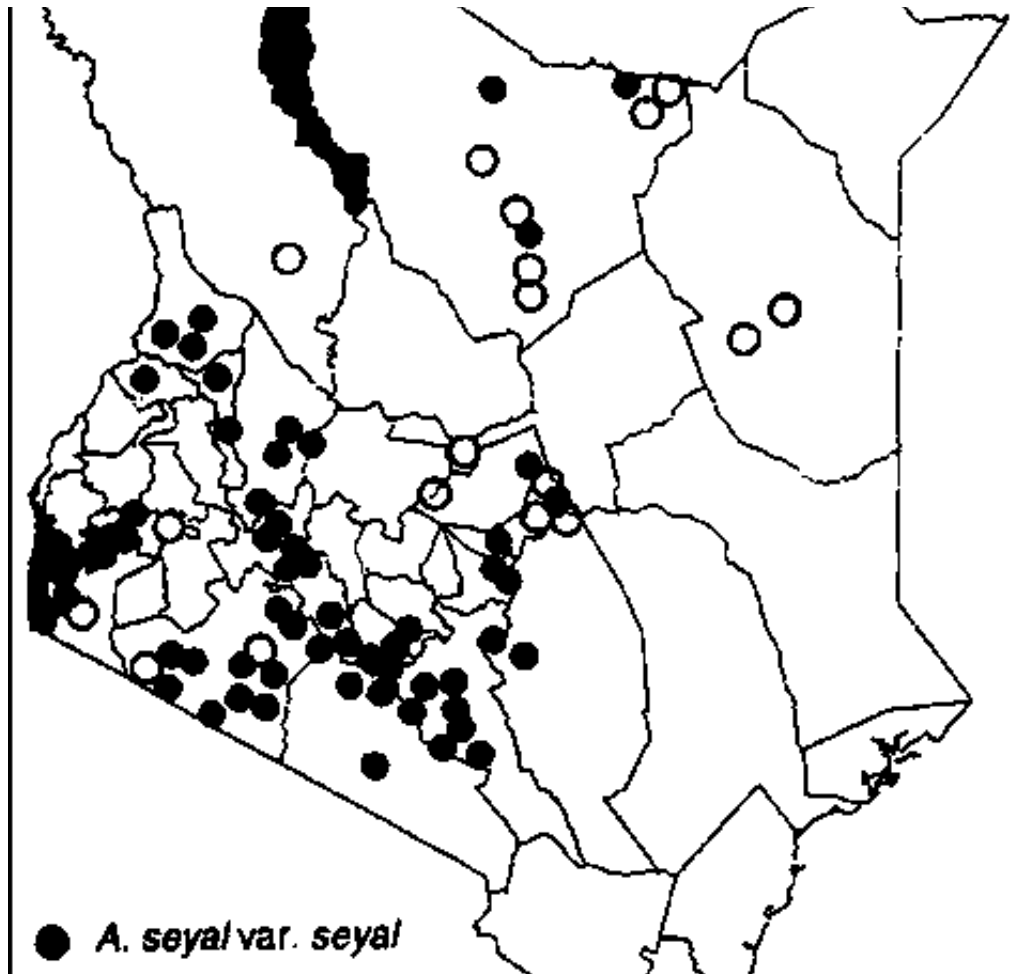
- *var. fistula* (Schweinf.) Oliv. (Borana: *wachu dima*, Somali: *fulaii wajol*) has ant galls. Distribution: Baringo, Wajir, Isiolo, Marsabit. From Sudan, Somalia south to Malawi, Mozambique and Zambia. Altitude: 200-1,750 m. Use: Gum edible and of some commercial value.





Figure







Figure

Acacia xanthophloea Benth., (English: fever tree, Naivasha thorn, Kamba: *mweya*, Maa: *olerai*) is a much larger acacia. It usually has the same uses and local names as *A. seyal*. Ecology: Most drier parts of Africa, and East Africa south to eastern Zimbabwe and KwaZulu Natal in South Africa.

Common at medium altitudes 1,400-2,300 m, especially Nairobi, Kajiado, Narok and Naivasha, especially in riverine conditions or places with high groundwater. Zones III-IV.



Acacia xanthophloea

Acacia tortilis (Forssk.) Hayne

Mimosaceae (Fabaceae)

syn: *A. spirocarpa* A. Rich., *A. raddiana* Savi

Borana: dadach, dadacha, urbu-ree (fruits) **Daasanach:** seech-geebe, sies-geebe (plural) **English:** umbrella thorn
Gabra: d'addaca **Ilchamus:** Itepes, Ikunyi **Kamba:** mulaa, muaa, ulaa (fruits) **Kipsigis:** chebitet **Maa:** oltepesi, sagararam (fruit) **Malakote:** dadacha, dadwota, dadech (young) **Marakwet:** ses, sesai (plural), sesoy (plural)
Mbeere: mugaa **Meru:** mugaa **Orma:** gudis **Pokot:** ses, sesyai (plural), sesoy (plural) **Rendille:** gahar khabdo (pods), dahar, qubdo **Samburu:** Itepes, sagaram (fruits) **Somali:** qurah **Swahili:** mgunga **Tugen:** siesiet, sesya **Turkana:** ewoi (mature), etir (young)

Description: A spiny acacia, usually 4-8 m high but reaching 20 m in riverine vegetation. Crown narrow when young,

spreading, fiat-topped and umbrella-like at maturity. **BARK:** Longitudinally fissured, dark grey. **THORNS:** Branches armed at each node with a straight white thorn as well as two short grey sharply recurved spines. **FLOWERS:** In white heads. **FRUIT:** A green-yellow to brown pod, often curled into a ring or crescent shape. Seeds smooth, greenish grey.

Ecology: Widespread in Africa from Algeria and Senegal to Eritrea and south to Angola, Namibia and Mozambique. Widespread in Kenya in dry bushland, bushed grassland, wooded grassland, riverine vegetation and arid-land scrub, 600-1,500 m. Soils very variable, from sandy to black cotton. Common in red soils. It is among the most drought-resistant acacias in Kenya. Rainfall: 200-900 mm. Zones IV-VII.

Uses: FOOD: Ripe fresh pods are eaten but seeds are discarded (+) (Maasai, Pokot, Turkana, Somali, Gabra, Daasanach). The crunchy pods have a faint sweet taste. Pods

(*ng'itit*) are pounded, sieved to remove fibrous particles and the flour mixed with blood and eaten (Turkana). The gum is also eaten (Pokot, Turkana, Somali) but is of inferior quality, sticky and may cause choking.

MEDICINAL: Boiled infusion of bark used for diarrhoea and stomach-ache (Pokot).

OTHER: Fuelwood (+++), charcoal (+++), fibre (++) for weaving traditional baskets (Tharaka), *kyondo* (Kamba), *ciondo* (Mbeere); ropes and string for building and other purposes are obtained from the bark. This fibre was much used before the introduction of sisal. Thorns used as pins or needles. Fibre chewed for coated tongue, *kivuti* (Kamba). Debarked roots, which have tiny perforations, are smoked as a remedy for colds (Kamba, Tharaka). Leaves, young shoots, and especially dry pods, are excellent fodder (+++) for livestock, especially goats and camels. Shade and as a meeting

place (Turkana). Fencing using dry branches.

CULTURAL/BELIEFS: Roots burned to reconcile families (Tharaka). The tree is believed to attract lightning (Tharaka).

COMMERCIAL: This is the most important acacia among pastoral communities. Pods sold for livestock (Lodwar, Mandera) and human food (Lodwar). Fuelwood and charcoal from this plant are widely sold in small market centres.

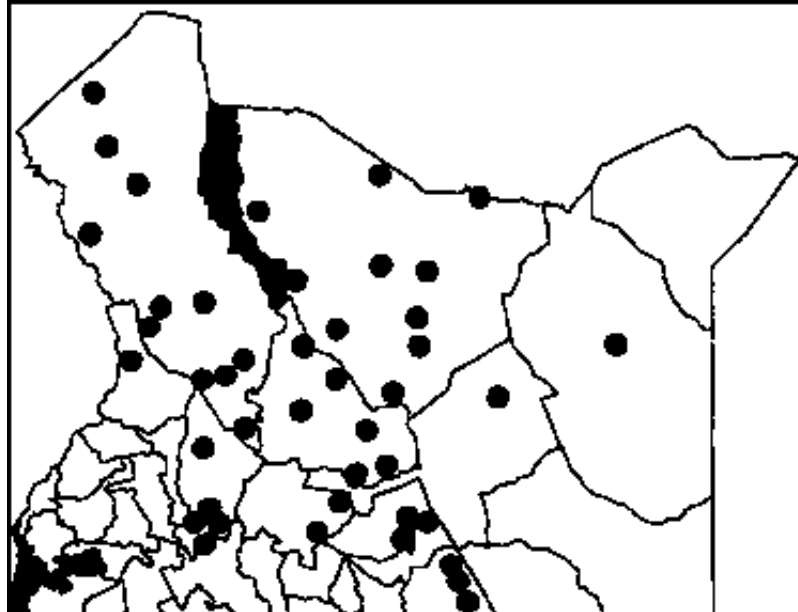
Season: Fruits in September-October (Machakos, Kajiado, Kitui, Tharaka).







Figure





Figure

Management: Seeds taken straight from the pod seldom germinate. Dormancy is broken when they pass through an animal gut, by scarification, bush fire or by hot-water treatment. Should not be planted near homes because of its thorns and the likelihood of attracting caterpillars that feed on the plant at certain seasons. Protection of some areas for some time to give young plants time to grow above the reach of goats may be the best way of increasing this useful tree. As

this species is very drought-resistant it has a high potential for desert reclamation.

Status: Locally very common.

Remarks: Two subspecies occur in Kenya:

- *ssp. spirocarpa* (A. Rich.) Brenan (syn: *A. spirocarpa* A. Rich.). Fruit hairy and glandular. Distribution: Moyale, Kima (Machakos), Taveta. Eritrea and the Sudan south to Mozambique and Angola.
- *ssp. raddiana* (Savi) Brenan var. *raddiana* (syn: *A. raddiana* Savi). Fruit non-hairy and non-glandular. Distribution: Coastal area, Faza and Manda Islands, Lamu. Algeria and Senegal east to Egypt, Somalia and Kenya.



Figure

Acokanthera schimperi (A. DC.) Schweinf.

Apocynaceae

syn: *A. friesiorum* Markgr.

Borana: karraru **English:** arrow-poison plant **Gabra:** k'arraaru **Kamba:** kivai **Kikuyu:** muricu **Kipsigis:** kelyot **Maa:** olmorijoi **Meru:** mururu **Nandi:** keliot **Pokot:** kelion **Samburu:** ilmorijoi **Somali:** marid **Tugen:** kelyon

Description: A dense round evergreen shrub or spreading sparsely branched tree to 7 m high. **BARK:** Fissured. **LEAVES:** Shiny, usually elliptic or ovate. **FRUIT:** Ellipsoid, to 2 cm long, green, turning green-yellow then dark purple on ripening. Seeds cream with an ivory appearance, compressed on one side.

Ecology: Widespread in East Africa, south to Zimbabwe, Mozambique, Swaziland and north-eastern South Africa. Grows in Kenya in bushland on rocky hillsides, especially on red or black rocky soils, e.g. at Muumandu (Machakos), Ongata-Rongai, Oloosaiyeti hill (Kajiado), Rumuruti (Laikipia), Loita, and Chepelion (north Baringo), 1,200-2,400 m.

Common in dry highland forests and bushed grasslands.
Rainfall: 500-900 mm. Zone III.

Uses: FOOD: Ripe fruits are edible (+). They are sweet with a slightly bitter taste, but should only be eaten when ripe. Otherwise the whole plant is poisonous. Birds have been known to drop dead on sucking nectar from the flowers.

OTHER: This is the plant used to make arrow poison (Pokot, Kamba, Kipsigis, Embu, Tharaka, Maasai) and by many communities in Central, East and southern Africa. Roots (or other parts of the plant) are boiled in a secluded place for up to 10 hours, adding water up to 5 times. A black viscous substance results which, on drying, may be wrapped up and stored far from people. The poison should never be handled with bare hands if there is any break in the skin. On cooling, the poison may also be pounded to a powder and stored. It is softened again by adding a little water (Maasai). The poison is

said to remain potent for a long time. Trees in the hotter areas give better poison and it softens or may melt in cold humid weather. Ash or *Aloe* sap may be put on top to prevent poison from oozing out (Kamba, Maasai). *Acokanthera* poison is a lethal cardiac poison only effective when it gets into the bloodstream. This is used against wild game ranging from dikdik to elephant, and small quantities may kill a human in 20 minutes or less. Antidote: In case of accident, squeeze out and suck contaminated blood from the point of entry immediately. (The person doing this should not have sores in his mouth.) Apply paraffin oil (Kitui).

COMMERCIAL: Poison sold in Kitui, said to be obtained from the coast. Arrows with poison from this plant sold (Mwala in Machakos, Tseikuru in Mwingi, Ishiara in Embu, Tharaka, Kitui). Locally, poison experts make this poison and apply it to other people's arrows for a fee (Loita in Narok).

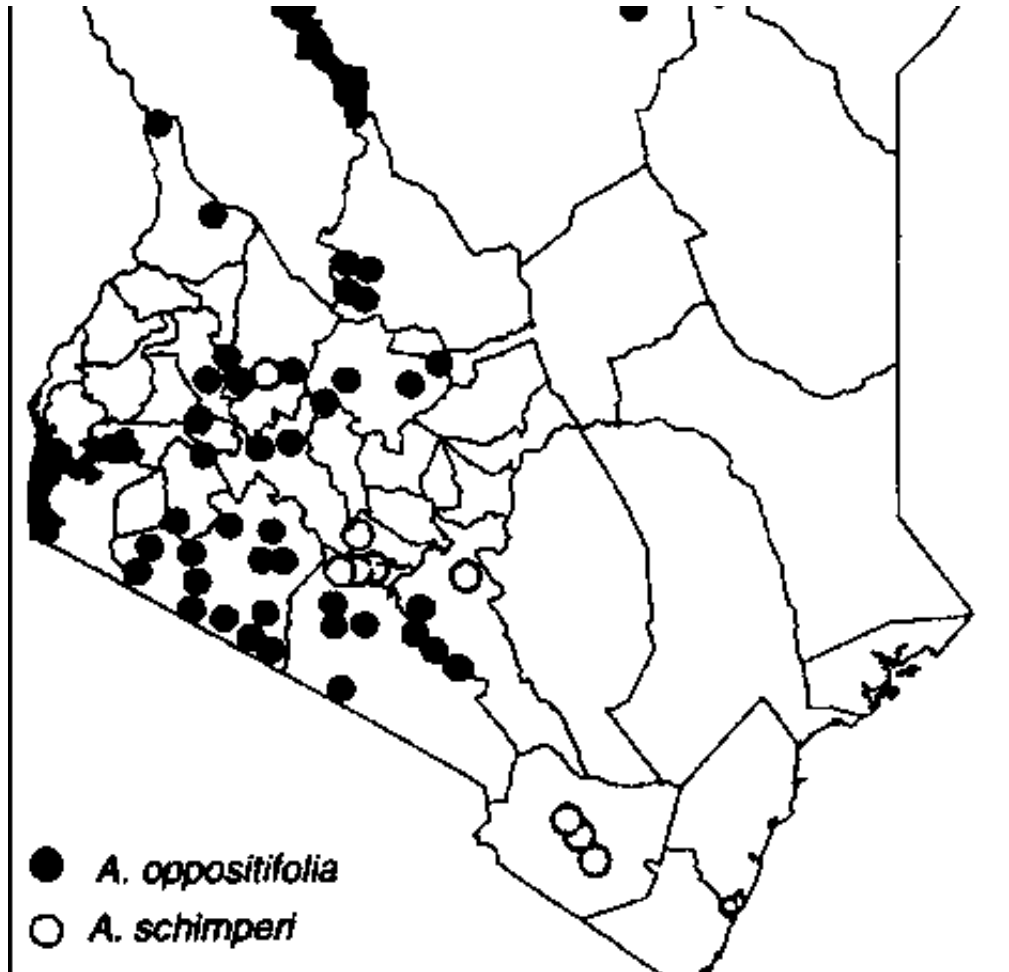
Season: Fruits in May (Narok).





Figure







Figure

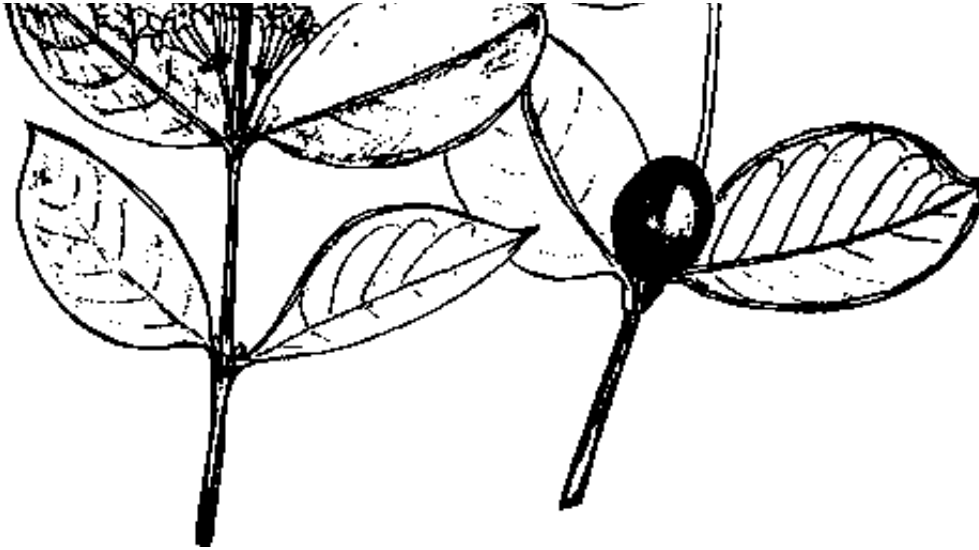
Remarks: A related species, but usually with larger fruits and leaves than those of *A. schimperi*: *Acokanthera oppositifolia* (Lam.) Codd, syn: *A. longiflora* Stapf has edible fruits too (English: arrow-poison tree, Swahili: *msunguti*, Kamba: *kikweo*, *ngweo* (fruit), Kikuyu: *kiruru*, *mururu*, *kiururu*, Mbeere: *mururu*, Meru: *mururu*, Taita: *msungusungu*). It is an evergreen shrub or small tree, normally 3-5 m high, exuding a white latex when any part is injured. **Bark** grey, rough.

Leaves opposite, shiny, elliptic to obovate, broadly ovate with a sharp tip. **Flowers** in clusters, made up of 5 parts, with a pink tube and white lobes. **Fruit** oval, 2-3 cm long.

Distribution: Kanzalu Range and Kalama (Machakos), Kiambu, Nairobi. Also in Tanzania, south to South Africa. Habitat: Bushland (especially on rocky hillsides) and riverine forest

edges and dry highland forests, up to 2,400 m. Soils: Rocky, red clay, clay-loam. Rainfall: 600-1,000 mm. Uses: Fruit edible when ripe (+), sweet and rather bitter. Latex from fruit used as chewing gum by children. Only ripe fruits should be eaten. The roots are occasionally used to make arrow poison (Kamba, Pokot, Kipsigis). A shade and ornamental tree. Season: Fruits in February-March (Machakos). Status: Uncommon. Remarks: Plant roots and other plant parts may be poisonous.





Acokanthera oppositifolia

Adansonia digitata L.

Bombacaceae

Chonyi: muyu, mauyu (fruits) **Digo:** mbuyu **Embu:** muramba

English: baobab **Giriama:** mbuyu, muuyu **Kamba:** muamba, mwaamba, mauyu **Kambe:** muyu, mauyu (fruits) **Maa:** olmesera **Malakote:** mubuyu **Mbeere:** muramba **Meru:** muramba **Orma:** yak **Samburu:** lamai **Sanya:** yaka **Somali:** yak (Tana River), jag **Swahili:** mbuyu, muuyu **Taita:** mlamba (mbale) **Tharaka:** muramba, muguna-kirindi

Description: A grotesque-looking deciduous tree to 15 m, with a disproportionately large trunk and twisted branching habit. Trunk soft, fibrous with a smooth grey surface.

LEAVES: Digitate. Leaflets to 13 cm long. **FLOWERS:** Large, white. **FRUIT:** To 25 cm long, with shiny yellowish green or rusty soft hairs and a hard oval or round shell, often grooved longitudinally. Seeds hard, embedded in a cream or white pulp.

Ecology: Somalia to southern Africa. In Kenya, a common plant in the coastal region but which also grows further inland,

e.g. Taveta, Kibwezi, south-eastern Makueni, dry parts of Kitui, Meru National Park and at Torosei in Kajiado, 0-1,300 m. Also planted as an ornamental outside this range. Grows in dry low country in *Sterculia-Delonix alata-Acacia-Commiphora* bushland and in low, hot, high-humidity coastal areas. Soils varied, but common on red soils, sandy loam and in rocky areas. Rainfall: 300-900 mm. Zones II-VI.

Uses: FOOD: The dry cream-coloured pulp is eaten raw (+++) or is dissolved in water, stirred to a milky state (milk may be added), seeds sieved off and the juice used as sauce (*mboga*) or added to porridge. Coconut juice is normally added (Giriama). Seeds are roasted like groundnuts (Kitui, Tharaka). Soft tuber-like root tips are cooked and eaten in times of famine. Germinating seed roots are also eaten. Young leaves are used as a vegetable (Giriama, Mbeere). Normally mixed with more coarse vegetables like cassava leaves (Giriama). The pulp-coated seeds (*mabuyu*) are coloured, sugar-coated

and sold as sweets in coastal towns (Swahili).

MEDICINAL: Bark decoction used for steam bathing of infants with high fever. Juice made from pulp is drunk to treat fever (Giriama).

OTHER: Fibre from trunk used as string and for weaving baskets and ropes. To obtain fibre, two cuts, one above and the other below, are made on the trunk and strips of string pulled out (the trunk is fibrous from surface to the centre). Strings for baskets are first chewed to soften them (Kamba). Tree used for placing beehives. Trunks damaged, e.g. by elephants, are used as shelter in *shambas* (Kamba, Giriama) and as a hiding place during war (Tharaka). Bark used for roofing and making temporary structures (Giriama). Appearance of new leaves or flowers signals the start of the rainy season (Kamba, Mbeere). Fallen trees improve the soil quality considerably. Fruit shells are used as fuelwood,

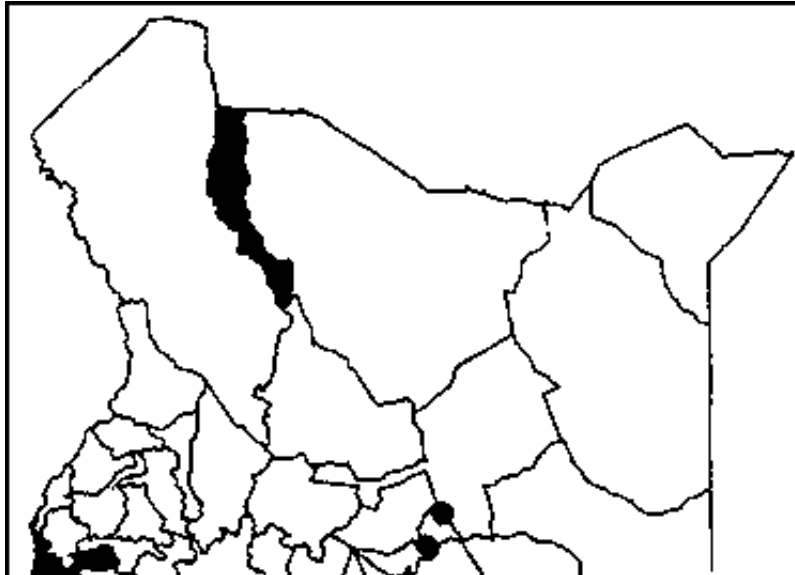
containers, bowls and for making a variety of items, including rat traps (Giriama). The fruit pulp mixed with fig-tree latex is used as birdlime. The shoot and trunk are eaten by elephants, the trunk is also a source of water. Fallen leaves are eaten by livestock.







Figure





Figure

CULTURAL/BELIEFS: A tree surrounded by complex myths and beliefs among most peoples in areas where it grows. Young plants not cut at all (Tharaka), while large trees are not debarked during or just before rains (Kamba) for fear of rain failure. A sacred and peaceful tree (Giriama). A cut tree is said to bleed like a human being, and this brings bad luck to whoever cuts it (Giriama). A person is believed to turn into

the opposite sex if he/she walks round it with a goat (Meru).

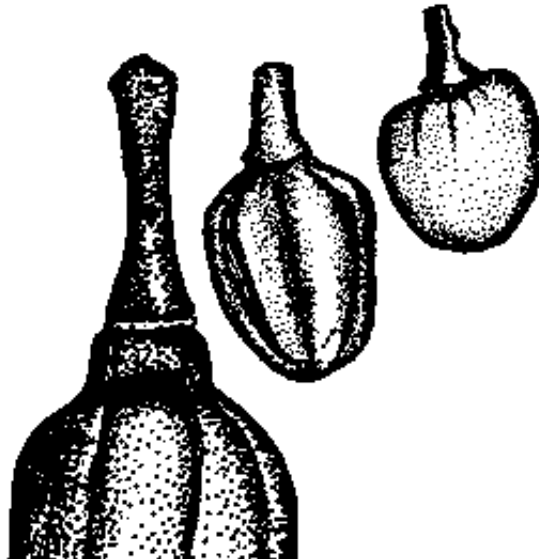
COMMERCIAL: Large quantities of fruits harvested and sold in coastal areas. Coloured pulp sold as sweets. Fibre sold in markets (Tseikuru, Mwingi, Tharaka). Baskets (*ciondo*, *syondo*) sold in curio shops. Usually more expensive than sisal baskets.

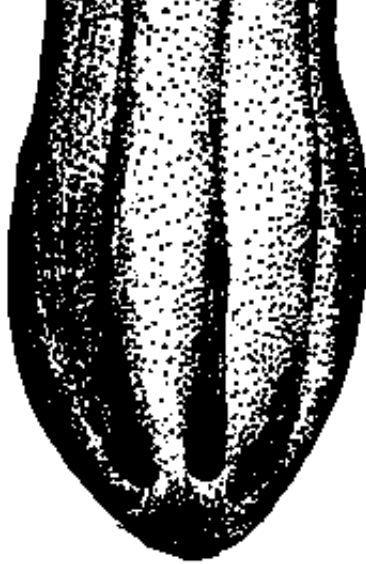
Management: Propagated by seed. Scarify or put seed in boiling water and let cool together. Naturally the seed may take several years before germination, hence the belief that it only germinates after abandoning the present homestead (Giriama). Very slow growing, the tree should not be planted near houses. Lateral roots may reach a length of 100 m or more. It is said to produce its first fruits after 60 years (Kitui).

Season: Flowers in October. Leaves in November-December. Fruits ready in July-September.

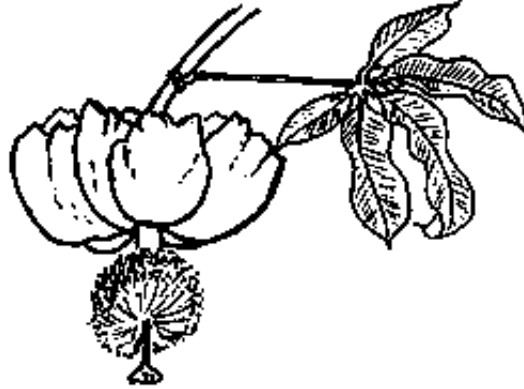
Status: Locally very common.

Remarks: Eating much fruit pulp with little else is said to cause weakness and swelling of joints. Up to three types of the tree are recognized by farmers through taste (some sweeter than others), and size and shape of the tree or its fruits as well as season of flowering.

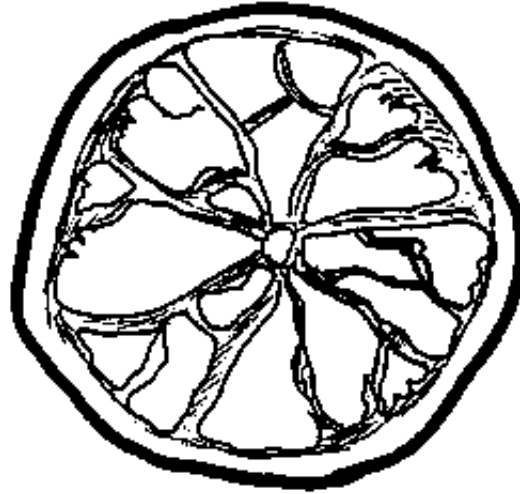




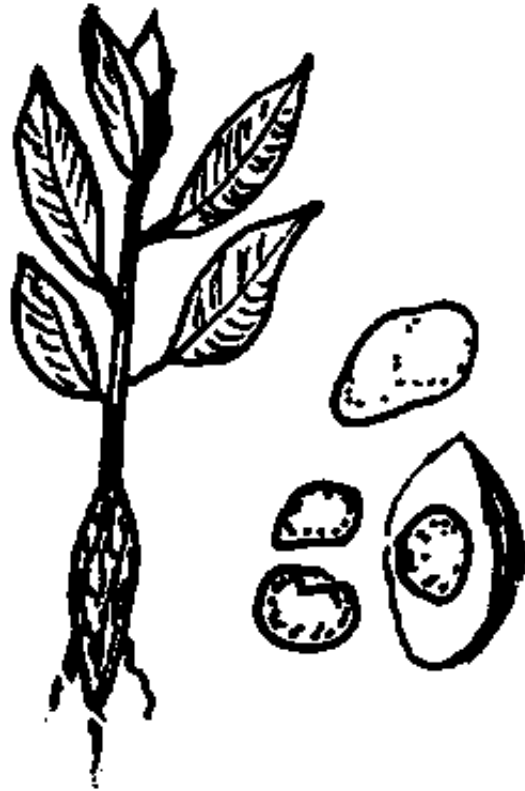
Figure



Figure



Figure



Figure

Aerva lanata (L.) Schultes

Amaranthaceae

Borana: daraara, boraati **Chonyi:** chivuma nyuchi **Digo:** chivwa kuku **Giriama:** kivuma nyuchi **Kambe:** chivuma nyuchi **Maa:** eleturot, ediati-ormwaate **Pokot:** chepiskut, chepkumot **Sanya:** wario **Somali:** fod cadde **Swahili:** kinongo **Tugen:** simetwo

Description: Erect, decumbent or scandent perennial woody herb usually 0.3-1 m high, occasionally to 2 m, usually with numerous ascending branches. Young stems covered with soft hairs. **LEAVES:** Round to elliptic, usually covered with woolly hairs. **FLOWERS:** In dense clusters, look like cream or greenish white wool.

Ecology: Widespread in the tropics and subtropics of the

world. From West Africa to Egypt and south to South Africa. Widespread in Kenya in open grassland, seasonally waterlogged areas, roadsides, forest edges and rocky areas, 0-2,200 m. Zones III-VII.

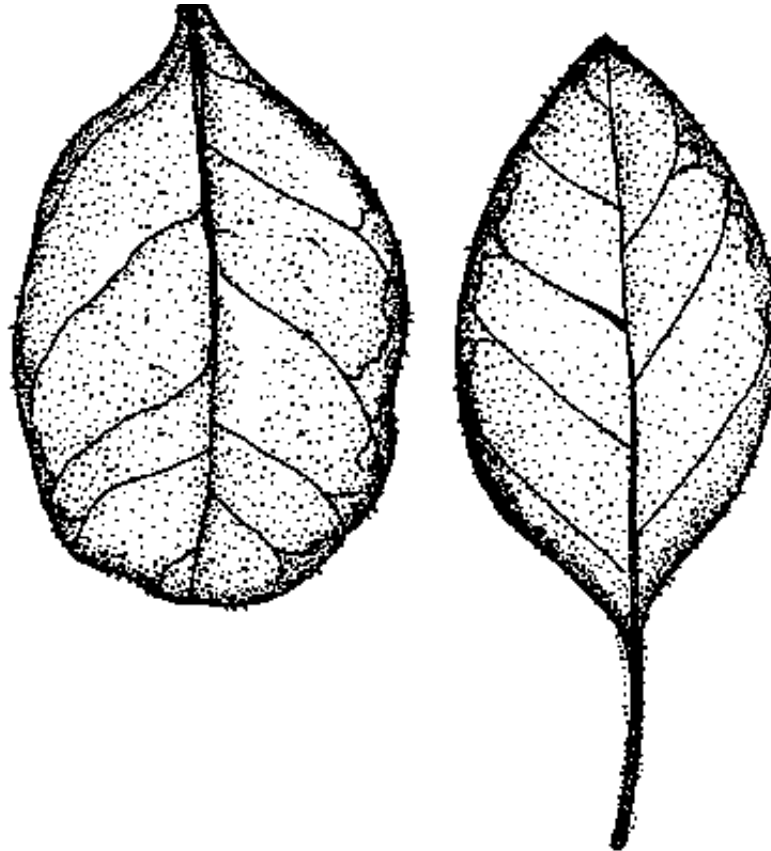
Uses: FOOD: Leaves eaten as a vegetable (++) (Giriama, Duruma, Chonyi).

MEDICINAL: Decoction of the leaves used for bathing babies suffering from malaria.

OTHER: Chicken feed (Digo). White wool used for stuffing pillows (Tharaka).

Status: Very common.



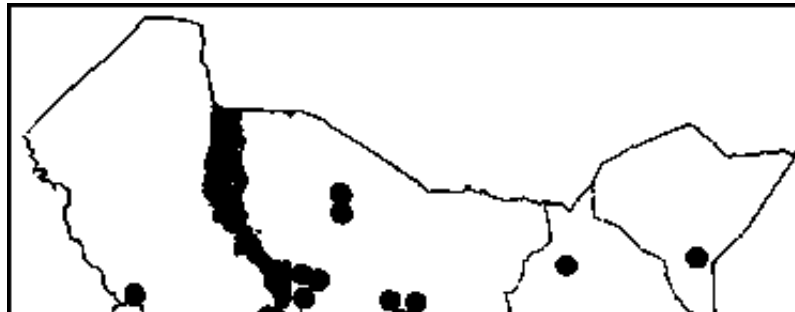


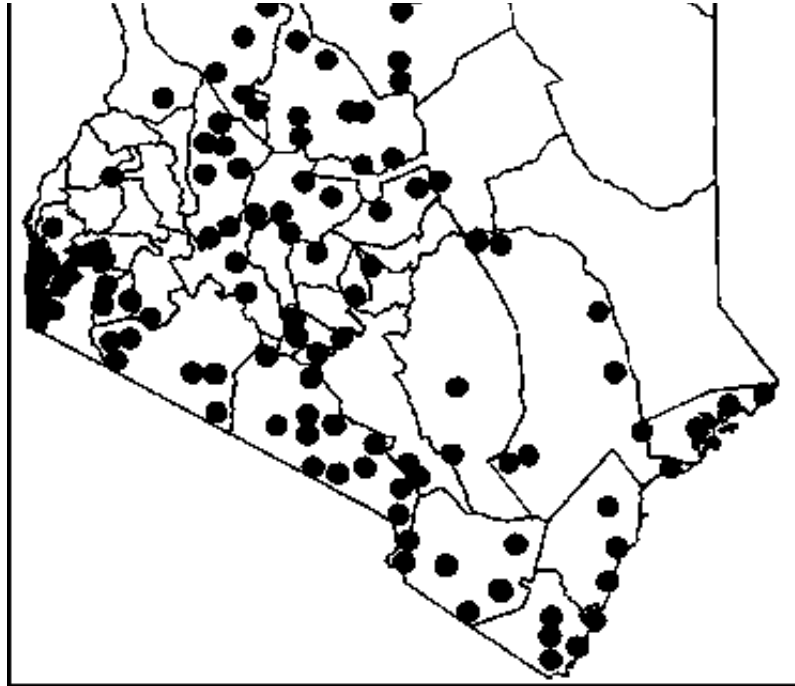
Figure





Figure





Figure

***Albizia amara* (Roxb.) Boivin**

Mimosaceae (Fabaceae)

Borana: boria **Kamba:** kyundua, kiundua **Maa:** orperelong'o
Pokot: kukutwo, panan **Somali:** gisrip, gisrep **Tugen:**
kukutwo

Description: An open tree to 8 m high or more. **BARK:**
Brown, fissured. **LEAVES:** Bipinnately compound. **FLOWERS:**
In cream heads. **FRUIT:** A long, flat, brown pod.

Ecology: Found in India and Sri Lanka and in East Africa
south to north-eastern South Africa. Widespread in Kenya in
bushland, especially in red and sandy soils, 500-2,000 m.
Rainfall: 500-800 mm. Zones IV-V.

Uses: FOOD: Gum is edible (++) . Stems are used in the
preparation of soup (+++). Pieces are cut, sun dried and the
extract added to soup (Maasai). The soup is stirred vigorously

and served. At most, the pieces may be used three times. An important soup additive for the Maasai.

OTHER: A good source of fuelwood and charcoal (+++).

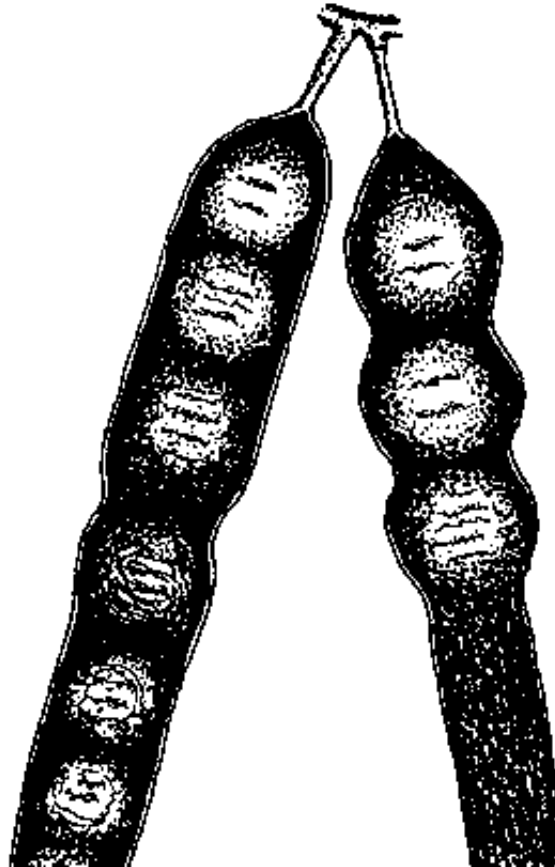
Status: Locally common.

Remarks: Two subspecies occur in Kenya:

- *ssp. amara* distinguished by its relatively fewer leaflets
- *ssp. sericocephala* extending to southern Africa.

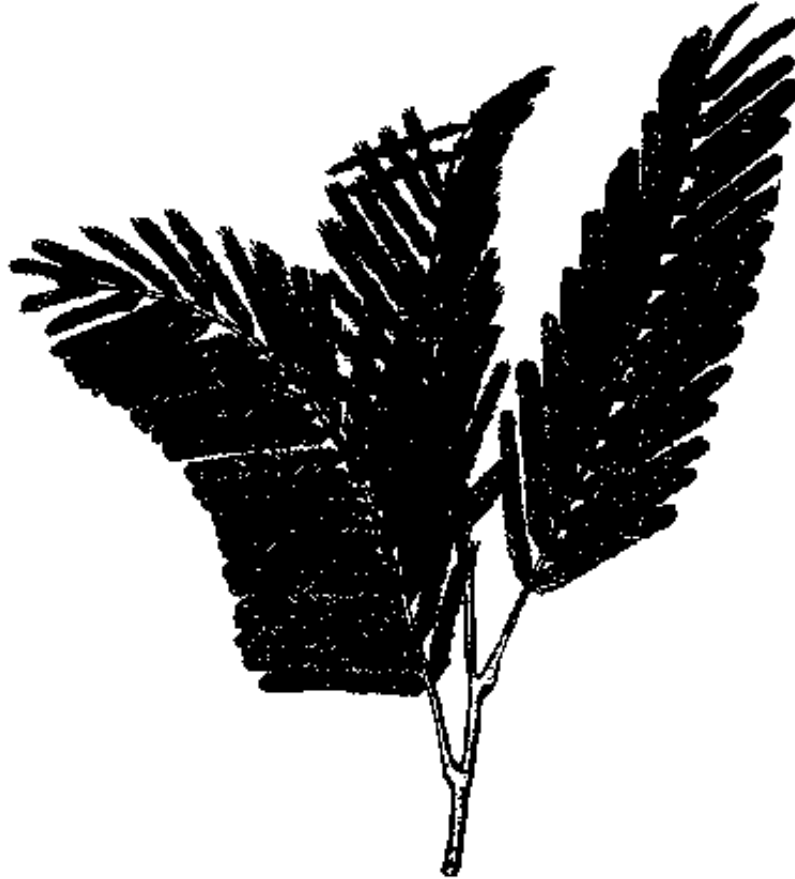
Many other plant species are used in the preparation of soup, especially by pastoral communities. The Maasai use at least 80 species in soup preparation. While some are used as appetizers and to keep fit, others have a drugging effect meant to make warriors fearless. Many have an emulsifying effect on meat fat. The majority are used by warriors (moran)

in the wilderness.

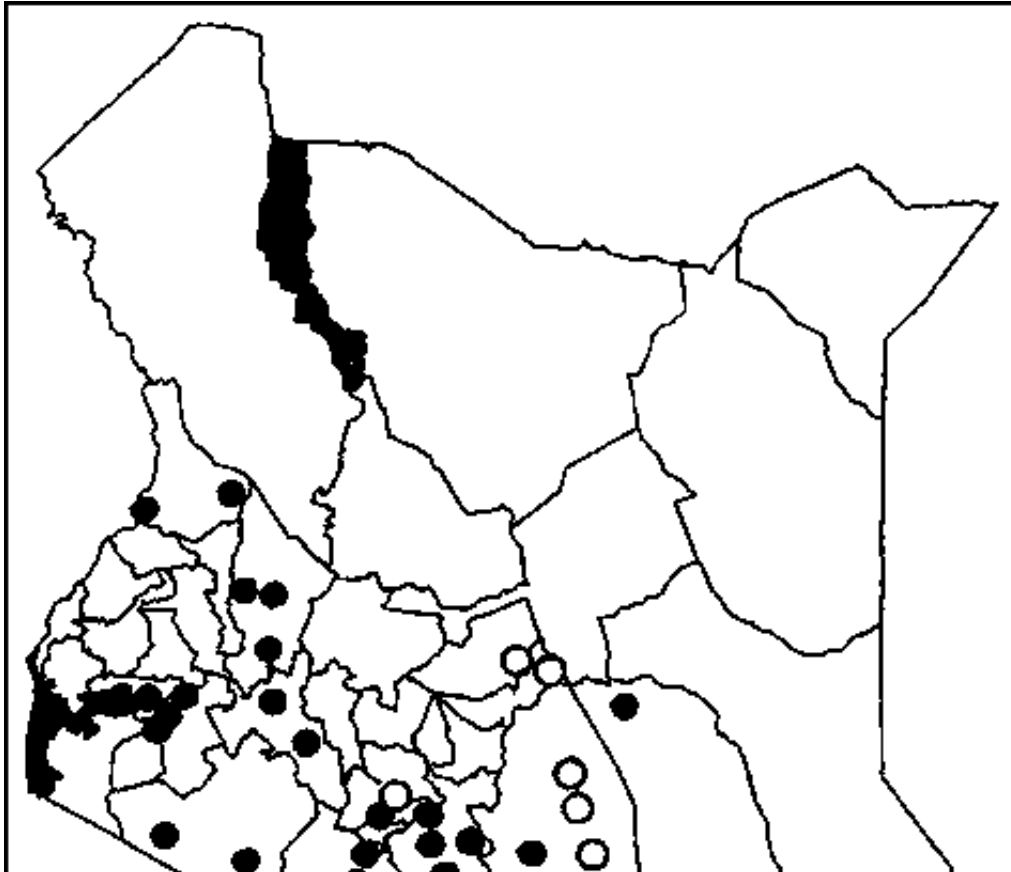


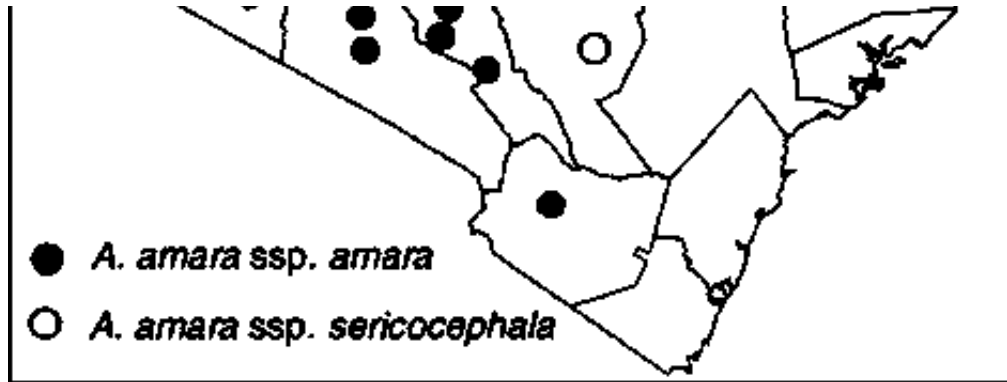


Figure



Figure





Figure

Amaranthus blitum L.*

Amaranthaceae

syn: *A. lividus* L.

English: purple amaranth **Kikuyu:** terere **Kipsigis:** mborochet, mborochik **Kisii:** emboga **Luhya:** omboga **Luhya**

(Bukusu): litoto **Luhya (Maragoli):** tsimboga **Luo:** ododo
Meru: rwoga

Description: A branched, erect or prostrate herb to 50 cm.
LEAVES: Long petioles and an ovate lamina to 10 cm long. The tip has a characteristic notch. **FLOWERS:** Green, borne in axillary and terminal spikes.

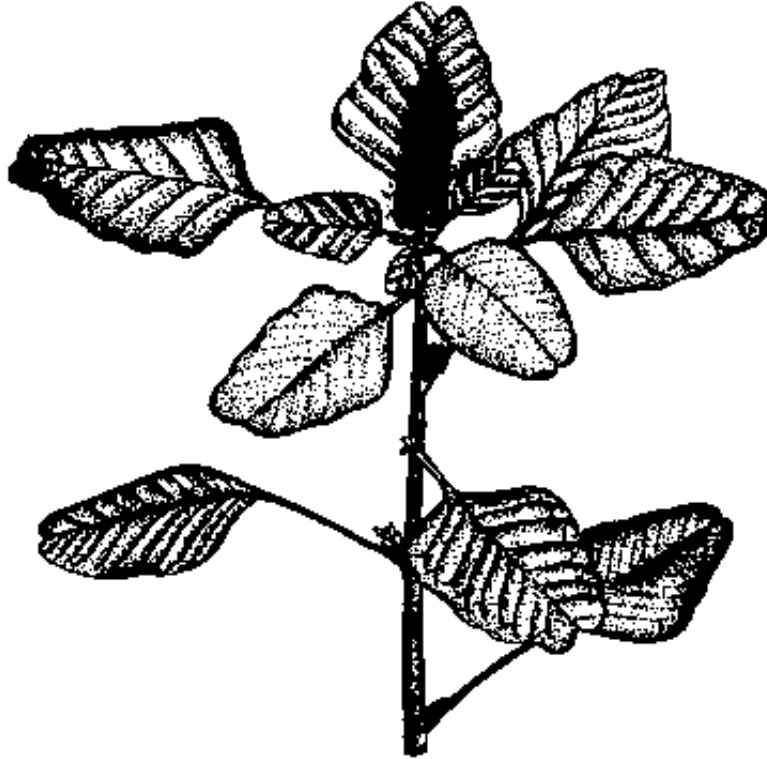
Ecology: Grows in tropical and subtropical parts of the world. This species is found in the central and western parts of Kenya, especially Kisii, Kericho, Bomet and Nandi Districts, in wet areas, on waste ground and in cultivated land, 800-2,400 m. Zones I-III.

Uses: FOOD: Leaves and young shoots used as a vegetable (+++) (Kikuyu, Nandi, Kipsigis, Marakwet, Luhya, Luo, Kisii). An important leafy vegetable for the Kisii and Kipsigis who cultivate it in kitchen gardens. **COMMERCIAL:** Sold in

Kericho, Kisii and Kisumu markets. Occasionally seen in Nairobi markets.

Remarks: Two subspecies are recognized by Townsend in *Flora of Tropical East Africa*:

- *ssp. lividus* (syn. *A. blitum*) is generally larger, erect with larger fruit and leaves.
- *ssp. polygonoides* is smaller and normally prostrate.

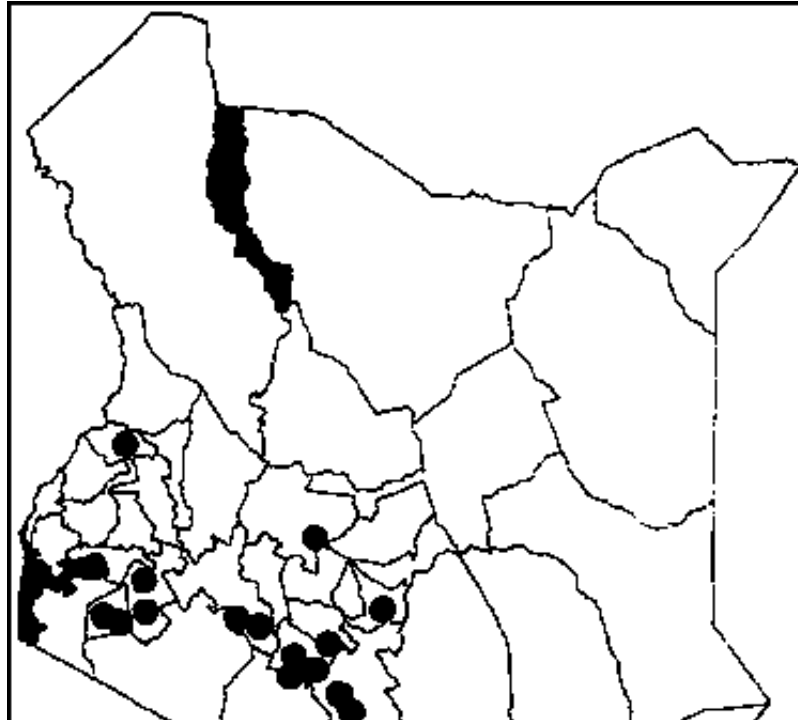


Figure





Figure





Figure

Amaranthus dubius Mart. ex Thell.*

Amaranthaceae

Digo: chiswenya **English:** amaranth **Giriama:** kiswenya, kiswenya-kithithe (small form) **Ilchamus:** raprapa, i-okuronit, i-okuroniti **Kamba:** w'oa, telele (Kitui), terere (Mwingi) **Kikuyu:** terere **Kipsigis:** kelichot **Kisii:** emboga **Luhya (Bukusu):** emboka, litoto **Luhya (Tachoni):** lidodo **Luo:** ododo, omboga **Maa:** nanyi, nyanyi **Marakwet:**

kipkanding'wa **Mbeere:** muterere **Pokot:** ptanya **Samburu:** nyoni, nterere, ntererei, mir **Swahili:** mchicha **Taita:** kichanya, kizenya **Tharaka:** terere

Description: An erect branched herb up to 1 m or more, resembling the spiny amaranth, *A. spinosus*, but without spines. Stems ridged. **LEAVES:** Simple, long petiolate, alternate, usually with an ovate lamina to 8 cm long, veins conspicuous underneath. **FLOWERS:** Borne in clusters, in the axils and in terminal branched heads or spikes. **FRUIT:** Covered by bracts and bracteoles which are the more visible structures of the flowering part. Seeds black, shiny.

Ecology: Grows in most tropical parts of the world and usually found in most sub-humid parts of Kenya below 2,000 m. A common herb in most towns in Kenya and commonly found on cultivated land, roadsides and flood plains. Cultivated a great deal in kitchen gardens in western Kenya and among the

Mijikenda of Coast Province. Zones I-V.

Uses: FOOD: Leaves and tender shoots are used as a vegetable (+++), sometimes cooked with more bitter vegetables such as *Cleome gynandra* (Luo, Siaya), black nightshade and *Launaea cornuta* (coast). This avoids the process of pouring out the water used for boiling the vegetables. *A. dubius* is a popular choice for improving the taste of many traditional leafy vegetables.

Season: Two weeks after the onset of the rainy seasons, April-September, November-January (coast).

Management: The mature inflorescence is squeezed between the palms to release the seeds which may be broadcast at the required site. Occasionally, weedy seedlings may be uprooted and planted at the required place (coast).

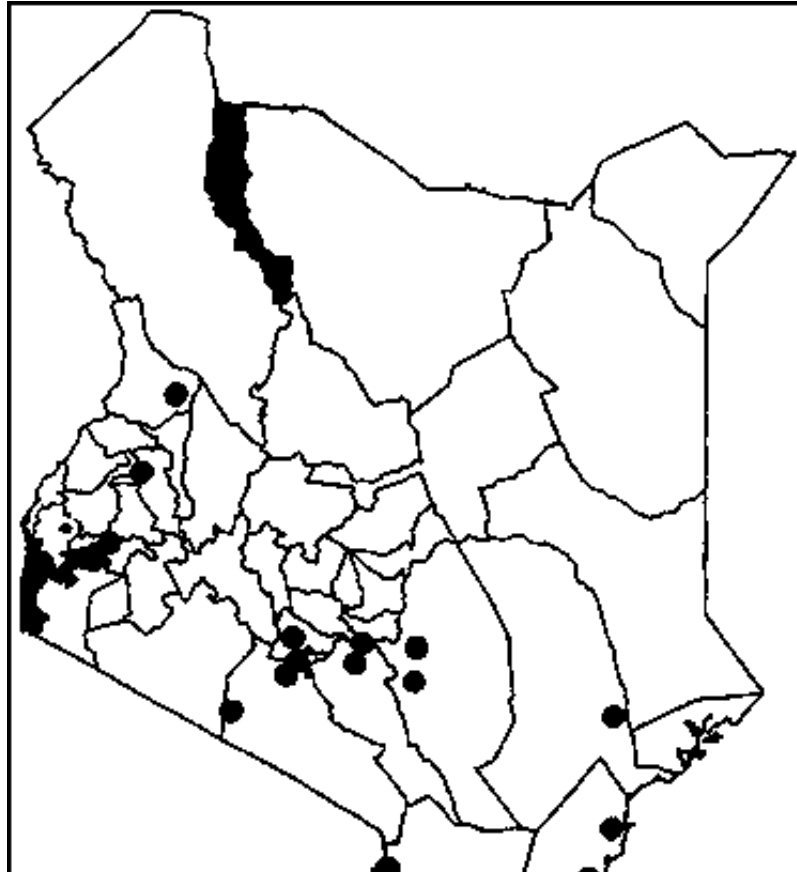
COMMERCIAL: Grown on a commercial scale along the Sabaki flood plains, in Kaloleni near Mombasa and in Wangige near Nairobi. Sold in Nairobi, Malindi, Mombasa, Siaya, Kisumu.

Remarks: *Amaranthus dubius* is believed to be of American origin. A more recently introduced large-leaved giant amaranth is believed to be a form of this species (Giriama: *kiswenya kibomu*). It grows much larger, the stems are thicker, leaves are larger and usually blotched purple. The inflorescence is large but seeds are smaller. This form is becoming more popular with farmers. Amaranths are among the most commonly used leafy vegetables in Kenya and most of Africa. Of the 60 or so species of *Amaranthus* in the world, at least 13 occur wild in Kenya. Many of these (probably with the exception of *A. thunbergii*, *A. sparganiocephalus* and *A. graecizans*) have been introduced from other parts of the world, especially the Americas and Asia. Because of their close

resemblance and the fact that many are only newcomers, they are often known by the same local names and used in the same manner. They are among the most nutritious leafy vegetables.



Figure





Figure

Amaranthus graecizans L.

Amaranthaceae

syn: *A. angustifolius* Lam., *A. silvestris* Vill., *A. parvulus* Peter

Digo: chiswenya **Embu:** rwoga **English:** amaranth, prostrate amaranth **Giriama:** logatsi **Ilchamus:** raprapa, lokuronit, lokuroniti **Kamba:** w'oa, woa, telele (Kitui), terere (north Kitui) **Kikuyu:** terere, terere wa gikuyu **Kipsigis:** kelichot **Luhya (Bukusu):** edodo, litoto **Luhya (Tachoni):** lidodo **Luo:** ombok-alikra, omboga **Maa:** nanyi, nyanyi, nyani, embeneyoi **Marakwet:** kipkanding'wa, kipiriak (plural)

Mbeere: muterere, muruoga **Meru:** rwoga ra kicuka **Pokot:** ptanya **Samburu:** mir, nyoni, nterere, ntererei **Somali:** dargu **Swahili:** mchicha, mchicha mwitu Taita: kizenya (Mbale), kichanya **Tharaka:** rwoga **Turkana:** ekiliton, lokiliton, louyeing'orok, adye

Description: An erect, decumbent or prostrate herb usually branched from the base and often less than 40 cm high.

LEAVES: On long petioles and with small lamina (about 4 cm).

FLOWERS: Green and borne in axillary clusters. **FRUIT:** Seeds tiny, smooth, shiny black.

Ecology: Found throughout most of Africa, warmer parts of Europe, tropical and subtropical Asia. The commonest amaranth species in the semi-arid and arid regions of Kenya but also grows in wetter regions on waste ground and as a weed of cultivation. Common on sand deposits along rivers, at roadsides and forest edges. It is most abundant where surface

run-off collects in semi-arid lands. It can grow in partially shaded areas under trees. Soils varied, mainly sand and sandy alluvium. Zones II-VII.

Uses: FOOD: The leaves and young tender shoots are used as a vegetable (+++). Later as the seeds mature it is advised to pick individual leaves as stray seeds in food feel like sand in the mouth. The vegetable is normally cooked and eaten with *ugali* or it may be cooked together with flour to a stuff known as *ngunzakutu* (Kamba) or *atap* (Turkana). Leaves may also be mashed with a mixture of maize and a pulse (Kikuyu, Kamba). A major drawback is that leaves of this species are small and collecting enough for a meal can take some time.

OTHER: Fodder (++) for all livestock.

Management: Seeds can be obtained from mature plants by rubbing the flower heads to release them. Passing a light

current of air through cleans them of other particles. The seeds may be broadcast soon after the onset of the rains. It can be intercropped with trees as it is shade-tolerant. In the wild, this amaranth sprouts easily soon after the onset of rains, grows fast, seeds and dries as fast, and hence its ability to survive in the arid lands. At maturity the plant sheds the small, black, shiny seeds.

Status: Common, especially in dry areas.

Remarks: Three subspecies have been recognized:

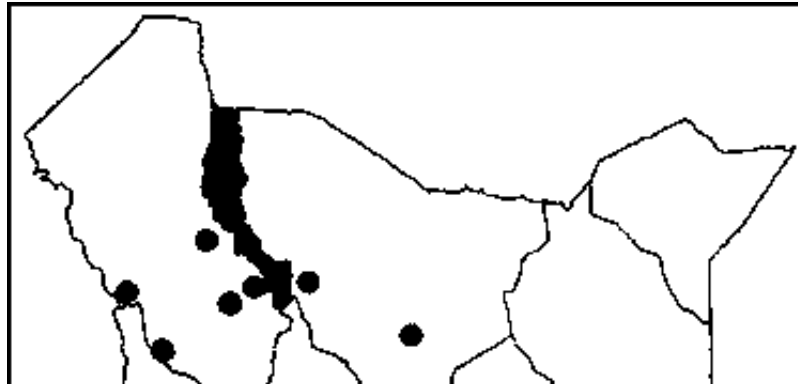
- *ssp. graecizans* (syn. *A. angustifolius* Lam.) with a narrow leaf blade and common in seasonally flooded areas,
- *ssp. silvestris* (syn. *A. silvestris* Vill.) with a broader leaf blade and more common than the former, and

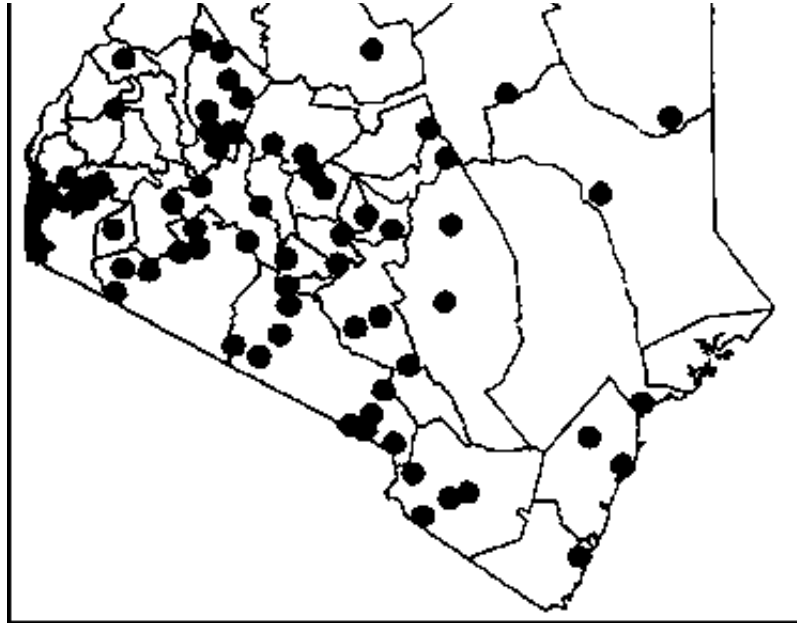
- *ssp. thellungianus* (Nevski) Gusev., a rare type, only occurring in Central Province.





Figure





Figure

Amaranthus hybridus* L.

Amaranthaceae

syn: *A. patulus* Bertol.

Chonyi: chiswenya, **English:** amaranth, Chinese spinach, spiny amaranth, spleen amaranth **Giriama:** kiswenya **Kamba:** w'oa, terere (Mwingi), telele-nene **Kambe:** chiswenya **Keiyo:** chepkerte, chepkerta **Kikuyu:** terere **Kipsigis:** cheptokdogan **Kisii:** emboga **Luhya (Bukusu):** litoto, liola, edodo, tsimboga **Luhya (Kisa):** tsimboka tsia navanyolo **Luhya (Marachi):** lidodo **Luhya:** tsimboga, edodo, litoto (plant) **Luhya (Tachoni):** litoto **Luo:** ododo, omboga, alikra **Maa:** enyaru-olmuaate, enyaru-nanyokie, nanyi, nyani **Marakwet:** chepkerte, chepkarta **Mbeere:** terere **Meru:** terere, rwoga **Sanya:** kiswenya **Somali:** dargo sagar, daargo-warabe **Swahili:** mchicha **Taita:** chanya (mbale) **Teso:** eboga

Description: An erect or prostrate branched herb usually 40-80 cm but occasionally attaining the height of a Mander, especially in cultivation. Stems green or tinted red, ridged.

LEAVES: Simple, alternate, green or tinted red with a lamina to 15 cm or more and a long petiole. **FLOWERS:** Borne in clusters in green, yellow, red or occasionally purple axillary and terminal spikes. **FRUITS:** Seeds shiny black or cream.

Ecology: Widespread in tropical and subtropical regions of the world and widely distributed in humid to sub-humid areas in Kenya, mainly as a weed of cultivation, in degraded land and built-up areas, along rivers, roadsides and forest edges, 900-2,600 m. Commonest in the middle altitudes and highlands (1,400-2,400 m). Zones I-V.

Uses: FOOD: Leaves and young shoots used as a vegetable (+++). This is the commonest and the most widely used species in the wetter regions. Much of it is picked from the wild or occasionally it is spared when found growing as a weed. In some parts of Kenya, especially in the west, the species is cultivated in small home gardens. The vegetable is

very tasty and its large leaves make it a very popular amaranth.

COMMERCIAL: Leaves, and occasionally seeds, sold in Nairobi and some other markets throughout the country.

Season: Rainy season and soon thereafter.

Management: *A. hybridus* grows easily from the small hard black seeds. Prepare the ground to loosen the soil and to get rid of weeds. The seeds may be sowed by broadcasting or in lines made at 30 cm intervals. As the seeds are tiny, they can be mixed with sand to ensure a more even distribution. Seeds germinate after a few days. Thin out the plants leaving the appropriate distance between neighbouring plants. These will be your first vegetables! Weed as often as necessary. Seed harvesting: At maturity, the flowering head will start losing its natural green colour (or whichever was the original colour).

Mature seeds are black, while immature ones are red or pale. Whole heads may be cut, dried in the sun on a polythene sheet and beaten with light sticks to release the seeds. Rubbing between the palms may release more seeds. The seeds and chaff are then winnowed on a tray.

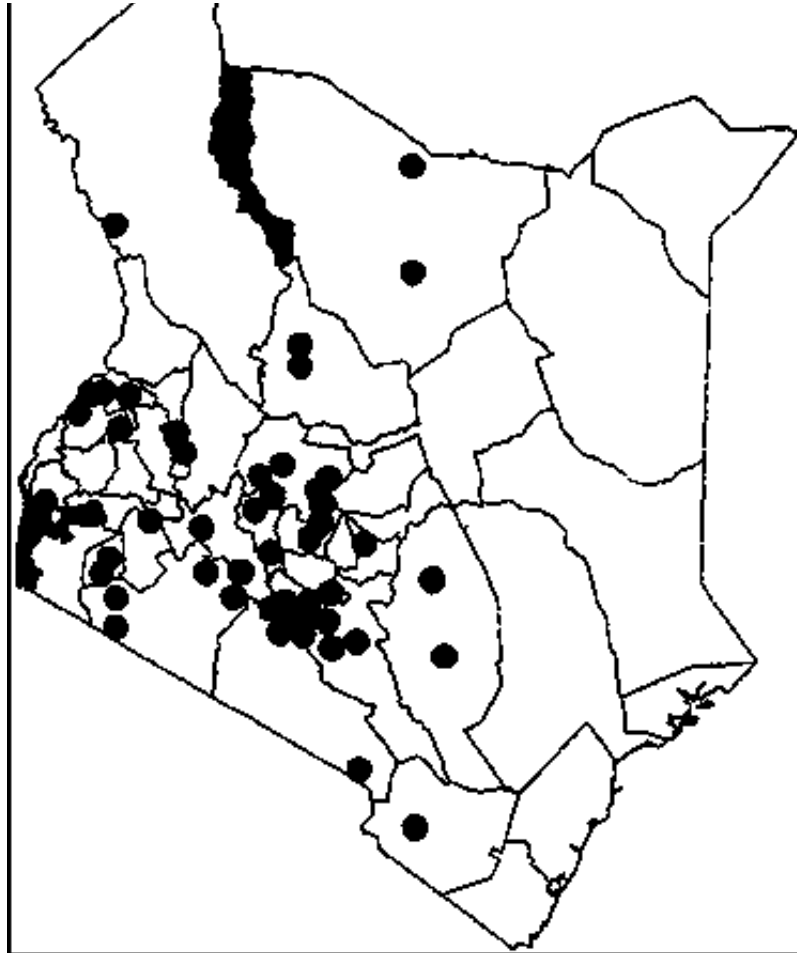
Status: Very common.





Figure





Figure

Remarks: Two related species are found in Kenya:

- *A. hypochondriacus* L. (syn. *A. patulus* Bertol.) has a prominent terminal spike, a more "spiny" look and often has a prostrate habit. It is more common in the higher altitudes.
- *A. cruentus* L. (syn. *A. paniculatus* L.) has a more branched flowering head, with a less "spiny" appearance. It is not as common at high altitudes. The red form of this species is also cultivated as an ornamental. These two species are often treated as subspecies of *A. hybridus*. Ethnobotanical surveys have confirmed that this is one of the introduced amaranth species in Kenya. *A. hybridus* is of Central American

19/10/2011

meister12.htm

origin.



Amaranthus cruentus

Amaranthus sparganiocephalus Thell.

Amaranthaceae

Maa: nanyi, nyani **Samburu:** nyoni **Somali:** rasso **Turkana:** edeyea, loyeing'orok, louyeing'orok

Description: A spreading prostrate or erect herb to about 50 cm, often branching near the ground forming a dense mass.
LEAVES: Greenish brown, with long petioles and a lamina of about 5 cm long. **FLOWERS:** Borne in sessile axillary clusters.

Ecology: North-eastern Africa and the Arabian peninsula. In Kenya it grows in abandoned pastoral settlements in semi-arid areas, especially in Kajiado, Samburu, Turkana and Marsabit. 100-1,600 m. Zones V-VII.

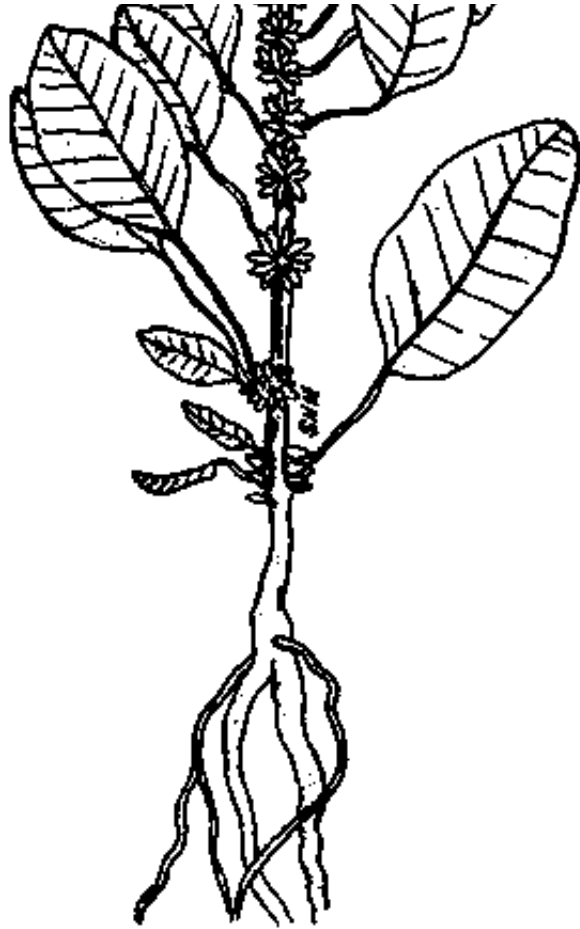
Uses: FOOD: Picked and cooked as a leafy vegetable (+) (Maasai, Samburu, Turkana, Pokot, Somali). This plant sprouts quickly soon after rain. It is picked along with *A. graecizans* by pastoral communities in the semi-arid areas of Kenya.

Management: Propagated by seeds.

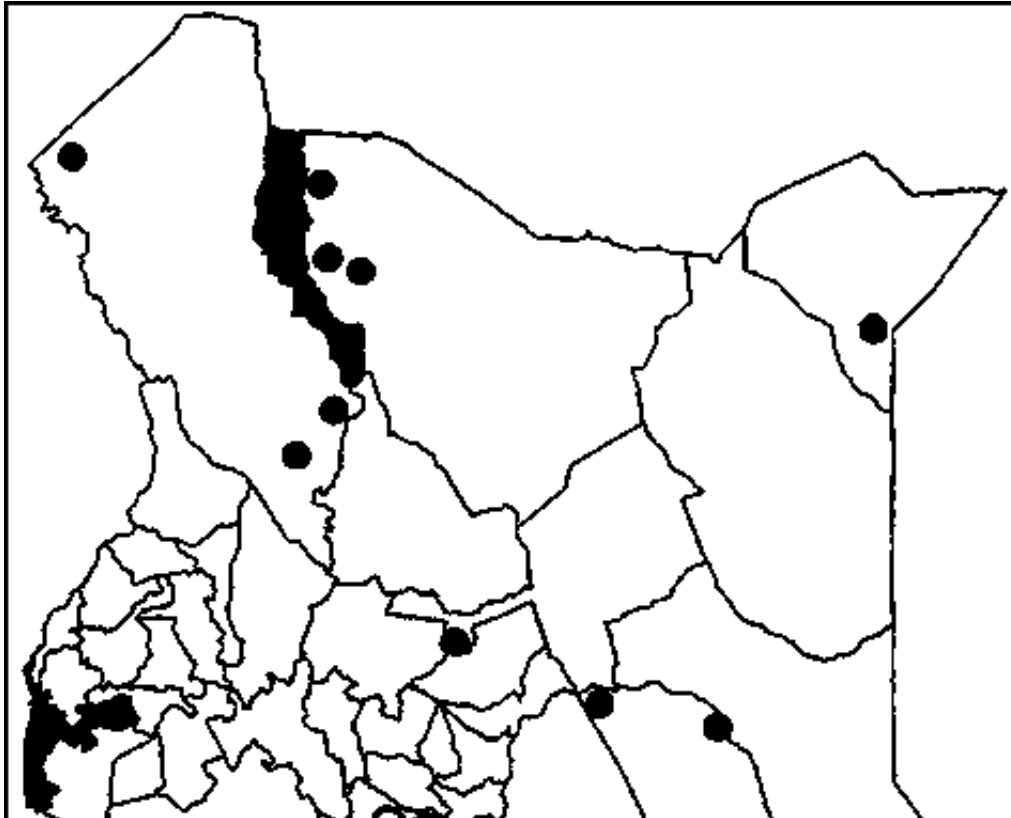
Status: Uncommon.

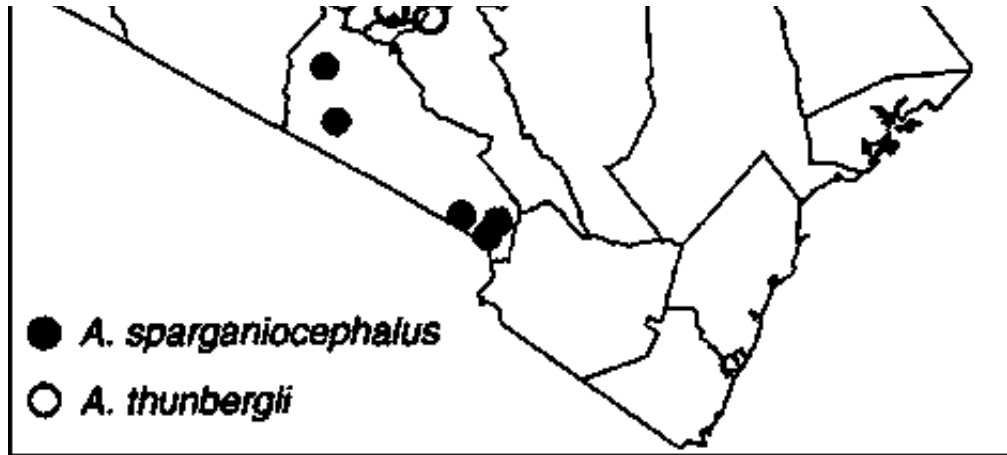
Remarks: The species is closely associated with animal enclosures in Maasai land. It is often found along with *A. graecizans* growing on top of Maasai traditional houses during the rainy season.





Figure





Figure

Amaranthus spinosus L.*

Amaranthaceae

English: careless weed, prickly amaranth, spiny amaranth

Giriama: kiswenya-cha-miya **Ilchamus:** Ikamasei **Kikuyu:** terere-wa-ng'ombe, terere wa kigombe **Kipsigis:** mborochet

Luo: ododo **Mbeere:** macica **Pokot:** sikukuu, chepkuratian
Samburu: nairepirepi **Sanya:** kiswenya-korati **Turkana:**
lookwa, epespes the rest of the local names as for *A. hybridus*.

Description: A stout, erect (occasionally decumbent) herb about 1 m or more with green or red and usually branched stems. **LEAVES:** Have a long petiole and an ovate lamina to 10 cm or more. **FLOWERS:** Spiny and green, forming axillary clusters and in terminal inflorescences.

Ecology: Grows in tropical and subtropical parts of the world, occasionally in temperate regions. The species is widely distributed in Kenya in most areas below 1,900 m. A common plant near livestock enclosures (hence the Kikuyu name for it), in abandoned settlements, along streams, at roadsides, in open grassland and as a weed of cultivation. It is the scourge of farmers at maturity. Zones I-VI.

Uses: FOOD: The species is seldom used as a leafy vegetable (+), picked mostly while still young before the spines have hardened and mainly by communities in the Coast, Nyanza and Western Provinces of Kenya as well as the central part of Rift Valley. The species is not much liked and its use is declining. This species is native of tropical America but was probably introduced to Kenya earlier than *A. hybridus*.

COMMERCIAL: Leaves occasionally sold, especially in Nyanza and western Kenya.

Status: Common.

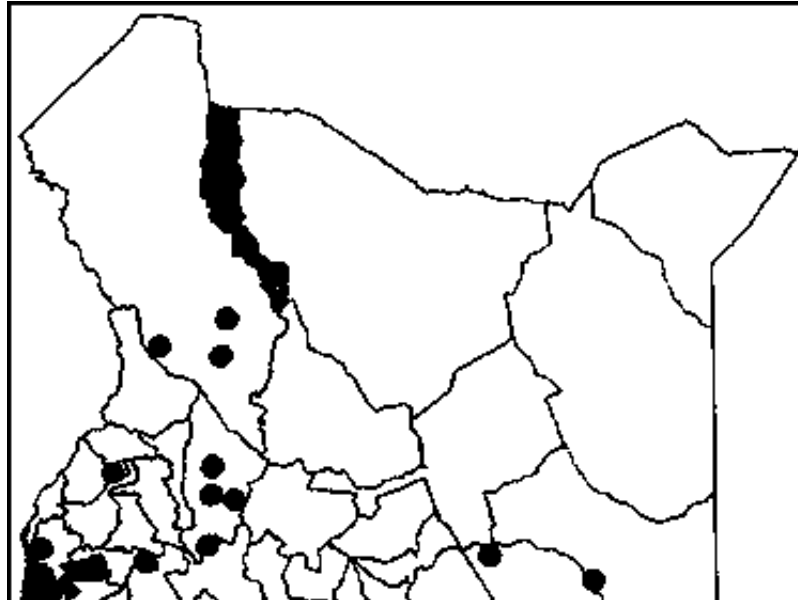
Remarks: This species may easily be confused with *A. hybridus* and *A. dubius*, but the red stems and spiny nature of *A. spinosus* are distinguishing features.







Figure





Figure

Annona senegalensis Pers. ssp. senegalensis

Annonaceae

syn: *A. chrysophylla* Bojer

Boni: malamoto, mlamote **Chonyi:** mtakuma **Digo:** mbokwe

Embu: matimoko (fruits) mutimoko (tree) **English:** wild

custard apple, wild soursop, **Giriama:** mbokwe, mutakuma, mtomoko-tsaka **Kamba:** makulo, mutomoko, makulo **Kambe:** mbokwe **Kisii:** omokera **Luhya (Bukusu):** kumufwora **Luhya:** muvulu **Luhya (Tachoni):** omfwora (tree), emifwora (fruit) **Luo:** obolo, nyabolo **Mbeere:** mukumuti, mumuu **Sabaot:** marungiyandet **Sanya:** mtomoko-badha, mthonoko-bada **Swahili:** mtomoko mwitu, mbokwe, mtope tope, mtokuu, sope tope, mtonkwe, mchekwa **Teso:** ebwolo

Description: A spreading shrub or small tree to 6 m. **BARK:** White grey. **LEAVES:** Broadly ovate, large, pale and softly hairy beneath. **FLOWERS:** Green-yellow to cream with numerous stamens. **FRUIT:** To 5 cm in diameter, oval or conical, formed from several carpels fusing together. Green when young, turning yellow to orange on ripening. Seeds smooth, shiny brown.

Ecology: Widespread in tropical Africa, from West Africa to

the Sudan and south to South Africa. Grows in the coastal zone, Kitui, Kisii, and Homa Bay Districts of Kenya in bushed grassland, especially humid, riverine woodland, coastal bushed grassland and forests, 0-1,750 m. Soils: deep sandy, alluvial or light red loam. Zones II-IV.

Uses: FOOD: Ripe fruit edible raw (+++). It is sweet with an acid taste and aroma of pineapple. The fruit cover may be eaten but is usually discarded together with the seeds. Bark chewed (Luo).

MEDICINAL: Roots used as cure for stomach-ache, vomiting and diarrhoea (Sabaot).

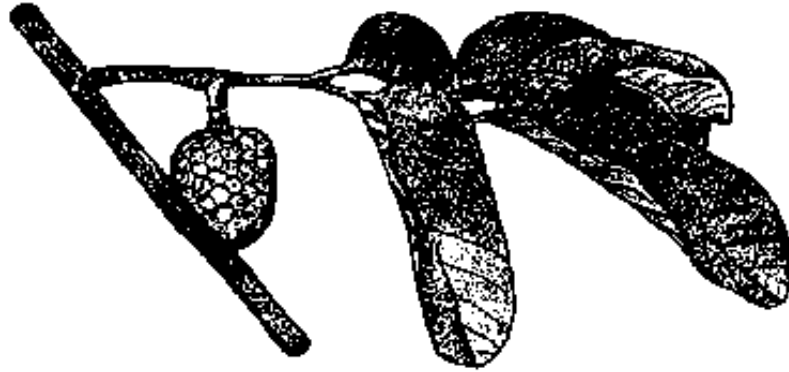
OTHER: Bark source of a brown dye. Fuelwood (++) (wood is soft).

Season: Fruits in August (Kitui).

Management: Propagated by seeds. Coppices well.

Status: Occasional.

Remarks: The species is related to the cherimoya (*A. cherimola*), sugar apple or sweetsop (*A. squamosa*) and to the custard apple (*A. reticulata*), generally known as *mtomoko* (Swahili), cultivated for their delicious fruit and commonly sold in Kenyan markets. A related but more shrubby species, *A. stenophylla* Engl. & Diels, found in southern Africa, has edible fruit too.



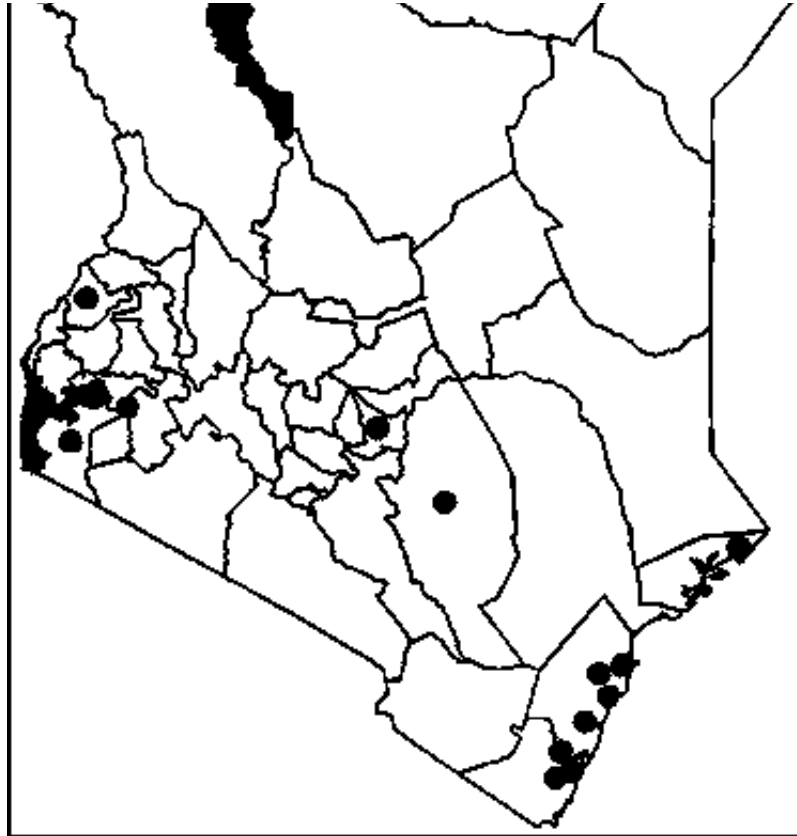
Figure





Figure





Figure

Antidesma venosum Tul.

Euphorbiaceae

syn: *A. bifrons* Tul., *A. boivinianum* Baill.

Boni: ngogaje, mulilago **Chonyi:** musimbiji **Digo:** mzungatchango, kihuro, chikuro **Giriama:** mhirondo, musimbiji **Kamba:** mukala (Kitui), kitelanthia, kitolanthia (Makueni), ngala, ndelanthia (fruits) **Kambe:** musimbiji **Kikuyu:** mukondwe, muhoigwa **Luhya (Bukusu):** kumukhakasu, bukhakasu (fruit) Luo: oguambula, oguombula **Malakote:** musigisigi **Mbeere:** mukanga-arithi, muthithio, muthethuka **Meru:** mutonye **Pokomo:** Musasusi **Swahili:** mbua nono, mbua ya nuno msasuzi, karacha, mziwaziwa, mwinamia ziwa, msuaga

Description: Shrub or, less often, a small tree to 6 m tall,

with scattered branches. **BARK:** Rough. **LEAVES:** Large, elliptic, densely hairy and light green to reddish brown beneath. **FLOWERS:** Dioecious, yellow-green in axillary and terminal spikes. Inflorescence often galled, drooping. **FRUITS:** Numerous in bunches, light green, turning red to reddish purple to almost black on ripening. **Ecology:** Widespread in Africa from Gabon east to Ethiopia and south to Namibia and South Africa and Madagascar. In Kenya, in Boni forest, Thui Hill (Makueni), Kitui hills, Nzaui hills (Makueni), Mavuria (Embu), Central, Coast and Nyanza Provinces, in bushed grassland, coastal bushland, forest edges, riverine bushland, 0-1,900 m. Rare in Central and Nyanza Provinces. Mainly on rocky hill slopes with light clay soil or sandy loam. Rainfall: about 850-1,000 mm. Zones III-IV.

Uses: FOOD: Fruits are edible (++) . They have a sweet, slightly sour taste. Ripe fruits are small but with a lot of reddish purple juice. Seeds are discarded.

MEDICINAL: Leaves, twigs and roots used to treat abdominal pains.

OTHER: Fruits eaten by some species of birds. Fruits used by children as dye or ink (Makueni). The writing fades slightly from blue-purple to light reddish purple after some time. Ornamental, fuelwood.

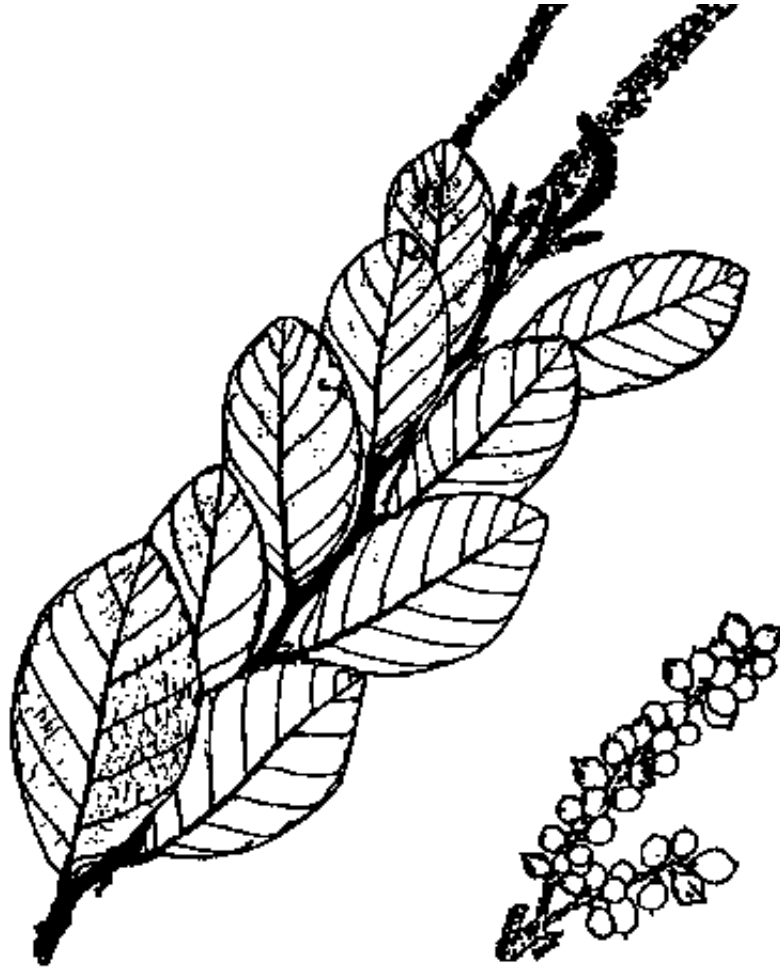
Season: Fruits in March (Makueni). A few plants may be in fruit in June or at other times.

Management: Propagated by seeds.

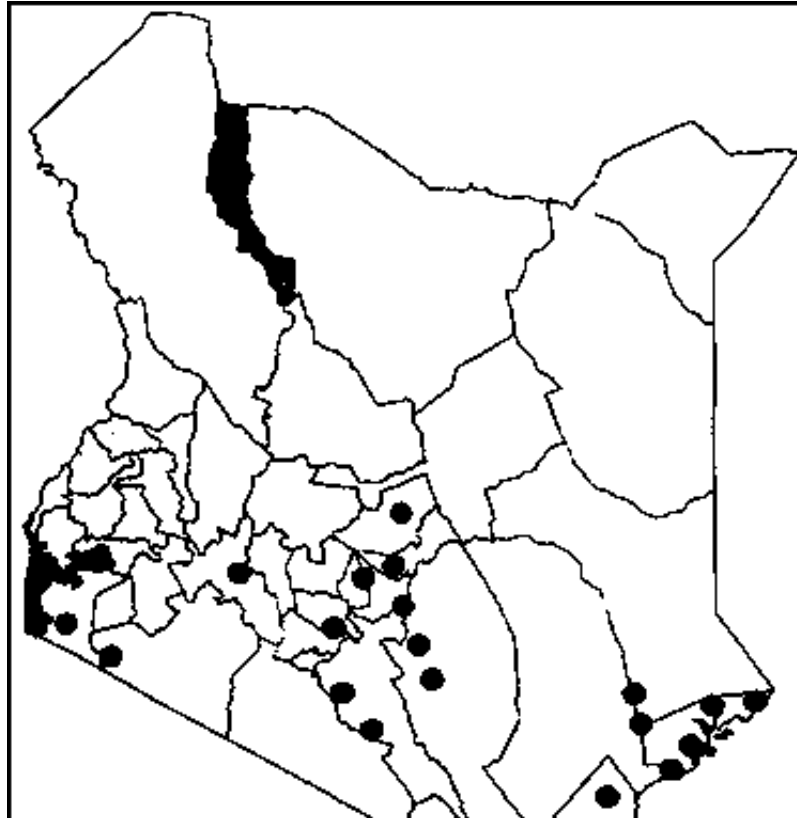
Status: Locally common, especially in the coastal region, Kitui hills and Thui Hill (Makueni). Generally uncommon.

Remarks: Roots said to be toxic.





Figure





Figure

***Asystasia gangetica* (L.) T. Anders.**

Acanthaceae

Chonyi: tsalakushe **Digo:** futswe, tala-kushe, futsure

Giriana: thalakushe, talakushe, burutula, vongonya **Kambe:**
talakusha **Kipsigis:** turkwot **Luo:** atipa **Maa:** gosida, enkosida

Sanya: thalakushe **Swahili:** fuchwe, mtikini

Description: A scrambling, prostrate or erect weak-stemmed herb 45-100 cm high. **LEAVES:** Dark green up to 8 cm long by 5 cm, broadly ovate, base rounded or heart shaped, apex

narrow. **FLOWERS:** Pink, corolla lip purple, borne on one side of a long slender inflorescence. **FRUIT:** A light brown dehiscent capsule.

Ecology: Widely distributed in most of tropical Africa. Mainly in the coastal region and western Kenya. Not recorded in northern Kenya. Found in forests, at forest edges and disturbed areas, 0-1,900 m. Zones I-III.

Uses: FOOD: Leaves used as a vegetable (++) (Digo, Giriama, Luo, Luhya). Cooking time is normally brief (Mijikenda). Also used as a vegetable in southern Africa.

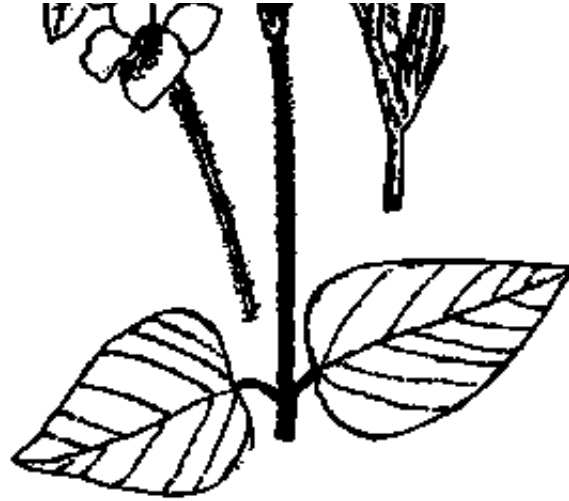
OTHER: Browsed by stock.

Management: Propagated by seeds.

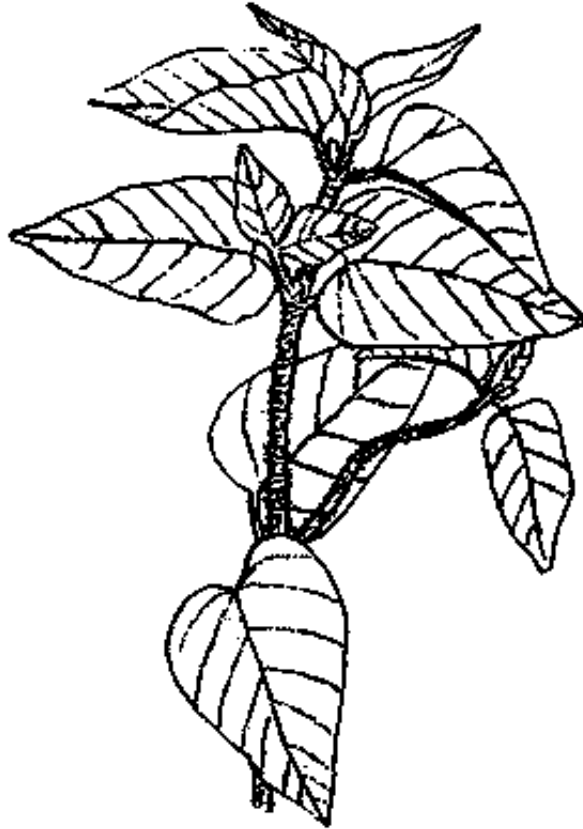
Status: Locally common.

Remarks: An important vegetable among the Mijikenda, mainly used for mixing with other leafy vegetables. Notable mixtures are with any of the following vegetables: *Corchorus olitorius* (*vombo*), pumpkin leaves (*mhango*), cassava (*Manihot esculenta*) leaves (*mpea*), *Launaea cornuta* (*mtsunga*), sweet potato (*mabwe*), cocoyam (*maburu*), cowpea and okra (*mabenda*). The cassava leaves have to be pounded in a mortar before use.

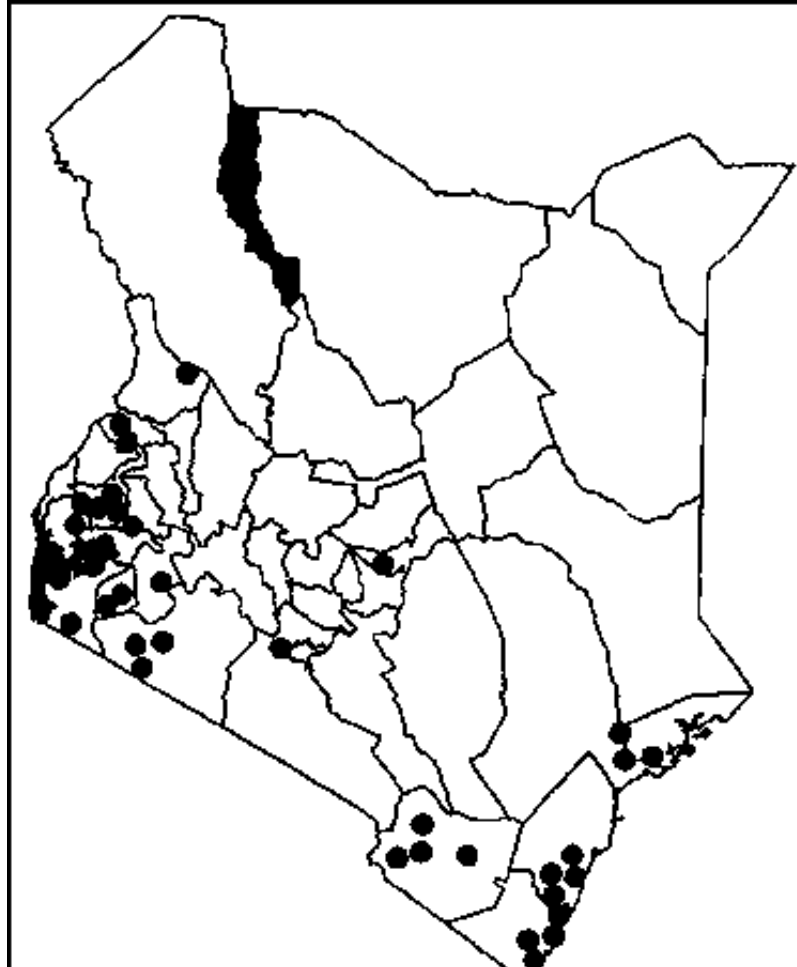




Figure



Figure



Figure

***Asystasia mysorensis* (Roth) T. Anders.**

Acanthaceae

syn: *Asystasia schimperi* T. Anders.

Kikuyu: muhika-naihu **Luhya:** kisuvu (Kakamega) **Luhya:** esidiba, nyag'ori **Luhya (Samia):** esidiba **Luhya (Bukusu):** sitipa (plant) **Luhya (Tachoni):** esitipa **Luo:** atipa **Mbeere:** karimi-ka-nthia **Pokot:** orongwo **Teso:** esidiba

Description: A small erect herb usually 30-75 cm high.

LEAVES: Ovate or elliptic, to 10 cm long. **FLOWERS:** White, lip often spotted green with brown streaks, borne on a short, densely bracted terminal inflorescence. **FRUIT:** A dehiscent

yellowish brown capsule narrowing abruptly at the base.

Ecology: Widely distributed in Kenya and also in other parts of eastern Africa, i.e. Uganda, Tanzania, Ethiopia and Somalia. Very common in Nyanza and Western Provinces and in Nairobi, 500-1,900 m; commonest between 1,200 and 1,700 m. Very common in disturbed areas, on roadsides, towns, grassland and found as a weed in gardens, especially on sandy and light clay soils. Zones II-V.

Uses: FOOD: Cooked and eaten as a vegetable (+++) (Luhya, Luo, Teso, Kikuyu, Mbeere, Giriama, Digo, Pokot). Normally cooked with leaves of cowpeas or spider herb *Cleome gynandra* (Luo). Said to be good for digestion (Siaya).

COMMERCIAL: Occasionally sold in some markets in Nyanza and Western Provinces.

Management: Propagated by seeds.

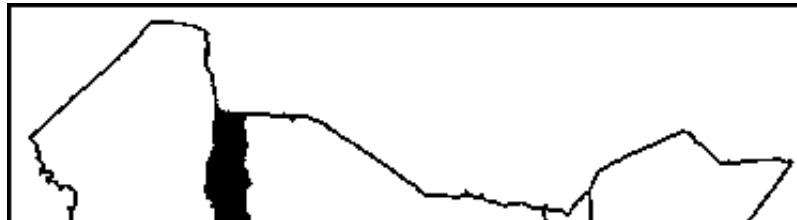
Season: Vegetable available during the rainy season and soon after.

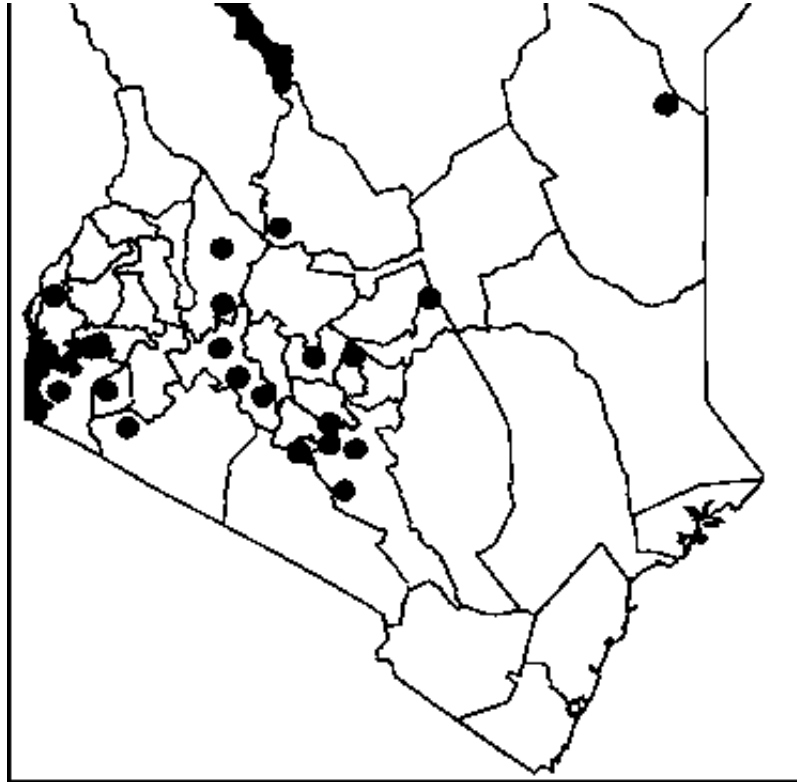
Status: Locally very common.





Figure





Figure

Azanza garckeana (F. Hoffm.) Exell & Hillcoat

Malvaceae

Embu: muto, matoo **English:** tree hibiscus **Kamba:** mutoo
Maa: olmotoo **Mbeere:** mutoo **Meru:** matoo (plural) **Somali:**
baamiya **Swahili:** nduwe, muwatata

Description: Shrub or tree to 8 m high. Crown light, spreading or occasionally narrow and high. **BARK:** Fissured, grey. **LEAVES:** Large, broad, rough, divided into 3-5 shallow lobes, petioles long. **FLOWERS:** Large, yellow, with a red or purple centre. **FRUIT:** To 5 cm across, light green, velvety hairy, with a clasping calyx, splitting into five valves on ripening. Seeds dark grey (almost black) and covered with woolly hairs.

Ecology: The only *Azanza* species found in Africa, from

eastern to South Africa. Very common in Machakos and Kitui Districts in open bushland and woodland. Common in *Combretum-Terminalia* bushland, 500-1,500 m. Soils: sandy or red clay. Rainfall: 600-800 mm. Zones III-V.

Uses: FOOD: Ripe fruits edible and very sweet (+++). Valves are chewed, the gelatinous sweet extract is swallowed and the fibrous remains discarded after chewing. Occasionally stored for up to a month without losing sweetness. Hard dry ones eaten too.

MEDICINAL: Used for coughs (Makueni). Stems and leaves pounded and extract taken against liver problems (Kitui).

OTHER: Fuelwood (+++), shade (++). Fruit juice used as a lubricant for toy wheels by boys (Makueni). Wood strong, finishing smooth and used in carvings, mortars and pestles, wooden spoons, yokes, handles for axes and in the

construction of traditional tables for drying utensils (Kamba, Mbeere). The centre poles in huts are usually of this plant (Kitui). The heartwood from some types is said to be very hard and resistant to attack by termites and other insects, hence used for combs and carvings (Kitui).

Season: Flowers in November-December (Kitui). Fruits in August-September and are spoilt by November rains (Kitui). Note: Fruits ripening said to coincide with months of food shortage in Kitui Central, and so an important famine food.

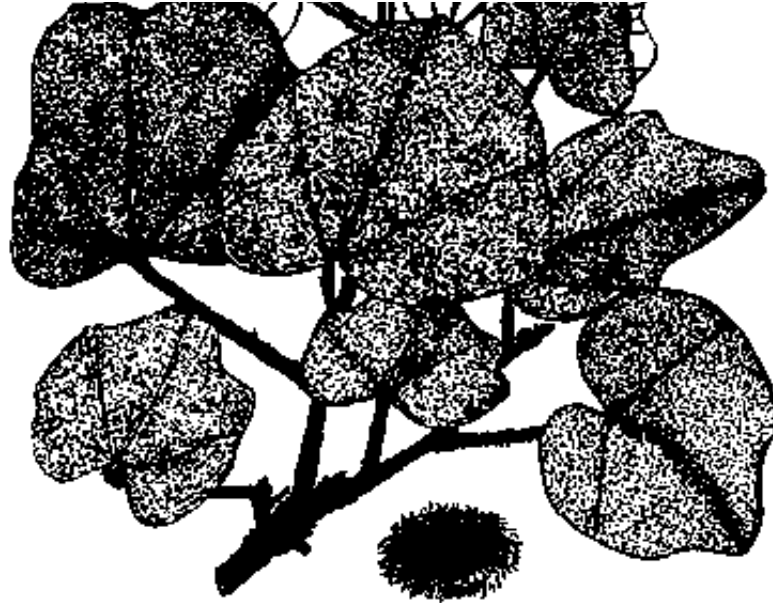
Management: Propagated by seeds, direct sowing. Planted in crop land as well as near homes as an ornamental. Prune lower branches to give it a good shape.

Status: May be locally common.

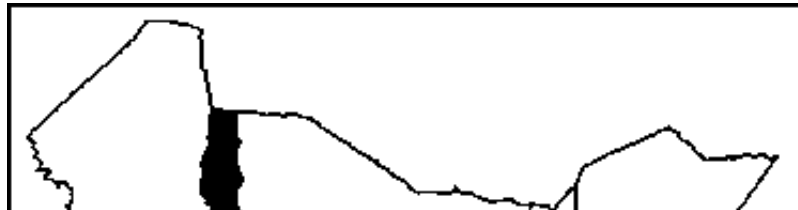
Remarks: An important fruit plant among the Kamba,

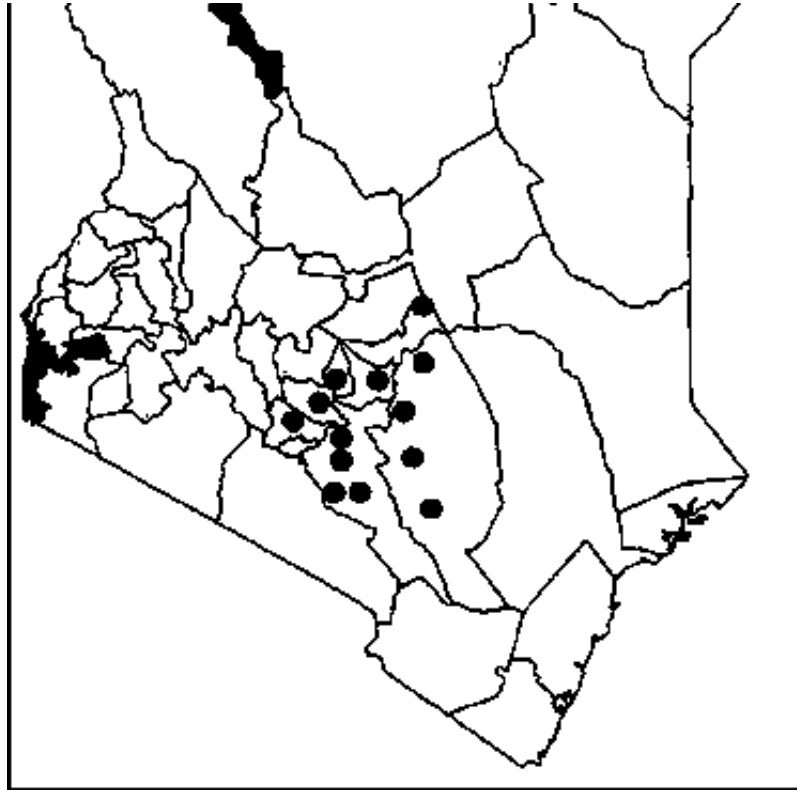
especially in times of famine, hence the saying "*Mutumia aleele muthoni kulea umutwiiya itoo*", meaning a father recalled his daughter from in-laws when they refused to give him this fruit during his visit. Fruits attract the cotton-boll stainer, hence not a suitable tree near cotton fields.





Figure





Figure

Balanites aegyptiaca (L.) Del.

Balanitaceae

Borana: baddan **Digo:** mwambangoma **English:** desert date
Gabra: baddana **Ilchamus:** lowei, Iowa Kamba: mulului, kilului **Kambe:** mkonga **Keiyo:** ng'osonaik, ng'oswet, ng'osyet (fruit) **Kipsigis:** ng'oswet **Luo:** otho, othoo **Maa:** olokwai, ilokwa (fruits), oIng'oswa, osaragi **Malakote:** mubadana **Marakwet:** tuyun, tuyunwo (plural) **Mbeere:** mububua **Orma:** baddan **Pokot:** tuyunwo **Sabaot:** chuuandet **Samburu:** lowvai, lowwai **Somali:** kullan (Tana River) **Swahili:** mjunju, mchunju **Taita:** kiwowa **Teso:** echomai **Tharaka:** mubuubua **Tugen:** ngonswo, ngoswa **Turkana:** eroronyit

Description: A much-branched spiny shrub or tree up to 10 m high. Crown rounded, dense (but still can be seen through,

cf. *B. glabra* which has a more dense crown and long stout branchlets). **BARK:** Trunk grey, deeply fissured longitudinally. Branchlets green, with (or without) long straight green spines (up to 10 cm). **LEAVES:** With a conspicuous petiole to 2 cm long, two leaflets, usually small, greyish green, normally shed in severe drought. **FLOWERS:** Small, greenish yellow, in leaf axils. **FRUITS:** Ellipsoid, up to 4 cm long, green. Ripe fruit brown or pale brown with a brittle coat enclosing a brown or brown green sticky pulp. Seed a hard stone.

Ecology: An important tree found from West and North Africa south to Zimbabwe and Angola from arid and semi-arid regions to sub-humid savannah. Found in many parts of Kenya, e.g. in Lambwe valley and Kaputei plains, but rare in the coastal zone. Pfound at 250-2,000 m in bushland and wooded grassland. A common tree in open grassland with black-cotton soil. Soils: Mainly red and black-cotton clay. Zones IV-VI.

Uses: FOOD: Ripe fruit is edible (++). The brown fruit shell, which is readily detached from the pulp, is removed. The brown pulp is sucked and the seed discarded. It has a sweet taste, rather bitter nearer the seed. Young leaves and tender shoots are used as a vegetable (Pokot, Turkana, Tugen, Marakwet, Keiyo, Ilchamus). The vegetable is boiled (water may be changed), pounded then fried or mixed with fat (Pokot, Marakwet). Seeds (with shell) or cotyledons (shell removed) are boiled for 2-3 hours and the bean-like cotyledons eaten (Pokot, Tugen, Marakwet). Gum is edible (Maasai). Elsewhere the seeds are a source of oil.

MEDICINAL: Decoction of roots is used for the treatment of malaria (Pokot). Roots boiled in soup used for oedema (*sir*) and stomach pains (Pokot). Roots are used as an emetic (Pokot). Bark infusion used to treat heartburn (Machakos).

OTHER: Fuelwood, charcoal (+++). Wood hard, durable,

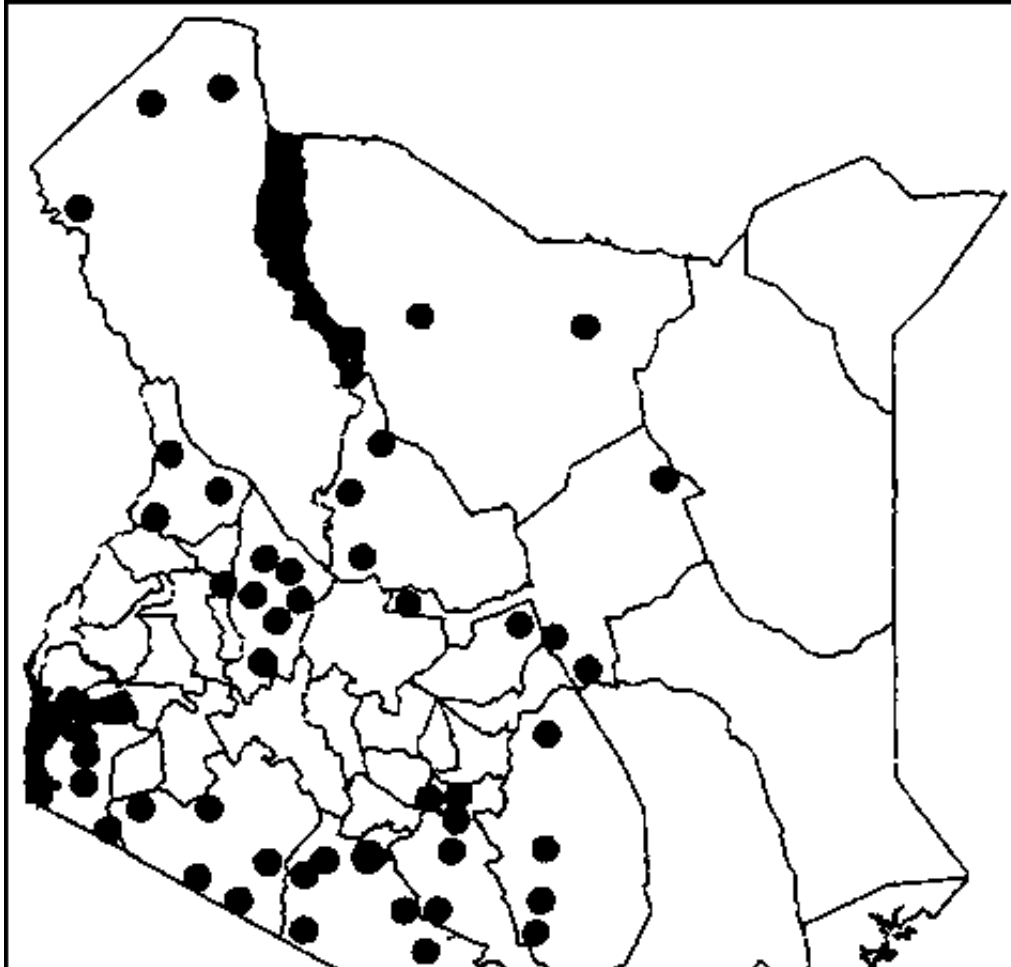
worked easily and made into yokes, wooden spoons, pestles, mortars, handles, stools, combs. Resin from stems used to stick feathers on to arrow shafts (Pokot, Turkana) and spear heads on to shafts (Pokot, Maasai, Turkana, Kipsigis), and repair cracks in tool handles, arrows, etc. (Turkana, Pokot). Branches used for fencing. Bark used as fish poison. Animal fodder (++)). Elsewhere fruits are used as poison to kill some stages of the bilharzia fluke in water. Even a few are effective. Activity has been reported in other *Balanites* species, and *B. maughamii* of southern Africa, with forked spines, is reportedly even more potent.

CULTURAL/BELIEFS: Fire made using this tree used to warm beer gourds for elders (Mbeere).





Figure





Figure

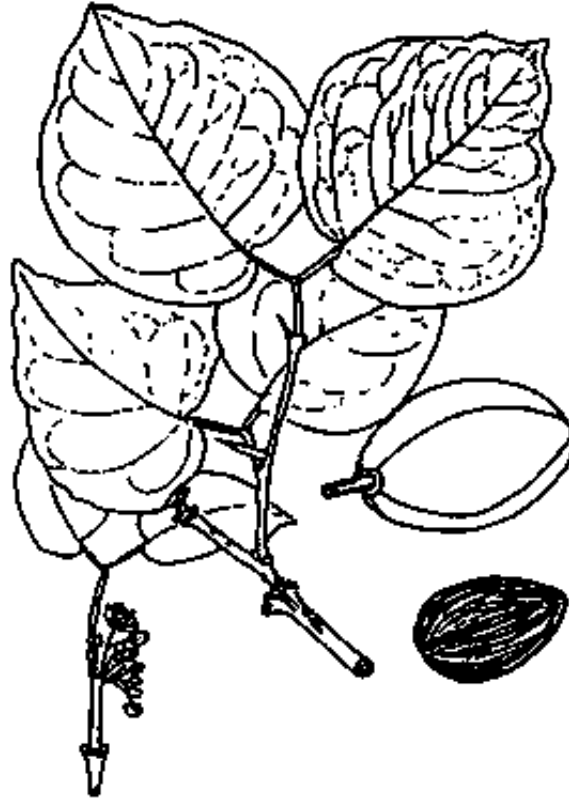
Season: Fresh new leaves in July-August (West Pokot). Fruits in March-April (Machakos, Kitui, Kajiado).

Management: Propagated by planting seed directly or by raising seedlings in a nursery.

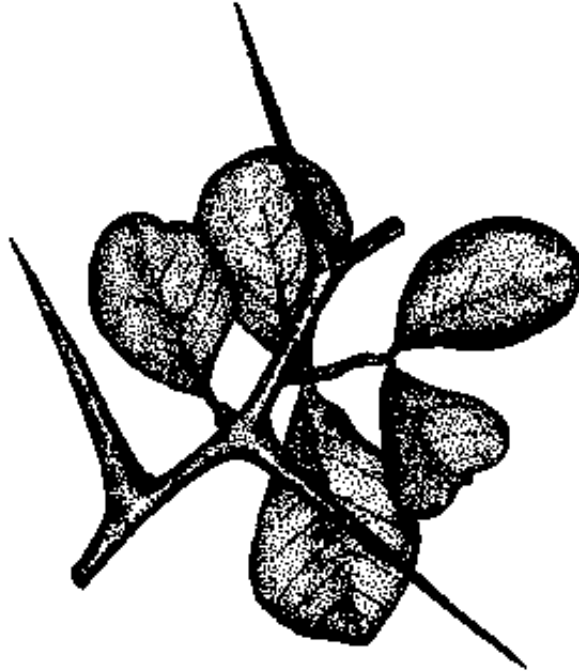
Status: Common.

Remarks: The name *olng'oswa* (Maa) is mainly used for *B. glabra* Mildbr. & Schlecht., an evergreen, much-branched

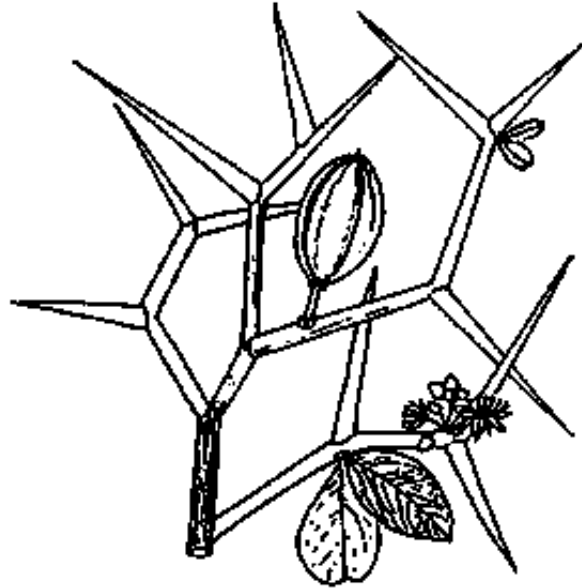
dense bush, shrub or small tree 2-4 m high. Branches green, drooping. Spines thick, long, to 10 cm or more. **LEAVES:** Usually without a conspicuous petiole and usually with two almost round fleshy looking leaflets. **FLOWERS:** Greenish yellow. **FRUITS:** Shortly ellipsoid, with light green longitudinal lines. The plant is common in Kajiado and Kaputei plains at 1,400-1,800 m on black soil. The commonest *Balanites* around Athi River. Ripe fruit pulp is sweet, juicy and eaten (Maasai) but is said to be mildly poisonous, causing a feverish feeling, stomach-ache and even diarrhoea (Maasai). *B. wilsoniana* Dawe & Sprague (Swahili: *mtonga*, Giriama: *mkonga*, Kamba: *kivuw'a*) is a large, extremely thorny tree (when young) up to 10 m tall. It is only found in the coastal area and in Kibwezi forest. Its leaves and fruits are larger than those of the other Kenyan *Balanites* species. Fruits are edible. The plant is often infested with caterpillars (*maungu*) which are collected for food by the Giriama.



Balanites wilsoniana



Balanites glabra



Balanites glabra

Balanites pedicellaris Mildbr. & Schlecht.

Balanitaceae

Marakwet: lomion, lom (plural) **Pokot:** lomion **Rendille:** ilbule **Samburu:** sarai **Turkana:** elamach

Description: A spiny, often multi-stemmed much-branched shrub or, rarely, a small tree usually 2-4 m high, with a rather narrow crown. Larger spines usually with many smaller ones.

BARK: Usually smooth, grey. **LEAVES:** Leaflets short-stalked, with a rounded apex. **FLOWERS:** Green. **FRUITS:** More or less round, 2-3 cm in diameter, green turning yellow when ripe.

Ecology: Grows in eastern Africa south to north-eastern South Africa. Widespread in Kenya, e.g. along the Turkwel River and on Observation hill (Amboseli). Usually along dry watercourses, flood plains, dry bushland, 300-1,300 m. Rainfall: 200 (riverine)-500 mm. Zones V-VII.

Uses: FOOD: Cooked cotyledons eaten (Pokot, Turkana,

Samburu, Tugen, Marakwet) (+++). Fresh fruits are bitter and toxic but reportedly eaten fresh in southern Africa.

Preparation: Fruits are gathered and pounded (usually after brief boiling) to break open the seed. Two green bean-shaped cotyledons are released. These are washed and then boiled for 8-9 hours. Over-boiling turns the cotyledons into a porridge-like fluid. Water is changed 8-10 times. Salt, ash solution (Pokot), tamarind (*Tamarindus indica*) (Turkana: Ng'ikebootok), bark of *Sclerocarya birrea* or *Lannea schweinfurthii* (Pokot) may be added at the end of the process to remove any remaining bitterness and to improve the taste. The food is eaten like beans, usually alone, occasionally with butter or milk. Uncooked cotyledons may be dried and stored. They can keep for several years.

FOOD/MEDICINAL: Boiled root infusion added to children's milk (Pokot).

MEDICINAL: Root infusion used for fever and diarrhoea (Pokot).

COMMERCIAL: Boiled cotyledons sold in Lodwar town and in some villages, e.g. in Kaputir, southern Turkana.

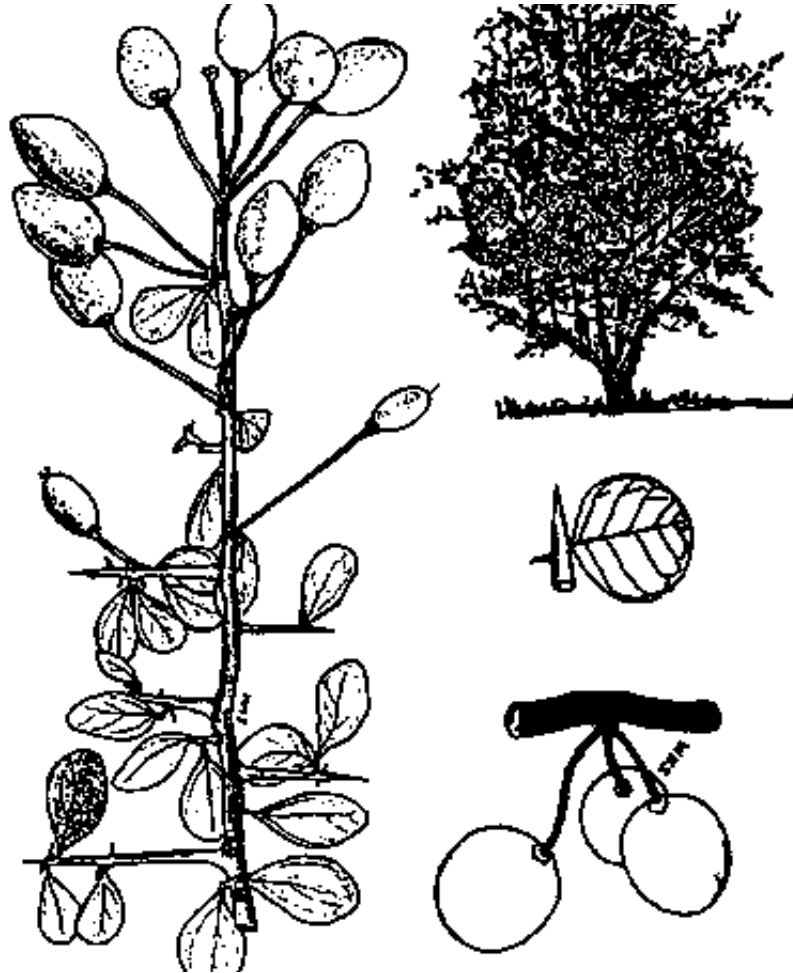
Season: Fruits in February (southern Turkana, Baringo) or September-October (Turkana, Baringo).

Management: Propagation by direct sowing at the desired site is recommended.

Status: Locally common.

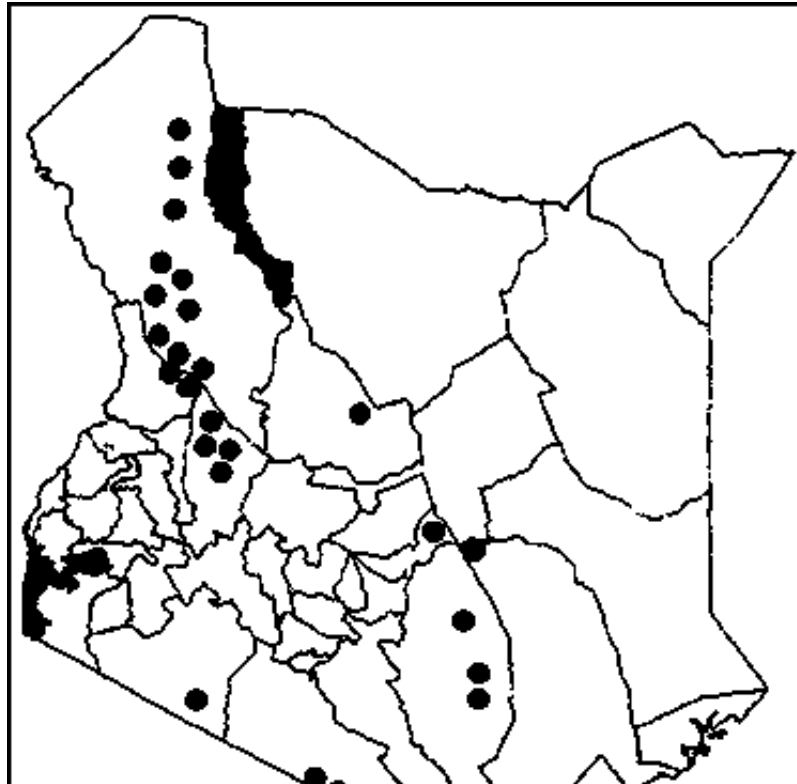
Remarks: Symptoms of poisoning by fresh fruits are thirst, dizziness and vomiting.







Figure





Figure

Balanites rotundifolia (Van Tiegh.) Blatter

Balanitaceae

syn: *B. orbicularis* Sprague, *B. gillettii* Cuf.

Borana: baddan **Daasanach:** kuute, kuusam (plural) **Gabra:** baddana **Marakwet:** lomion, lorn (plural) **Malakote:** mubadana **Orma:** baddan **Pokot:** lomion, loma (fruit) **Rendille:** kulum **Samburu:** sarai **Somali:** kullan (Tana River) **Tugen:** tirikikwa **Turkana:** ebei

Description: A usually spiny shrub or small tree to 5 m. Crown usually open. **BARK:** Grey, corky. **SPINES:** Long, bearing leaves and flowers. **LEAVES:** Almost stalkless, divided into two almost round leaflets. **FLOWERS:** Pale green. **FRUIT:** Up to 4 cm long, ellipsoid, green with longitudinal lines, turning orange when ripe.

Ecology: Found in Kenya, e.g. along the Turkwel River, in the Kerio delta, Mutha hill and in other parts of the country in dry *Acacia-Commiphora* bushland, often in rocky areas. Often seen as the only tree on sand dunes in northern Kenya, 50-1,350 m. Rainfall: 150-400 mm. Zones VI-VII.

Uses: FOOD: The pulp of the ripe orange fruit is eaten fresh (+) (Gabra, Boran, Somali, Turkana, Pokot, Daasanach). Cotyledons are eaten when boiled (+++). The seed shell is removed by pounding or boiling then pounding. The cotyledons are boiled for 3-4 hours (Turkana, Marakwet, Tugen, Pokot,

Daasanach) and eaten, normally with milk. The fruit pulp is made into a local brew (Turkana).

FOOD/MEDICINAL: Boiled root infusion added to children's milk as a tonic (Pokot).

MEDICINAL: Boiled root infusion used as an emetic and purgative during fever and for diarrhoea (Pokot).

OTHER: Trunk used for carving headrests (Turkana: *ekichelong*) and wooden spoons (Turkana: *ekalaboch*) (Turkana, Daasanach). Branches used for making livestock enclosures (Turkana, Daasanach). Wood used for smoking milk and blood containers (Daasanach) for flavour and to disinfect the container. Camel and goat fodder (++) . Fuel wood (++) .

Management: Propagation by direct sowing at the desired site is recommended.

Season: Fruits in February and August-October (southern Turkana).

Status: May be locally common.

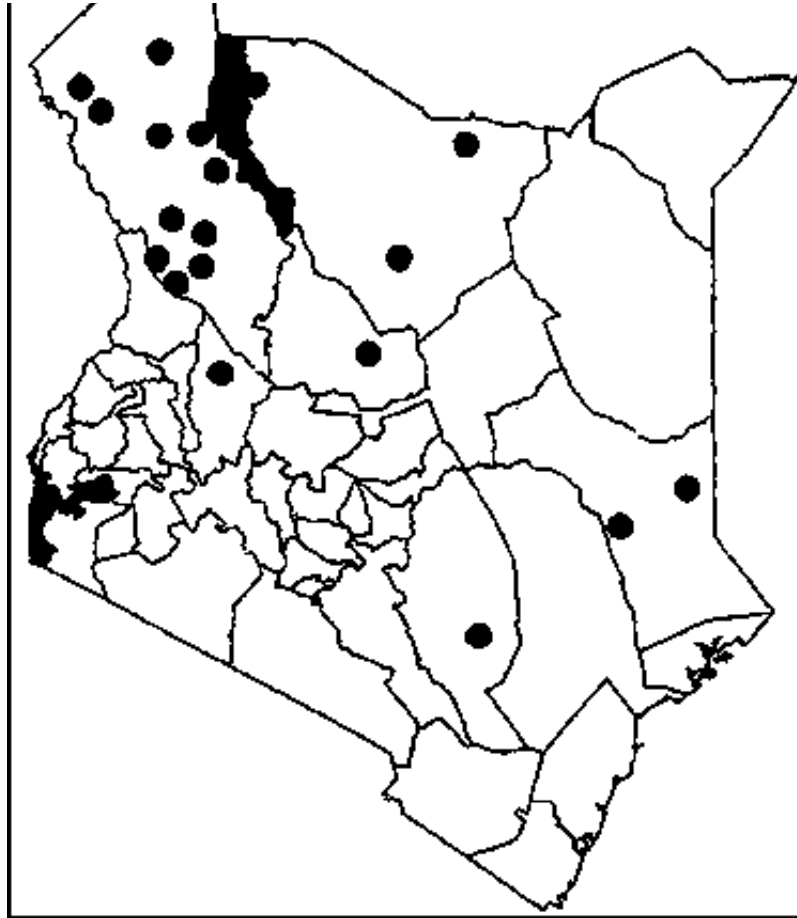
Remarks: A very drought-resistant tree species, even more so than the desert date (*Balanites aegyptiaca*). This species, together with *Acacia tortilis* and *A. reficiens*, may be a good substitute for *Prosopis chilensis* and *P. juliflora* for reclaiming desert areas.





Figure





Figure

Basella alba L.

Basellaceae

English: vine spinach, indian spinach, ceylon spinach, malabar spinach **Kamba:** kieema **Keiyo:** nderemiat **Kikuyu:** murerema **Kipsigis:** nderemiat, nderemek (plural) **Kisii:** enderema **Luhya:** tsinderema **Luhya (Bukusu):** endeleva **Luhya (Kabras):** eshivetso **Luhya (Samia):** enderema (singular) **Luhya (Tachoni):** yindeleva **Luhya (Tiriki):** enderema **Luo:** nderema, demra (Homa Bay) **Maa:** osoiyai, osoyai **Marakwet:** nderemia, okiek: nderemiat **Pokot:** rachan **Samburu:** ng'aisichoi, lemudong'o, lemoldongu, Itaai, Itani **Taita:** ndelema **Tugen:** lubchan

Description: A soft, twining perennial plant. Stems fleshy, green, often tinged brownish purple. **LEAVES:** Heart-shaped with a pointed tip, soft, shiny, dark green, blade up to 10 cm long or more. **FLOWERS:** Small, fleshy, cream or white, borne on an erect inflorescence.

Ecology: Widely distributed in the tropics, e.g. in China, Japan, the Philippines, Borneo, Fiji and Hawaii, West Indies, Brazil and Guyana. From West Africa to Ethiopia and south to Mozambique, Malawi, Zambia and Angola. Rare in Central Africa. In Kenya, e.g. on the Elgon, Aberdare, Mt Kulal and Mt Kenya highlands and in Trans Mara and Donyo Sabuk (River Athi). Found in forest, forest edges, humid bushland, wet rock cliffs and common in disturbed areas, 0-2,450 m. Often planted in hedges in towns and homes. Zones II-III.

Uses: FOOD: Leaves used as a vegetable (Taita, Kikuyu, Kipsigis, Luhya, Luo, Pokot, Tugen, Kisii, Kipsigis, Maasai

(Narok)) (+++). Leaves soft and usually cooked with other coarse vegetables. Leaves given to cattle to increase milk yield (Homa Bay).

MEDICINAL: Used for constipation in animals and humans.

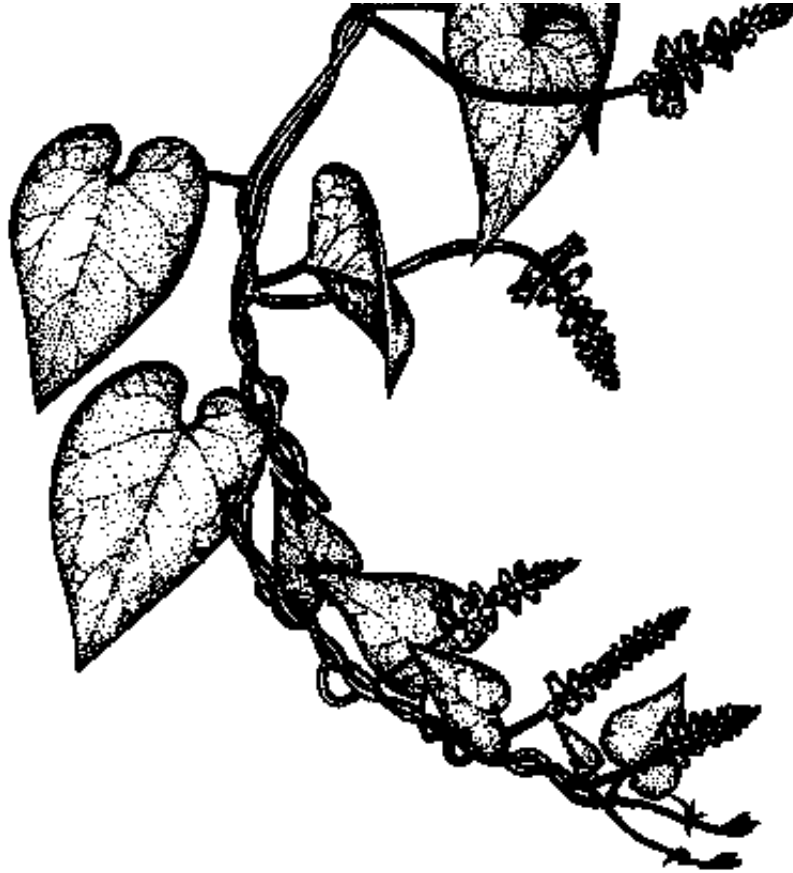
COMMERCIAL: Leaves sold in West Pokot.

Management: Best propagated from stem cuttings.

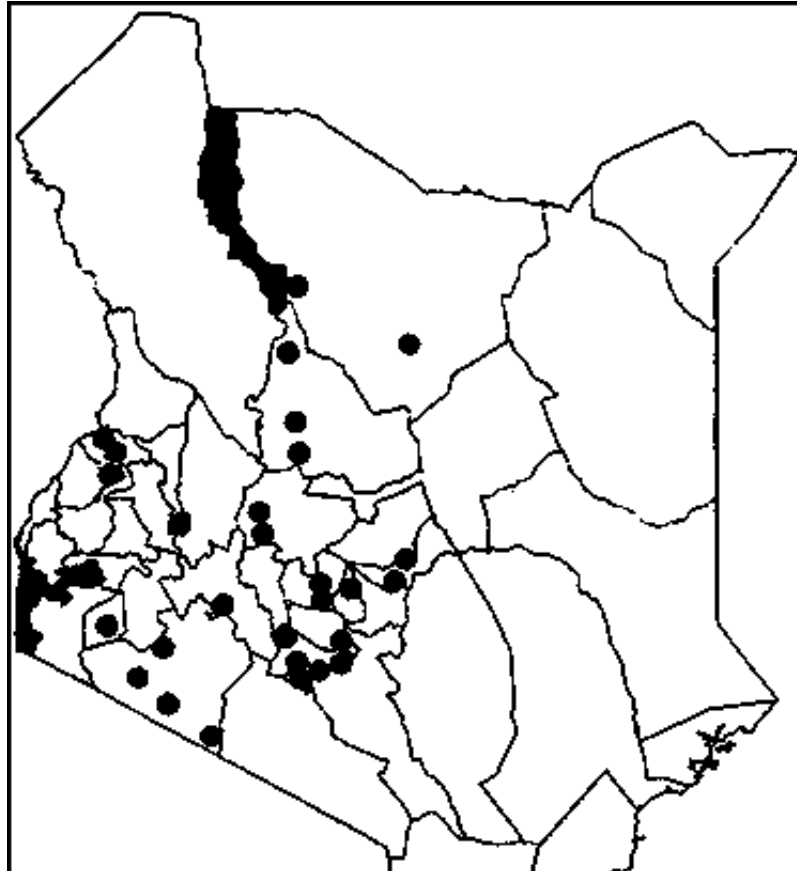
Status: Rare in truly wild habitats.

Remarks: Some cultivated forms with relatively thicker stems and larger leaves are probably from South Asia.





Figure





Figure

Berchemia discolor (Klotzsch) Hemsley

Rhamnaceae

Borana: jajab, jejab **Chonyi:** mkulu **English:** bird plum, brown ivory **Giriama:** mkulu **Kamba:** kisanawa (Kitui), kisaaya, nzaaya (fruit), nzanawa (fruit), **Kambe:** mkulu **Malakote:** mujajabho, jajabho (fruit) **Marakwet:** muchukwa (singular), muchuk (plural), muchukwo **Mbeere:** muthwana **Meru:** muthwaye **Orma:** jajab **Pokot:** muchukwo, muchuk (plural) **Samburu:** santaiti **Somali:** deen (Tana River), dheenden ro'o, kor'guba **Swahili:** mkulu **Taita:** mzwana **Tharaka:** muthwana **Tugen:** muchukwa **Turkana:** emeyen

Description: A more or less evergreen tree up to 10m high with a narrow or rounded crown, less often a spreading bush. **BARK:** Greyish brown, reticulately fissured. **LEAVES:** Ovate to oblong, yellowish green below. **FLOWERS:** Small, yellow-green, with 5 floral parts. **FRUIT:** Oval, tapering towards the tip, 1-2 cm long, green, turning yellow to reddish brown when ripe.

Ecology: Widespread from the Sudan to South Africa in semi-arid bushland, wooded grassland as well as riverine vegetation, 0-1,600 m. Tends to be riparian in the more arid areas. Common on riverine alluvial soils, in rocky areas and in light soils. Zones V-VII.

Uses: FOOD: Ripe (and occasionally unripe) fruit eaten (++) ; may be eaten whole together with outer covers and seed, which may also be discarded. Gum edible.

MEDICINAL: Bark infusion used for "enlarged spleen" and diarrhoea (Pokot). Ground up fruits used for sore throat and tonsillitis (Pokot).

OTHER: This species has hard yellowish brown durable wood used as poles, in construction, for furniture (+++) and frames for doors and windows. Stems are good fuelwood (+++) and charcoal is excellent. Shade (++). Poles used for constructing granaries. Dried fruit used by Tharaka girls as beads. Samburu warriors use the fruits as clasps for fastening their hair. Tree used for suspending beehives (Kitui, Tharaka, Mbeere).

CULTURAL/BELIEFS: Root decoction given to barren women (Tugen).

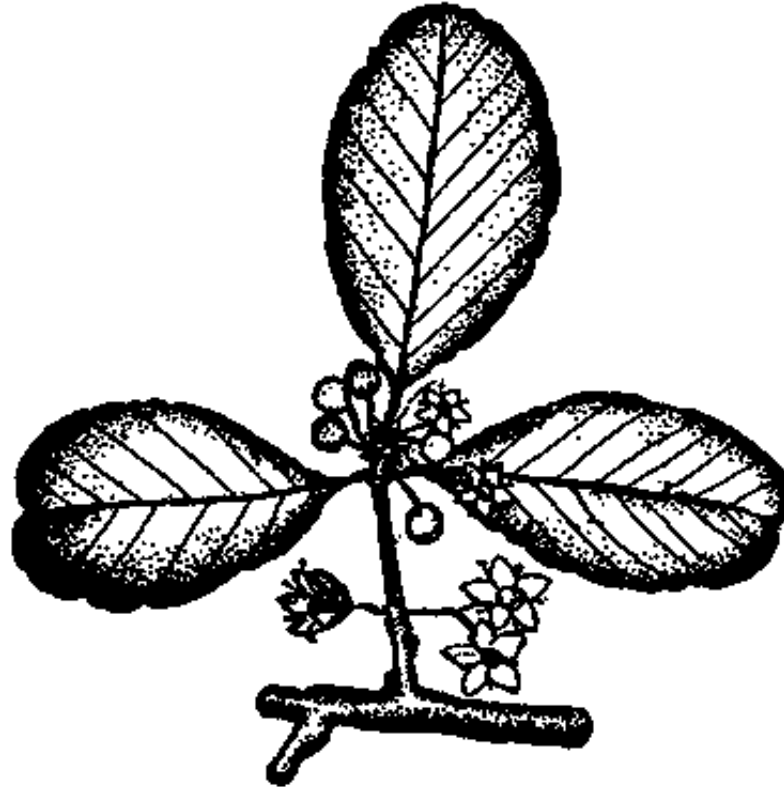
COMMERCIAL: Fruits occasionally sold in Mutomo (Kitui), and Tseikuru (Mwingi).

Season: Fruits in February-March (Meru, Tharaka, Mwingi, Kitui).

Management: Directly sown seed germinates easily.

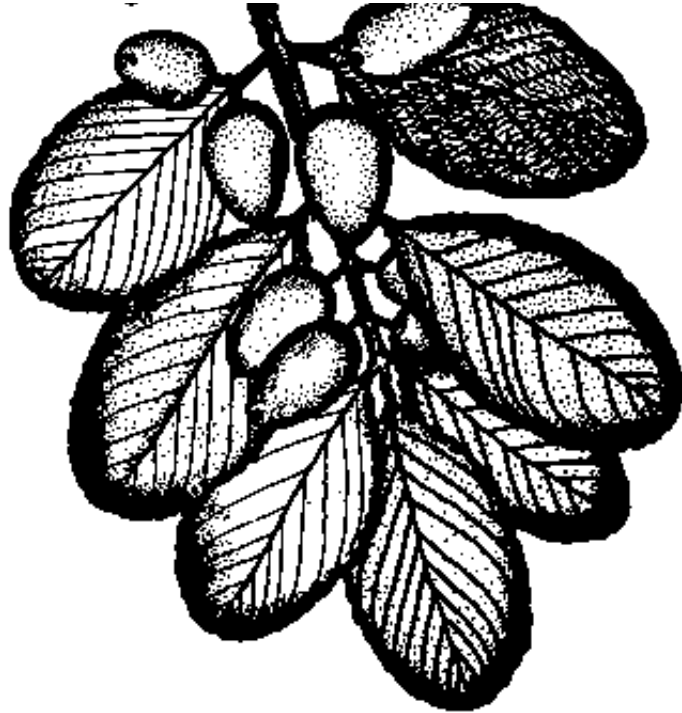
Status: Occasional.

Remarks: *Berchemia zeyheri* with edible fruits is found in Zimbabwe, South Africa and Mozambique.



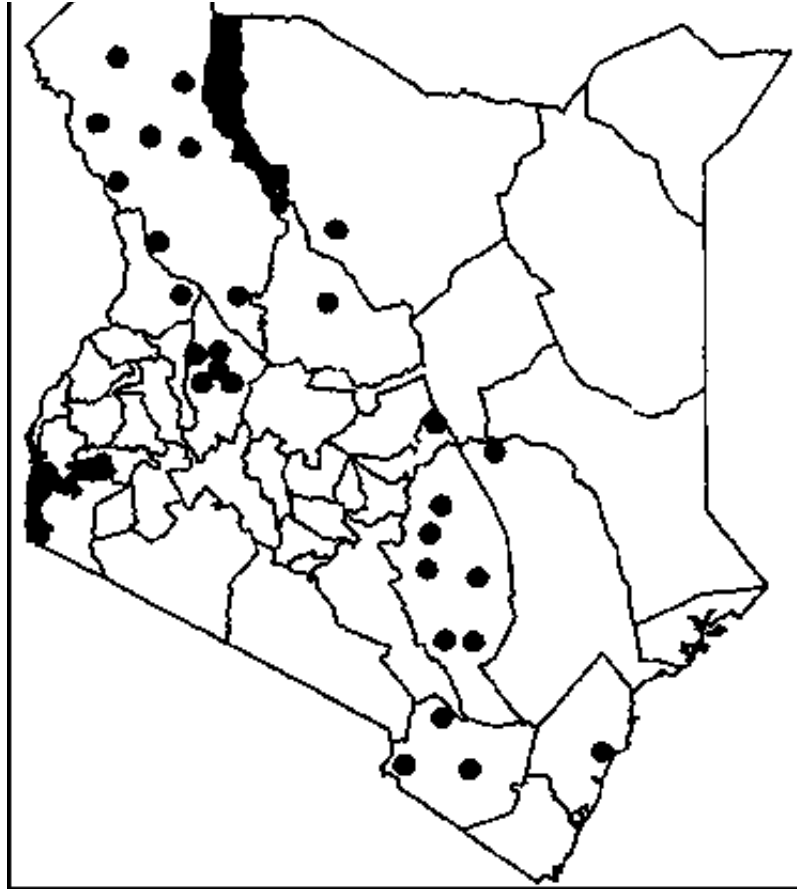
Figure





Figure





Figure

Borassus aethiopum Mart.

Palmae (Arecaceae)

Boni: ong **Chonyi:** mnazi, nazi (fruit) **Digo:** dzova, mvumo, ngolokolo (fruit), **Duruma:** mugumo **English:** borassus palm, African fan palm, palmyra palm, deleb palm **Giriama:** mugumo **Kambe:** mnazi, nazi (fruit) **Luhya (Tachoni):** mnazi **Malakote:** murifate **Meru:** mungthi **Orma:** marafa **Somali:** mardafa (Tana River) **Swahili:** mvumo, mtapa, mchapa **Teso:** edukut, edukudukut

Description: A strikingly tall unbranched palm to 25 m high. Trunk: Smooth to rough, grey, widening high up above the middle. Leaf scars prominent immediately below crown, less prominent below. **LEAVES:** Fan-shaped, very large, to 2.5 m

long, upper half divided into many folded leaf segments.

FLOWERS: Green, dioecious. **FRUIT:** Large, up to 15 cm long by 12 cm wide, smooth, slightly elongate, orange to orange-brown, containing up to 3 seeds surrounded by a fibrous pulp.

Ecology: Widespread throughout the less dry areas of tropical Africa. Open grassland with a high water-table, along watercourses, flood plains, coastal coral sands, often in dense stands. Found at the coast in Kenya, e.g. at Madunguni (Kilifi), Gede ruins and in Shimba forest, western Kenya and around Mandera, 0-1,400 m. Zones III-IV.

Uses: FOOD: Fruit pulp and seed edible (Digo, Giriama) (++). The immature seeds are eaten. Germinating seedlings are reportedly eaten (Uganda). Excellent palm wine, *dzova* (Digo) is made from sap tapped from inflorescence peduncles (stalks). It is reputedly the best palm wine in Africa with a high sugar content (Uganda).

OTHER: Leaves are used in the mat and basket industry. The trunk is tough and termite-resistant. It is used as poles, in construction and as beehives.

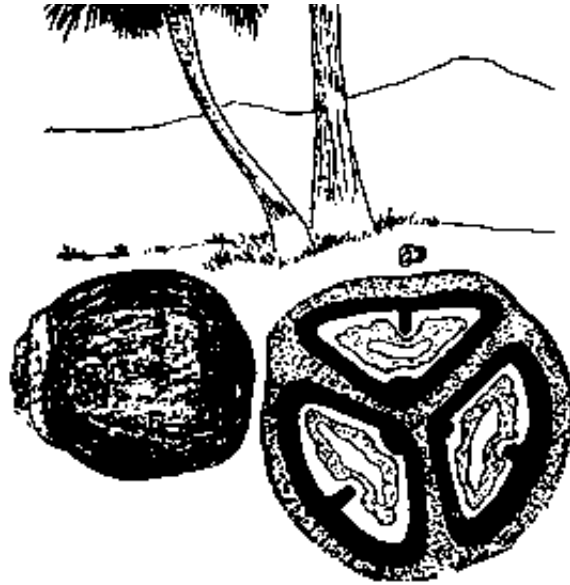
Management: Propagated by seed which are best sown directly on site. Grows fast when young but very slowly later. Fallen seeds root easily in humid soil. Root develops well before shoot is seen.

Status: Generally rare but may be locally common. Over-exploitation of the palm for its wood and sap has led to its decline in most areas where it grows.

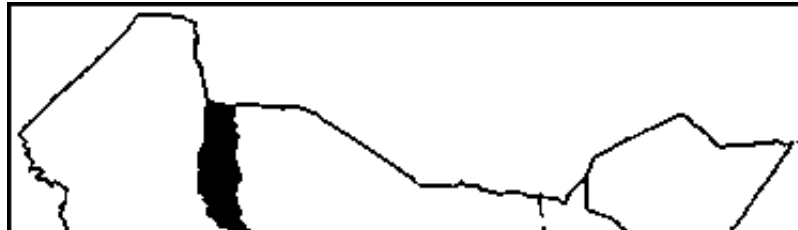
Remarks: Another palm used for wine production is *Elaeis guineensis* Jacq. (English: oil palm, Guinea oil palm, Swahili: *mchikichi*, *mjenga*, Digo: *mchikichi*, Pokomo: *mchanga*, Sanya: *metsengwa*, Taveta: *mposi*). It is a tree palm to 15 m high. Young stems covered with persistent leaf bases which are shed

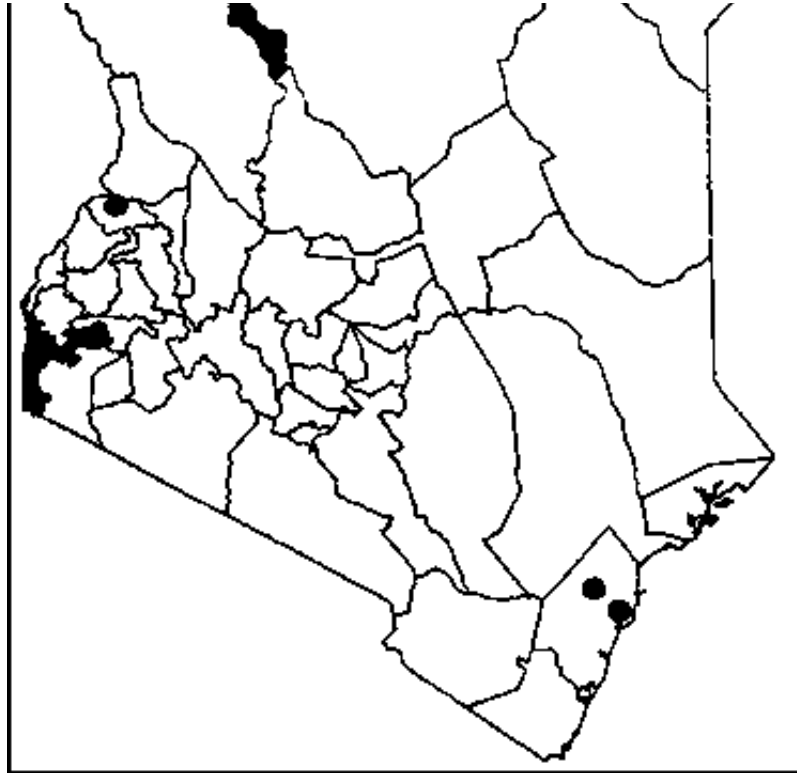
with age leaving ridges of scars on the trunk. **LEAVES:** Dark green, long, borne in a terminal crown. Leaflets with spiny margins. **FLOWERS:** Monoecious, borne in the leaf axils. Riverine. Uses: An important oil crop (seeds) in West Africa but not in Kenya. Oil is used in the manufacture of margarine, soap and as a lubricant. Palm wine is tapped from the palm in Uganda and West Africa but not in Kenya. Unlike *Borassus*, the wood is not durable. A rare species in Kenya.





Figure





Figure

Another important palm is *Cocos nucifera* (English: coconut palm, Giriama: *mnazi*, Kamba: *munathi*, Sanya: *madhi*, Swahili: *mnazi*, *nazi* (fruit)). This palm is grown all over the tropics in hot humid coastal areas and has been cultivated for a long time. In Kenya it is grown along the coastal strip and in a few inland areas as an ornamental plant (Lake Turkana, Lake Victoria, Kitui). An important source of wine, food, thatching material, building poles, fuelwood, shade, oil, leaves for handicrafts and a host of other traditional uses. The oily extract from the coconut flesh, *tui* (Swahili), is used for flavouring food. It is added to the dish only in the last 5-10 minutes of cooking to avoid boiling and curdling.





Elaeis guineensis



Cocos nucifera

Boscia coriacea Pax

Capparidaceae (Capparaceae)

Borana: qalqalq, galgacha-hareh **Daasanach:** dhuorich
Gabra: k'alk'acca **Ilchamus:** sericho, serichoi (plural) **Maa:**
enkapalases, enkapoleses **Malakote:** kalaqacha **Marakwet:**
sorikwo, sorik (plant) **Mbeere:** mukiare, muthiu, kikiare,
mutangira, gitangira **Orma:** kalkach **Pokot:** sorichon, sorich
(plural) **Rendille:** lyoror, yoror **Samburu:** serichoi **Somali:**
ghalangal, degaiyare, degeiyar **Swahili:** mna fisi **Tharaka:**
muthiuthiu **Tugen:** sirkwa **Turkana:** eedung, eerdung

Description: An evergreen, much-branched, usually multi-stemmed shrub or small tree to 6 m high. **BARK:** Smooth, dark grey to grey-white. **LEAVES:** Light green, leathery, elliptic, apex sharply pointed. **FLOWERS:** Creamy green. **FRUITS:** Light green with a fleshy coat. Seeds enclosed in a

tough white skin.

Ecology: An evergreen shrub common in all drier areas of northern Uganda, the Sudan, southern Ethiopia, Somalia and northern Tanzania in dry bushland or *Acacia-Commiphora* bushland, often in rocky areas or in loose red clay or sandy soils, 100-1,500 m. Common, e.g. in Turkana and Tsavo. Rainfall: 300-500 mm. Zone VI.

Uses: FOOD: Boiled cotyledons eaten (Pokot, Tugen, Turkana) (+++). Preparation: Fruits are pounded with a stone to remove the green outer fleshy coat. The seeds are then boiled briefly in water to loosen the tough white outer skin and then pressed between stones to release the green cotyledons. The skins are floated off in water and the green cotyledons boiled. Water is changed 8-12 times. Boiled seeds may be fried. Ripe fruit may be sucked for its sweet taste (Taita, Kamba, Tharaka, Mbeere, Daasanach).

MEDICINAL: Root decoction used for the treatment of headache (Pokot) and bark for yellow fever (Samburu); root infusion taken for gonorrhoea (Daasanach).

OTHER: Fodder for goats, donkeys, camels and cattle, especially important during the dry season. Fruits eaten by birds. Branches and stems used in construction (Pokot, Turkana). Shade tree, fuelwood. Stems made into blunt arrow heads used for shooting birds (Daasanach).

COMMERCIAL: Cooked food sold in Turkana markets. Often exchanged with other foodstuffs.

Season: Fruits in February (southern Turkana) or March, October (Mtito Andei).

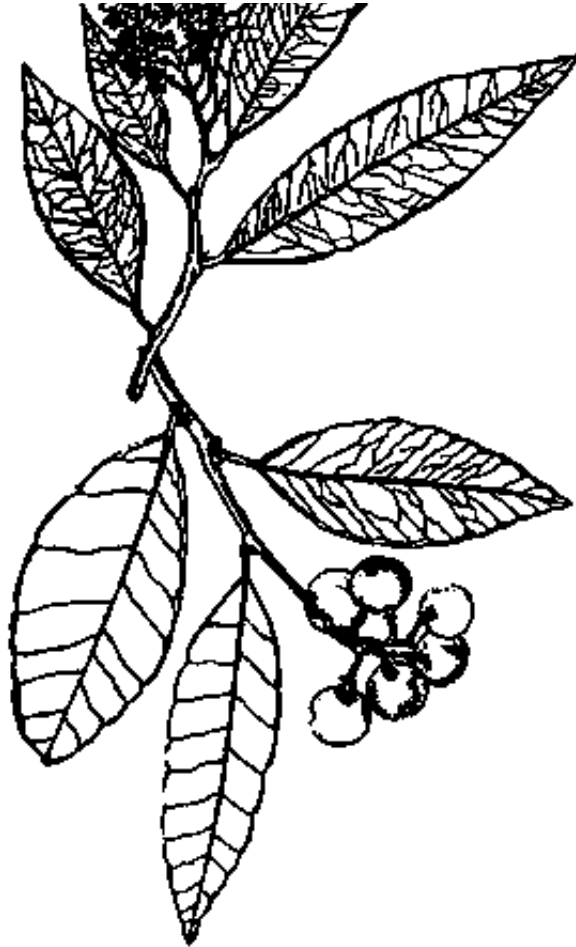
Management: Propagated by direct sowing at site.

Status: Common. Usually protected (Turkana).

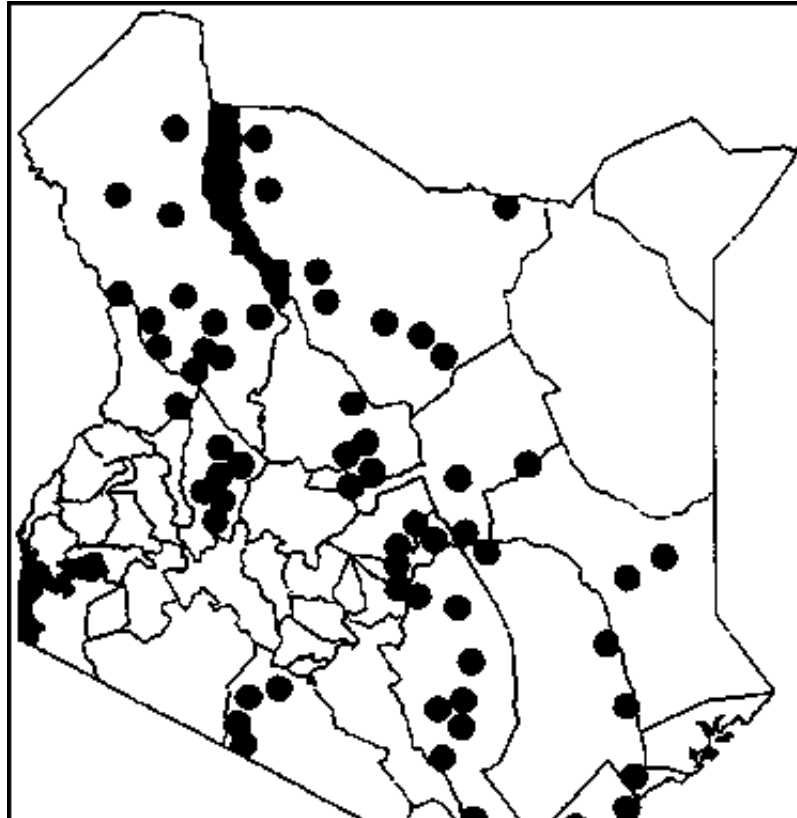


Figure





Figure





Figure

***Boswellia neglecta* S. Moore**

Burseraceae

syn: *B. hildebrandtii* Engl.

Borana: dakkara, dakkar, dakkar gurate, hancha-dakkara (resin), hancha-lubadin (incense) **Daasanach:** dong'od-nee-dhieroka, hancha-dakkara (gum) **English:** frankincense

Gabra: dakkara **Kamba:** kinondo **Orma:** dakar **Pokot:** sungululwo **Rendille:** halale, hanja (resin) **Samburu:** lecholoo, Ikinoo **Somali:** magafur, murfur-madbe, mirafur

(Tana River) **Swahili:** ubani **Turkana:** ekinyate

Description: Shrub or, less often, a tree to 5 m high.

LEAVES: Borne in tufts on small side shoots. **FLOWERS:** Greenish white. **FRUIT:** Red, triangular, 3-seeded.

Ecology: Found in northern and eastern Uganda, northern Tanzania, eastern Ethiopia, Somalia and in most drier parts of Kenya, e.g. in southern Turkana, Mutha (Kitui), northern Baringo in *Acacia-Commiphora* bushland chiefly in rocky and red loam or clay soils, 200-1,350 m. Rainfall: 250-600 mm. Zones V-VI.

Uses: FOOD: Resin from bark used as chewing gum (Turkana, Pokot, Rendille). Bark used for making tea (Pokot, Turkana).

FOOD/MEDICINAL: Bark decoction added to milk and given to children as tonic (Somali, Pokot).

MEDICINAL: Dried ground bark put into wounds (Somali); root decoction drunk for enlarged spleen (Pokot).

OTHER: Plant used in tanning (Rendille). Resin burned for its aroma (as frankincense) (Somali), during peace prayers (*hancha-lubadin*, Boran) and to drive away mosquitoes (Somali). Goat and camel fodder (++) . Toothbrush, stools (Daasanach).

COMMERCIAL: Resin sold as frankincense. The species is the commonest source of frankincense in Kenya.

Status: May be locally common.

Remarks: True frankincense is resin of a more superior quality yielded by *Boswellia carterii* Birdw. and *B. frereana* Birdw. both occurring in northern Somalia. Three other species of *Boswellia* occur in Kenya: *B. papyrifera* (Del.) Hochst. found

in Turkana District at the Sudan/Uganda border, *B. rivae* Engl. found in Mandera and *B. microphylla* Chiov. found in Moyale and Mandera Districts (Somali: *mugle*, Borana: *dakkar*). Resin from the last is exploited commercially.

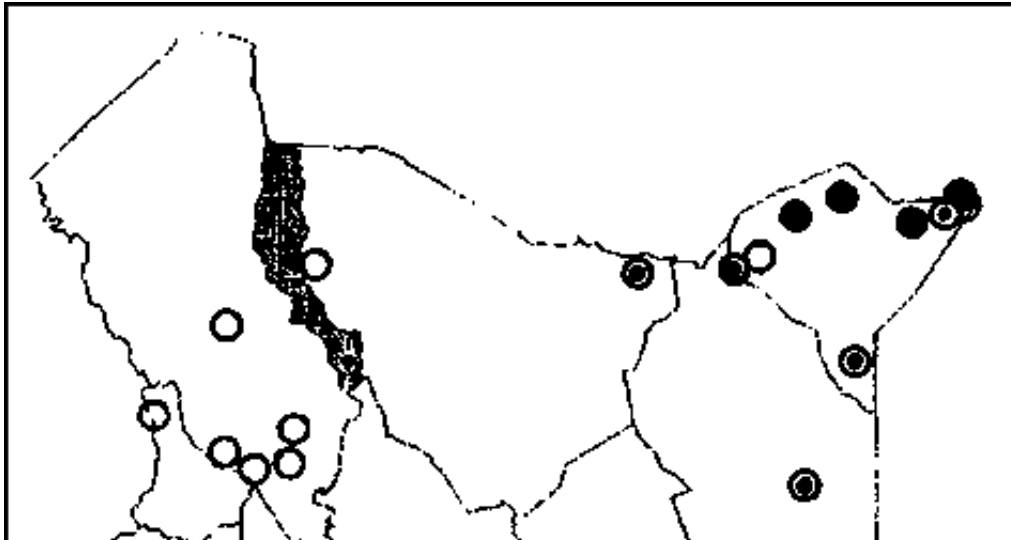


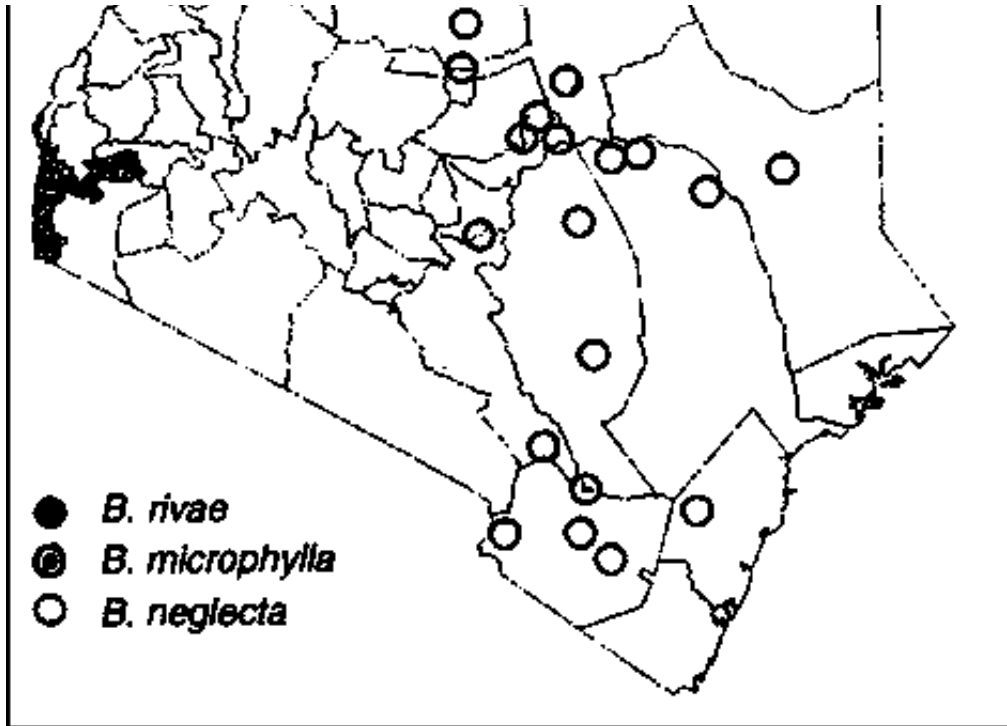
Boswellia frereana





Figure





Figure

Brassica carinata A. Br.

Cruciferae (Brassicaceae)

syn: *B. integrifolia* (Wes.) Rupr.

English: Ethiopian cabbage, Ethiopian mustard Kisii: chinkongonyira **Luhya (Maragoli):** likabichi Iya manyonyi **Luo:** kandhira **Mijikenda:** kanzira-sukuma (Mariakani)

Description: An erect annual herb, often branched, to 1.2 m or more. **LEAVES:** Pinnately lobed, smaller compared to those of other brassicas. **FLOWERS:** Yellow, borne in a long terminal inflorescence. **FRUIT:** A long capsule. Seeds small.

Ecology: Grown in many parts of the world with several cultivars. In Kenya mainly grown in Nyanza and Western Provinces, especially by the Luo and Luhya communities. Introduced at the coast. Occasionally grown in large cities such as Nairobi by the same communities. Also found as an escape

in the same areas, 0-1,600 m (in Kenya). A weed of cultivation also grown as a vegetable. Prefers fertile places such as abandoned cattle enclosures. Rainfall: 600-1,600 mm. Zones II - III.

Uses: FOOD: Leaves are used as a vegetable (Kisii, Luo, Luhya, Mijikenda, Suba) (+++). A popular vegetable among the Luo. Leaves mixed with those of *akeyo* (*Cleome gynandra*) are boiled, made into lumps, dried in the sun and stored in a clay pot (*agulu*) as a dry-season food (Luo). This may be eaten with *apoth* (*Asystasia mysorensis*) as *mboga*. Leaves are also fried with meat and used as *mboga*. Leaves are said to be mixed with those of *Solarium nigrum* and *Cleome gynandra* in Malawi. The cooked vegetable has a characteristic sharp odour and it is not bitter. In southern Africa, oil is extracted from the seeds and used for cooking and for rubbing on the skin.

MEDICINAL: Water obtained after boiling leaves is used to

treat diarrhoea (Luo).

OTHER: Seeds much liked by birds, hence the Maragoli name.

Management: Grows easily from seeds which are sown in lines or broadcast. Normally grown in kitchen gardens (Luo: *sirundi*, *kirundi*) at the homestead to minimize on bird attack (Luo, Luhya). Among the Luo it is grown together with *akeyo* (*Cleome gynandra*). Seeds are often mixed with ash when planting to keep off pests. Seeds are also distributed by birds. Plants are normally cut at a height of about 15 cm to induce the plant to produce larger leaves.

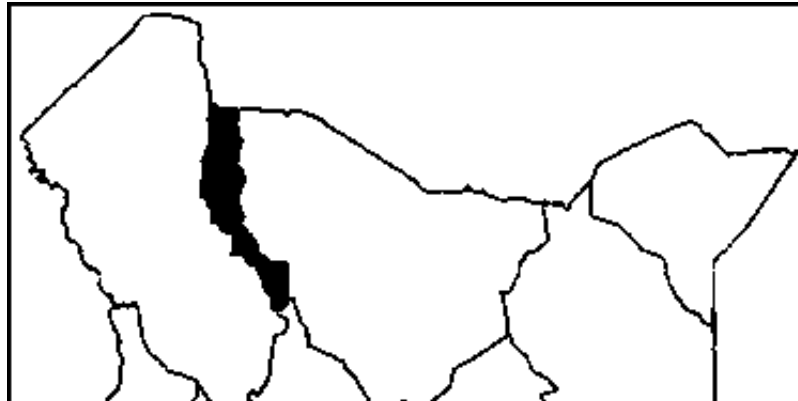
Remarks: A plant of unclear taxonomic position and doubtful origin. Some authorities treat *B. carinata* as a variety of *B. juncea* (L.) Czern. This species is also found in India (English: Indian mustard). *B. carinata* is believed to be a native of the Ethiopian highlands. Significant variation in leaf width is found

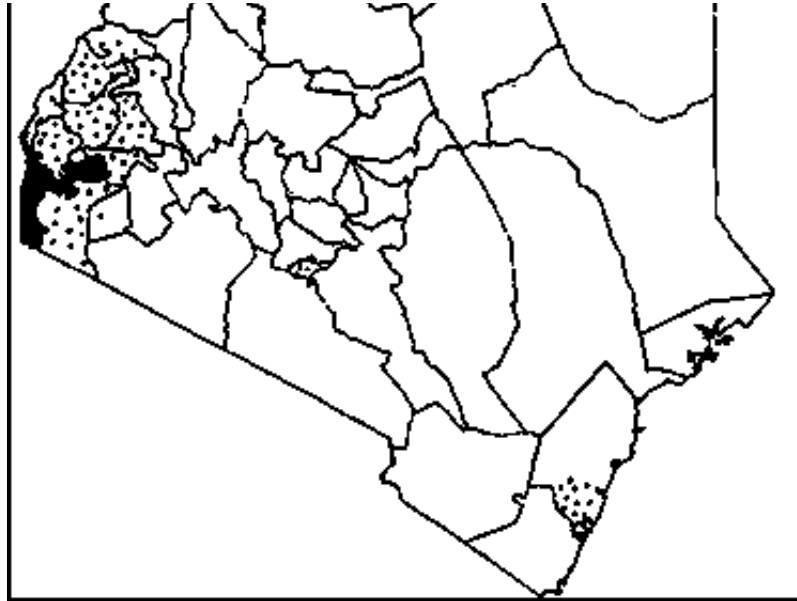
in this species. Some forms have very narrow leaves. Leaves are generally small and there is need for improvement if it is to have potential as a vegetable.





Figure





Figure

The genus *Brassica* contains some important exotic species such as the cabbage (*B. oleracea* L. var. *capitata*), rape and swede (*B. napus* L.), turnip (*B. rapa* L.) and kales (*B. oleracea* L. var. *acephala*). (Swahili: *sukuma-wiki*, Kikuyu: *matharu*,

Kipsigis: *sarokel*, Luo: *badmaro*, Kisii: *egesusura*, Luhya: *likabichi*). Several of these introduced species have gone wild, especially in the highlands. Kales are becoming more important, especially among urban dwellers, thus replacing cabbage and traditional vegetables.

Bridelia taitensis Vatke & Pax

Euphorbiaceae

Borana: karo **Kamba:** mwaanzia **Mbeere:** muce **Samburu:** lapironit **Tharaka:** muyee

Description: Usually a much-branched multi-stemmed shrub, 2-3 m high. **LEAVES:** Broad, apex blunt or slightly notched with prominent veins underneath. **FLOWERS:** Tiny, greenish yellow, borne in clusters, inconspicuous. **FRUITS:** Small, to 1 cm across, green (tinged purple) turning almost black.

Ecology: Only known in northern, eastern and coastal Kenya. Found in Marsabit, Mutomo and Tsavo East National Park. Grows in dry bushland, woodland or riverin bushland, often on rocky or gravelly ground and on sandy soil, 440-1,200 m. Zones IV-V.

Uses: FOOD: Fruit is edible (+). It has a sweet-sour taste.

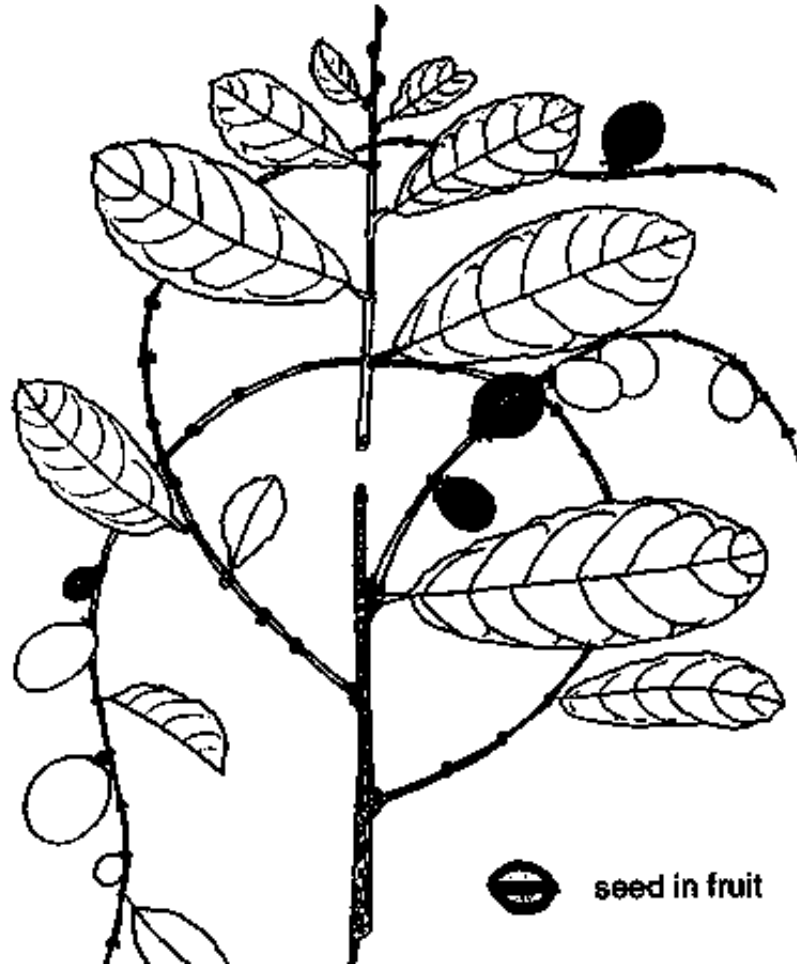
MEDICINAL: Bark extract used against earache (Tharaka).

CULTURAL/BELIEFS: The dead were buried under this shrub (Tharaka).

Season: Fruits in March in Machakos.

Status: Locally common.

Remarks: *B. cathartica* Bertol.f. (Swahili: *makarakara*, *mkarati*, Giriama: *mkalakala*) also has edible fruits.



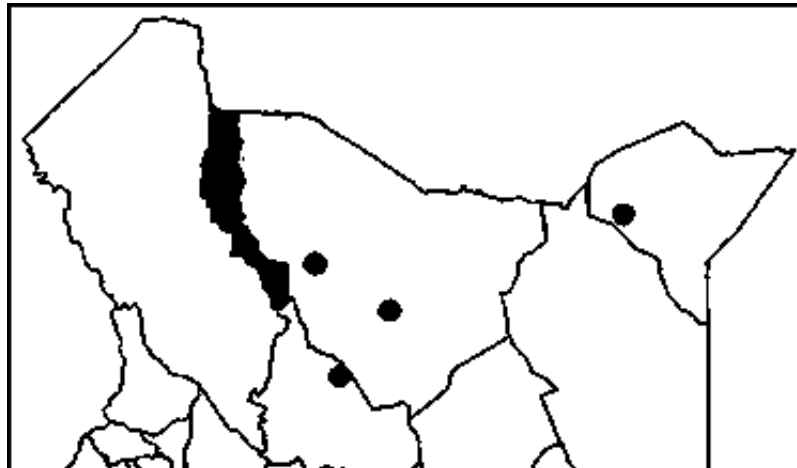


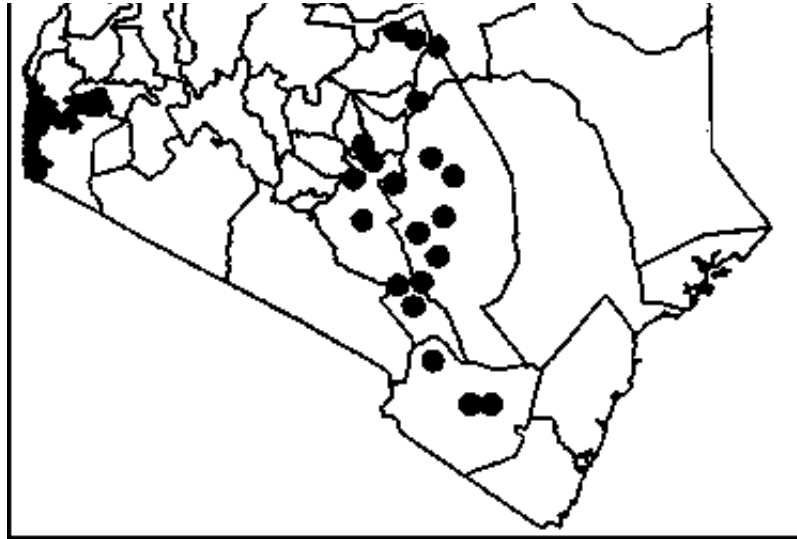
Bridelia cathartica





Figure





Figure

***Cajanus cajan* (L.) Millsp.**

Papilionaceae (Fabaceae)

Chonyi: mbalazi (fruit), mubalazi **Embu:** njugu **English:**

pigeon pea **Giriama:** mbubalazi **Kamba:** nzuu **Kambe:** mbalazi (fruit), mubalazi **Kikuyu:** njugu **Luo:** obong **Marakwet:** njugu **Meru:** nangu, ncugu **Swahili:** mbaazi **Teso:** epana **Tharaka:** njugu

Description: A shrub, usually 2-3 m tall with a dense and narrow or loose crown. Branches erect, drooping when with fruit. **BARK:** Green or dark red with pale longitudinal lines. **LEAVES:** Each with 3 leaflets covered with glands. Upper surface soft, dark green. Paler and with prominent veins beneath. **FLOWERS:** In terminal or axillary inflorescences, yellow to dark red (standard with reddish brown lines). **FRUIT:** Pods to 10 cm long, straight or slightly curved with hairy glandular surface, green, often streaked red, dark brown or purplish black. Seeds up to 9 (commonly 5-6) per pod, green, turning cream or light brown on drying.

Ecology: Cultivated in tropical Africa and America and a great

deal in India. Cultivated in many parts of Kenya, especially in Murang'a, Kirinyaga, Embu, Meru, Machakos, Kitui and Makueni Districts. Also grown in the Kerio valley. West Pokot, southern Turkana and in Nyanza Province, 0-1,800 m. Does best in semi-arid to sub-humid areas. Occasionally found as an escape on waste ground. Red clay soils and clayey sandy soils are best. Rainfall: 600-1,000 mm. Zones III-V.

Uses: FOOD: Peas may be mashed with other foods like potatoes, cooked with maize, or made into a stew (*mbogd*) and eaten along with *ugali*. Peas are boiled, mashed and rolled into balls or boiled with sorghum (Luo). Among the Kikuyu, pigeon peas were important food during ceremonies like circumcision.

OTHER: After harvesting the stalks are cut and used as firewood (rather poor quality, burns fast but an important fuel during the wet and planting seasons). A good plant for crop rotation or intercropping. An important fodder plant during the

dry season after crop harvest. The dry leaves and pods remain after harvest and are important food for donkeys, cattle and goats.

COMMERCIAL: Sold in various forms: fresh pods, green peas without pods and dry peas, mainly in central and coastal parts of Kenya and in Nairobi.

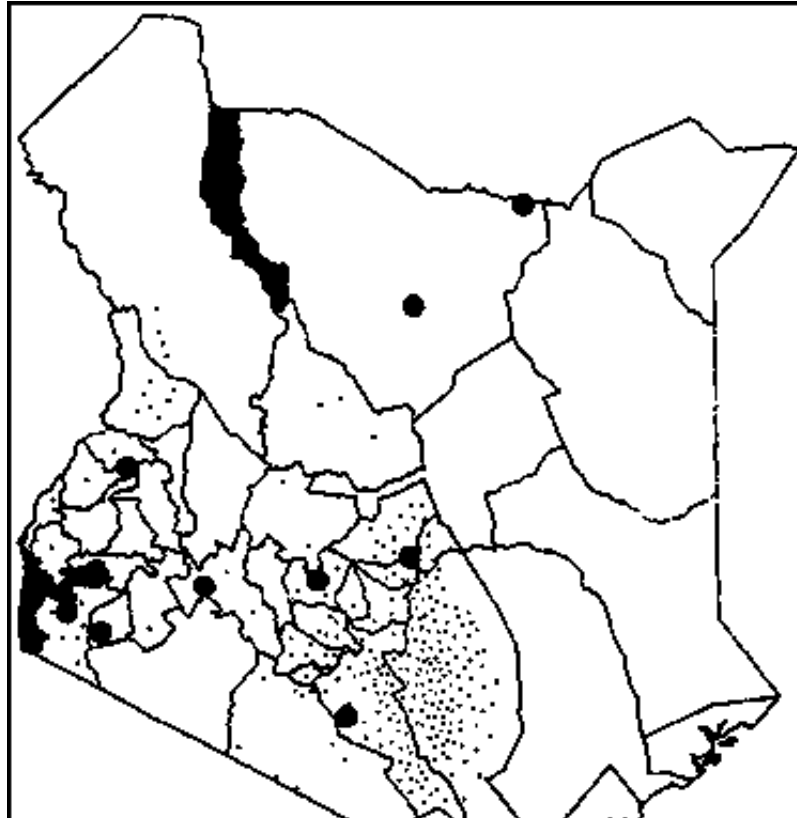
Season: Flowers in May-June in Machakos, Kitui, Mbeere and Mwingi. Fruits in July-August in Mbeere, Kitui and Machakos.

Management: May be grown as a pure stand or with other crops. In the low hot regions of Eastern Province it is normally planted during the short October/November rains and harvested in July-August the following year. In Nyanza normally planted sparsely or at the edge of crop land.
Harvesting: Once the pods are dry, the fruiting branchlets are cut or broken off and spread on the ground for further drying

(especially of leaves and fresh pods). Dry pods easily split open releasing seeds when threshed. These are winnowed on a windy day. Seeds do not store for long without insecticides.



Figure





Figure

Pigeon pea is still an important crop in semi-arid areas, i.e. Machakos, Makueni, Mbeere and Tharaka-Nithi Districts. In the more humid areas its cultivation has declined because of introduction of other crops such as field peas (*Pisum sativum*, Kikuyu: *minji*) and kidney beans (*Phaseolus vulgaris* L., Kikuyu: *mboco*, Kamba: *mboso*, Luo: *oganda*, Swahili: *maharagwe*). In many areas increased attack by insect pests (*kathoa*, Kikuyu, Kamba) at flowering time has reduced yields significantly in recent years, in some cases causing total crop failure.

Pigeon pea is a hardy crop and a preferred food. It may be intercropped with deeply rooted crops such as cowpeas (the creeping type), cassava, pumpkins, gourds and sweet potato. Crops such as maize, beans, millets, sorghum and quick-maturing types of cowpeas are adversely affected. Its potential in the food industry is still not yet fully exploited. Pests are a major problem threatening its cultivation.

Remarks: The origin of this important crop is still a subject of contention. It is believed to be of African origin, but the possibility of it being Asian cannot be discounted. There are only two species in this genus; the other, *C. kerstingii*. Harms, grows wild in West Africa and hence the assumption that the pigeon pea is probably of African origin. Some forms of this crop have their origin in India.





Figure

Canthium glaucum Hiern

Rubiaceae

Chonyi: mtambachiko **Giriama:** mfuranje **Kambe:**
mtambachiko **Swahili:** mtengeji

Description: A spiny shrub usually 2-4 m high. **BARK:** Brown to grey. **LEAVES:** With very short petioles, elliptic, usually 2-5 cm long, borne at nodes or on short shoots below the paired spines. **FLOWERS:** In cymes, few, greenish. **FRUIT:** Square in outline, green turning yellowish orange when ripe.

Ecology: Found in coastal bushland, usually in open places with deep sandy soils, 0-150 m, e.g. in Marafa and in Arabuko forest (Kilifi). Ssp. *glaucum* occurs in Somalia and ssp. *frangula* in southern Africa. Zones III-IV.

Uses: FOOD: Ripe fruits fleshy, sweet and much liked (+++) (Mijikenda).

OTHER: Branches used for fencing.

Season: Fruits in March-April (Sabaki), April-June (Kilifi, Malindi).

Status: Rare.

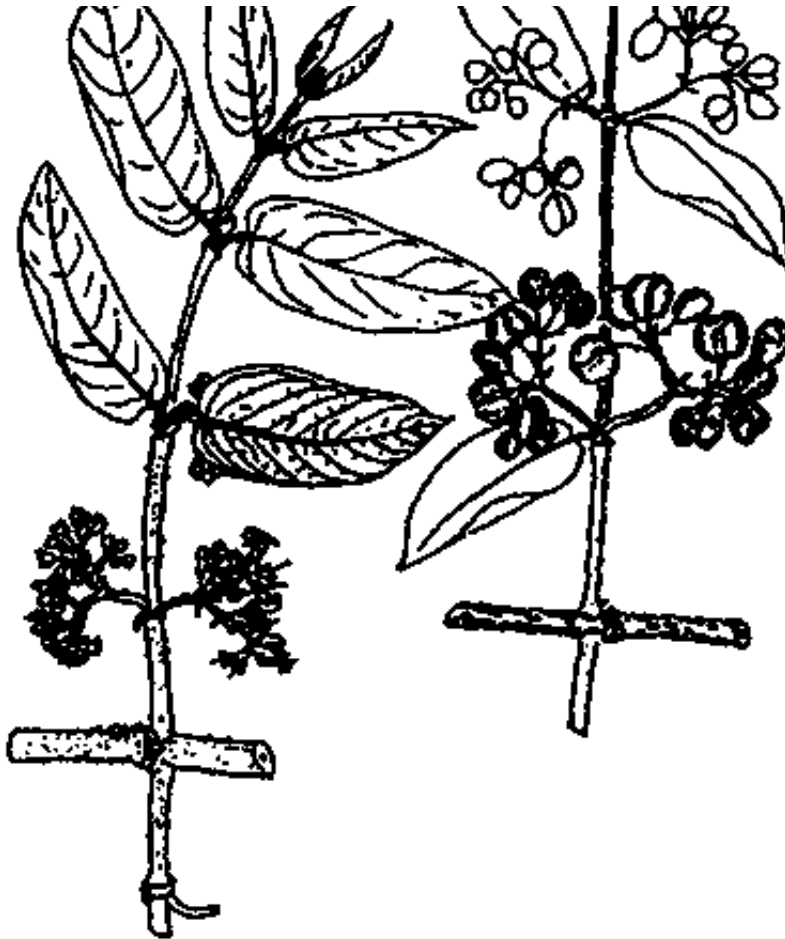
Remarks: Many members of the closely related genera *Keetia*, *Psydrax* and *Multidentia* have edible fruits. Notable examples are *Keetia gueinzii* (Sond.) Bridson (syn: *Canthium gueinzii* Sond.) (Swahili: *mtindapo*, Kamba: *mukumuti*, Kikuyu: *mugunguma*, Luhya: *lusebi*, Luhya (Bukusu): *nabusuma*, Luhya (Tachoni): *olwobo*, Luo: *kikumba*, *athuno*, Kipsigis: *cheplekwelet*, Meru: *mugugu*, Tugen: *mokilokwa*), altitude: 150-2,500 m; *Keetia zanzibarica* (Klotzsch) Bridson

(syn: *Canthium zanzibaricum* Klotzsch) (Swahili: *mporopojo*, *ndapo*, *mtindapo*, Digo: *muyunzu*, Giriama: *muzunzwi*, *mukimbiri*, Kambe: *chimbiri*), distribution: Kwale, Kilifi, Tana River, altitude: 0-450 m; *Multidentia crassa* (Hiern) Bridson & Verdc, var. *crassa* (syn: *Canthium crassum* Hiern) (Luhya (Bukusu) and Luhya (Tachoni): *kumunyanya*, *kumunyinyi*, *bunyinyi* (fruit)), found in Trans Nzoia District and Western Province.

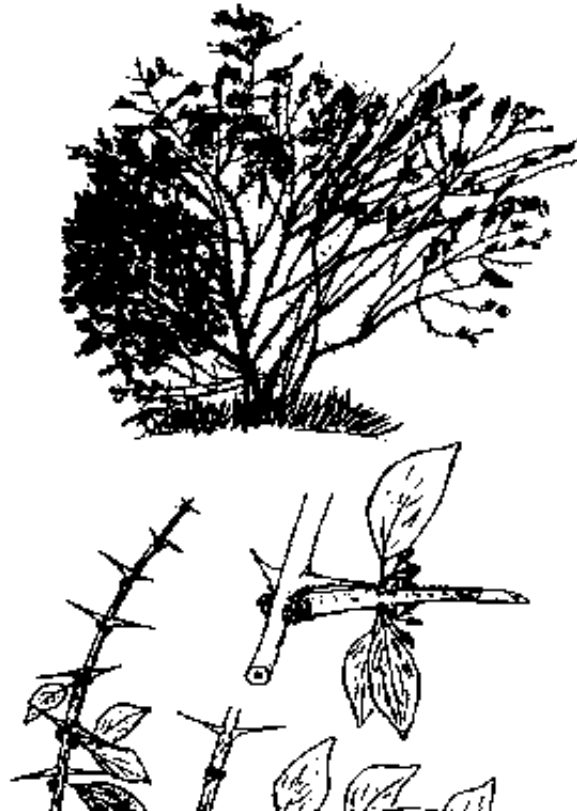


Multidentia crassa



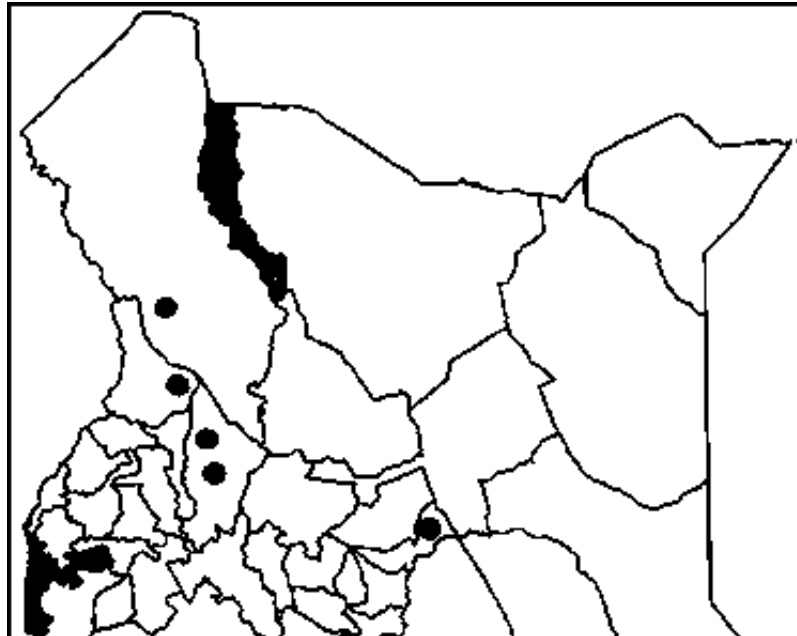


Keetia gueinzii





Figure





Figure

Canthium lactescens Hiern

Rubiaceae

Pokot: putere, ptere, putoro

Description: A shrub or small tree to 9 m. Stems thick with short internodes. **BARK:** Reddish to dark grey. **LEAVES:** Broad to almost round, large, paired, usually at branch tips.

FLOWERS: Cream or yellowish green in cymes borne in leafless nodes. **FRUITS:** Usually with 2 lobes, 1.0-1.5 cm in diameter, green, turning yellow on ripening.

Ecology: Distributed in eastern and southern Africa from the Sudan and Ethiopia south to Zimbabwe and Angola, and in Kenya in Samburu, at Siyabei River in Narok, Baringo and West Pokot. Grows in riverine bushland and on rocky hillsides, 1,000-2,300 m. Zones III-IV.

Uses: FOOD: Fruits fleshy when ripe and very sweet.

Remarks: Many of the *Canthium* species have edible fruits. Other notable ones are *C. setiflorum* Hiern, a coastal shrub usually 1.5-3 m high, flowers yellowish green to cream, fruit yellow to dark brown, to 1.5 cm long, and *C. pseudosetiflorum* Bridson (Pokot: *molkotwo*, Borana: *ladana*, Turkana: *etoukoro*, *emidakan*, Somali: *natana*) mainly found in the Rift

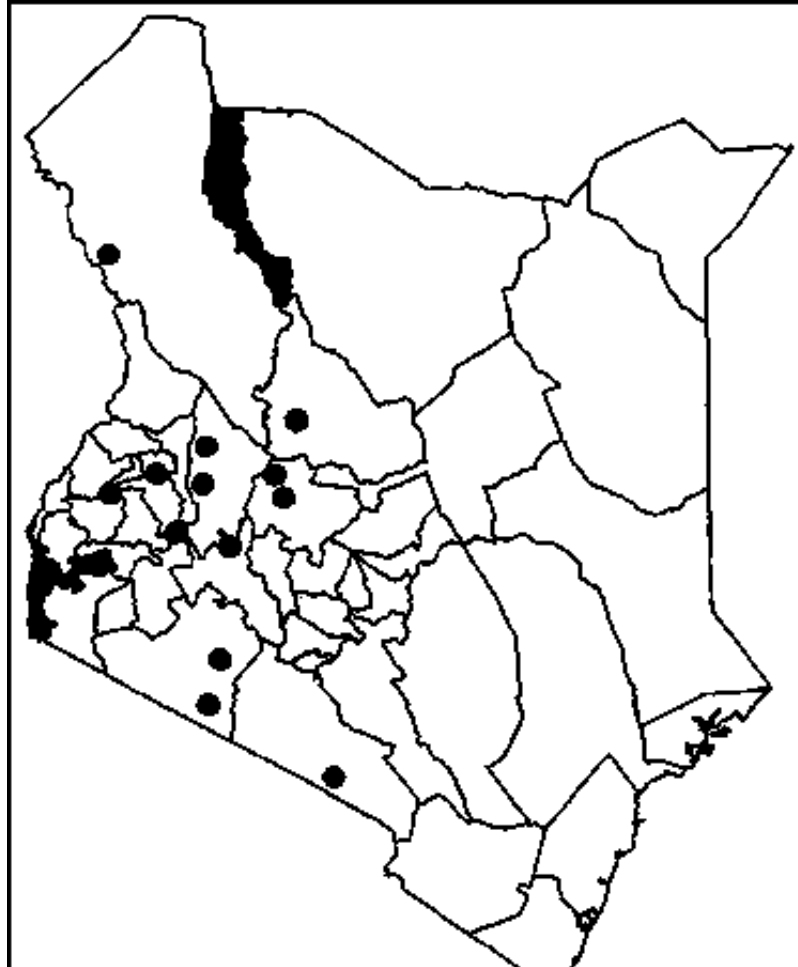
Valley region and northern Kenya. A boiled root extract is added to children's milk as a tonic (Pokot). Altitude: 750-1,750 m.



Canthium setiflorum



Figure





Figure

Carissa edulis (Forssk.) Vahl

Apocynaceae

Borana: dagams **Chonyi:** mtandomboo **Embu:** mukawa
Gabra: dagams **Giriana:** mtandambo **Kamba:** mukawa
(Machakos, Makueni), mutote (Kitui), ngawa, ndote (fruit),
nzunu (fruit, Kitui) **Kambe:** mtandambo **Kikuyu:** mukawa
Kipsigis: legetetyet, legetiet **Kisii:** omonyangateti, **Kuria:**
munyoke **Luhya (Bukusu):** kumurwa (plant), burwa (fruit)
Luhya (Tachoni): oburwa **Luo:** ochuoga **Maa:** olamuriaki,
ilamuriak (plural) **Malakote:** mokalakala, kaka-mchangani
Marakwet: leketet (plural), leketetwa (singular), leketetwo
Mbeere: mukawa **Meru:** kamuria, nkawa-mwimbi (fruit)

Nandi: legetetwa **Pokot:** lakatetwa, lokotetwo **Rendille:** godhoom-boor **Samburu:** lamuriei, lamuriai **Sanya:** gurura **Somali:** adishawel **Swahili:** mtandamboo **Taita:** kirimba, ndandangoma **Teso:** emuriei **Tugen:** legetetwa

Description: Dense, evergreen, spinous shrub commonly found scrambling on other bushes or, rarely, standing by itself and sending out branches from the main bush. All parts exuding white latex on slight injury. **SPINES:** Straight, sometimes forked and up to 5 cm long. **LEAVES:** Broadly ovate to elliptic, glossy green, opposite and with a pointed apex. **FLOWERS:** Reddish pink outside, white inside as seen when they open. **FRUITS:** Round or ellipsoid, up to 26 mm in diameter, green, often tinged red or purple when unripe but turning dark purple (almost black) and glossy when ripe. Seeds few, dark brown, often compressed or undeveloped.

Ecology: Widespread in Kenya and much of Africa. Forest

edges, bushland and thickets, especially on rocky hillsides. Common in rocky areas, on clay soils, especially black-cotton soils at valley bottoms and near seasonally flooded areas, 0-2,500 m. Rare in the coastal belt. Rainfall: 500-1,800 mm. Zones II-V.

Uses: FOOD: Both the unripe and ripe fruits are eaten whole (+++) (in the case of ripe fruits seeds may be discarded). The unripe fruits (green to purple) taste tart. Ripe fruits delicious-sweet and soft. Much liked by both children and adults. All fruits exude a milky latex. Flowers eaten (Luhya (Bukusu)).

MEDICINAL: The plant is among the most important sources of traditional medicine. Roots boiled and taken with soup to strengthen bones, for general fitness (Kamba, Meru, Pokot, Maasai) and (usually with other plants) for gonorrhoea (Maasai, Samburu, Kikuyu-Nyandarua). Boiled root extract drunk for chest pain (Kamba), indigestion, lower abdominal

pains in pregnant mothers (Luo), polio symptoms (Samburu), headache and fever in children (Pokot). Decoction from boiled branches and leaves used for treating breast cancer, headache and chest pains (Nandi).

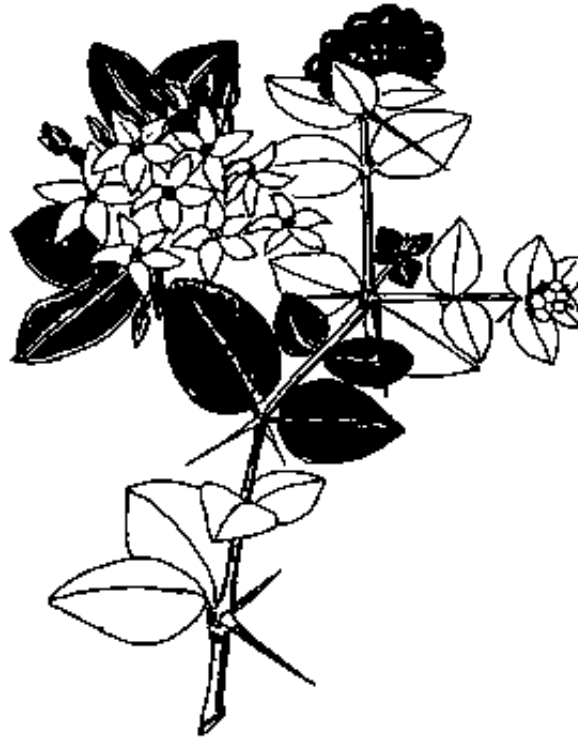
OTHER: Good goat fodder (+++). Good hedge plant (+++). Ripe fruits used as a dye by children. Silk-moth cocoons occasionally found on the plant.

COMMERCIAL: Fruits occasionally sold in markets.

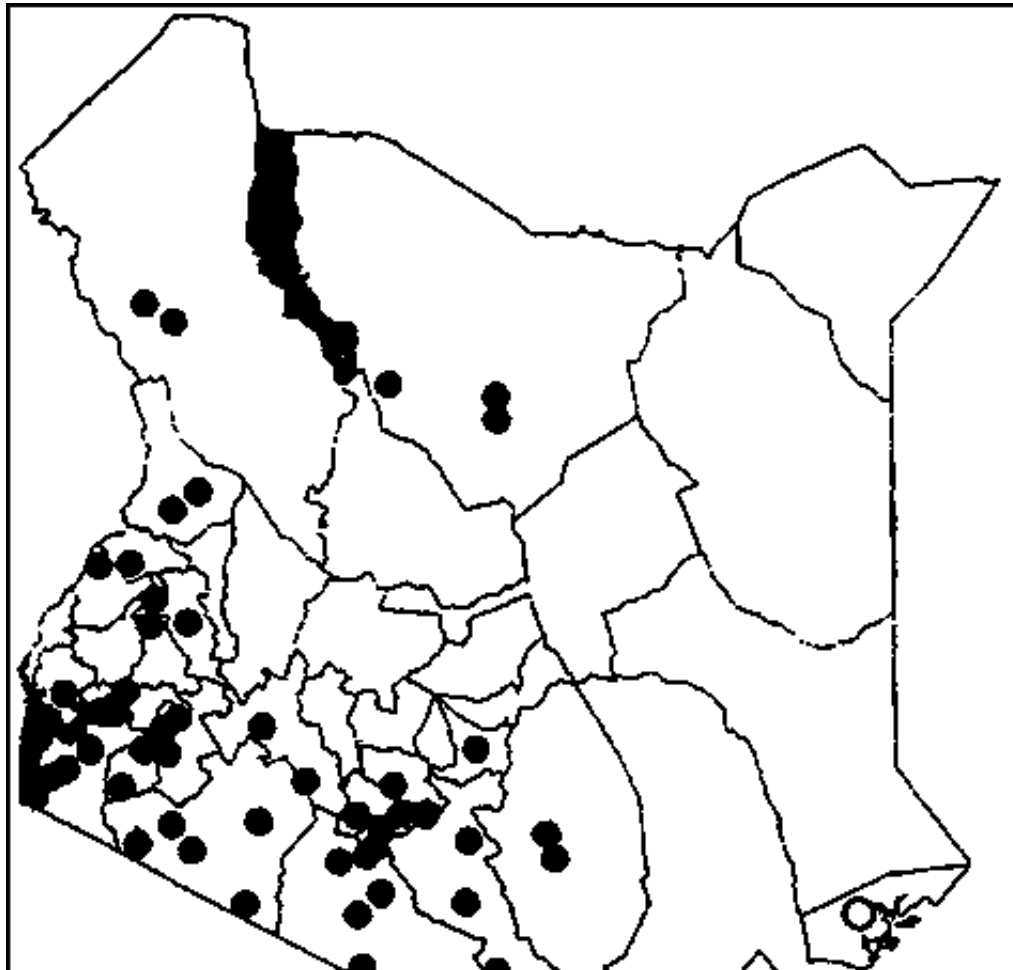
Management: Seeds sown directly germinate easily. Saplings often grow under parent bushes and may also be used. Cultivated in several parts of the world for its fruit and as a hedge plant.

Status: Locally common. Rare in some parts (coastal areas) and Machakos, Makueni (partly due to over-exploitation for

medicinal purposes).



Figure





Figure

Remarks: *Carissa edulis* is a variable species in Kenya. Variation is seen in the spines (some individual plants have almost all spines forked), fruits (while some are almost spherical, others have a slightly pointed base), leaves (some glabrous while others are hairy, and others conspicuously narrowed towards the apex). Some large fruit-bearing plants are found in parts of Ngong forest and in the Kitui highlands. The germplasm for some of these populations is threatened and hence the need to collect it. The taxonomy and herbarium

collections of this species in Kenya (especially as it relates to *C. bispinosa*, with which it seems to share many features) needs to be clarified. Typically, the petals of *C. edulis* overlap to the left while those of *C. bispinosa* overlap to the right.

A related species, *C. tetramera* (Sad.) Stapf (Swahili: *mtandamboo*, Digo: *mtandamboo*, Giriama: *mtandamboo*, Chonyi: *mtandamboo*, Kambe: *mtandamboo*, Sanya: *gurura*) with forked spines, smaller fruit and slightly toothed leaf margins also has delicious edible fruits. Distribution: Kwale, Kilifi in coastal bushland and wooded grassland, 0-450 m. Propagation: Seed, direct sowing. Season: Flowers in December, January, February, May, June. Fruits in January, February, June, July, August in Nairobi, Kitui, Machakos, Embu.



Carissa tetramera



Carissa bispinosa

Catha edulis Forssk.

Celastraceae

Arabic: qat, khat **Borana:** chati, cati **Chonyi:** miraa **Embu:** miraa **English:** khat, Abyssinia tea, Arabian tea **Giriama:** miraa **Kamba:** mailyungi, miungi (plural) **Kambe:** miraa **Kikuyu:** muirungi, miirungi (plural) **Kipsigis:** tomoiyot **Kisii:** mairungi **Maa:** olmeraa **Marakwet:** tumayot **Meru:** muraa, miraa (plural) **Okiek:** tumayot **Samburu:** mamiraa **Somali:** qat, kat (pronounced *chat*) **Swahili:** miraa **Teso:** emairugi

Description: An evergreen shrub or large tree to 25 m with a dense crown. Trunk to 1 m in diameter. **BARK:** Grey-green or pale greyish brown. Young shoots green to red. **LEAVES:** Up to 12 cm long, narrowly elliptic with serrate margins, opposite, alternate on coppice shoots. Young leaves crimson brown, glossy, becoming yellow-green and leathery with age.

FLOWERS: Small, white to creamy yellow in axillary cymes.

FRUIT: A red-to-dark-brown, oblong, pendulous 3-valved capsule, up to 1 cm long. Seeds reddish brown with a small brown papery wing at the base.

Ecology: Found in south-western Arabia and Yemen and in many parts of Africa from Ethiopia to South Africa. Introduced in India and many other tropical countries. In Kenya, found, e.g. in the Nyambene mountains, Kyulu hills, south-western Mau forest, Cherangani forest, Mt Kenya, Turbo, Kakamega Forest, Mt Elgon. Cultivated in Nyambene and Meru. In the wild it is found in moist montane forests, evergreen forests and their margins, dry *Olea* and *Juniperus* forests, riverine forests and in thickets in *Combretum* wooded grassland. Along drainage lines and rocky hillsides, 1,200-2,400 m. Commonest around 2,000 m. Colluvial, stony or red soil. Rainfall: 800-1,800 mm. Commonest around 1,000 mm. Zones I-III.

Uses: Stimulant: Bark from fresh young shoots is peeled off and chewed as a stimulant, mainly by Somali and Meru and in towns (popular with long-distance heavy truck drivers as it is said to keep them awake). As one chews, a lump of khat (Somali: *taksin*) is gathered on one side of the mouth. Khat is

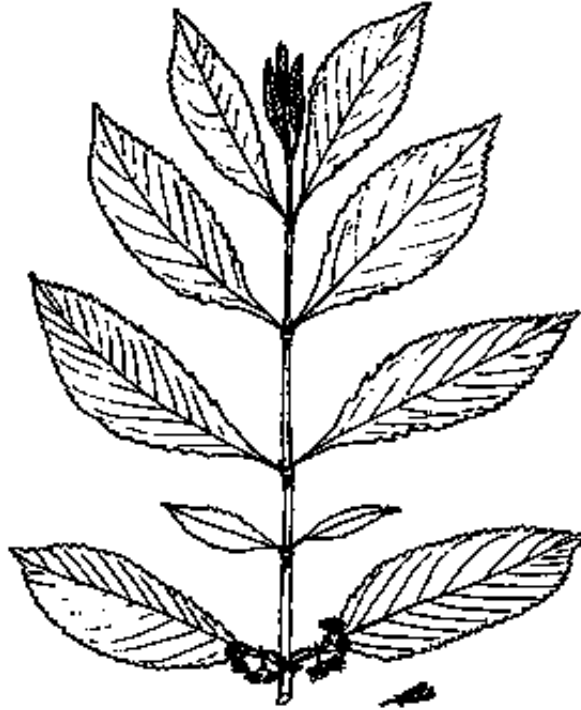
usually chewed along with soft drinks, black spiced tea or chewing gum. The leaves are reportedly used to make a beverage like tea-called Abyssinia or Somali tea. Dried leaves may be smoked like tobacco. An important plant during wedding ceremonies (Boran, Somali).

MEDICINAL: Roots and bark boiled in tea or soup as a remedy for gonorrhoea (Kipsigis, Maasai).

CULTURAL/BELIEFS: Khat, tobacco and coffee taken as a gift to the girl's home during the first visit of the boy's parents as a sign of friendship between the two families (Boran). Said to form part of the bride price in marriage among people of Nyambene. Plant used in wedding ceremonies among the Boran and Somali.

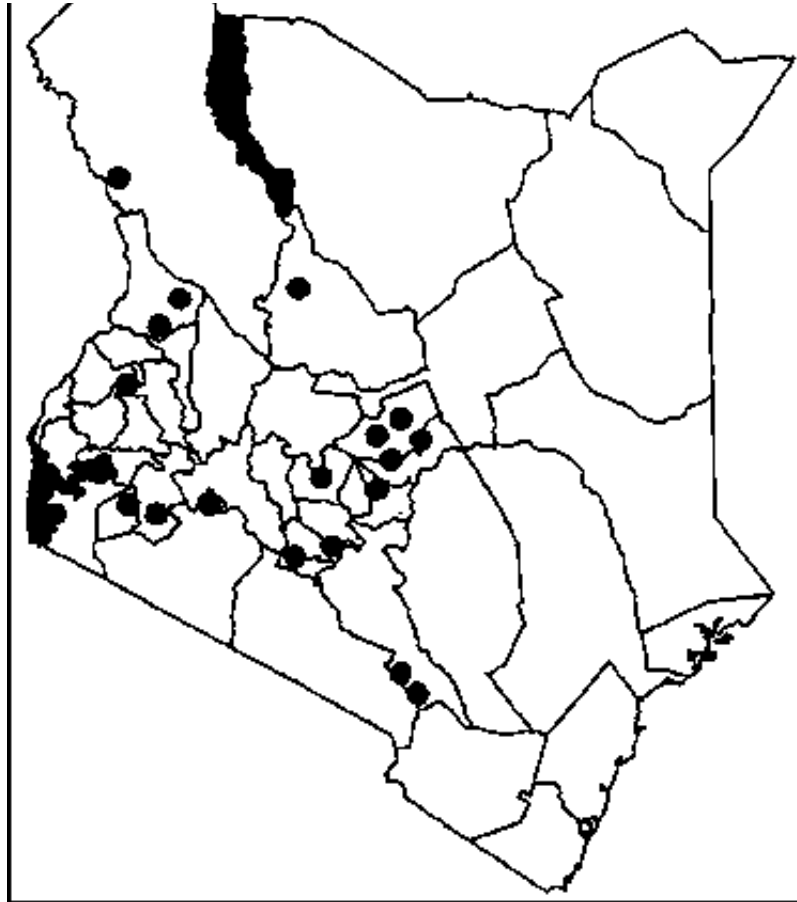
OTHER: Building poles, fuelwood (++)).

COMMERCIAL: Young shoots are sold in urban centres, especially to the Somali community. The khat trade is a flourishing multi-million shilling business in Kenya. Loads of it are harvested from the Nyambene highlands and air-freighted (mainly by chartered aircraft) from Nairobi to Somalia. It is also exported to the Middle East and often finds its way to Somali nationals in many parts of the world. Shoots are bound into small bundles which in turn are wrapped in banana leaves to protect the twigs from withering. In this condition khat can last for up to a week. In Kenya the banana leaves are hung outside kiosks to indicate the presence of khat vendors. Despite its wide occurrence in other parts of Kenya, khat obtained from Nyambene District is of a superior quality. The Kangeta type with reddish purple bark is best and is often exported. Muringene and Maua types are poorer quality and are often mixed with the Kangeta type to increase their value. Up to six types have been reported in Ethiopia.



Figure





Figure

Management: Planting may be done vegetatively through cuttings. Twigs harvested for chewing are mainly obtained from coppiced plants.

Status: Generally uncommon in the wild. Large populations have, however, been reported in the Kyulu and Gwasi hills.

Remarks: *Catha edulis*, the only member of its genus, is an important drug plant in eastern Africa. Khat chewing is an important social activity among the Somali. Khat is usually provided to important visitors by the bride during wedding ceremonies. It is said to produce wakefulness and mental alertness by its stimulating effect on the nervous system. Thus it is used in situations requiring concentration.

The health, social and economic costs of khat chewing,

however, outweigh the advantages. It induces thirst and therefore the user has to buy a lot of soft drinks. Khat is corrosive to the mouth wall. Chewing gum has recently gained popularity as it soothes the mouth besides absorbing stray khat particles. It is often a cause of constipation among chewers. It suppresses appetite and, when used for long periods, the alertness induced may lead to extreme fatigue and even stupor. Excess use of khat may induce symptoms of hallucination, intoxication or poisoning and, in extreme cases, insanity. Despite its short energy-boosting effect, prolonged use has been reported to cause emaciation and impotence. Khat chewing is addictive and often may impose a financial strain on the individual or family. The practice of chewing khat is condemned by non-users and is generally seen as unhealthy. There have been several attempts to ban the use of the drug by the authorities in Kenya and in some Islamic countries. The majority of khat users are found in the Islamic community.



Figure

Citrullus lanatus (Thunb.) Mansf.

Cucurbitaceae

Chonyi: matikiti **English:** watermelon, egusi melon **Giriama:** matikiti **Kamba:** itikitiki **Kambe:** matikiti **Luo:** afwoto **Marakwet:** sot **Sanya:** mkikili **Swahili:** mtikiti **Turkana:** namunye, amamnyet

Description: A trailing or climbing plant. Stems hairy, usually

creeping extensively. **LEAVES:** With deep lobes, usually 3-5 lobes. Central lobe the largest. Tendrils usually divided into two, rarely simple. **FLOWERS:** Monoecious, petals yellow, joined below. **FRUITS:** Ellipsoid to almost round, usually 15-20 cm long, green with pale green longitudinal stripes and white juicy flesh. (Note: The form with dark green stripes on the surface and red-pink flesh is the one more commonly found in markets.)

Ecology: Tropical Africa, Asia and America. In Kenya grows, e.g. in southern Turkana along the Turkwel River and in the coastal region. Cultivated land, abandoned cultivation, grassland, flood plains, 0-1,400 m. Common on sandy soils. Zones II-VII (riverine).

Uses: FOOD: The fruit is peeled and the flesh eaten raw or boiled. It can also be peeled, seeds removed and chopped into small pieces which may be eaten raw or cooked with pumpkin

leaves or those of *Lycium europaeum* L. (Turkana: *ekereru*, Daasanach: *il-maarach*). Seeds may be sun-dried, ground and the resulting meal mixed with sorghum flour and made into a porridge, *atap* (Turkana). In other parts of Africa, seeds may be roasted and eaten. Leaves are also reported to be used as a leafy vegetable.

OTHER: Children make toy wheels from the fruits (Makueni).

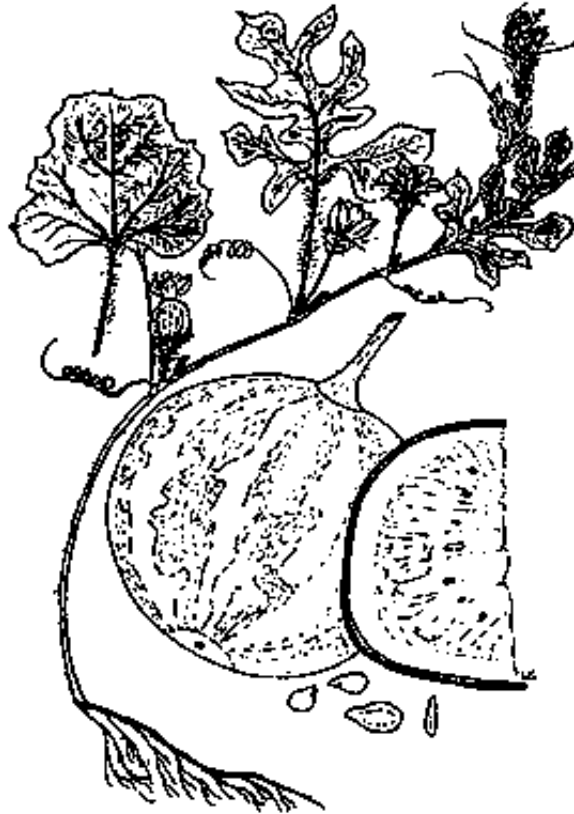
COMMERCIAL: Local form sold in Turkana. Commercially cultivated form common in most markets in large towns.

Season: Fruits in July in southern Turkana.

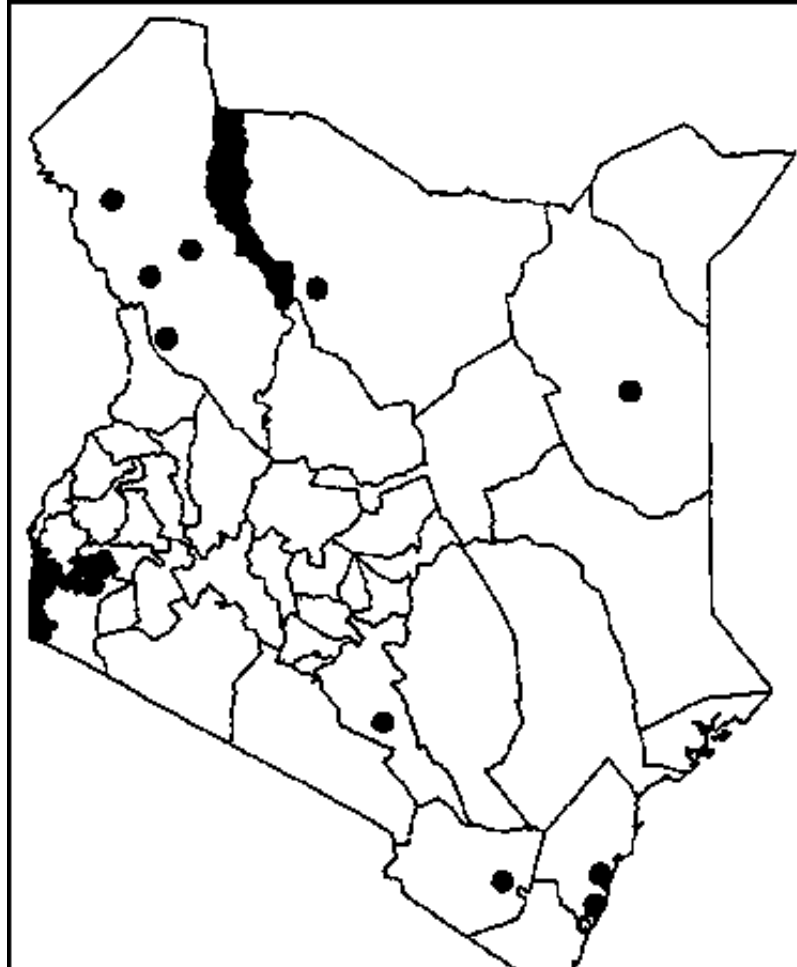
Status: Common in cultivation (Turkana). Rare elsewhere.

Remarks: The local form of the watermelon is among the earliest cultivated food plants of the Ng'ikebootok in southern Turkana who believe that it came with elephant dung. Both

the immature and mature fruits are eaten raw. The mature ones are sweeter.



Figure





Figure

Cleome gynandra L.

Capparidaceae (Capparaceae)

syn: *Gynandropsis gynandra* (L.) Briq., *Cleome pentaphylla* (L.) Schrank

Chonyi: mwangani **English:** bastard mustard, spider herb, spider flower, cat's whiskers **Giriama:** mwangani **Kamba:** mwianzo, mukakai (Machakos) sake, mwaanzo, ithea-utuku (Kitui) **Kambe:** mwangani **Keiyo:** saka **Kikuyu:** thagiti, thageti **Kipsigis:** isakyat, isagek, isakiat Kisii: chinsaga **Luhya (Bukusu):** esaka (singular), chiisaka (plural) **Luhya (Kisa):** tsisaka **Luhya (Kisa, Kabras, Tiriki):** tsisaka **Luhya (Marachi):** **lisaka** **Luhya (Tachoni):** chiisaka (plural), yisaka

(singular) **Luhya (Samia):** esaka (singular) **Luo:** dek (Homa Bay), akeyo, alot-dek, deg-akeyo (Siaya) **Maa:** lemba-e-nabo (Elang'ata wuas), olmuateni, oljani-lool-tatwa (Meto), naibor lukunya **Marakwet:** sachan, suroyo **Meru:** munyugunyugu **Okiek:** isakiat, isagek (plural) **Pokot:** suriyo, suriya, karelnet **Rendille:** bekeila-ki-dakhan, **Sabaot:** sakiantet **Samburu:** sabai, lasaitet **Sanya:** mwangani **Somali:** jeu-gurreh **Swahili:** mkabili, mwangani **Teso:** ecadoi **Tugen:** kisakiat **Turkana:** echaboi, akio

Description: An erect herb to 1.3 m high (usually 0.5-1.0 m). Stems hairy, rather oily. **LEAVES:** On long stalks, usually divided into 3, 5 and 7 leaflets, to 7 cm long. **FLOWERS:** White or pink borne on a long much-branched inflorescence. **FRUIT:** A long-stalked capsule splitting to release small rough, greyish black seeds.

Ecology: Widely distributed in most of Africa, tropical Asia

and America and all over Kenya as a weed of cultivation and disturbed areas, 0-2,400 m. Common in abandoned homesteads, especially animal enclosures. Soils: Fertile soils with a lot of organic matter. Zones I-VI.

Uses: FOOD: Leaves (often with flowers) widely used as a vegetable in Kenya, especially in the western and coastal regions (+++), (Luo, Luhya, Kisii, Teso, Kipsigis, Nandi, Giriama). Not a traditional vegetable of the Central Bantu, however. By themselves leaves are bitter. Leaves are boiled, butter added and eaten along with *ugali* made from finger millet flour. This is served to important visitors such as in-laws as a sign of respect (Luo). Usually cooked with other vegetables such as cowpeas, amaranth (Luhya, Pokot, Luo) and *Solanum nigrum* (Pokot). In western Kenya, milk is added and preferably left overnight in a pot. This reduces the bitterness. Leaves mixed with those of *kandhira* (*Brassica carinata*) are boiled, made into lumps, dried in the sun and

stored in a clay pot (*agulu*) as a dry-season food (Luo). This may be eaten with *apoth* (*Asystasia mysorensis*) as *mboga*. Among the Kisii, it is almost mandatory for women to use this before and after childbirth, circumcised boys must eat it and it is served to important visitors.

MEDICINAL: Root infusion used for chest pain (Makueni); vegetable a cure for constipation (Luo). Water obtained after boiling leaves is used to treat diarrhoea (Luo). Leaves are pounded with a little water and the extract drunk as a treatment for *chira* (a condition with symptoms like those of AIDS, but associated with a curse or punishment from the spirits). Patient also bathes with this.

COMMERCIAL: Vegetable sold in the major towns, especially in Coast, Nairobi, Nyanza, Rift Valley and Western Provinces.

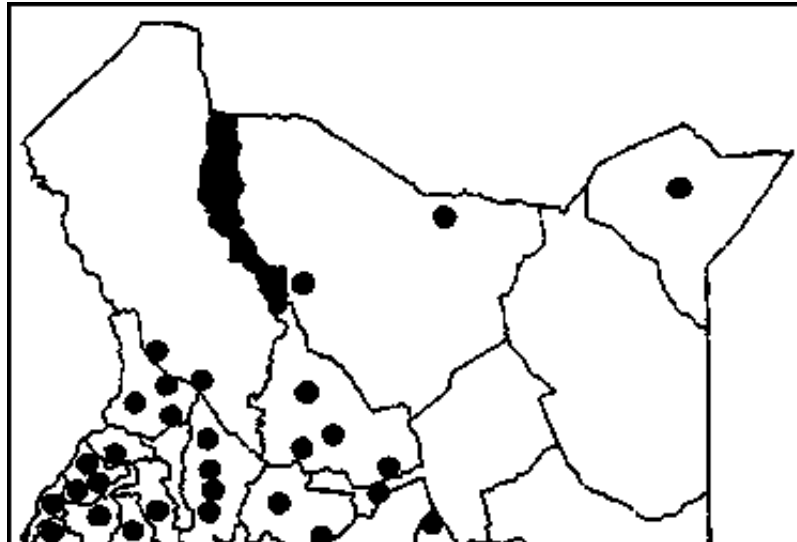
Management: Grown from seeds. Planted either in lines or by

broadcasting. Cultivated on a small scale by farmers, especially the elderly in western parts of Kenya. Outside Kenya commonly cultivated for seed oil.





Figure





Figure

Status: Common.

Remarks: Because of the bitterness of the leaves, some people prefer not to use salt. The Mijikenda believe that use of salt may lead to the disappearance of the plant from cropland. The synonym *Gynandropsis gynandra* is the name used at the

East African Herbarium. The related species *Cleome monophylla* L. (Somali: *aiyo*) is widespread in Africa and common as a weed in cultivation. *C. allamanii* Chiov. (Somali: *liimo danyeer*) and *C. hirta* (Clotzsch) Oliv. (Somali: *garah lahgurare*) are also used as a vegetable but to a lesser extent. Their leaves are smaller. Among the Luo, *dek* is often used as a general term for a leafy vegetable.



Cleome hirta

Coccinia grandis (L.) Voigt

Cucurbitaceae

Daasanach: daal-guo, daalle, dalaam (fruit) **English:** ivy gourd, scarlet gourd **Kamba:** kimuya, kimowe (Machakos, Makueni), imore, imondu (Mwingi) **Kikuyu:** kigerema **Luhya (Maragoli):** kidunda **Luo:** mutkuru, nyamutkuru, nyathund-guok, mitkuru (Homa Bay) **Maa:** ndegegeya, olamposhi, enkaiserariai **Marakwet:** kipchimchim **Mbeere:** kigerema, kirigirigi (Riandu), ndambawangaa **Pokot:** ariapongos, pchichen, pchichin (fruit), tarmuch, ketporapis **Rendille:** lahuge **Samburu:** nkaisiruaruai **Somali:** parampar, barambar **Turkana:** ekadala, arekoi, elero, emanimun

Description: A climbing or prostrate perennial plant arising

from a tuberous rootstock. Stems weak, angled, with tendrils.

LEAVES: Usually 3-5 lobed (lobes often divided into further lobes), margin usually with small hard red teeth. **FLOWERS:** Male and female flowers borne on separate plants, yellow to light yellow. Male flowers usually solitary or paired, female flowers solitary. **FRUITS:** Ellipsoid, to 7 cm long by 4 cm wide, rounded at both ends, green, ripening to bright red from the bottom upwards. Ripe fruits soft and easily detached from the plant.

Ecology: Tropical Asia, tropical Australia, Arabia, Fiji, introduced to West Indies and tropical South America. In Africa from Senegal east to Somalia. In Kenya, e.g. in Moyale, Turkwel Valley (riverine bushed grassland), Kisumu, and Kibarani in Kilifi District. Grows in dry *Acacia* bushland and riverine bushland. Commonly found climbing on bushes and hedges. Zones III-V.

Uses: FOOD: The soft juicy, bright red fruit are eaten raw (+) (Kamba, Turkana, Pokot). Ripe fruit are beaten into a solution, boiled in water, flour added and made into stiff porridge (Turkana). The fruits are dried, ground into flour and mixed with cereal flour (Turkana). Young leaves occasionally used as a vegetable (Luo (Siaya), Mbeere, Kikuyu, Pokot (Nginyang)), mashed and mixed with maize and pulses (Kikuyu, Mbeere).

MEDICINAL: Leaves mixed with ghee are used as medicine for *hima* (pain on the left side of the abdomen and lightening of the skin) in children. Medicine is applied externally (Luo).

OTHER: Seeds chewed (Daasanach). Fodder for camels and all livestock (+). Fruits eaten by birds.

Season: Flowers in January-February (Marsabit), March-April (Wajir, Isiolo, Turkana), December (Homa Bay), September (Taita), November (Kitui, Samburu). Fruits in March

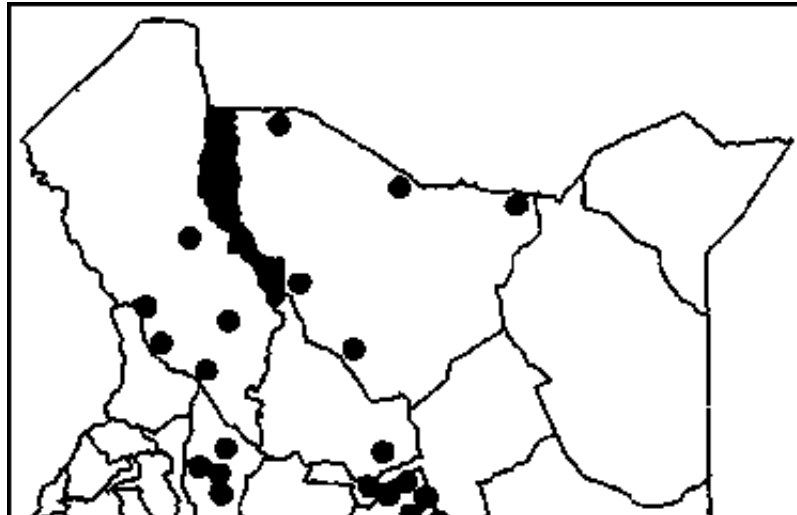
(Samburu, Kajiado, Kitui), October (Mombasa), June (Kilifi).

Status: Common.





Figure



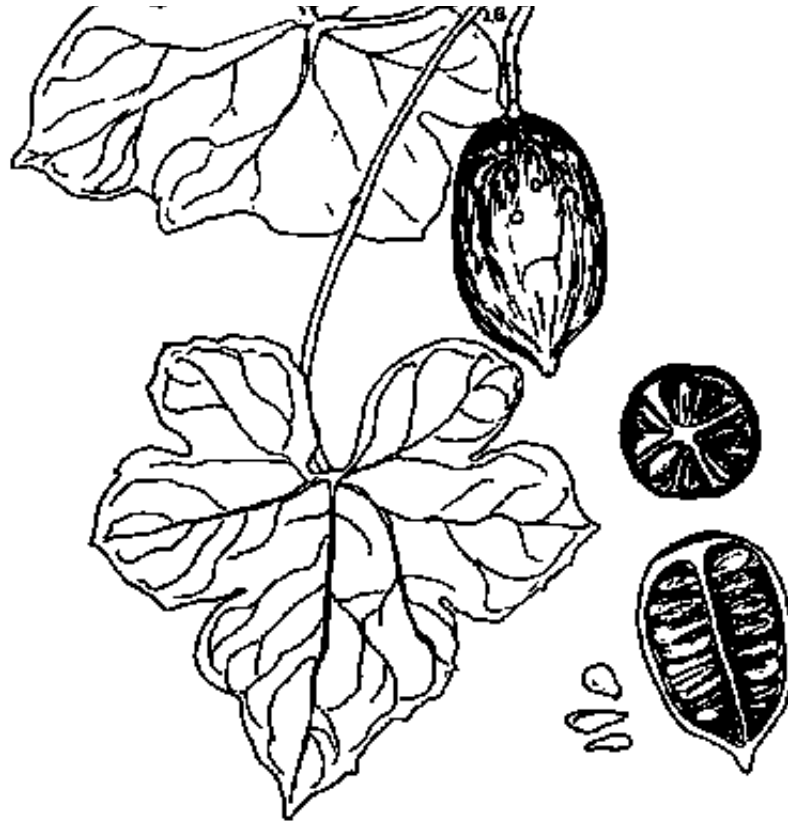


Figure

Remarks: In Asia the fruits are occasionally candied and sold in local markets. This species resembles *C. trilobata* (Cogn.) C. Jeffrey (Kikuyu: *kigerema*, Mbeere: *kirigirigi*, Samburu: *nkaisiruaruai*). Stems slender but strong. Leaves usually 3-5 lobed and very rough above (usually more so than in *C. grandis*) and softly hairy below. Fruits ellipsoid, often with a

narrow end, bright red with longitudinal stripes of light green or yellow. Very common around Nairobi. Found in the central part of the country. Rift Valley and coastal area and in northern Tanzania but not known anywhere else. The leaves are used as a vegetable (Mbeere, Meru, Kikuyu). *C. adoensis* (A. Rich.) Cogn. (Kamba: *kyambatwa*, *kimoe*, Luhya (Bukusu): *nandemu*, Luhya: *obutsiba*). Grows in most parts of Kenya, e.g. in Kitui, Kitale, Thika, Karura forest. Also in southern Africa. A creeping or climbing plant with deeply lobed leaves. Fruit pale green with dark green interrupted longitudinal lines, ripening to orange-red. Altitude 0-2,400 m, especially in bushland, grassland and at roadsides. Fruits are edible. Normally associated with snakes. Liked by birds.





Coccinia trilobata

Coffea arabica L.

Rubiaceae

Borana: bun **English:** arabian coffee, arabica coffee, coffee
Kamba: kaawa **Kikuyu:** kahua **Kipsigis:** kawek, kahawek
Kisii: ekawa, ekahawa **Luhya (Bukusu):** ekawa **Luhya (Tachoni):** kahawa **Luo:** kawa **Meru:** kahuwa **Mijikenda:** kahawa **Somali:** bun **Swahili:** kahawa

Description: Shrub or small tree up to 6 m high, but kept below 3 m in cultivation. Leaves elliptic, flowers white and axillary. Fruit a 2-seeded drupe, ellipsoid, to 2 cm, green, turning red to dark red on ripening.

Ecology: Wild populations of coffee are found in southern Ethiopia and in northern Kenya on Mt Marsabit and possibly Mt Kulal in highland forests, 1,300-1,500 m. Coffee is cultivated

throughout the tropics and most of Africa. In Kenya it is grown throughout the country at medium altitude (1,300-2,200 m) and rainfall (700-1,200 mm). Does well in deep red clay-loam soils. Zones III-IV.

Uses: This is the well-known coffee plant grown for its seeds which are the source of household coffee, a stimulating beverage. Processing involves separating the fruit pulp from the seeds. In homes this may be done by squeezing the ripe fruits in water. The cream seeds are washed and dried for a few days then pounded in a mortar to remove the seed wall. Seeds are then roasted and pounded or ground. Bulk processing in rural coffee factories involves removing the fruit wall, grading, fermenting, air drying and packing. Roasting is a specialized process done at a central factory. In Ethiopia, coffee drinking is an important social event. Members of a neighbourhood may meet every morning to drink coffee (Guragae area, central Ethiopia). It is served in special pots

and cups. Members meet at the house whose owner's turn it is to prepare the coffee.

Management: Easily grown from seeds in nurseries from where it is transplanted to farms.

Other: Pruned branches used as firewood. "Husks" from factories are used as manure.

Cultural/beliefs: Coffee, tobacco and khat are taken as gifts to a girl's home during the first visit of the boy's parents as a sign of a developing friendship between the two families (Boran). Coffee is one of the plant materials offered under fig trees during some cultural ceremonies (Boran).

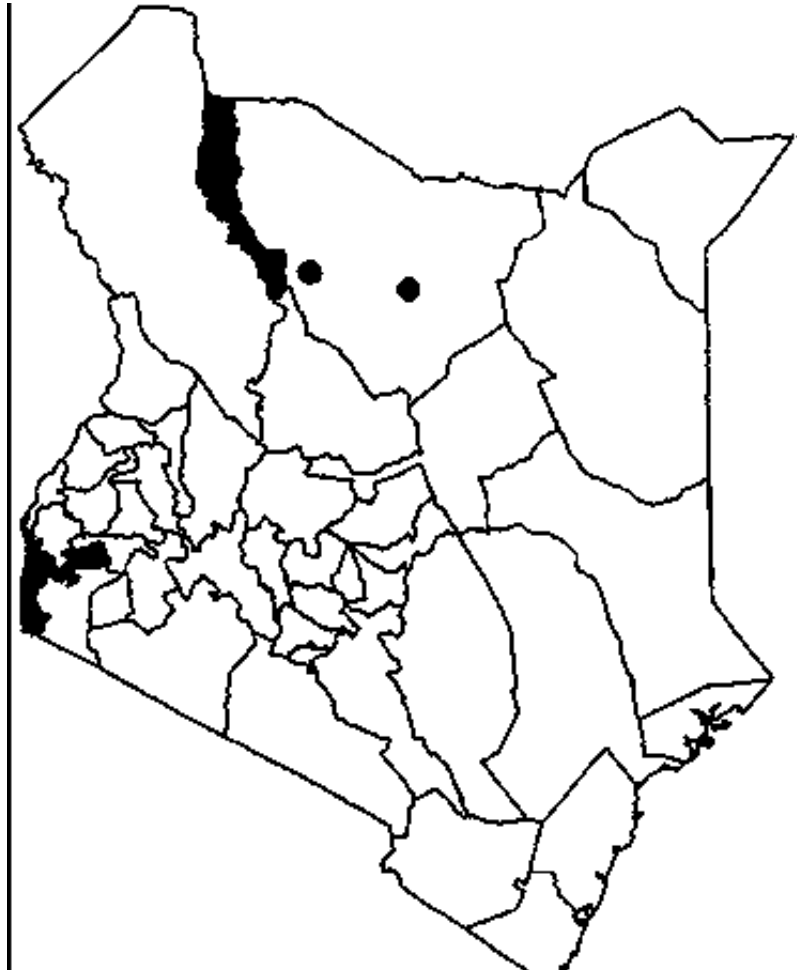
Remarks: Arabica coffee is native to the Kaffa region (whence the name coffee is derived but now falling under Oromia Federal State) of southern Ethiopia.

Several other species of coffee are cultivated. The best known of these is *Coffea canephora* (syn: *C. robusta*), (English: robusta coffee). This is said to have the highest content of caffeine. Others are *C. liberica* (English: Liberian coffee) and *C. stenophylla* (English: Sierra Leone coffee, highland coffee), both of West Africa. At least five other species of *Coffea* are found wild in Kenya but are of no commercial importance. Coffee is an important export crop in Kenya, ranking second after tea in foreign currency earnings.





Figure



Figure

Commelina africana L.

Commelinaceae

Chonyi: dzadza, **Digo:** dzadza **Giriama:** dzadza, kadzadza
Kamba: kikowe **Kambe:** dzadza **Kikuyu:** mukengeria **Luhya**
(Bukusu): sikayangaya (plant) **Luhya** (Kabras):
eshingayangaya **Luhya (Maragoli):** linyororo **Luhya (Tiriki):**
shingayangaya **Luo:** odielo **Mbeere:** mutambananguru
Samburu: naiteteyai **Sanya:** kahu **Somali:** bar **Swahili:**
kongwa

Description: A prostrate or erect (when young) herbaceous plant with soft stem. **LEAVES:** Alternate, lanceolate to almost linear with bases clasping the stem. **FLOWERS:** Yellow,

occasionally white. Leaf blade ovate, up to 10 cm long by 5 cm wide.

Ecology: A common *Commelina* in tropical Africa and in Kenya. Rare in northern Kenya and the coastal region. Found in cultivated and disturbed areas, open grassland, bushed grassland and under trees in woodland.

Uses: FOOD: Widely eaten as a vegetable (Luhya, Luo, Kamba, Teso, Mbeere) (++). An important vegetable just after the onset of the rainy season before cultivated vegetables are available; it is soft and therefore mixed with other types of leafy vegetable.

FOOD/MEDICINAL: Stalks pounded, boiled and milk added for children's colds and coughs (Samburu); fluid from spathes is applied locally for eye diseases.

OTHER: Fodder (+++) for all livestock; the plant sprouts earlier than other plants and is therefore useful, especially after a prolonged dry season. Said to quench thirst in animals.

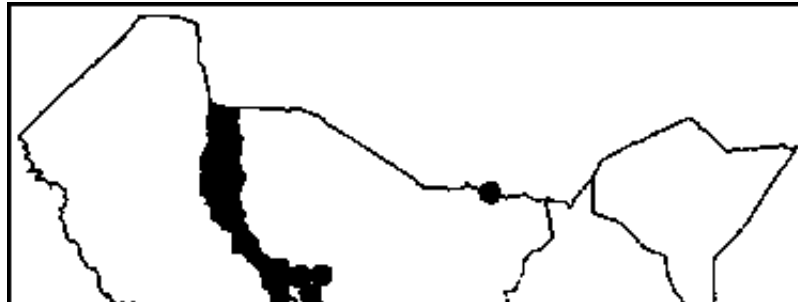
Management: Propagated vegetatively from rhizomes.

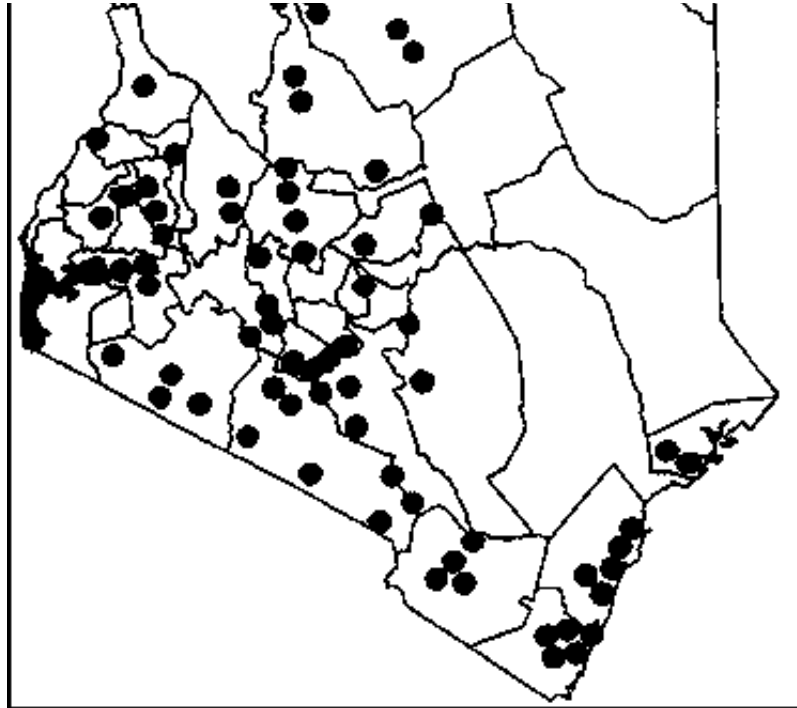
Status: Common.





Figure





Figure

***Commelina benghalensis* L.**

Commelinaceae

Digo: dzadza **Embu:** mukengeya, mukengeria **Kamba:** itula
Kikuyu: mukengeria **Luhya (Bakhayo):** linyolonyolo,
lifwafwa **Luhya (Bukusu):** lifwafwa **Luhya (Tachoni):**
lifwafwa (plant) **Luo:** odielo **Maa:** enkaiteteyiai **Mbeere:**
mukengeria, nang'ombwe **Pokot:** portotion, partation
Samburu: ngaiteteyai **Somali:** bar **Teso:** ekoropot **Tugen:**
lobbitiet **Turkana:** aturae, etirae **Turkana (Ng'iramuk):**
nabutachwee

Description: A common herb with creeping or ascending branches. **LEAVES:** Light green, hairy and ovate, with sheathed bases. **FLOWERS:** Blue.

Ecology: Widespread in Kenya, Africa and Asia. Often found as a weed in cultivation, on roadsides and in disturbed areas, especially in grassland and damp places, 0-2,400 m. Zones I-

VI.

Uses: FOOD: Leaves only rarely used as a vegetable (+). Women used to advise their children against picking this type of *Commelina* as it is said to cause a disease known as *kithunda ndutu* and knee-joint problems after prolonged use (Kamba). Also eaten as a vegetable in Kiberenge, Sukumaland and among the Nyamwezi of Tanzania.

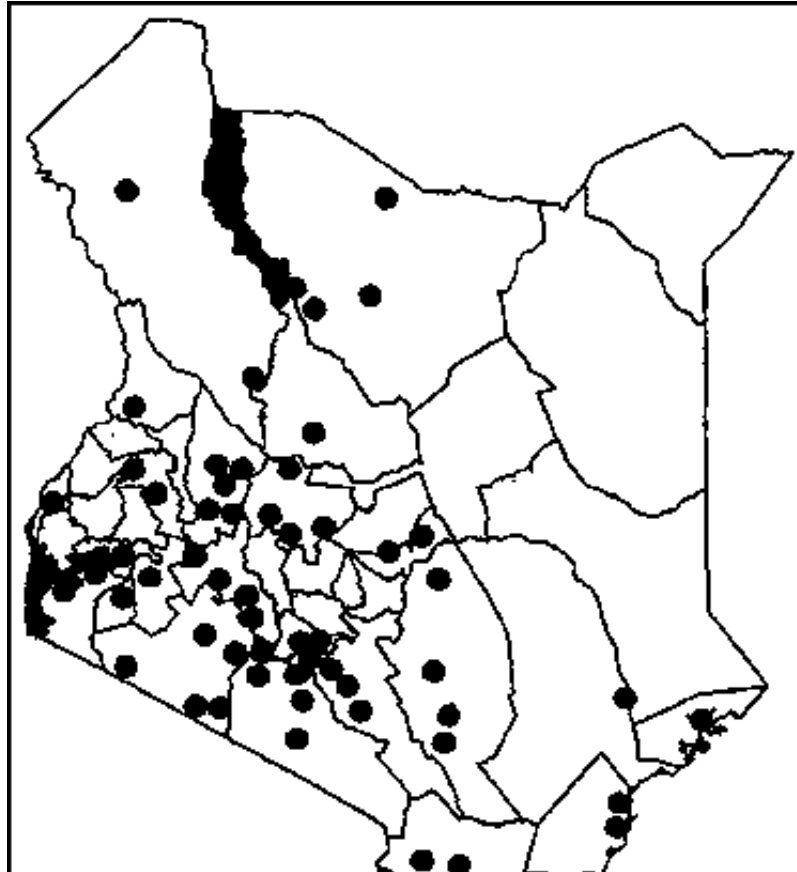
OTHER: Cattle and goat fodder (+++). Normally harvested for livestock (Kikuyu, Mbeere).

Management: Can be planted for livestock by use of rooted stems or rhizomes.

Status: Very common.



Figure





Figure

Commelina forskaolii Vahl

Commelinaceae

Chonyi: dzadza **Digo:** dzedza lume **Giriama:** kadzadza
Kamba: kikowe, kikoe (Kitui) **Kambe:** dzadza **Marakwet:**
cherat (plural) **Mbeere:** kithi, mukengeria, kimore **Pokot:**
cheretwo, cherotwo, aportotoyon, aportoyon, partatoyon
Sanya: kahu **Somali:** bar **Swahili:** jaja, kongwe **Turkana:**
atuarae, etirae

Description: A soft, weak-stemmed trailing plant arising from underground rhizomes. Stems with distinct nodes. **LEAVES:**

Narrow, long, up to 12 cm, by 3 cm wide. **FLOWERS:** Deep blue.

Ecology: Widely distributed in Kenya and in the neighbouring countries. Common in Embu, Meru, Machakos and Kitui. Commonly found in lightly shaded cool or damp areas. Found as a weed in cultivation, disturbed places and in bushed grassland, especially dry *Combretum* bushland, 0-1,700 m. Favours sandy to loam soils and occasionally red clay. Zones II-VI.

Uses: FOOD: Leaves picked and cooked as a vegetable (+++) (Mbeere, Kamba, Giriama, Turkana). Soft when cooked and hence usually mixed with other coarse vegetables or mashed in a maize and pulse mixture (Mbeere, Kamba). Sprouts fast after the first rains and is normally harvested at this time before other vegetables are ready. Leaves widely used as a vegetable in Kenya and Tanzania. An important vegetable

among the Kamba.

OTHER: Good fodder for animals (+++). Leaves eaten by chickens.

Management: Propagated vegetatively by rhizomes (root cuttings).

Status: Common.

Remarks: a related and also commonly used species is *C. imberbis* Hassk. With elongated leaves and mauve-blue flowers. (Digo: *dzedza lume*, Chonyi: *dzadza*, Giriama: *dzadza*, Kamba: *kikowe*, Kambe: *dzadza*, Mbeere: *kimore*, Sanya: *kahu*). It is common in the coastal region.



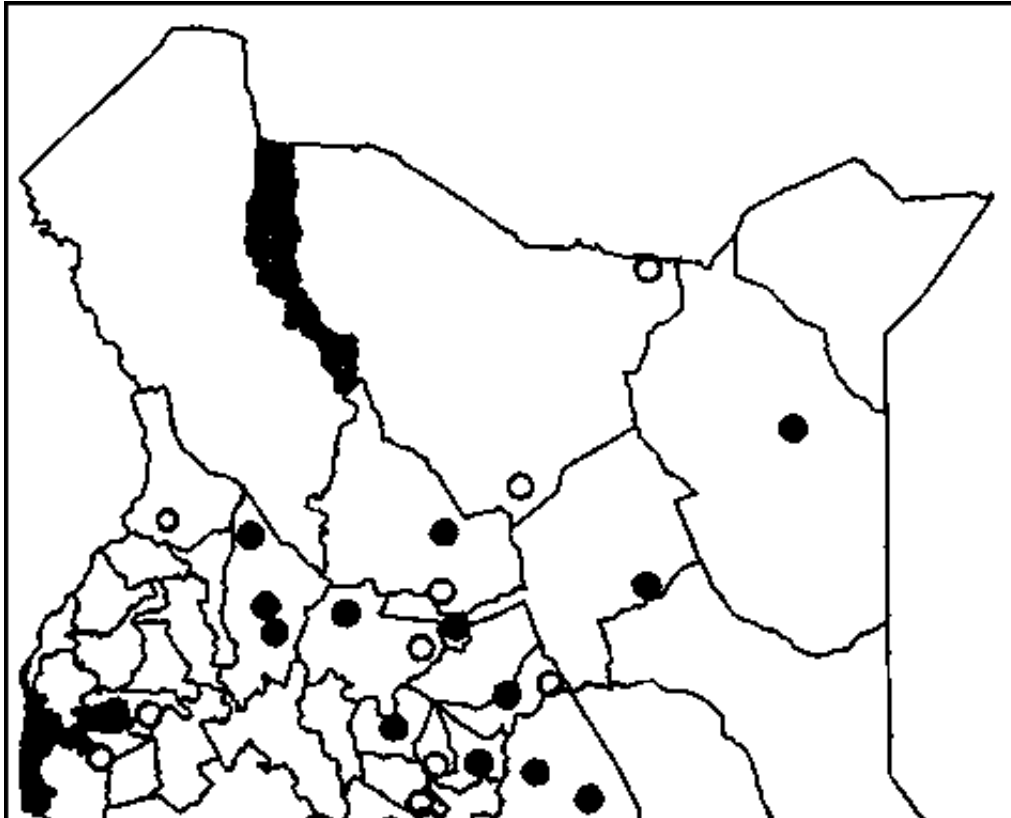
19/10/2011

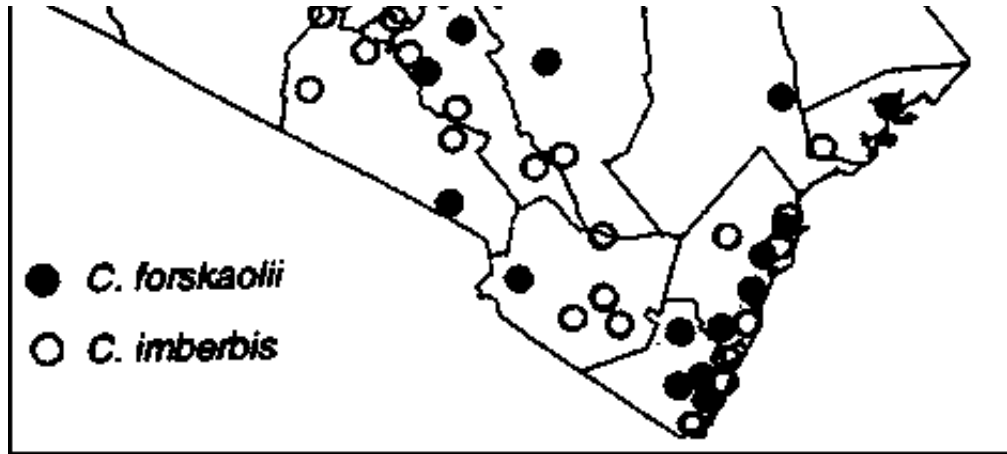
meister12.htm

Commelina imberbis



Figure





Figure

Commiphora africana (A. Rich.) Engl.

Burseraceae

Borana: hamis, dibo **Daasanach:** kerech-dhata **Gabra:** hameesaa **Giriama:** musishwi, mutsuchwi **Kamba:** kitungu, ndungu (fruit), itula **Luo:** arupiny **Maa:** oloishimi **Mbeere:**

muguagua, kirugurugu (Evurore) **Orma:** komper Pokot: katagh, kallechuwa **Rendille:** ilmasara, lerokoa **Somali:** dabaunun **Swahili:** mkororo **Turkana:** ekadeli

Description: Deciduous spiny shrub or small tree to 5 m high (usually 2-4 m). Branchlets reddish purple. **BARK:** Green, with a thin light yellow but translucent scaling cuticle.

LEAVES: 3-foliolate, the middle leaflet being largest, obovate and with toothed margin, lateral ones much smaller and usually elliptic. **FLOWERS:** Small, dioecious. **FRUITS:** To 1.5 cm, green, turning brown on ripening.

Ecology: Widely distributed in the drier parts of Africa from Senegal east to Ethiopia and south to South Africa. Mainly in the low, drier parts of Kenya where it is common in *Acacia-Commiphora* bushland. Soils varied, but mainly red clay, sandy clay and on rocky ground. Rainfall: 400-1,000 mm. Zones IV-VII.

Uses: FOOD: Roots of young plants chewed for their sweet taste and to quench thirst (Kamba, Maasai, Pokot). Roots are juicy with a slightly sweet taste. Gum eaten (Maasai, Pokot, Turkana). Bark is used to make a red tea (Pokot, Turkana).

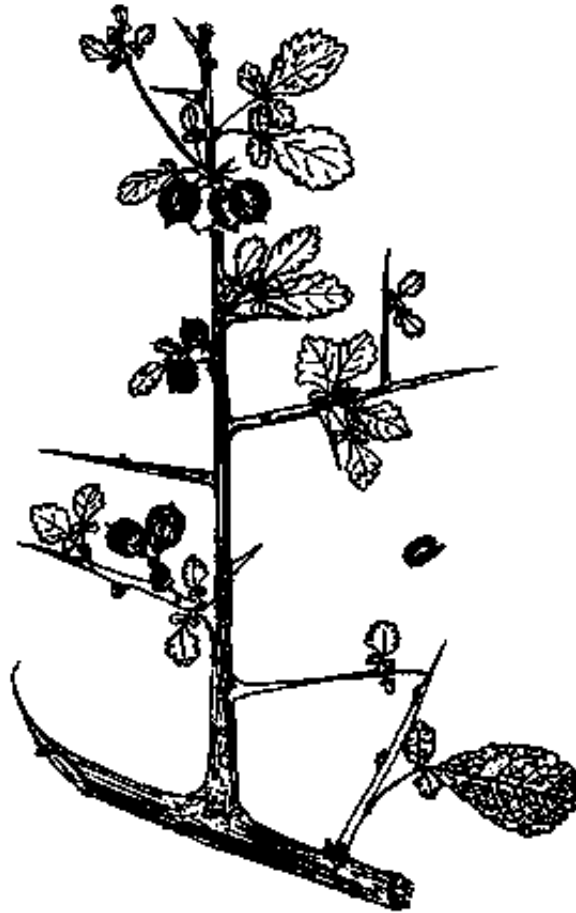
MEDICINAL: Fruits chewed or pounded and used for diseases of the gum, *muthingithu* (Makueni), ulcerated gums, toothache.

OTHER: Hedge, wooden spoons, fencing. Stems used as a toothbrush (Rendille, Kamba). Camel and goat fodder (++), especially in the dry season. Gum used in arrow making. Wood used for house building, headrests, stools, milk containers (Pokot, Turkana, Daasanach).

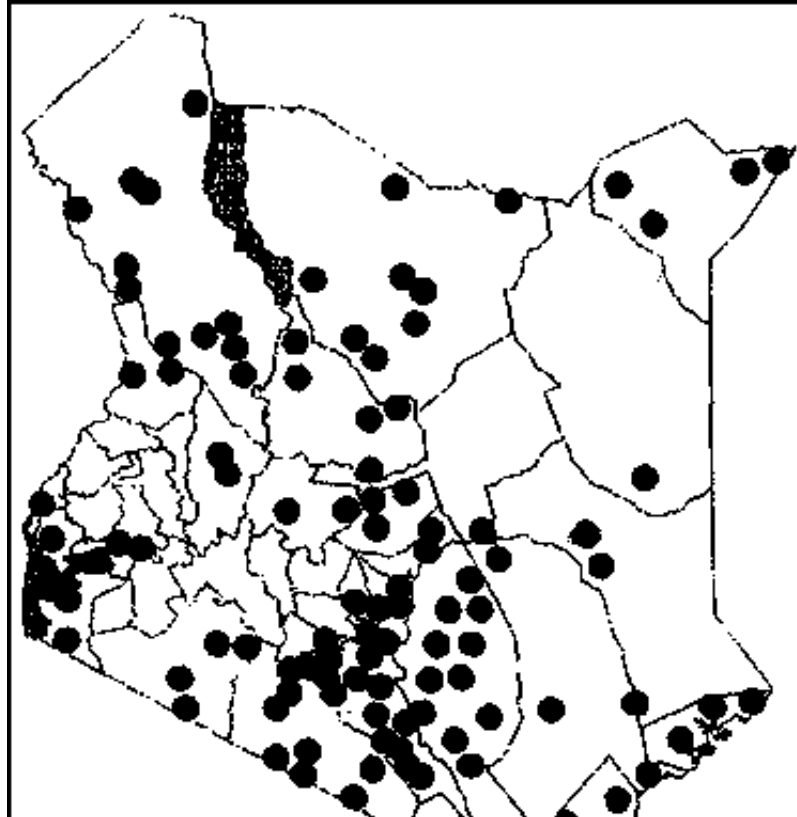
Management: Propagated vegetatively by stem cuttings.

Status: Common.

Remarks: A good hedge plant.



Figure





Figure

Commiphora rostrata Engl.

Burseraceae

Borana: dirraa, dainjo **Malakote:** choneh **Mbeere:** munyei
Orma: udesi **Pokot:** lokimeta **Rendille:** galdayan (Korr)
Samburu: Imaim, ltilimani **Somali:** jano (Isiolo), jenau, janau
 (Wajir), hanguli (Eldas) **Tharaka:** mutunkuuri **Turkana:**
 lokimeta, eurumosing (Ng'ikebootok), lekora

Description: A strong-smelling shrub to 3.5 m. Stems exude a copious, clear, sap. Lateral shoots end in strong spines.

BARK: Smooth, dark purple or maroon to almost black.

FLOWERS: Dioecious, narrow-stalked, deep red. **FRUITS:** Red, pointed, with wiry stalks. Plant usually leafless at time of flowering.

Ecology: Grows in eastern Ethiopia, Somalia and north-and south-eastern Kenya in dry open *Acacia-Commiphora-Boswellia* bushland, 80-1,050 m. Common on sandy, gravelly soils or on rocky areas. Rainfall: 200-600 mm. Zones V-VII.

Uses: FOOD: Leaves eaten raw (Somali, Marakwet). Salty or tasting of oxalic acid. Leaves used as a relish or cooked to add flavour to food (Mbeere (Thambu)). Bark or branches used in the preparation of tea (Turkana (Ngikebootok), Daasanach). Stem pith chewed to quench thirst (Somali). Bark from young plants chewed (Somali).

FOOD/MEDICINAL: The bark or branches may be chewed or

an infusion drunk for fever, colds and coughs (Turkana).

MEDICINAL: Leaves and young twigs chewed for coughs and chest problems (Tharaka). Sap applied to sore eyes (Turkana, Somali), but painful.

OTHER: Sap used to glue feathers on to arrow shafts (Pokot). The bark is pounded, put in to a new gourd with water and left for 3 days then washed out leaving a nice smell in the gourd (Pokot). Stems used as toothbrush (Rendille).

Season: Flowers in April-May (Tana), November-December (southern Turkana, Tana, Isiolo).

Management: Propagated vegetatively by stem cuttings.

Status: Occasional.

Remarks: Two varieties are known: var. *rostrata*, which is an

erect shrub and the more common and widespread variety, and var. *reflexa* (Chiov.) Gillett with a spreading prostrate habit found in Dandu in north-eastern Kenya, south-east Ethiopia and in Somalia.

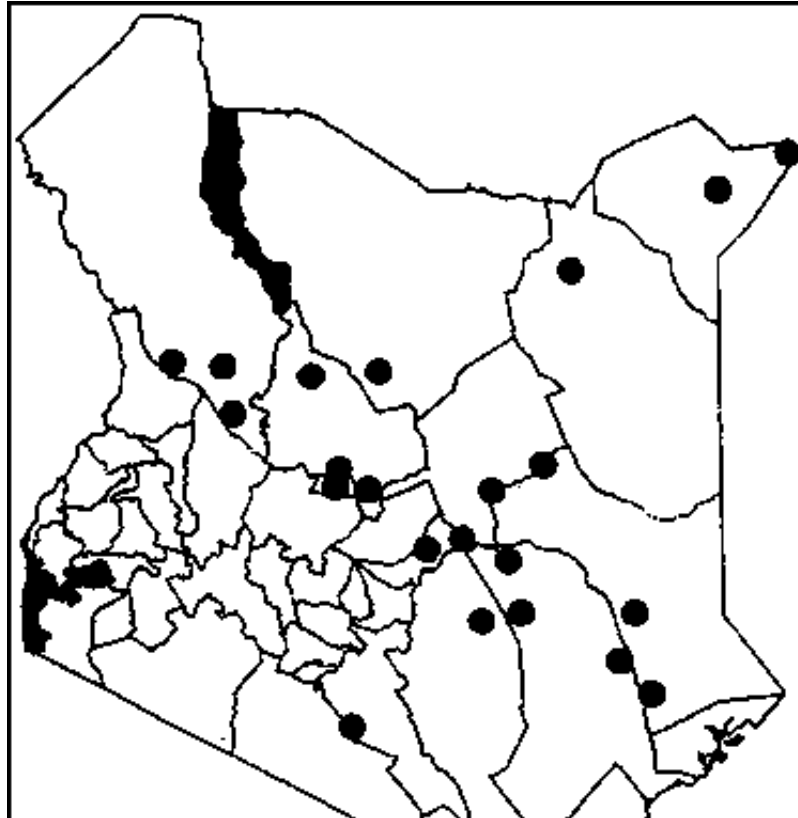




Figure



Figure





Figure

Commiphora schimperi (O. Berg) Engl.

Burseraceae

syn: *C. trothae* Engl., *C. buraensis* Engl.

Maa: osilalei

Description: A deciduous spiny shrub or small tree to 5 m high (usually 2-4 m). **BARK:** Cuticle reddish brown or grey, peeling in rolling sheets. **LEAVES:** 3-foliolate, central leaflet to 3.5 cm long, lateral leaflets smaller and similar.

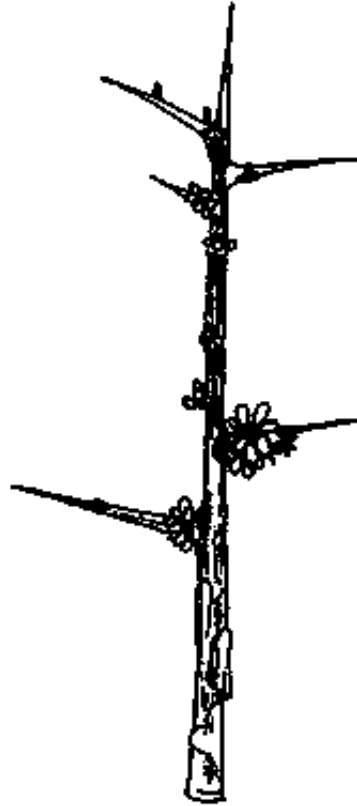
Ecology: Ethiopia and Yemen, Somalia, northern Uganda, Tanzania south to South Africa. Found in most parts of Kenya except Western and Nyanza Provinces. Common in *Acacia-Commiphora* bushland and bushed grassland, 400-1,900 m. Soils varied, but mainly red clay, sandy clay and rocky ground. Zones IV-VI.

Uses: FOOD: Roots of young plants are chewed because of their juicy sweet taste and to quench thirst (Maasai, Kamba). Resin exuded from bark (*enaing'orre*) is chewed (Maasai). Root infusion added to children's milk as a tonic (Maasai, Kajiado). The red inner bark is boiled in tea (Maasai).

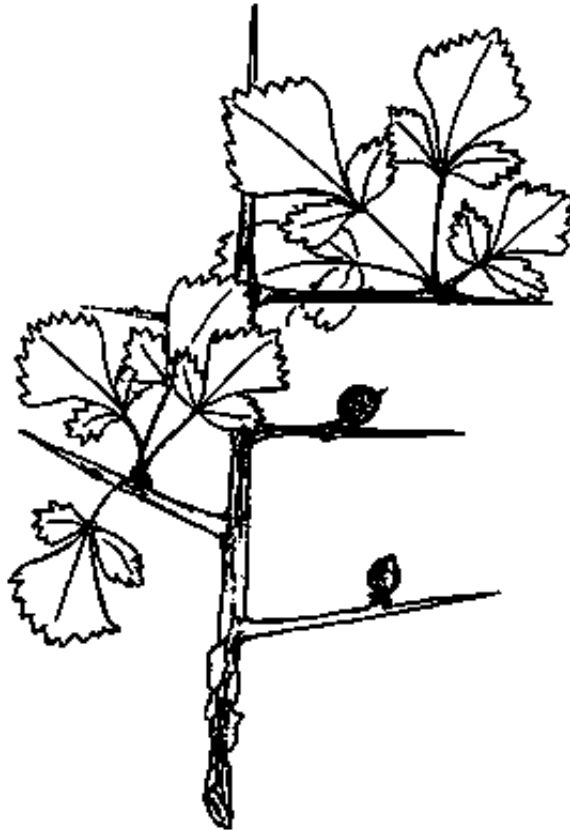
OTHER: A hedge plant. Sticks used for making fire.

Management: Propagated vegetatively by stem cuttings.

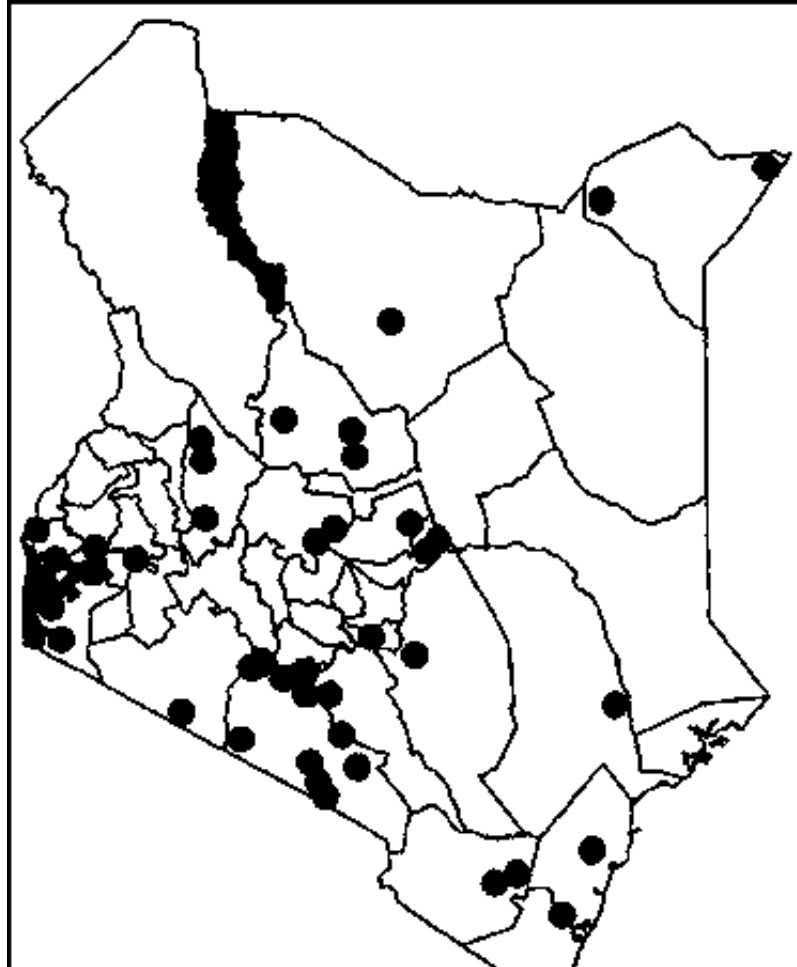
Status: May be locally common.



Figure



Figure





Figure

Corchorus olitorius L.

Tiliaceae

Chonyi: chikoshu, vombo **Digo:** mlenda, mwatsaka wa bara, bombo **English:** jute, bush okra, Jew's mallow **Giriana:** vombo, **Kambe:** chikoshu, vombo **Kisii:** omotere **Luhya (Bukusu):** murere **Luhya (Kabras):** omurere **Luhya (Kisa):** omurele **Luhya (Marachi):** murere **Luhya (Tiriki):** omurere **Luo:** apoth, apoth-nyapololo **Pokot:** chow (Sigor) **Sanya:** kikoshu **Swahili:** mlenda, mulenda, kala **Tugen:** ntereryan (Kibingor) **Turkana:** namale, lojeel, emarot, abungu

Description: An erect woody herb, usually 0.5 to 1.2m high but may reach a height of up to 2.5 m in cultivation. **LEAVES:**

To 15 cm long, short stalked, ovate to elliptic, margin serrated. Leaf blade usually with basal protrusions.

FLOWERS: Yellow. **FRUIT:** A short-stalked, cylindrical capsule that splits into 5 parts. Seeds greyish black, angled.

Ecology: Grows in northern Australia north to China and west through India and Pakistan to the Middle East and in most of Africa. Also naturalized in tropical America. Widespread in Kenya in seasonally flooded areas, flood plains, at edges of lakes, dams and marshes and in bushland, wooded grassland and open grassland, especially in low hot country, 0-1,500 m. Alluvial soils or sandy loam. Zones II-IV.

Uses: FOOD: Leaves widely used as a vegetable in Kenya and the rest of Africa (+++) (Luhya, Luo, Giriama, Digo, Swahili, Samburu). Normally cooked with other coarse vegetables as it is slippery, e.g. with *Gynandropsis gynandra*, *Crotalaria brevidens* and *C. ochroleuca* or cowpeas. When cooked with

cowpeas, milk and butter, it is given to lactating mothers (Luo). Leaves are pounded in a mortar, cooked with meat and flavoured with lemon or lime juice (Swahili). It is mixed with *Asystasia gangetica* (*tsalakakushe*) or a mixture of cowpea, pumpkin, sweet potato and cocoyam leaves (Mijikenda).

MEDICINAL: Scrapings from the root are put into cavities in teeth to ease pain (Digo). Bark is a source of the common commercial jute fibre. In India and Bangladesh, this plant is cultivated extensively for its fibre.

COMMERCIAL: Vegetable sold in Nairobi and many market centres around the country, especially in Coast, Western and Nyanza Provinces.

Season: Rainy season and soon afterwards.

Management: Propagated by seeds. Sown in rows or

broadcast. The vegetable may be harvested by breaking off small branches. This encourages the growth of new shoots.

Status: May be locally common but generally rare.

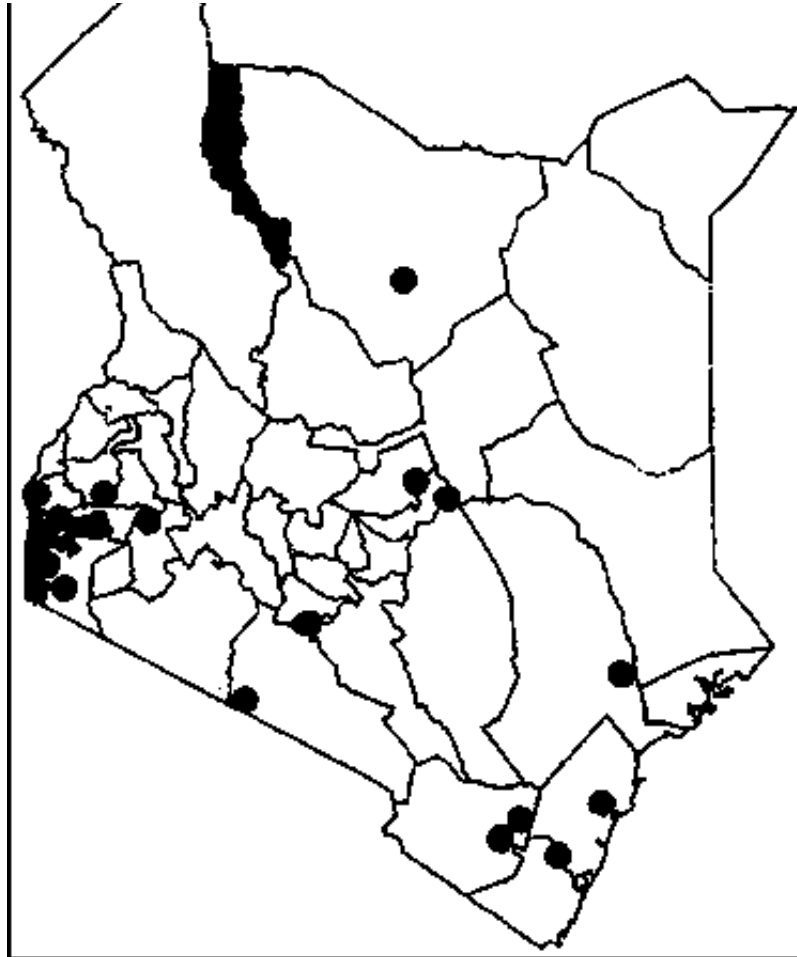
Remarks: This species is one of the ancient food crops of the Middle East. It is sown and used as a pot-herb by Jews (hence the name "Jew's mallow") and in stews in Egypt where it is known as *melokhia*. It is reportedly used in soups in Central America and as a pot-herb in South East Asia. Large quantities of this species are grown for the extraction of jute (used for making ropes and bags) in eastern India, Bangladesh and south China. A variable species with several cultivars.





Figure





Figure

Corchorus trilocularis L.

Tiliaceae

Borana: luuftoole **Chonyi:** chikosho, vombo **Gabra;** luftoole (Gabra): qaqalla (Huri Hills) **Giriama:** kikosho **Kambe:** chikosho **Keiyo:** nterere **Kipsigis:** laiyo-nebo-soin, laiyo-nebo-soin (Timbilil) **Luhya:** mrere msatsa (Busia) **Luhya (Bukusu):** murere-nalubenga, murere-nalubembe, sitanyamurwe, nalubembe, nalubonga **Luhya (Kabras):** omurere **Luhya (Maragoli):** mrere **Luhya (Tiriki):** omurere **Luhya (Tachoni):** lihu, oluvembe **Luo:** apoth **Marakwet:** karkar, kokorwo (singular) **Pokot:** chepkarkarian, mamapatontoluo, mamachemeloi **Samburu:** leperia **Sanya:** kikosho **Swahili:** mlenda

Description: A usually erect branched herb. **LEAVES:** Ovate or broadly so with serrated margins. **FLOWERS:** Yellow. **FRUIT:** Slender long pod-like capsule, to 7 cm or more, straight or slightly curved and splitting into 3-4 (often 3) valves. Capsules are held erect on the stems, singly or in pairs.

Ecology: Found in most parts of Africa from Senegal east to Ethiopia and from Egypt south to South Africa. A common *Corchorus* in most parts of Kenya in open *Acacia* bushland, grassland, cultivated ground, flood plains, edges of marshy places, dams and lakes, 0-2,400 m. Soils vary, e.g. sandy alluvial, black cotton, sandy or clay. Zones II-VI.

Uses: FOOD: Leaves eaten as a vegetable (+++) (Pokot, Giriama, Luo, Luhya, Kipsigis). As this vegetable is slippery when cooked, it is normally mixed with other coarse vegetables, usually *Gynandropsis gynandra*, *Crotalaria*

brevidens and *C. ochroleuca* or cowpeas (Luhya, Luo). When cooked with cowpeas, milk and butter it is given to breast-feeding mothers to aid lactation (Luo). **OTHER:** Fodder.

COMMERCIAL: Sold in many markets throughout the country, especially in Nairobi, coastal and western areas.

Management: Propagated by seeds which are sown in rows or broadcast.

Status: Common.

Remarks: There could be up to eight *Corchorus* species in Kenya, about half of which are commonly used as a vegetable. *C. tridens* L. (Chonyi: *chikosh*, Giriama: *kikosh*, Kambe: *chikosh*, Luo: *apoth*, Sanya: *kikosh*) has narrow or ovate leaves to 10 cm long with a pair of protrusions at the base of the blade. The capsules are slender, short (to 4 cm long),

straight or slightly curved with 3 spreading horny protrusions at the end of each capsule and split into 3 valves. This species is found in most of Africa. In Kenya it is found in most dry areas, dry bushland, grassland, swamps and in cultivation. *C. aestuans* L. (syn. *C. acutangulus* Lam.) has oval leaves with a pair of protrusions at the base of the leaf blade. Capsules are broader than in *C. tridens*, up to 3 cm long, with three diverging horns and splitting into 3 valves. *C. fascicularis* L., on the other hand, has long narrow leaves without protrusions and a short capsule to 1.5 cm long. These species are also used as a vegetable.

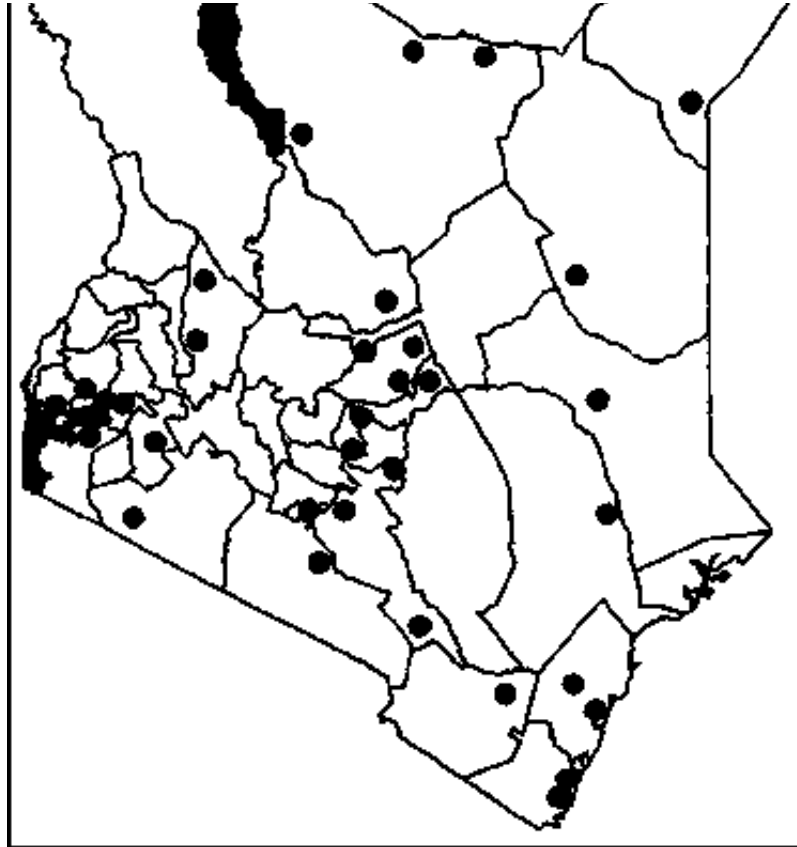


Corchorus trilocularis



Corchorus tridens





Figure

Cordia monoica Roxb.

Boraginaceae

syn: *C. ovalis* DC.

Borana: qotte, mader **English:** sandpaper tree **Ilchamus:** seki, Isek, Imuleel, Imuleelin, muleelin **Kamba:** kithei, nthei (fruit) **Kikuyu:** muthigi, mukuo, mukuu **Kipsigis:** nogirwet **Luo:** oseno **Maa:** oseki, eseki, Isek, il-seki (plural) **Meru:** ikuo **Orma:** araba **Pokot:** topererwo, toporewo, taparer **Samburu:** se'eki, lamantume **Somali:** marergom, marer-girgir (Tana River), marer-goh **Swahili:** msasa **Tharaka:** muthugagu, mutugangu **Turkana:** etuntun, elkaisekiseki

Description: Spreading, much-branched bush, shrub or tree to 6 m high (normally 3-5 m). **BARK:** Yellow to ash grey, smooth, flaking. **LEAVES:** Ovate to almost round, very rough

above, greenish grey. **FLOWERS:** Cream, turning brown on drying. **FRUIT:** Yellow or orange, oval, up to 2 cm across.

Ecology: Grows in India, Sri Lanka and in Africa from Sudan south to South Africa. Widely distributed all over Kenya in bushland, 0-2,200 m. Common in valley bottoms and along watercourses. Often on rocky areas and red clay soil. Zones I-VI.

Uses: FOOD: Mucilaginous pulp of fruit edible (+). Fruit coat is normally removed, the pulp (with seed) is sucked and the seed discarded. The pulp is sweet but gummy.

MEDICINAL: Roots boiled and the extract taken for vomiting and malaria, especially by children. Leaf extract given to animals and people to remove retained placenta (Tharaka).

OTHER: Fuelwood, shade, good charcoal, handles, wood

carving (Kamba), beehive hooks (Kamba, Tharaka). Rough leaves are used as sandpaper to polish wooden shafts of spears (Maasai, Pokot). Camel and goat fodder. Stems made into clubs (Luo) and thinner ones into arrow shafts (Maasai, Narok). **CULTURAL/BELIEFS:** Used in blessings (Maasai, Samburu, Pokot). Used in rituals (Luo). The Maasai believe that if a livestock keeper carries an *oseki* stick his cattle will not suffer from certain diseases. Believed to be a peace-engendering plant (Maasai). To stop a fight or to prevent oneself from being attacked, a stick from this plant is placed between the opposing parties. The aggression should stop immediately. Whoever disregards this warning may be punished heavily. Bad luck may also befall him and it may mean death of one or more members of the family. It is therefore enough warning to say "*elua eseki*", meaning "I separate you with *eseki*".

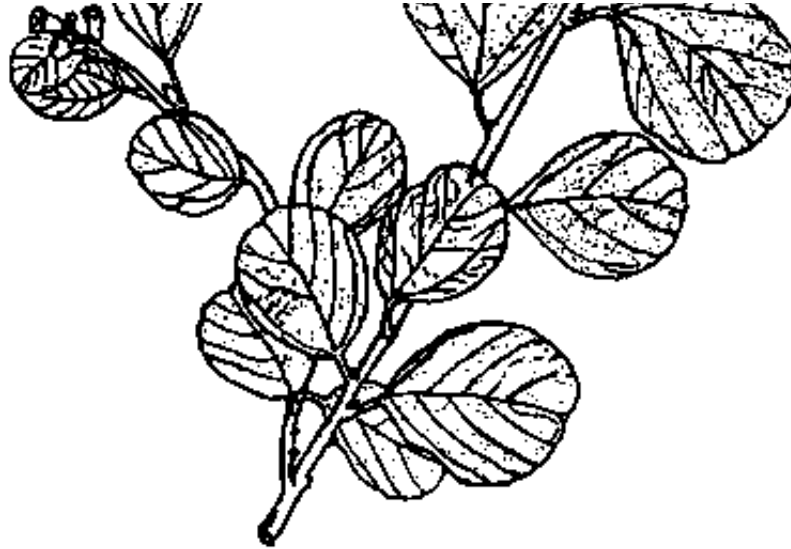
Season: Flowers in April-May (Kajiado, Samburu), October-

November (Taita, West Pokot, Nairobi, Meru). Fruits in February-March (Kajiado, Samburu), April-May (Kwale, Kisii); June-July (Machakos, Kitui, Meru, Isiolo), August (Isiolo, Baringo). Timing mainly depends on rains.

Management: Propagated by seeds sown directly and without pre-treatment.

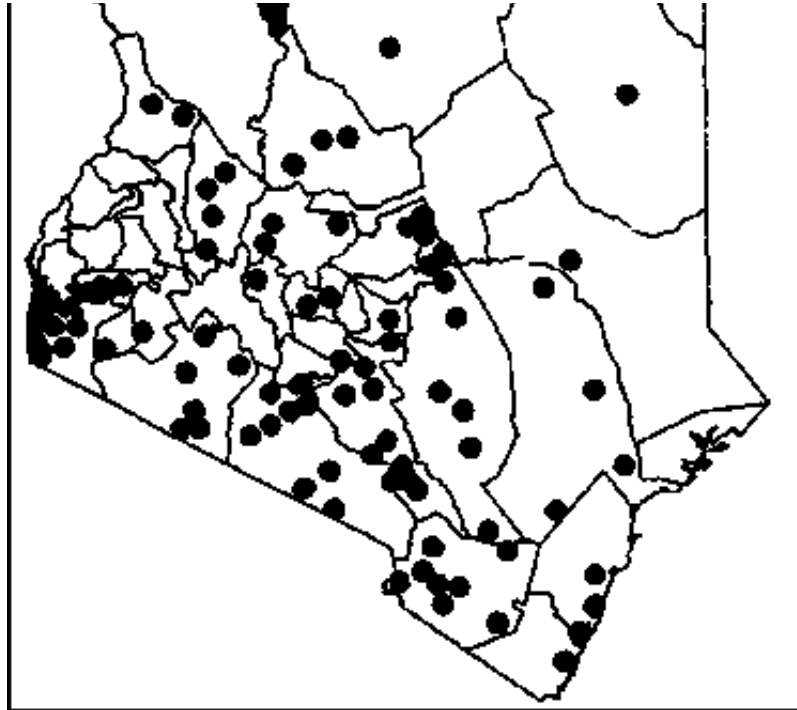
Status: Common.





Figure





Figure

***Cordia sinensis* Lam.**

Boraginaceae

syn: *C. gharaf* Ehrenb. ex Aschers.

Borana: harores, mader-boor, madeer-goowe, madee'r
Chonyi: mkayukayu **Gabra:** mad'eera **Giriama:** mderia, mkayukayu
Ilchamus: salapani, Igweita **Kamba:** kithea, muthei-munini, kithia
Kipsigis: nokirwet **Maa:** ol-durgo, ol-dorko, ol-olgot
Malakote: mutalya-chana (riverine. Tana River), mutaale
Marakwet: adomoyon **Orma:** mader
Pokomo: muhale, mhali, mtale **Pokot:** adomeyon, adomeon, adome (fruit)
Rendille: gaer, koh, madeer, gayer **Samburu:** dorgo, Imanturre, Igueita, Igweita-orok, silapani
Sanya: ho'orocho **Somali:** mareer, marer **Tugen:** adumewa, edoma (leaves), adomewa
Turkana: edome

Description: A low leafy shrub or bush, rarely a small tree up to 6 m high, often multi-stemmed. **BARK:** Finely fissured

longitudinally, or smooth, dark grey on branches. **LEAVES:** Variable, smooth or slightly rough, narrow and long, ovate to obovate or broadly so. **FLOWERS:** Cream, browning when over. **FRUITS:** Conical, bright red or orange when ripe, produced in masses. Seed hard, rough, yellowish cream.

Ecology: Grows in the Middle East, Pakistan, India, Sri Lanka and in Africa from West Africa to Ethiopia, Somalia and Egypt south to Namibia and north-east South Africa. Widespread in the drier parts of Kenya but absent in Western and Nyanza Provinces. Found in dry riverine vegetation, usually with *Salvadora persica*, or in open bushland, usually 0-1,400 m. Mainly alluvial, sandy, red loam and rocky soils. Zones IV (coast)-VII.

Uses: FOOD: Ripe fruits eaten raw (+++). The sweet mucilaginous pulp may be eaten fresh. Fruit cover and seeds are discarded. Large quantities of the fruits are gathered,

pounded to a sticky mass, sun-dried and stored in a wooden container, *eburr* (Turkana). Whenever it is needed, water is added to soften it, then served. The fruit pulp is sometimes used for brewing a local beer. The fresh fruits are squeezed in water to dissolve the pulp. This is mixed with tamarind (*Tamarindus indica*) juice and fermented. Fresh juice may also be drunk (Turkana). A clear gum produced by the tree is edible.

OTHER: Stems are widely used as poles in hut construction (+++) (Turkana, Pokot, Boran, Somali, Gabra) and for erecting bird-scaring platforms in sorghum fields (Turkana). In many cases these may root, hence becoming a near-by source of food. Fodder (+++) for goats, camels, sheep and cattle. Stems are made into walking sticks, wooden spoons, stirrers. Stems used for smoking gourds (Maasai).

CULTURAL/BELIEFS: Branches are spread where the house

of a newly married couple is to be built, branches are put above the house during *almadho* and *soriyo* ceremonies (Samburu). Sticks used in settling battles in the absence of *C. monoica*, *oseki* (Maasai). Widely used in rituals (Gabra, Samburu. Maasai, Boran).

COMMERCIAL: Fruits sold in Lodwar (Turkana). Poles for construction sold (Pokot, Turkana).

Season: Flowers in April-May (Turkana). Fruits in March (Kilifi), May-June (Kajiado, Kitui), August-September (Garissa, Samburu, Turkana, Kajiado).

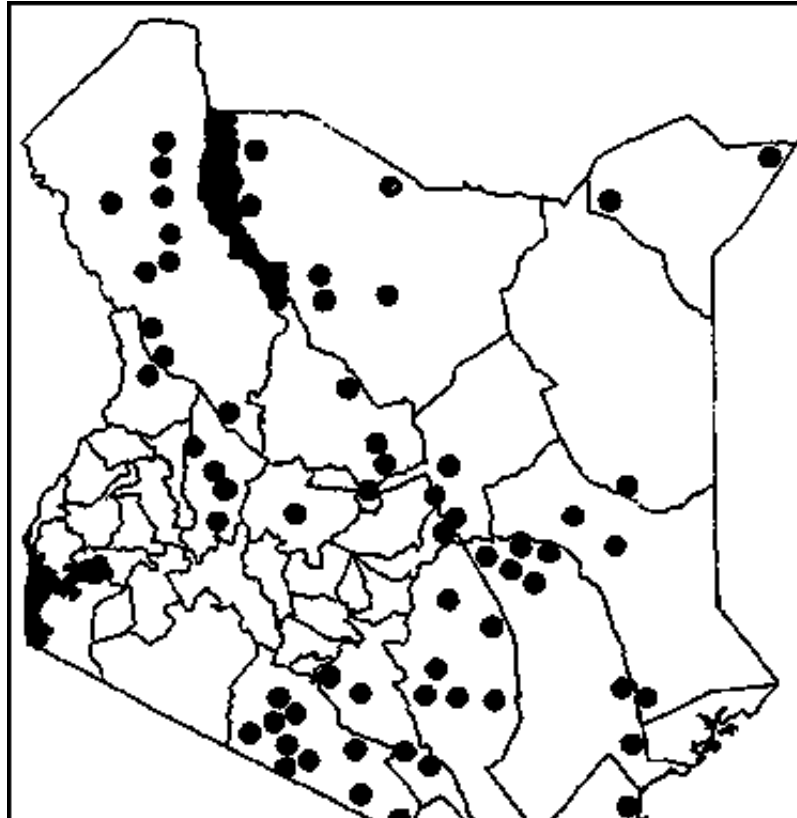
Management: Propagated by seeds which are best sown directly on site.

Status: May be very common.





Figure





Figure

Remarks: *C. sinensis* is a very variable species. In northern Kenya and at the coast it tends to have longer, smooth leaves. In the Tharaka, Kitui, Mbeere, Machakos and Kajiado area, the leaves tend to be more coarse, shorter and with an irregular margin. A very important plant in dry zones as a source of food, fodder and wood for building. Many of the *Cordia* species have edible fruits. Other notable examples are *C. somaliensis* Bak., a bushy usually multi-stemmed shrub found in the drier parts of coastal Kenya and southern Somalia only in open areas and in bushland on sandy soils, dunes and coral, and *C. crenata* Del. (Turkana: *ebiteosin*, Rendille: *koh*, Somali:

marrer-koh) with hairy young shoots and broad leaves which is widespread in the drier parts of Kenya. Common in riverine vegetation.



Cordia crenata

Crotalaria brevidens Benth.

Papilionaceae (Fabaceae)

syn: *C. intermedia* Kotschy

Kamba: kamusuusuu **Kipsigis:** kipkururiet, kipkurkuriet
Luhya (Bukusu): kimiro **Luhya (Kisa):** emiro **Luhya**
(maragoli): imito, mito **Luhya (Marachi):** miroo **Luhya**
(Maragoli): imito **Luhya (Tachoni):** vimboka, emiro **Luo:**
mito, mitoo **Maa:** oleechei, olotwalan, enoontwalan **Pokot:**
kamra

Description: An erect much-branched herb (rarely decumbent), usually 0.5-1.2 m high. Stems green. Branches ascending. **LEAVES:** Divided into 3 narrow leaflets to 10 cm

long by 2 cm wide (normally much less). **FLOWERS:** Yellow with very conspicuous reddish purple veins. **FRUITS:** Long narrow pods to 5 cm by 0.7 cm wide, very short stalked, slightly longitudinally compressed on one side, black when dry. Seeds yellow turning orange to dark red.

Ecology: Grows from Nigeria east to Ethiopia. In Kenya, e.g. in Kitui, Embu, Muguga (Kiambu), Nairobi, Kapenguria, Nanyuki, Sotik. Absent in the coastal region. Occasionally cultivated for its leaves. Grassland and bushland, 500-2,700 m, often on termite mounds, at roadsides, in cultivated land, disturbed forest and near seasonally flooded areas. Zones I-IV.

Uses: FOOD: Leaves are widely used as a vegetable in western Kenya (+++) (Luo, Luhya, West Pokot) and into Uganda. Bitter, normally cooked with *Corchorus* species (Pokot) or milk to mask the bitterness (Luhya). More bitter than *C. ochroleuca*.

OTHER: Fodder.

COMMERCIAL: Sold in the major towns of western Kenya and in Nairobi.

Management: Propagated by seeds.

Status: May be locally common. Generally uncommon in the wild. Widely cultivated, especially in western Kenya.

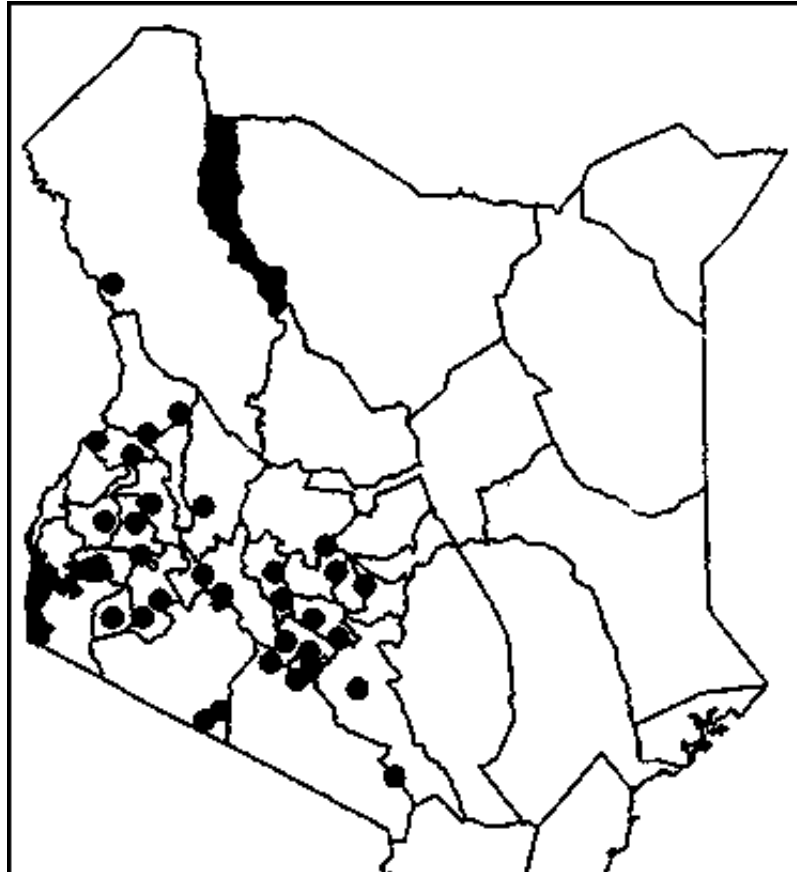
Remarks: Several varieties of this species occur, with two in Kenya:

- *var. intermedia* (Kotschy) Polhill has a large flower with the calyx 5-8 mm long. Found from Tanzania to Ethiopia, west to the Democratic Republic of Congo (Zaire) and Nigeria.
- *var. parviflora* (Baker f.) Polhill has a smaller flower

with the calyx up to 4-5 mm long. Grows in Kitui, Embu, Muguga (Kiambu), Nairobi and adjoining areas, but not known elsewhere.



Figure





Figure

Crotalaria ochroleuca G. Don

Papilionaceae (Fabaceae)

syn: *C. cannabina*. Bak. f.

Kamba: kamusuusuu **Kipsigis:** kipkururiet, kipkurkuriet
Luhya (Bukusu): kimiro, kumuro (singular) **Luhya (Kisa):**
emiro **Luhya (Maragoli):** imito, mito **Luhya (Marachi):**
miroo **Luhya (Tachoni):** yimboka **Luo:** mito, mitoo, muto,
ambaro **Maa:** oleechei, olotwalan **Pokot:** kamra, karelnet

Description: An erect herb (annual or short-lived perennial)

usually 0.5-1.5 m high. Stems ribbed with ascending branches. **LEAVES:** Divided into 3 narrow leaflets to 13 cm long by 3 cm wide, normally much smaller. **FLOWERS:** Yellow with very conspicuous purple veins. **FRUITS:** Fat pods, up to 7 cm long by 2 cm wide, shortly stalked, slightly longitudinally compressed on one side, end blunt with persistent style. Seeds yellow to orange.

Ecology: Grows from West Africa to the Sudan and south to Angola, Mozambique, Zimbabwe and Botswana. Cultivated for its leaves in Nyanza and Western Provinces. In seasonally flooded areas, flood plains, swamp edges, bushland, at roadsides and in cultivated land, 300-2,000 m. Zones I-III.

Uses: FOOD: Leaves widely used as a vegetable in western Kenya (+++) (Luhya, Pokot, Luo). The vegetable is slightly bitter and is normally cooked with milk or other vegetables such as cowpeas and *Corchorus* species to counteract this.

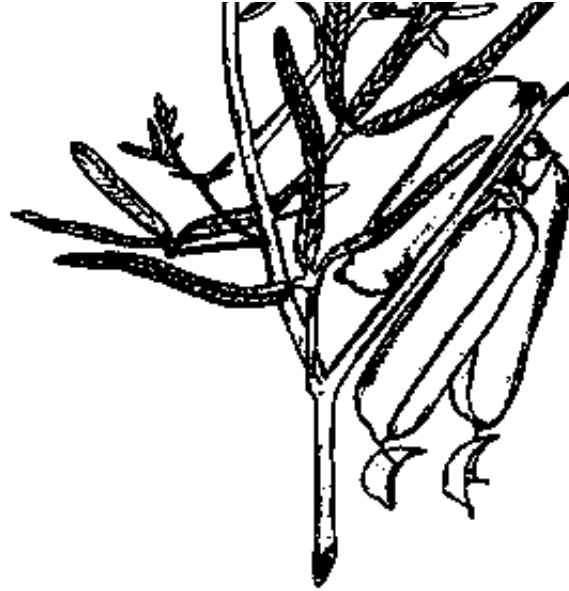
Commercial: Leaves sold in Nairobi and most major towns of western Kenya.

Management: Grows easily from seeds.

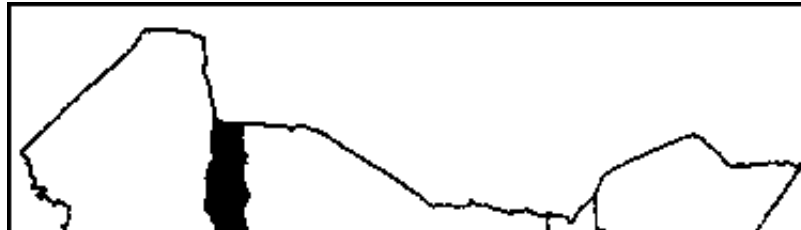
Status: Generally rare in the wild. Widely cultivated, especially in western Kenya.

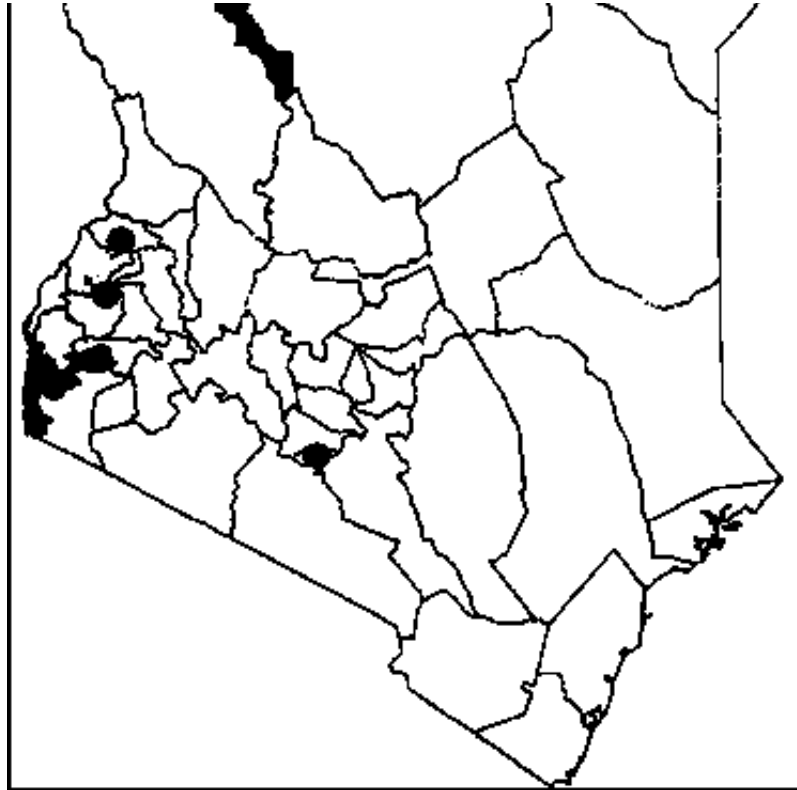
Remarks: Often confused with *C. brevidens*, but easily distinguished from it by size and shape of leaf and pod.





Figure





Figure

Cucumis dipsaceus Spach

Cucurbitaceae

Borana: burate-harre **English:** teasel gourd **Gabra:** buratte
Kamba: kikungi, kyambatwa **Luo:** nyabuth-muok **Maa:**
orng'alayoi-loo-sirkon, eng'alayioi-naju **Mbeere:** gikungui,
mukungui **Pokot:** alaskau, kuutitan (fruit), chesapulian,
ariapongos **Rendille:** khonjote **Samburu:** ntujuu, dudhu
Somali: hungureri, hungureri-damer **Turkana:** eome,
ekaleruk

Description: A trailing or climbing plant. Stems with tendrils,
angled and with prickly hairs. **LEAVES:** Ovate or shallowly 3-
lobed, coarsely hairy, light green, up to 10 cm long.
FLOWERS: Yellow. **FRUITS:** Oval with numerous protrusions,
light green, turning yellow on ripening.

Ecology: North-eastern tropical Africa in bushland, grassland, cultivated land and in disturbed areas climbing on bushes and on hedges. Common at river banks on alluvial and sandy soils but also found in clay soils, 425-1,800 m. Zones IV-VII (riverine).

Uses: FOOD: Young leaves from young plants (Turkana) or young shoots of older plants are used as a vegetable (++) (Kamba, Turkana, Pokot). Leaves are occasionally used in mashed food (Makueni).

MEDICINAL: Roots and leaves crushed and put on cuts. Juice from fruits used to rub on swollen neck glands (Pokot). Fruit juice is made into a solution (Pokot, Somali) or boiled (Luo, Homa Bay) and taken as an emetic or purgative (Turkana). Solution is usually given as an antidote after poisoning. Milk is served immediately after vomiting (Pokot, Nginyang).

OTHER: Goat and camel fodder. Fruit liked by donkeys, pulp eaten by squirrels (Makueni), but said to be poisonous to man.

Season: Leaves available 2 weeks after the start of the rainy season and fruits 2 months later.

Management: Plant grows easily from seeds.

Status: Common.

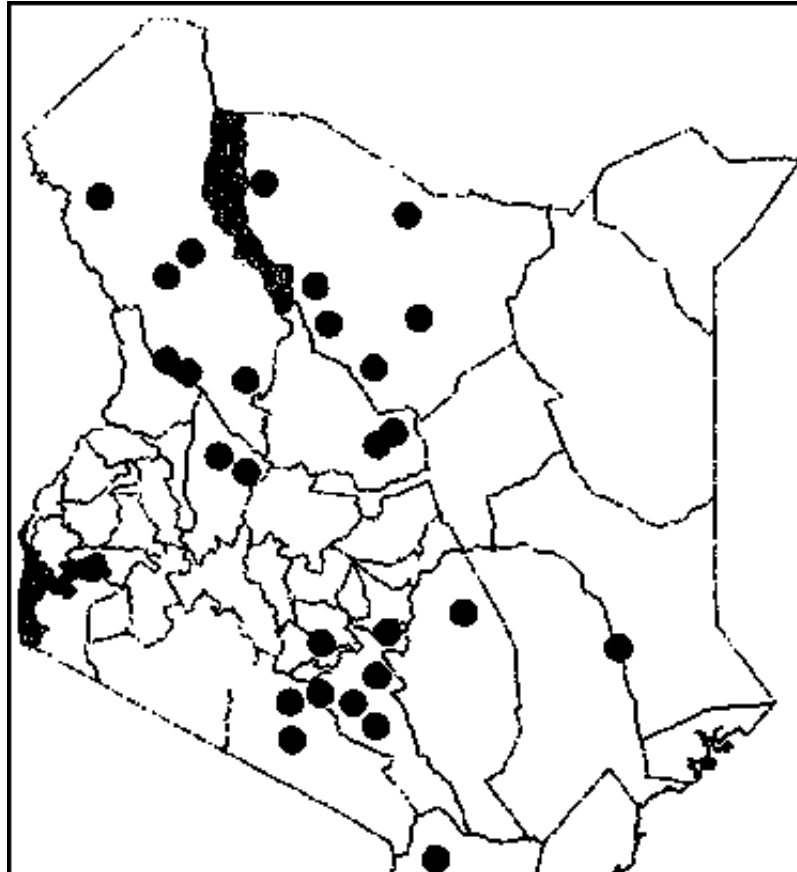
Remarks: The fruits of several *Cucumis* species are used as food. These include *C. prophetarum* L., a prostrate herb from a perennial rootstock, with rough, narrow-lobed leaves and yellow flowers. Fruit egg-sized, pale green with dark green lines and soft bristles, ripening to a yellow colour. (Turkana: *ekolese*, Samburu: *ntuyu*, Pokot: *ariapongos*, Maa: *ilporbol lo ntare*). Ecology: India west through the Middle East to Africa. Widely distributed in the drier parts of Kenya. Not recorded in

Nyanza and western Kenya. Found in dry bushland and woodland. Processed fruits are used as food (Turkana). Fruits are goat and sheep fodder. Two subspecies are recognized: ssp. *dissectus* (Naud.) Jeffrey, found in north-eastern Africa, the Democratic Republic of Congo (Zaire), Uganda, Tanzania and most parts of Kenya; ssp. *prophetarum* found from Senegal east to India and the northern parts of Kenya. Ripe fruits are clear yellow.





Cucumis metuliferus

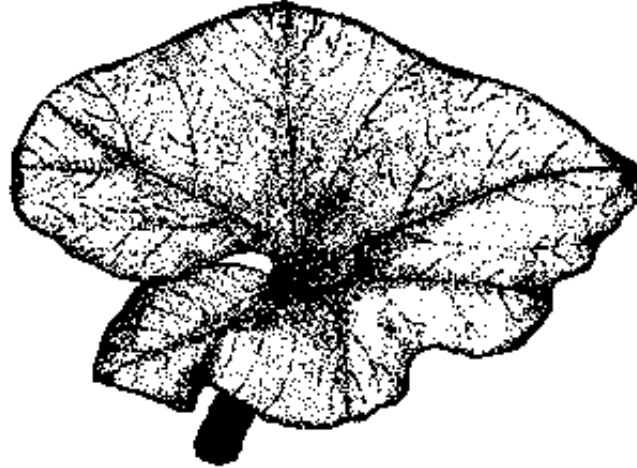




Figure

Another member worth mentioning in this genus is *Cucumis metuliferus* Naud. (English: spiny cucumber, horned cucumber). This is a climbing herb with hairy stems and solitary unbranched tendrils. **LEAVES:** Heart-shaped, hairy with long petioles. **FLOWERS:** Male and female flowers are separate on the same plant. **FRUITS:** Up to 12 cm long by 6 cm wide. Dark green with striations of white dots and covered with scattered spiny processes to 1.2 cm long, with a horny tip. The fruit turns orange to bright red on ripening. It is found in *Acacia* bushland (in miombo woodland in southern Africa) and roadside bushes mainly in red alluvial or loamy soils at an altitude of 800-1,300 m. The species is found wild in northern

Kenya. Collections have been made in Sigor (West Pokot) and Mandera. It is widely distributed in the rest of Africa but cultivated for commercial purposes in southern Africa. The mature unripe or ripe fruits are eaten raw. The horny part of the spiny processes is cut off and the fruit split to eat the seed-filled white to translucent pulp. Fruit may also be peeled. This fruit has the taste of a cucumber (*Cucumis sativus*). Its use as a food has not yet been reported in Kenya. The fruit is common in markets in southern Africa and is also exported to Europe and America. The leaves may also be used as a vegetable.



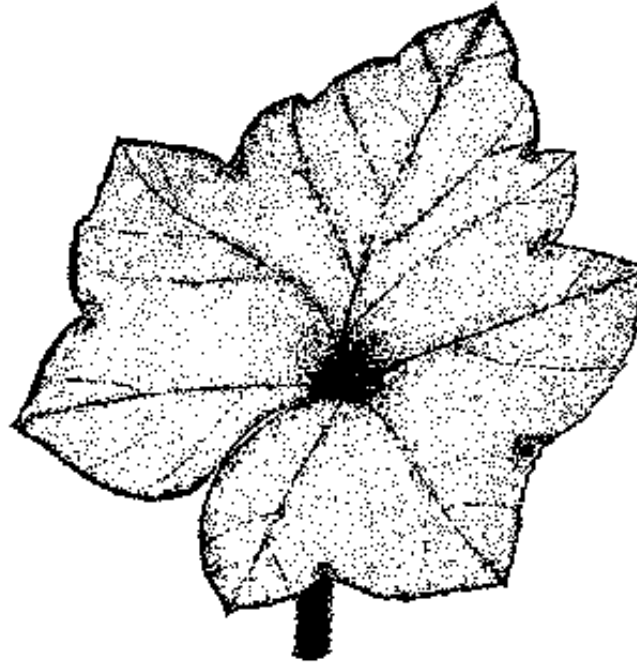
Cucurbita maxima

The ripe fruit has a striking orange-red colour and so the plant may also be grown as an ornamental. Fruits last long in cool weather.

Cucurbita ficifolia Bouch (English: Fig-leaved gourd, malabar gourd, Kikuyu: *kahurura*, *kanyuria*) is another extensive

creeper or climber. Cultivated in the central highlands, especially by the Kikuyu. Leaves used in the preparation of *irio*, a mixture of maize, pulses and often green bananas and/or Irish potatoes. It usually germinates spontaneously in cultivated land.

Also commonly grown for their fruit and leaves are the pumpkins (Borana: *bododa*, Kamba: *ulenge*, *ilenge* (fruit), Kikuyu: *marenge*, Kisii: *risosa*, Embu: *irenge*, *marenge*, Luhya (Bukusu): *lisiebebe*, *liondo* (fruit), Meru: *marenge*, *malenge* (Nyambene), Turkana: *ekaideit*) *Cucurbita moschata* Duch. ex Lam. and *Cucurbita maxima* Duch. Ex Lam. *C. moschata* has distinctly lobed (divided) leaves, while those of *C. maxima* only have a wavy margin. Both have yellow flowers. Leaves and young shoots are used as vegetables.



Cucurbita moschata

Cyperus blysmoides C. B. Cl.

Cyperaceae

syn: *C. bulbosus* Vahl var *spicatus* Boeck

Kamba: ngaatu **Luo:** rabuon-apuoyo **Marakwet:** morkut
Pokot: moikut **Samburu:** ilkuroti **Somali:** gohosa, gooso
Turkana: akademoit, ekadet-etum, ikikiriau

Description: A slender erect perennial sedge to 30 cm, emerging during the wet season and dying back in the dry season. Basal bulb up to 8 mm and covered by brown to blackish scales and with very slender stolons ending in new roots. Stems 5-25 cm long, triangular or compressed, with many crowded leaves at the base. **FLOWERS:** Inflorescence a single spike without bracts, of 3-6 spikelets 8-12 mm long.

Ecology: Grows in northern Kenya, Rift Valley, Central, Eastern and Nairobi Provinces. Also in Uganda and northern Tanzania (Tanga Region). Seasonally wet habitats, sandy to heavy clay, often in stony areas. Found in woodland, wooded

grassland and as a weed in cultivated land, 300-2,100 m.
Zones III-VI.

Uses: FOOD: The bulb or "nut" is edible (++). Used to be an important famine food in the early days. The nuts are tasty and the stem bases are peeled and the soft fleshy part eaten.

MEDICINAL: Bulb eaten for fever (Pokot).

OTHER: Bulb also eaten by rodents, baboons and birds.
Fodder for cattle.

Status: Locally common.

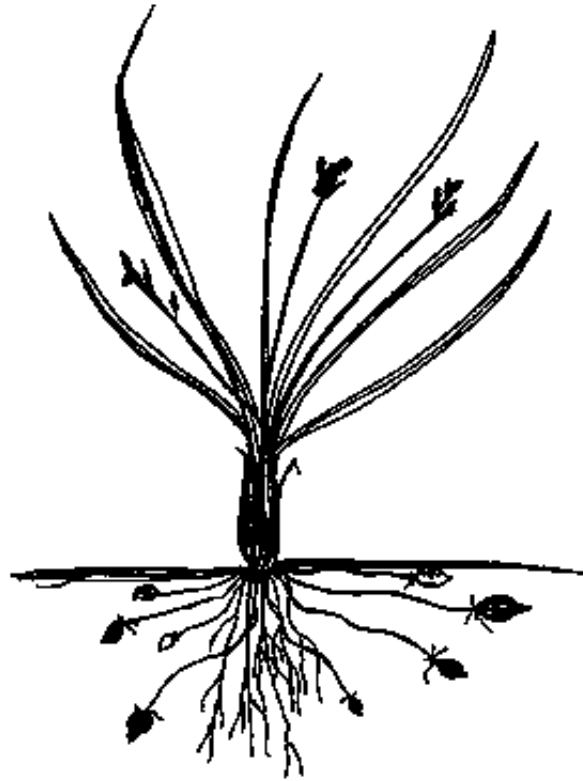
Remarks: Several other species of sedges have edible stem bases and nuts.

- *C. bulbosus* Vahl var. *melanolepis* Kkenthal is found in Kenya, Uganda, Eritrea, Ethiopia, Somalia and

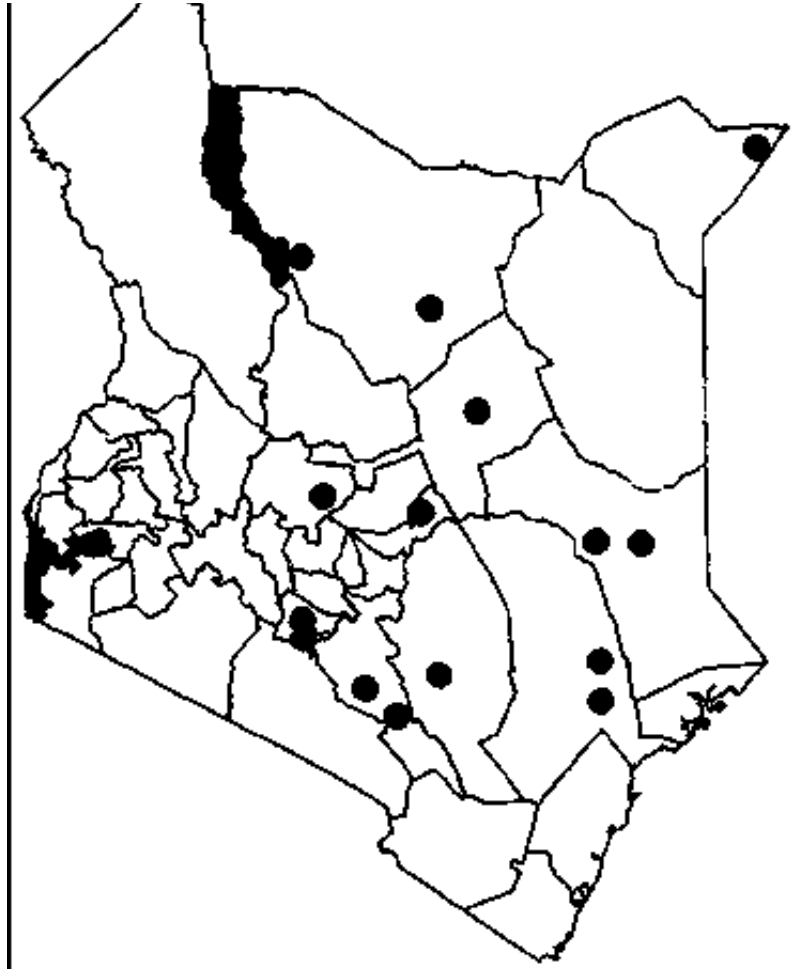
northern Tanzania at 200-2,000 m. It grows to about 30 cm and is less common. Absent from the coast and western Kenya. The stem base is edible (Maasai).

- *C. rotundus* L. grows to 30 cm and is widely distributed in Kenya.
- *C. giolii* Chiov. has a bulbous base and a 3-angled stem and is widespread in the drier parts of Kenya. Found in wooded grassland and as a weed in cultivation. The base is said to be used as perfume.

Sedges differ from grasses in their pith-filled stems which are not jointed.



Figure



Figure

Cyphia glandulifera A. Rich.

Campanulaceae (Lobeliaceae)

Borana: kurte **Kamba:** ngomo **Mbeere:** mukandakiria
Samburu: lokorijet, ekurgigi

Description: Erect often single-stemmed herb, usually 25-40 cm high. Stem purplish green arising from a globose yellowish white scaly tuber (occasionally with short protrusions) to 5 cm across and about 6-12 cm below the soil surface. **LEAVES:** Arranged in whorls round the stem at approximately the same point 1-2 cm above ground level, without a conspicuous leaf stalk, nearly fleshy, ovate to almost round, up to 10 cm long, dark green, margin irregularly serrated. **FLOWERS:** Short-

stalked, pinkish with five petals, borne alternately in the axils of miniature leaf-like bracts along a long erect spike, occasionally twining around other more sturdy plants.

Ecology: Grows in most parts of Kenya and central and northern Tanzania, Ethiopia and Somalia. In Kenya, e.g. at the foot of the Ngong Hills, in Chepararia (West Pokot), Mwingi and in Murang'a. Common between 1,000 and 2,000 m. Found in open grassland, disturbed grassland, open wet depressions and cultivated land, usually in loose clayish soils. Also common and often the only plant in eroded and bare black-cotton or alluvial soil derived from it. Zones III-V.

Uses: FOOD: Leaves used as a vegetable (++) (Kitui). Juicy tubers peeled and eaten, especially by herdsmen (+) (Kamba, Boran). Tubers are slightly sweet.

OTHER: A fodder plant for livestock.

Season: March-April, November-December (Nairobi, Kajiado, Kitui). Sprouts soon after the rains.

Management: Propagated by tubers or seeds.

Status: Locally common.

Remarks: Several forms occur; one much-branched.



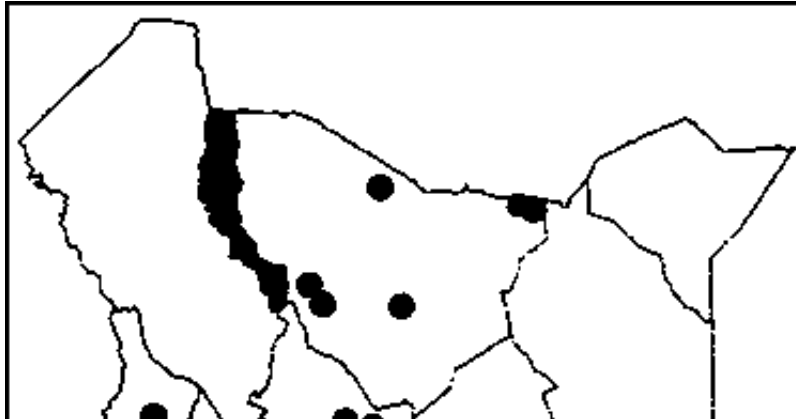
Figure

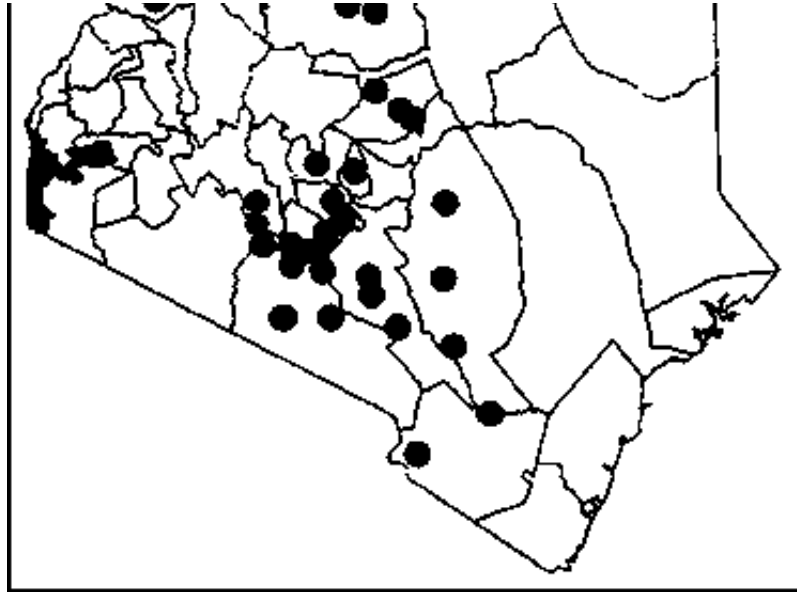
L. rosea





Figure





Figure

***Dactyloctenium aegyptium* (L.) Willd.**

Gramineae (Poaceae)

Borana: maasai, makwala, magala **Daasanach:** bunite
English: crow-foot grass **Kamba:** ukuku **Kikuyu:** mukinda, nyaragita **Maa:** embokwe, empokui, enkampa (Elang'ata Wuas), porori aja **Mbeere:** iguko, gingara, gitiko, utiko
Pokot: mokono, kumokon **Samburu:** laparaan, laburaun, ntalanwen, hidowensili **Somali:** ausdenan, ensili, jarba, hidow, hidowensili **Swahili:** kimbugi-mbugi **Taita:** kisambara
Turkana: ekauduudu, emekwi, ekahuduhudu

Description: Grass, normally 0.3-0.7 m high, often spreading. Nodes with a brown ring. Culms (stems) ascending.
FLOWERS: Inflorescence consisting of several spikes, ascending or radiating horizontally from the culm tip in a star-like manner. **FRUITS:** Seeds (grain) light brown and sand-like, to 0.7 mm across.

Ecology: Throughout tropical and warm temperate regions of the world, introduced into America and widespread in Africa.

All over Kenya, especially in semi-arid areas, 0-2,100 m. A common weed in cultivated land, in grassland and disturbed bushland. Zones III-VII.

Uses: FOOD: Grain ground into flour and used for the preparation of porridge or *ugali* (Pokot, Turkana, Kamba) in times of famine. It is difficult to grind the grain into flour because of the small size. Grain eaten raw by children (Pokot). Grain mixed with that of *Amaranthus graecizans* (*ptanya*) and ground on stone (*kungowoi*) to flour and made into stiff porridge (*paan*) (Pokot). Flour may be cooked together with vegetables in a mixture known as *ngunzakutu* or added to milk and eaten raw (Kamba: *kinaa*). Root rhizomes of *Dactyloctenium* spp., especially those of *D. bogdani* (Somali: *ausdenan*), are chewed by Turkana and Daasanach children because of their sweet taste. Grain may keep almost indefinitely (Pokot).

OTHER: Grain, chicken food; grass, livestock fodder (++).

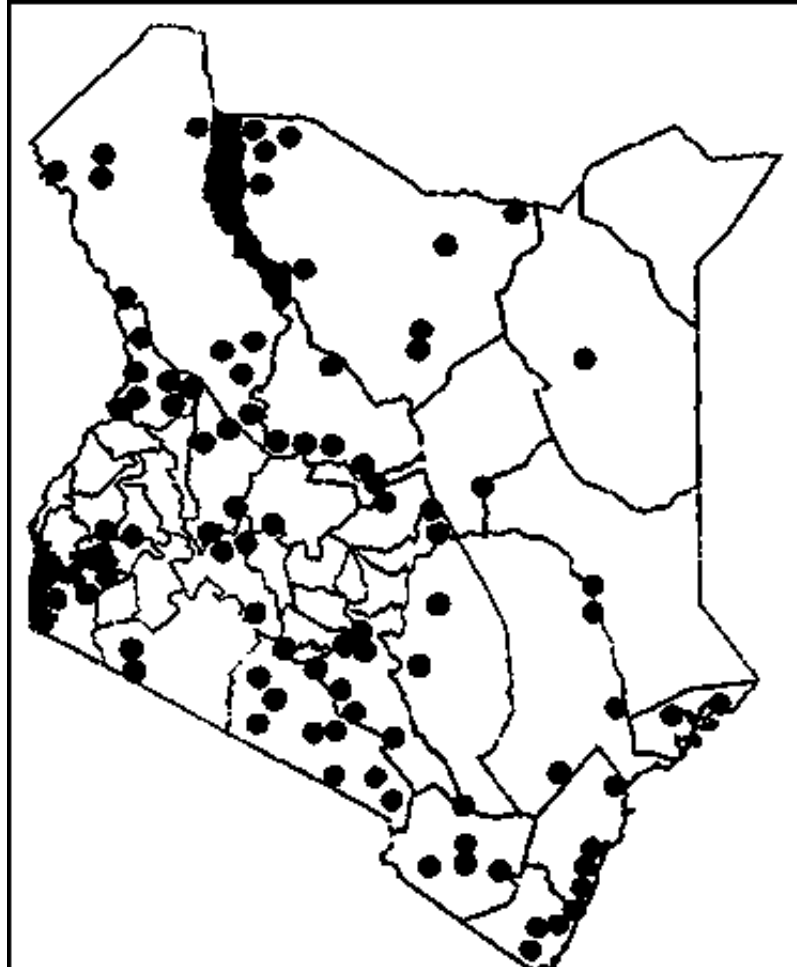
Season: Grain mainly available in February-March and July-August in Makueni, Machakos, Kitui and Pokot.

Status: Locally common.

Remarks: A variable species. Anthers are smaller than those of *D. giganteum*.



Figure



Figure

Dactyloctenium giganteum Fischer & Schweick.

Gramineae (Poaceae)

Kamba: ukuku **Kikuyu:** mukinda **Somali:** ausdenan **Swahili:** mkandi, kimbugimbugi **Taita:** kisambara

Description: Grass, normally 0.5-1.5 m high, spreading by above-ground stolons which root at the nodes. Node with a brown ring. Culms (stems) usually erect. **FLOWERS:** Inflorescence consisting of several spikes, ascending or rarely radiating horizontally from the culm tip in a star-like manner. **FRUITS:** Seeds (grain) light brown and sand-like up to 0.8 mm long.

Ecology: From Kenya south to South Africa. In Kenya confined to the east, e.g. Mtito Andei, Machakos, Kitui, Kajiado and Taita. A weed of cultivated land, roadsides and disturbed bushland, 200-2,000 m. Usually light red clay and loam soils. Zones V-VI.

Uses: FOOD: Grain ground into flour which is made into porridge or cooked together with vegetables in a mixture known as *ngunza-kutu* (Kamba). Milk may also be added to flour and eaten raw (*kinaa*). It is difficult to grind the grain into flour because of its small size.

OTHER: Grain, chicken food; grass, animal fodder.

Season: Grain available in February-March and July-August.

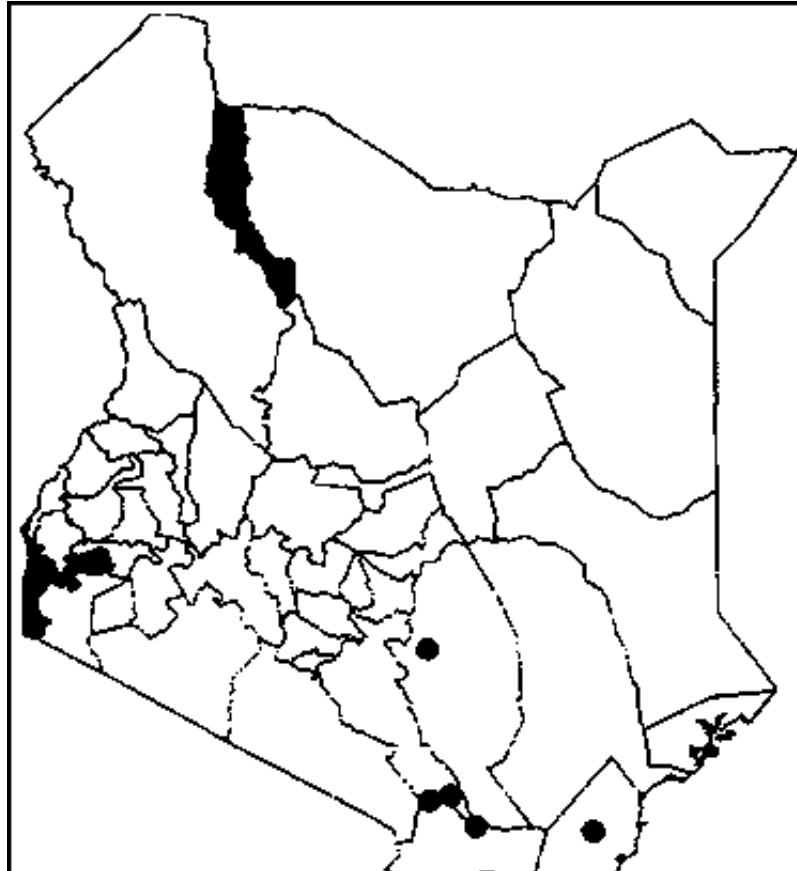
Management: Propagated by seed which are directly sown on site.

Status: Locally common.

Remarks: Distinguished from *D. aegyptium* in having longer anthers, a more erect habit and longer, usually ascending, spikes.



Figure





Figure

Dialium holtzii Harms

Caesalpinaceae (Fabaceae)

Giriama: Mtsumbwi **Swahili:** mpepetu

Description: Tree to 20 m. Crown with a medium spread.

BARK: Grey-brown, smooth. **FLOWERS:** Cream. **FRUITS:** Dark brown with a brittle outer coat. Pulp red, enclosing 1-2 nearly round brown seeds.

Ecology: Grows along the east African coast from Kenya through Tanzania to Mozambique. In Kenya only in the coastal

region, especially towards the Tanzanian border in moist lowland forest, 0-100 m in coastal limestone sandy soils. Zones I-III.

Uses: FOOD: Fruit edible (++). The dry pulp has a sweet, acid taste. Often used on porridge.

OTHER: Wood used in construction and as fuelwood.

COMMERCIAL: Ripe fruits occasionally sold in coastal towns.

Management: Propagated by seeds.

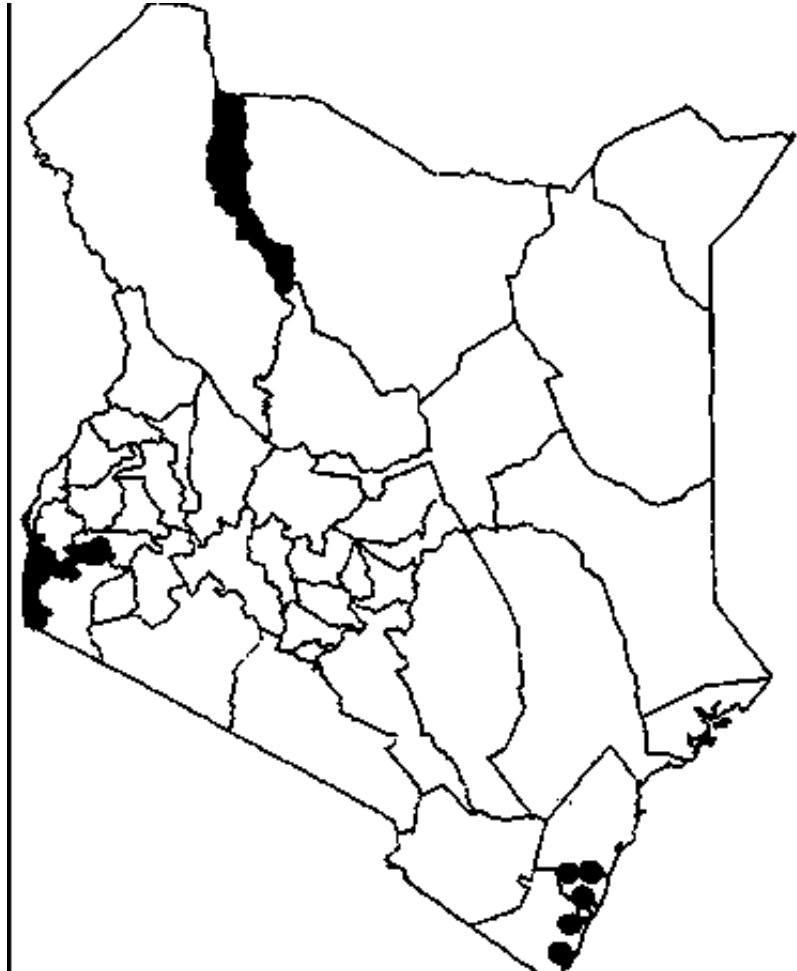
Season: Flowers in November-December. Fruits in March-April.

Status: May be locally common.

Remarks: Fruits may keep for over 2 years.



Figure



Figure

Dialium orientale Bak. f.

Caesalpinaceae (Fabaceae)

Boni: sheshubla, shishobli **Chonyi:** mtsumbwi, mutsumbwi

Girama: mtsumbwi, mutsumbwi **Kambe:** mtsumbwi, mutsumbwi
Sanya: shoshobli, shusholwe **Somali:** frim

Swahili: mpepeta, mpekechu

Description: A spreading, often multi-stemmed, shrub or small tree usually to about 5 m, rarely to 15 m. Branches drooping, occasionally touching the ground. **BARK:** Smooth, grey. **FLOWERS:** Cream or yellow-green, in dense panicles. **FRUITS:** Reddish brown with a thin dry brittle shell enclosing a dry red pulp. Seeds 1 or 2, grey-brown, smooth, shiny,

enclosed in a thin soft membrane.

Ecology: Grows along the east African coast from southern Somalia to north-eastern Tanzania. In Kenya only in the coastal area: Kwale, Kilifi, Tana River and Lamu, in dry coastal forest, in *Brachystegia*, *Azelia*, *Manilkara* woodland, and in coastal riverine vegetation, 0-100 m. Sandy or alluvial soils. Zones II-IV.

Uses: FOOD: Fruits eaten raw and have a sweet acid taste (+++). The outer shell is easily detached, the pulp sucked (membrane covering the seed is eaten too) and the seed discarded. Good when used as a snack. The fruit pulp is used for flavouring porridge and may also be made into a juice.

OTHER: Wood is used for dhow ribs and building poles. Fuelwood.

COMMERCIAL: Fruit sold in Malindi town.

Season: Fruits in March-April.

Management: Propagated by seed sown directly on site.

Status: May be locally common in the Coast Province.

Remarks: Fruits may keep for over 2 years.

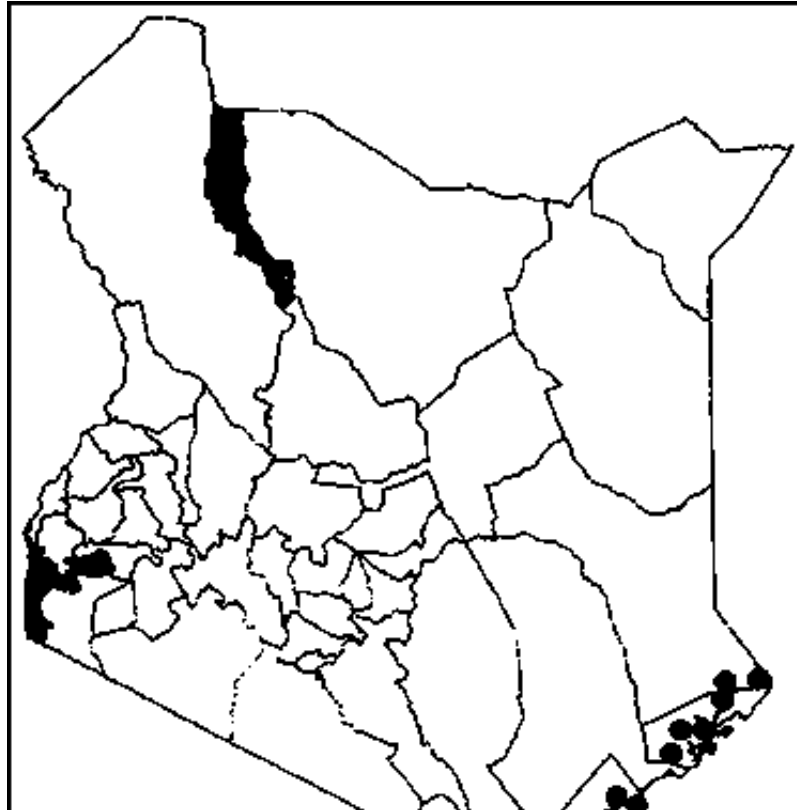


Figure





Figure





Figure

***Digera muricata* (L.) Mart.**

Amaranthaceae

syn: *D. angustifolia* Suesseng.

Borana: getgedaan, galgethoom (Bubissa) **Daasanach:** bal-burach **Gabra:** gelgedaana **Giriama:** kigulukimwenga (var. *patentipilosa*) **Kamba:** walange **Maa:** enoonkoroi (magadi road), enoonkori **Pokot:** kaprimet, cheriyan, chererayan, chekirio **Rendille:** gey-gidhan, giddan, giddan-ki-dahan **Samburu:** lorumcheria, idooge (Mathews Range), ndukee

Taita: mhale, mbalu **Turkana:** ekoromomwae, ekoromwae, eosin-aikenyi (katilo)

Description: Erect herb usually 0.7-1.3 m high with numerous straight thin branches, some arising from just above ground level. **LEAVES:** Usually narrow and up to 6 cm long, apex pointed. **FLOWERS:** Small, pink to white, borne on a long slender inflorescence.

Ecology: Found in Uganda, Tanzania, Sudan, Ethiopia, Somalia, Socotra and in Asia (*ssp. muricata*). All over Kenya in dry bushland, grassland, forest edges and hillsides. Most common in dry low-lying areas in grassland, flood plains, cultivated land and disturbed areas, especially towns, 0-1,500 m. Commonest below 1,000 m. Varied soils: alluvial in flood plains, sandy loam to red clay. Mainly in Zones V-VI, but var. *patentipilosa* in Zones III-IV.

Uses: FOOD: Leaves and young shoots used as vegetable (Pokot, Turkana, Giriama, Digo, Kamba) (+++); flower base contains nectar sucked by children (Rendille).

OTHER: Fodder, especially for goats and sheep.

Status: Locally very common.

Remarks: Two subspecies occur in Kenya:

- *ssp. muricata* with outer tepals (sepals and petals) closely (7-12) veined, and
- *ssp. trinervis* C. C. Townsend (outer tepals not closely (3-5) veined). The former is found at the coast and probably introduced. *Ssp. trinervis* has three varieties:
 - *var. trinervis* the commonest of the three

found all over Kenya

- var. *macroptera* C. C. Townsend almost as widely distributed and closely resembling var. *trinervis*
- var. *patentipilosa* has ovate leaves with prominent veins underneath and a short spike. It is found at the coast and is much used by the Giriama. This last variety has large leaves and great potential for domestication.

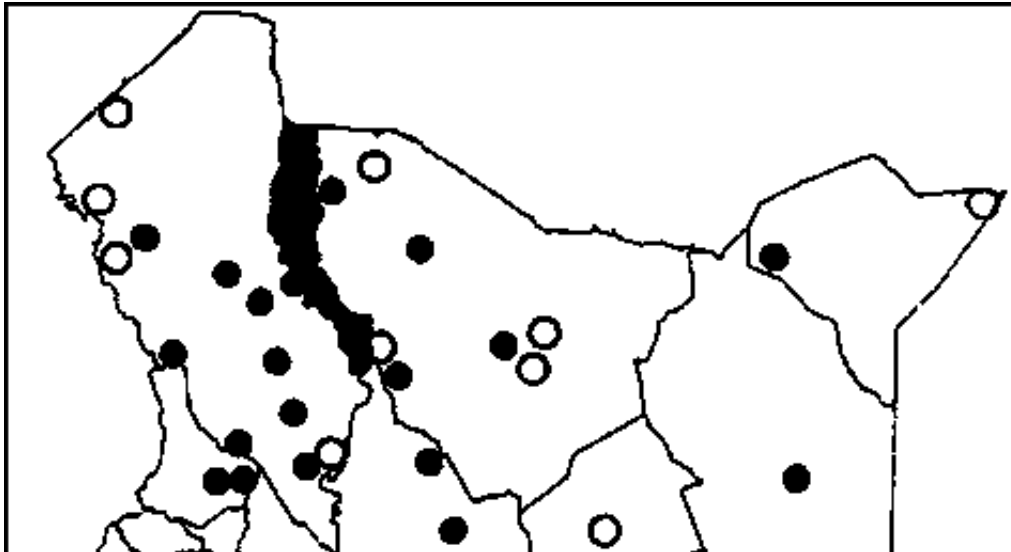


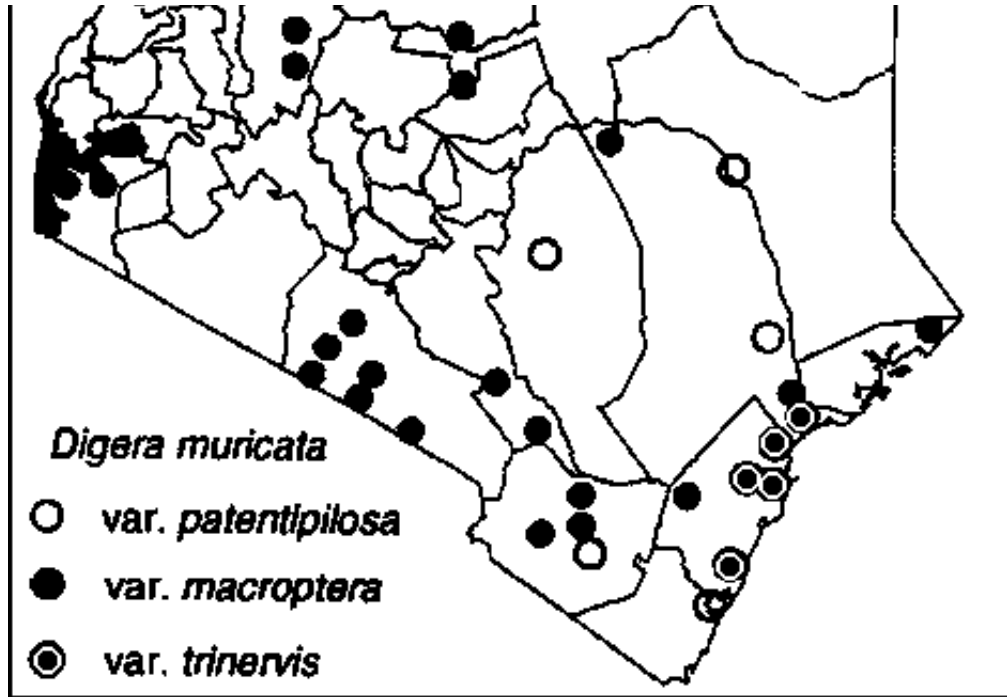
Figure





Figure





Figure

***Dioscorea bulbifera* L.**

Dioscoreaceae

English: potato yam, air potato **Giriama:** mutokera **Luhya (Bukusu):** liliakhunyu **Luhya:** litugu, lirungu **Luhya (Maragoli):** litugu, liruku **Luo:** oruka, oroko

Description: A twining dioecious plant. Underground tubers elongate or nearly round and irregular, occasionally absent. Aerial tubers (bulbils) up to 7 cm in diameter, brown, rounded or angular. **LEAVES:** Alternate with a long petiole, heart-shaped, narrowing towards the apex. **FLOWERS:** Pink-white, borne on long inflorescences arising from the leaf axils. Male up to 4 per axil and up to 10 cm long. Female up to 3 per axil and up to 30 cm long. **FRUIT:** A dry capsule to 2 cm long.

Ecology: Tropical Africa (including West Africa), Asia, Pacific islands. Cultivated in western Kenya. High-rainfall lowland and mid-altitude rain forest, wet woodland, swamp and stream

edges. Zones I-III.

Uses: FOOD: Aerial tubers roasted or boiled like sweet potatoes (Luhya, Bukusu). Often soaked for about two days in cold water to dissolve out poisonous compounds.

FOOD/MEDICINAL: Boiled tubers peeled and given to children as a cure for measles. Often maintained traditionally in gardens for this purpose (Luhya).

Management: Grown from the mature bulbils. New shoots may also grow from the rootstock. In poor soils it should be planted with manure if possible.

Status: Very rare, probably entirely absent in the wild. The cultivation of this crop in Kenya has declined considerably in recent years.

Remarks: Two varieties are distinguished in Kenya:

- the cultivated var. *anthropophagorum* (A. Chev.) Summerh. with reduced or absent underground tubers and angular edible aerial tubers
- the wild var. *bulbifera* has no underground tuber but has rounded aerial tubers; it is reportedly poisonous.
- var. *sativa* with edible tubers is an Indian variety.

The yams belong to the family Dioscoreaceae, a group of plants which, like the grasses, have one cotyledon (monocotyledons). There are about 600 species in the genus *Dioscorea* distributed over the tropical and subtropical parts of the world. They are generally dioecious twining climbers, often prickly and arising from a tuberous rootstock. Yams are known for their tubers which may be underground or up on the stem (aerial). The yam tuber is the storage organ for the plant and is the edible part. Many of the species, however, do not have

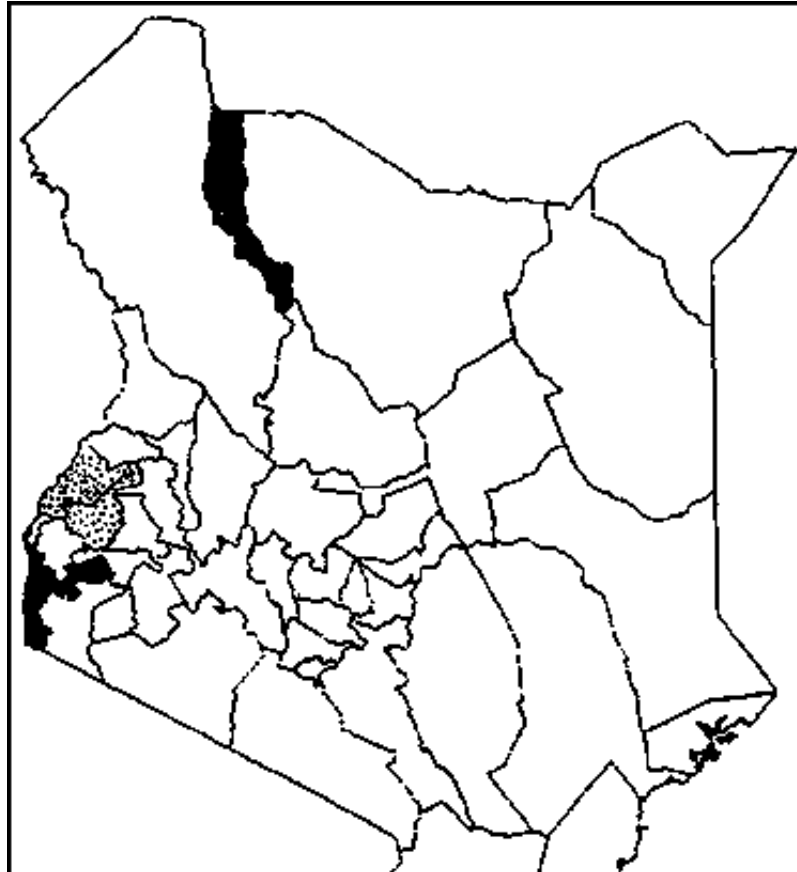
edible tubers.

Yams are cultivated throughout the tropics, especially in South-East Asia, Central and West Africa and in South America. In West Africa they are an integral part of the culture. *D. bulbifera*, a native species in East Africa and a traditional crop of the Luhya, has long been cultivated in Africa and Asia. Some other species of edible yams cultivated in East Africa include the West African yams (*D. cayenensis* or yellow Guinea yam) and they are cultivated in Uganda and probably in western Kenya too. *D. alata* (white yam, originally from India) is also cultivated in Uganda and Tanzania but reportedly not yet in Kenya.





Figure





Figure

Dioscorea dumetorum (Kunth) Pax

Dioscoreaceae

Boni: digi **Giriama:** mariga **Maa:** ol-oibare bare **Swahili:** maringa, kiazzi kikuu, vigongo, kikwa, ndiga, mariga **Taita:** mako

Description: A twining prickly dioecious plant. Underground tubers lobed, often intertwined among roots. **LEAVES:** Long-stalked, divided into three leaflets, rather rough above, light green and softly hairy below. **FLOWERS:** Inflorescences long and pendulous, to 20 cm, often branched, dirty white, woolly.

FRUIT: A winged capsule to 3 cm long.

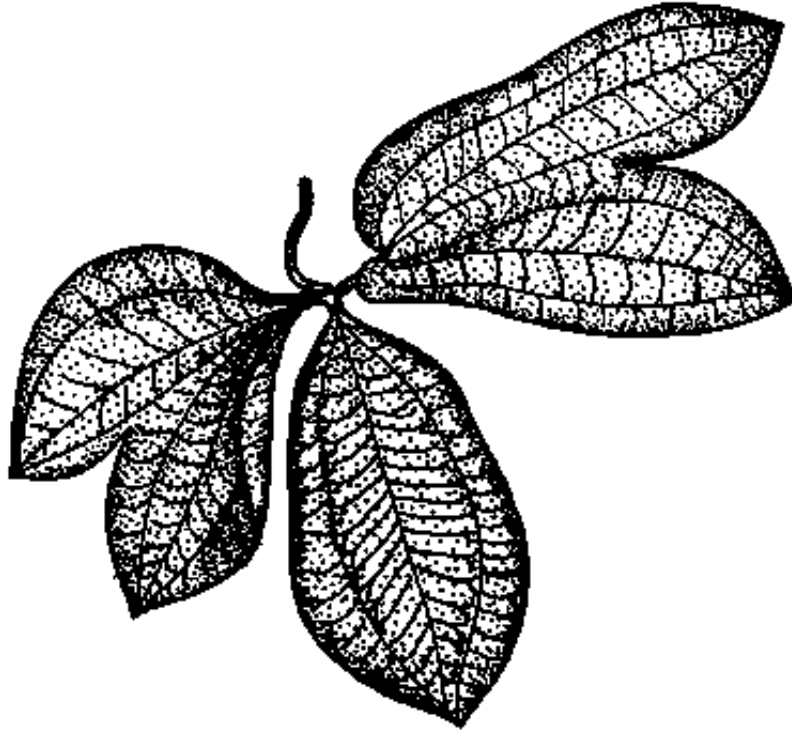
Ecology: Grows from Ethiopia and Somalia west to Senegal and south to South Africa. Found in Kenya in the coastal region and in adjoining areas, 0-1,650 m. Cultivated to a small extent outside Kenya. In the wild at edges of low evergreen forests, coastal bushland and *Brachystegia* woodland. Commonly found on deep sandy soils. Zones II-V.

Uses: FOOD: Tubers eaten like potatoes (++), and used as a famine food (Boni (Tana River), Giriama). Tuber roasted like the cultivated yam. A most important wild tuber but requiring careful preparation as it may be poisonous. Tubers are normally peeled, soaked and washed before cooking. This eliminates the poisonous compounds normally concentrated in the latex. In southern Sudan the tubers are boiled and soaked for three days before being eaten. Tubers are peeled, sun-dried, ground into flour and made into stiff porridge, *sima*

(Digo).

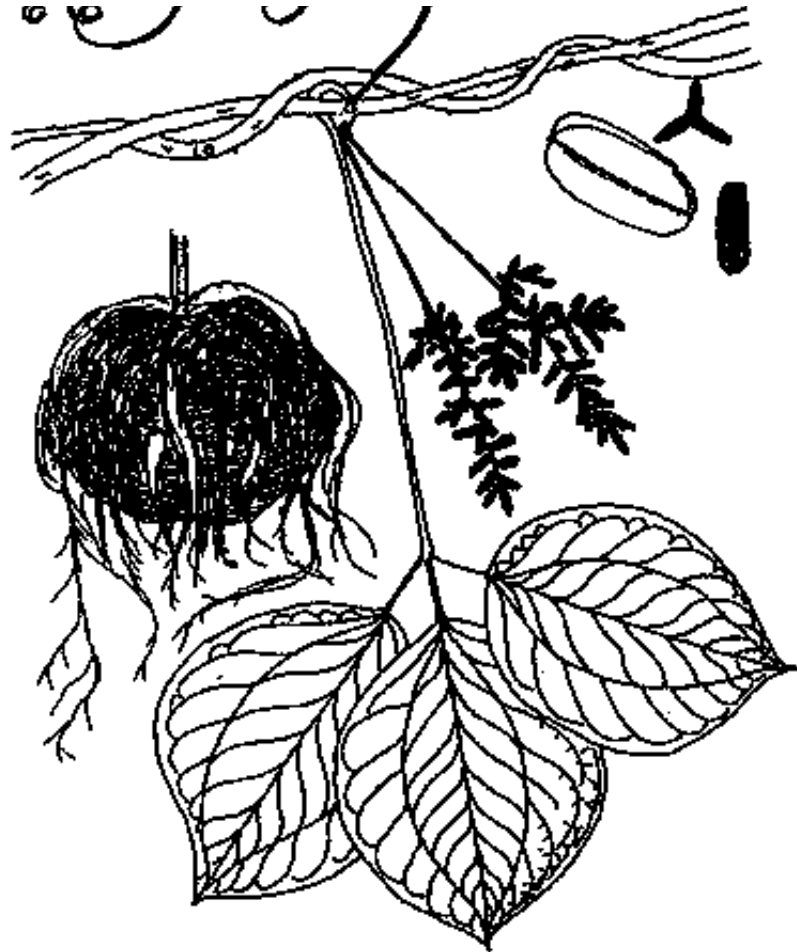
MEDICINAL: Dried and ground roots mixed with water are used to cure bilharzia.

Remarks: In Tanzania the root is reported to have caused vomiting followed by death when eaten raw.

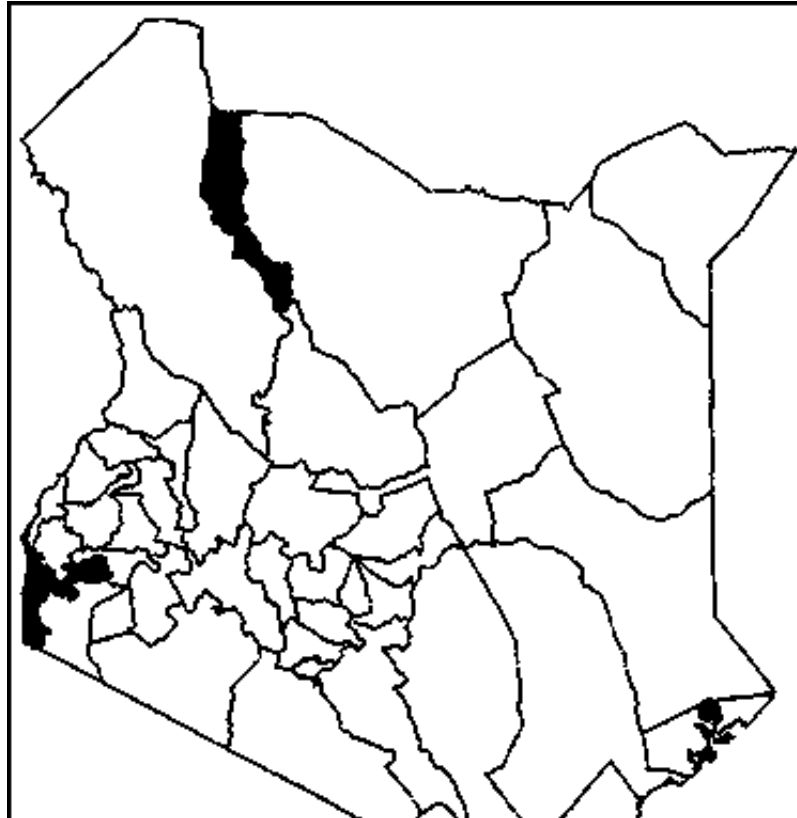


Figure





Figure





Figure

Dioscorea minutiflora Engl.

Dioscoreaceae

Embu: gikwa, ikwa (plural) (tuber) **Kamba:** kikwa **Kikuyu:** gikwa **Kisii:** chinduma (plural), enduruma (singular) **Luhya (Bukusu):** litolotolo **Luhya (Maragoli):** kihama **Luhya (Tachoni):** litolotolo (plural) **Meru:** rukwa, gikwa (tuber), **Sabaot:** musapchet, mucukwet **Swahili:** kiazzi-kikuu, viazi-vikuu (plural)

Description: A prickly twining perennial, dioecious plant.

Stems slender, prickly, arising from a tuberous root. Tubers reddish brown, up to 40 cm long with several finger-like projections. Found 20-50 cm below the soil surface. **LEAVES:** Usually opposite, often heart-shaped with a pointed apex. **FLOWERS:** Male numerous, borne on a cluster of up to 10 short stalks on either side of the leaf node. Female borne in pairs on flower stalks which are longer than those of the male, up to 15 cm or more and resembling "hair pieces". The two flower stalks are opposite each other at the leaf node. **FRUITS:** Winged, rare.

Ecology: Grows wild from Uganda west to Senegal and south to Angola, but not in Kenya. Cultivated in Kenya especially by the Kikuyu, Embu, Meru (previously by the Kamba) and by some communities in Tanzania and Uganda. In the wild it is common at the edges of tropical forest where it twines to great heights on other plants. In cultivation the plant is found in humid areas with deep, well-drained soils. Mostly does well in

deep fertile red soils. Common at 1,500-2,400 m in areas with more than 700 mm rainfall. Zones II-IV.

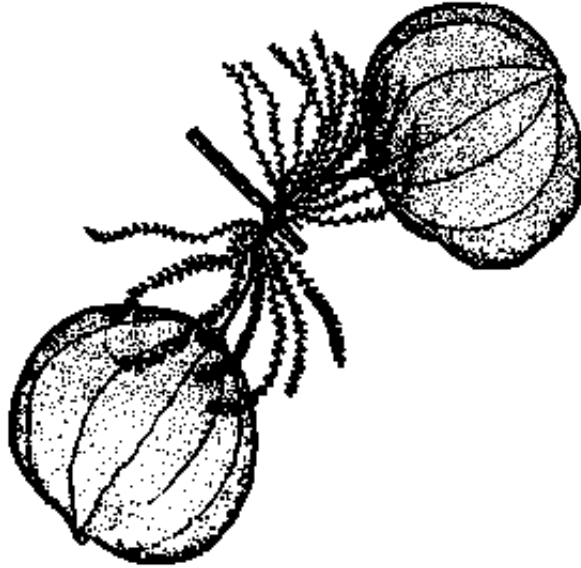
Uses: FOOD: The tubers are eaten either roasted, boiled or fried. Tubers for roasting require no peeling and are the tastiest. Yams may be fried with other types of tubers like Irish potato. *D. minutiflora* has a dry consistency with an appealing taste. Tubers are much relished by old people. Damaged or bruised tubers do not keep for long.

COMMERCIAL: Tubers are occasionally sold in Nairobi and Central Province. They are generally more expensive than other types of tubers.

Management: Many types of yams are propagated vegetatively. In Central Province, among the Kikuyu, *D. minutiflora* is propagated by use of the hard, much-branched stem base (*ihindi*, meaning bone), from which the tubers arise.

Portions of the stem base are chopped off. The pieces may keep for a month or more. Preferably the soil should be mixed with manure. Planted pieces take 3-5 weeks before sprouting. As the stems are weak they should be supported by strong, tall stakes to give the plant more space for climbing and to enable more light to reach the leaves. Better still, the yam can be planted near an existing large tree on which it can twine. Traditionally the Kikuyu, Embu and Meru plant *D. minutiflora* along with cuttings of *Commiphora eminii* ssp. *zimmermanii* (Kikuyu: *mukungugu*, Chuka: *mutungururi*, Embu: *mukugugu*) for support, and hence the Kikuyu saying, "They are as friendly as the *gikwa* and *mukungugu*". Where the soil is not deep or loose, artificial mounds may be created.

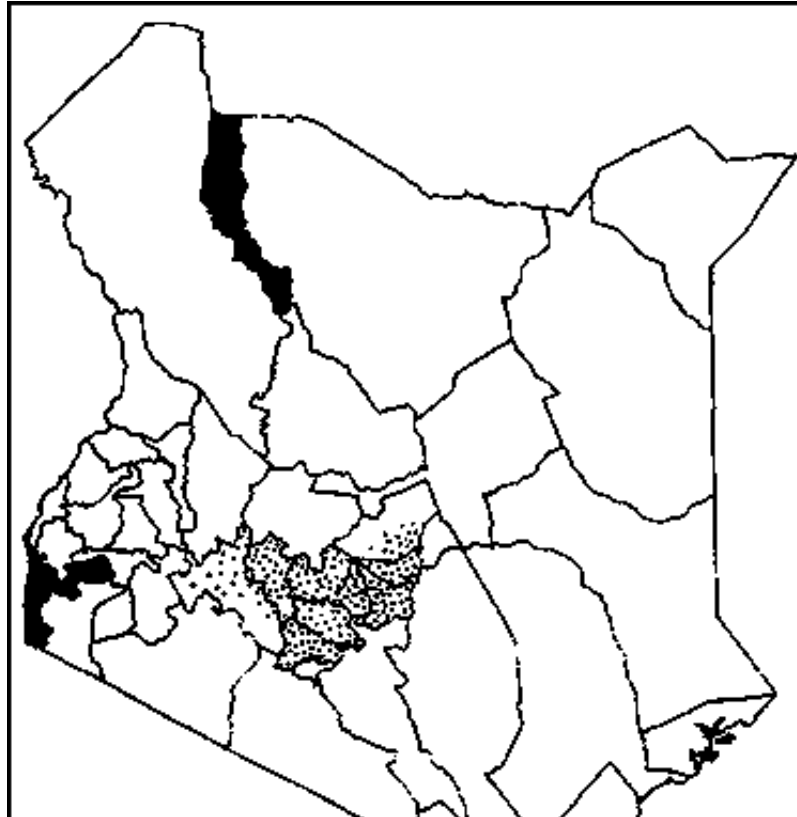
Growth is quite fast (up to 1 m a month) and tubers may be harvested after 2-3 years. One plant at the Nairobi Museum that had not been disturbed for almost 20 years gave more than a 60-kg sack of yams!



male flowers



female flowers





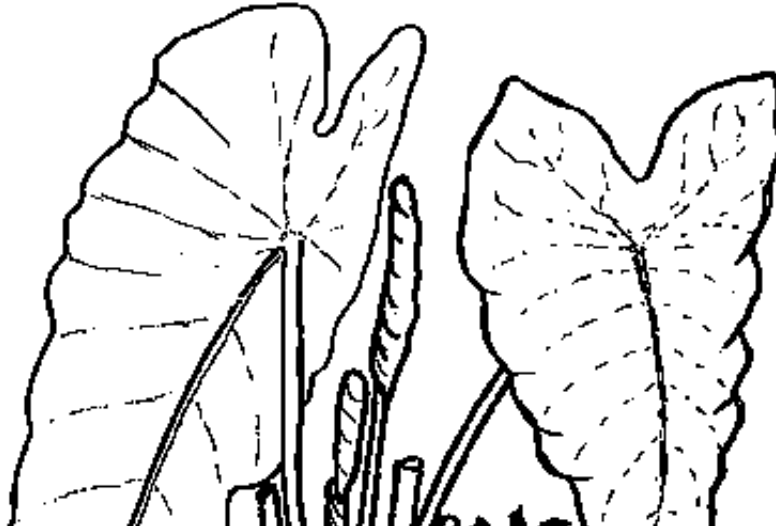
Figure

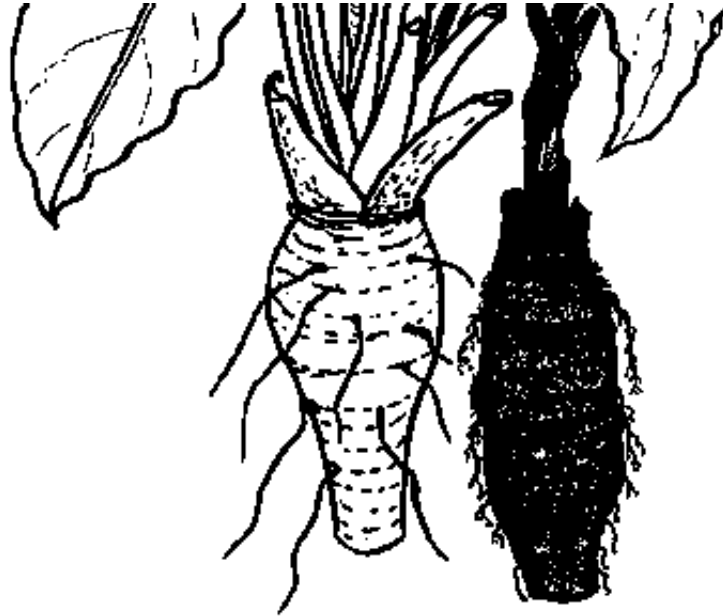
The yam can be intercropped with other common crops like maize, beans and Irish potatoes. They can also be planted just outside crop land where they will not inconvenience other activities. They should be grown on deep-rooted trees to avoid competition.

Remarks: The most commonly used yam in Kenya; at one time widely used by the Central Bantu. But its use as food has declined rapidly in recent decades. It is now a rare crop, almost invariably maintained by elderly women as a matter of tradition in their small shambas.

Also referred to as "yam" in Kenya is *Colocasia esculenta* (L.) Schott (Araceae), syn. *C. antiquorum* Schott (English: cocoyam, taro, Swahili: *nduma*, Kikuyu: *nduma*, *matuma* (leaves), Kisii: *enduruma* (singular), *chinduma* (plural), Kamba: *nduma*, Embu: *nduma*, *ituma* (singular), Luhya (Bukusu): *litolotolo*, Mbeere: *nduma*, Meru: *nduma*, *matuma*, *ituma* (singular)). This is the root crop erroneously referred to as arrow root in Kenya. The starchy corms, which may have a black or greyish cover, are much liked, especially for breakfast. The leaves are also used as a leafy vegetable as a side dish (*mboga*) and for mashing with traditional food (*kienyeji*, Kikuyu, Kamba). Cocoyams are native to Asia and the Pacific islands. They are propagated vegetatively by planting the top of the corms (the stem base) in valley bottoms, along streams and where waste water collects. *C. antiquorum* was until recently treated as a distinct species but now it is considered a variety of *C. esculenta*. Var. *antiquorum* (Schott) Hubb. & Rehder is the commonest variety in Kenya;

var. *esculenta* is distinguished by the presence of numerous smaller corms in addition to the main one. The earliest forms to be cultivated by the central Bantu had small, less tasty corms that left an itchy sensation in the throat (Kikuyu: *nduma-ya-mwanake*) after eating them. Nowadays, these are rare as they are rapidly being replaced by the larger tastier cultivars.

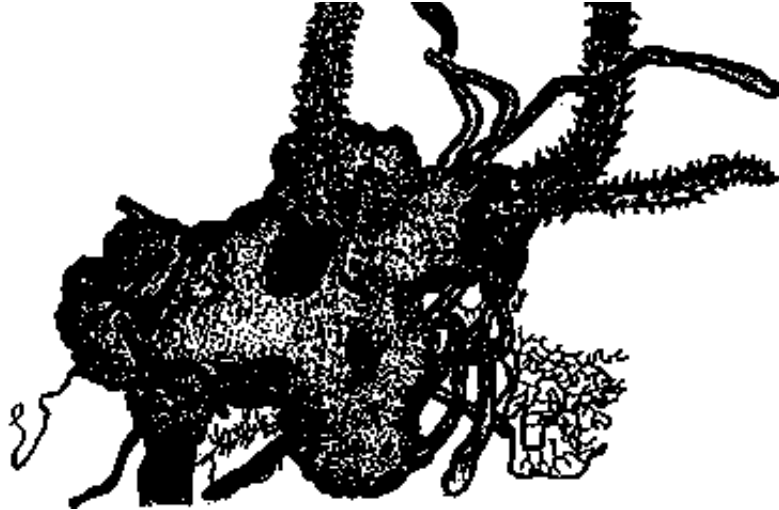




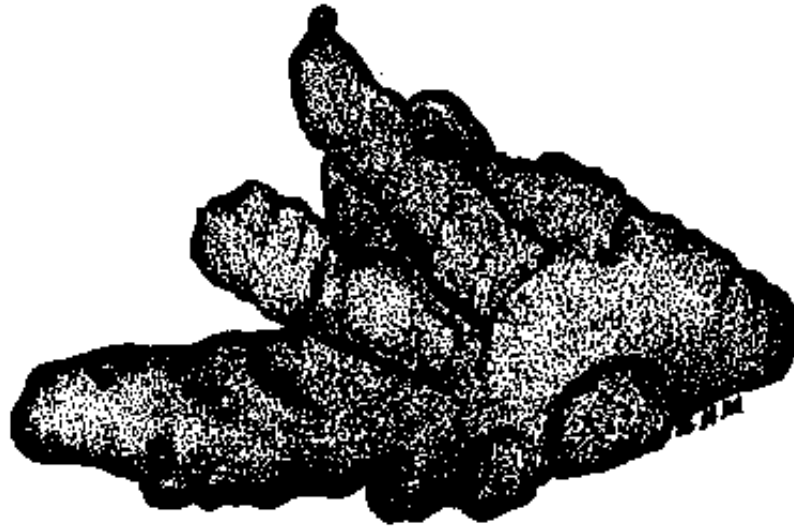
Colocasia esculenta







Dioscorea minutiflora sprouting shoot



Dioscorea minutiflora tuber

Diospyros mespiliformis A. DC.

Ebenaceae

Digo: mbara, mkulu **English:** african ebony, jackal berry

Giriana: mkulwe, mkuluye **Kambe:** mkulwe **Luo:** chumo, chumu **Malakote:** mokowlo **Mbeere:** mukoro **Meru:** muroko **Orma:** kolati-gurati **Somali:** korati (Tana River), kolati **Swahili:** msindi, mgombe, mkadi, mpweke, mgiriti **Taveta:** mugongolo Teso: ekum **Turkana:** egum, egumoit

Description: An evergreen tree to 30 m or more. Crown usually narrow (occasionally spreading), dense with drooping smaller branches. **BARK:** Greyish black, longitudinally fissured or scaly. **LEAVES:** 4-14 cm long, shiny, entire, leathery, alternate, elliptic to oblong, midrib prominent below. **FLOWERS:** Bell-shaped, white, dioecious, sweet smelling. Male flowers clustered, female solitary or up to 3. **FRUIT:** Round or nearly so, smooth with tough glossy skin, up to 3 cm in diameter, yellow to yellowish brown when ripe, clasped by persistent calyx and with a persistent style. Seeds up to 6, brown.

Ecology: An evergreen tree of medium-to-low altitudes, in West, East and southern Africa. Found in Kenya near watercourses in dry bushland, on lava flows in semi-evergreen thickets and rocky hillsides, especially in gullies, 0-1,500 m. Zones IV-VI.

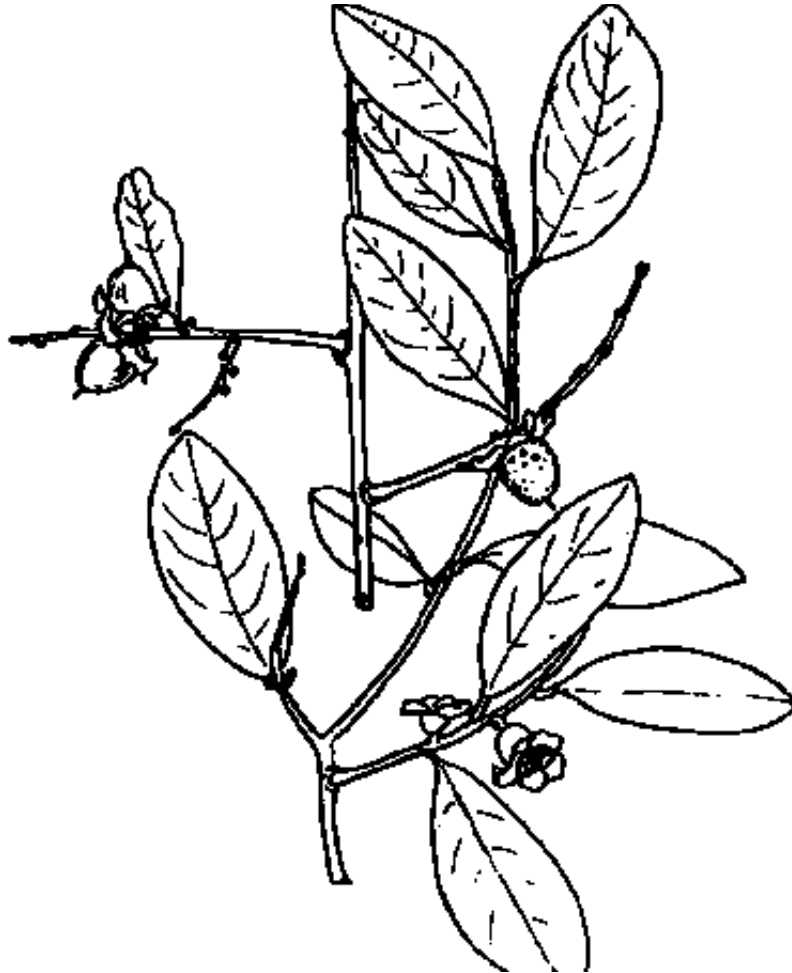
Uses: FOOD: Ripe fruit sweet, eaten raw (Digo, Turkana, Taita, Embu, Mbeere) (+). Seeds may be eaten or discarded. Fruits are collected in bulk and a kind of porridge made from them and drunk in times of famine (Mbeere).

OTHER: Shedding of old leaves seen to signal the coming of the rainy season (Mbeere). Hanging beehives (Mbeere). An excellent source of timber. Wood hard, heavy, very durable even in damp conditions, termite-resistant; sapwood cream-white, heartwood yellowish pink, darkening on drying and with age. Timber used for wood carving and for furniture.

Status: Uncommon and depletion high.

Remarks: Many other *Diospyros* species have edible fruits. Good examples are:

- *D. consolatae* Chiov. (Mbeere: *mutoroma*, Giriama: *mbat'the*, Sanya: *kararacha*) and
- *D. squarrosa* Klotzsch (Giriama: *mpweke*, Kambeere: *mpweke*, Swahili: *mpweke*, Chonyi: *mpweke*, Sanya: *mpweke*) with a slender trunk and a flaking black bark. Young parts hairy (pink). Common in the Coast Province.
- *D. scabra* (Chiov.) Cuf. has edible fruit but they are rarely eaten (Daasanach). Common along luggas in northern Kenya. Wood very hard. Made into sticks used for planting sorghum (Daasanach).



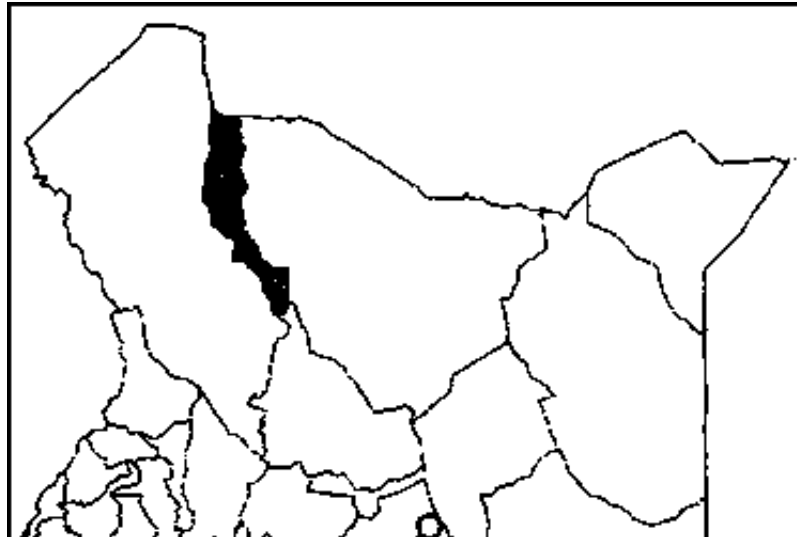


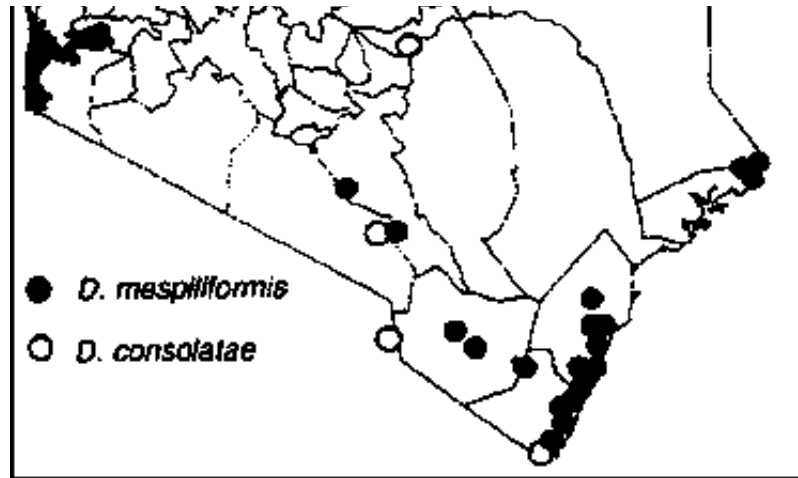
Diospyros consolatae





Figure





Figure

***Dobera glabra* (Forssk.) Poir.**

Salvadoraceae

Borana: garse **Chonyi:** mkuha **Daasanach:** kadite, kada (plural) **Giriama:** mkuha **Kamba:** kisiu, kikaitha (Kitui)

Kambe: mkuha **Malakote:** mokopa **Marakwet:** koros (plural), korosion (singular) **Orma:** gashir **Pokomo:** mukuha **Pokot:** keresion, korosion **Samburu:** serr-i, n-daaruma **Somali:** garas, garso **Swahili:** msega, mswaki **Tharaka:** mungaritha **Turkana:** edapal

Description: Evergreen tree usually 4-7 m high with rounded or spreading low crown. Bark dark grey, almost black or light grey, smooth or nearly so with reticulation giving it a false rough appearance. Leaves opposite, simple, entire, dark green or grey-green, ovate to almost round with a fleshy appearance. Flowers greenish white, fragrant. Fruit green, wrinkled, oval, turning yellow-orange when ripe.

Ecology: Widespread in East and north-east Africa. Also in India. In Kenya common at the coast, Kitui and northern areas in dry bushland, often near watercourses and places with a high groundwater-table in rocky or sandy soils, less often on

clay soils. Zones IV (coast)-VII.

Uses: FOOD: Fruit pulp eaten raw (+). Cotyledons eaten when cooked (++). Preparation: The fruit and seed covers are removed, usually by pounding. The bean-like cotyledons are boiled for 3-4 hours during which water is replaced 4-6 times (Pokot, Turkana, Tugen, Marakwet, Daasanach). Ash or a salty extract from a type of soil (*ngeny*) is added towards the end of the process to improve the taste (Pokot). Dried cotyledons may be stored for more than a year. The fruit ripens during drought, thus making it particularly useful as a source of food. Gum from the tree eaten in Mandera (Somalia).

MEDICINAL: Boiled root infusion given to a mother after birth to prevent fainting. Leaves pounded, soaked in cold water and solution used as drops for eye disease (Samburu).

OTHER: Wood used as fuelwood and in construction of huts

(Tharaka, Pokot, Turkana). Wood used to make mortars (Giriama), watering troughs, *taker* (Pokot), containers (Somali, Manderu). It is, however, soft. Smaller branches used as toothbrushes (Giriama, Pokot, Somali, Turkana); camel and goat fodder (+++); a good shade tree (+++).

CULTURAL/BELIEFS: A ceremonial tree and meeting place (Pokot, Baringo). Leaves are burnt in ceremonies, for sick cattle, for protection during battles and against wild animals, and by young girls before circumcision (Pokot).

COMMERCIAL: Boiled cotyledons sold in Lodwar town.

Management: Propagated by seeds which are best sown directly on site. Seeds lose viability rather quickly. A very slow-growing tree. Coppices well.

Status: Uncommon but may be very common locally.

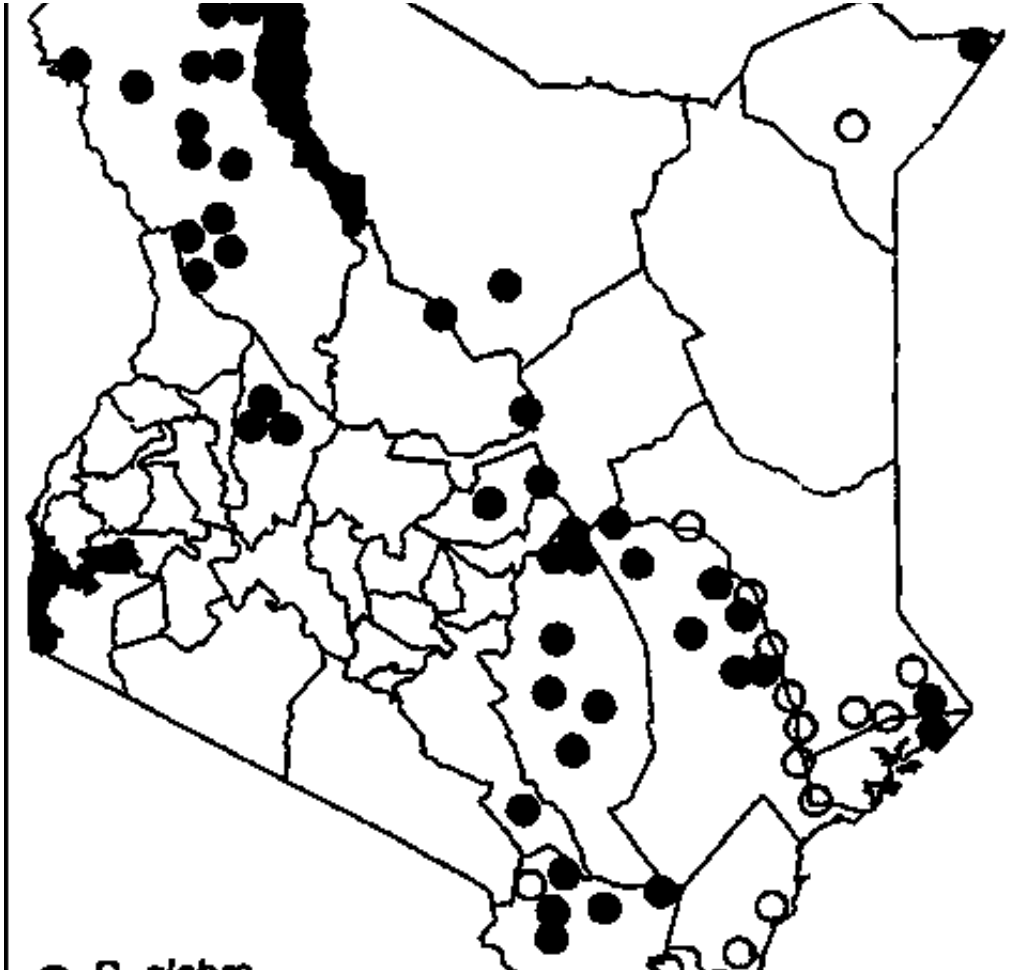
Remarks: A related, almost indistinguishable (and probably the same), species is *D. loranthifolia* (Warb.) Harms. (Chonyi: *mkuha*, Orma: *dende*, Swahili: *msega*, *mswaki*, Giriama: *mkuha*, Kamba: *kisiu*). A medium-sized tree with a rather spreading crown. **LEAVES:** Grey-green, leathery. **BARK:** Corky, longitudinally fissured, flaking off in small patches. **FLOWERS:** White. **FRUITS:** Oval, wrinkled, yellow-green on ripening. Fruits are used in the same way as those of *D. glabra* and the other uses are more or less the same. Distribution: Kenya, southern Somalia, Tanzania, Mozambique. Altitude: 0-800 m.





Figure







Figure

Dovyalis abyssinica (A. Rich.) Warb.

Flacourtiaceae

syn: *Aberia abyssinica* Clos

Borana: kurawa **Chonyi:** dungatundu (fruit), mdungatundu
Giriama: mdungatundu, dungatundu **Kamba:** mukambua,
 ngambua (fruit) **Kambe:** dungatundu (fruit), mdungatundu
Kikuyu: mukambura, ngambura (fruit) **Kipsigis:** nukiat,
 mwokiot **Kisii:** omokorogunywa, omokorogoinwa **Luo:** akutho,
 songola **Maa:** olmarogi, olmorogi, ilmorok (plural) **Marakwet:**
 mendililwo, bapchebilil **Mbeere:** muraga **Meru:** muro **Nandi:**

nokok **Pokot:** mintirilwo, karaturwa, **Sabaot:** mundililwet
Samburu: Imoroo **Sanya:** mkidonyathi **Taita:** mbuche

Description: Spiny shrub or small tree, often 2.5-5 m but occasionally reaching 9 m. **BARK:** Ash grey, almost always supporting lichens. Branches armed with stout spines.

LEAVES: Shiny, alternate, entire or undulate. Petioles and veins often red. **FLOWERS:** Dioecious, female solitary, male often clustered, green or pale yellow, faintly sweetly scented.

FRUITS: To 2 cm in diameter, light green turning yellow or orange on ripening.

Ecology: Grows in Uganda, Tanzania, Ethiopia, Somalia, Malawi and Socotra. In Kenya on Mt Kulal, Nyambene Hills, Taita Hills, Central Kenya highlands, Loita Hills, Rift Valley highlands at forest edges, 0-2,700 m. Common on red soils. Zones II-IV.

Uses: FOOD: Ripe fruit eaten raw, but very acidic. The thin fruit cover may be peeled and the fruit, together with the seeds, eaten. They are excellent for making jam and for souring porridge.

FOOD/MEDICINAL: Roots boiled in soup (Kikuyu).

MEDICINAL: Root decoction taken with fat for cure of gonorrhoea (Maasai, Narok). Roots used for bilharzia (Kikuyu), stomach-ache and fever.

OTHER: Used for fencing (Samburu). Fodder for goats and sheep. Thorns used for piercing ears (Giriama).

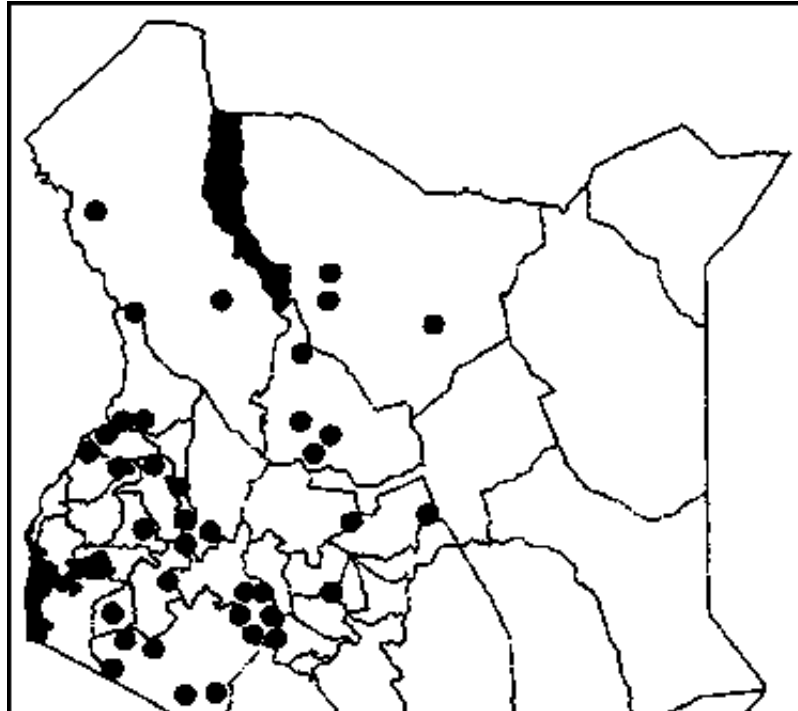
COMMERCIAL: At one time fruits were sold in some local markets.

Status: Uncommon.





Figure





Figure

Dovyalis macrocalyx (Oliver) Warb.

Flacourtiaceae

syn: *Aberia. macrocalyx* **Oliver**

Giriama: munyhee, munyee **Luhya (Bukusu):**
kumusongolomunwa, busongolomunwa (fruit) **Maa:**
enkoshopini, olaimurunyai **Nandi:** kaptowinet **Pokot:**
chuchwenion, chuchween (plural)

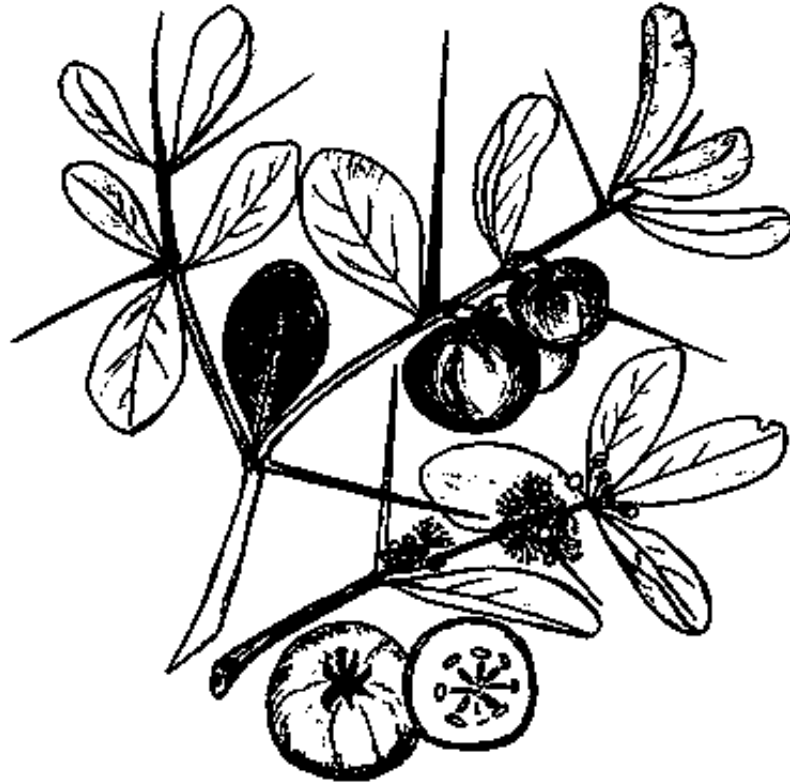
Description: A spiny shrub 2-4 m high, less often a tree 6 m high. Spines narrow, long, up to 6 cm or more. **LEAVES:** Ovate, entire. **FLOWERS:** Male in clusters. Female solitary, in leaf axils. **FRUITS:** Up to 2.5 cm long, oval, bright red with a persistent beautiful greenish yellow calyx.

Ecology: Grows in Uganda, Tanzania, including Zanzibar and Pemba, Sudan and south to Angola and Zimbabwe. In Kenya, e.g. along the Mara River, in Uasin Gishu, West Pokot and Kisumu in forest, forest edges or riverine, 0-2,600 m. Common in deep red soils. Zones I-IV.

Uses: FOOD: The ripe bright red fruit are edible (Pokot, Marakwet, Maasai, Kipsigis, Nandi). Sour with a slight sweet taste.

Status: Occasional.

Remarks: Many other *Dovyalis* species have edible fruit but are often quite acid in taste. One good example is the southern African *D. caffra* (Hook. f. & Harvey) Warb. (Kisii: *chinkongonywa*, *ekayaba*, Kamba: *kaiyava*, Embu: *rweso*) commonly known as Kei apple and widely planted as a hedge in Kenya.

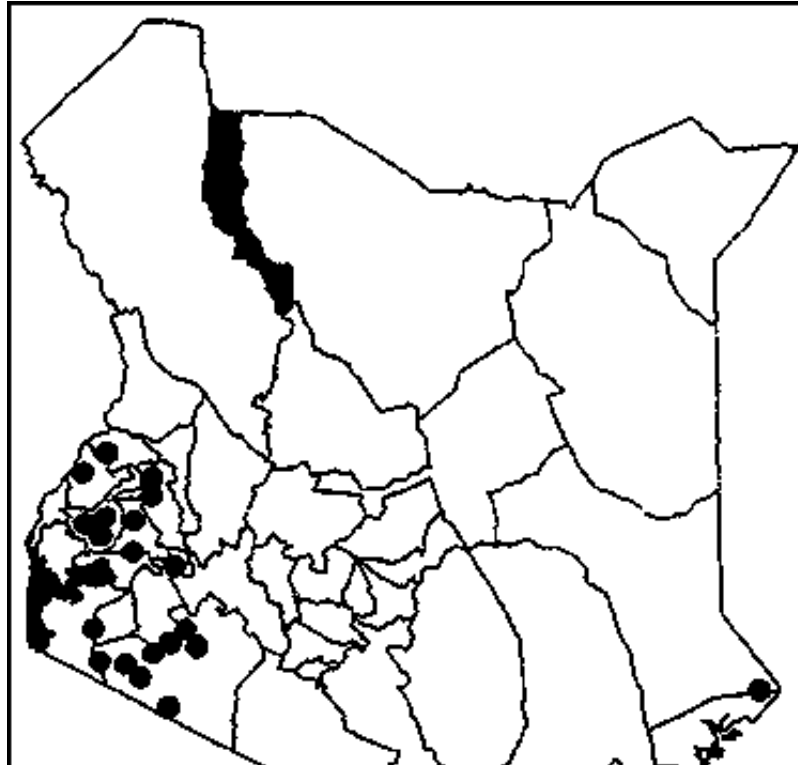


Dovyalis caffra





Figure





Figure

Eleusine coracana Gaertn.

Gramineae (Poaceae)

Chonyi: wimbi **Embu:** ugimbi **English:** finger millet **Kamba:** uimbi **Kambe:** wimbi **Keiyo:** kipsongik **Kikuyu:** ugimbi, mugimbi **Kisii:** obori **Luhya:** obure **Luhya (Bukusu):** bulo **Luhya (Isukha):** vule **Luhya (Marachi):** obule **Luhya (Maragoli):** voro, boro **Luhya (Tachoni):** obure, obul, bulo, obule **Luo:** kal **Maa:** oloikimbi **Meru:** ugimbi **Nandi:** kipsongik **Pokot:** matagh, mataighio (singular) **Sanya:** wimbi **Swahili:**

wimbi, mwimbi Teso: akima **Tharaka:** ugimbi

Description: A grass usually 0.5-1 m high. **FLOWERS:** Head dirty green and branched into 5-7 spikes (fingers) usually 5-10 cm long. **FRUITS:** Grain usually reddish brown, dark brown or occasionally cream.

Ecology: In Africa found in cultivation from Nigeria east to Eritrea and south to South Africa and Namibia. Northeastern Africa is considered the centre of origin of this crop.

A traditional crop of many communities in Kenya, but nowadays grown to a relatively smaller extent than before. Still a major crop among the Kuria, Ilchamus, West Pokot District, Tugen and Marakwet, 0-2,400 m. Requires fertile soils and 650-1,000 mm well-distributed rainfall. Zones II-IV.

Uses: FOOD: The grain is normally made into flour used for

the preparation of *uji* (porridge) and *ugali* (stiff porridge). It is often mixed with sorghum or maize in these preparations. Sour milk and melted butter are added to *ugali* made from finger millet and this is wrapped in new banana leaves and eaten by warriors (Luo). Flour and grain are also used in local beer brewing, especially among the Luo, Kuria and Luhya. Among the Luo, the seeds are germinated and dried (*thowi*), ground and put in water for 4-7 days to ferment. Fresh flour is put in water for a day or two and fried in balls (*mbare*). The two are mixed and left for about three days to ferment. The resulting brew is drunk through long hollow sticks called *oseke* tipped with a filter. Finger millet has been cultivated in Kenya since ancient times and is a traditional food for many communities, especially Keiyo, Marakwet, West Pokot, Tugen, Giriama, Taveta, Teso, Luo, Luhya, Kisii, Kikuyu, Ilchamus, Embu, Taita, Kuria, Kamba. Its use as a food is closely integrated in the traditional customs of many communities.

COMMERCIAL: Grain and flour are sold throughout the country. Now common in major food stores in towns.

Management: Traditionally sown by broadcasting. It can also be sown in lines, especially when intercropped. Finger millet requires fertile soil and is normally associated with shifting cultivation. It is less susceptible to bird attack than bulrush millet. Harvesting: Individual heads are cut and spread out to dry in the sun. These are threshed, winnowed and the grain stored. This grain can keep for over ten years. This ability to keep for a long time made it an important famine food in the olden days.

Remarks: Like many of the traditional grains, the cultivation and utilization of finger millet has declined in recent years. This may be attributed to:

- Low yields compared to maize. The latter has thus

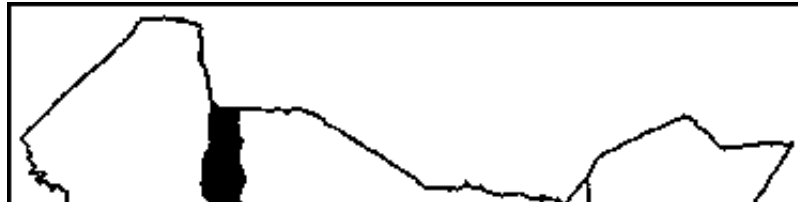
superseded finger millet where it used to be grown.

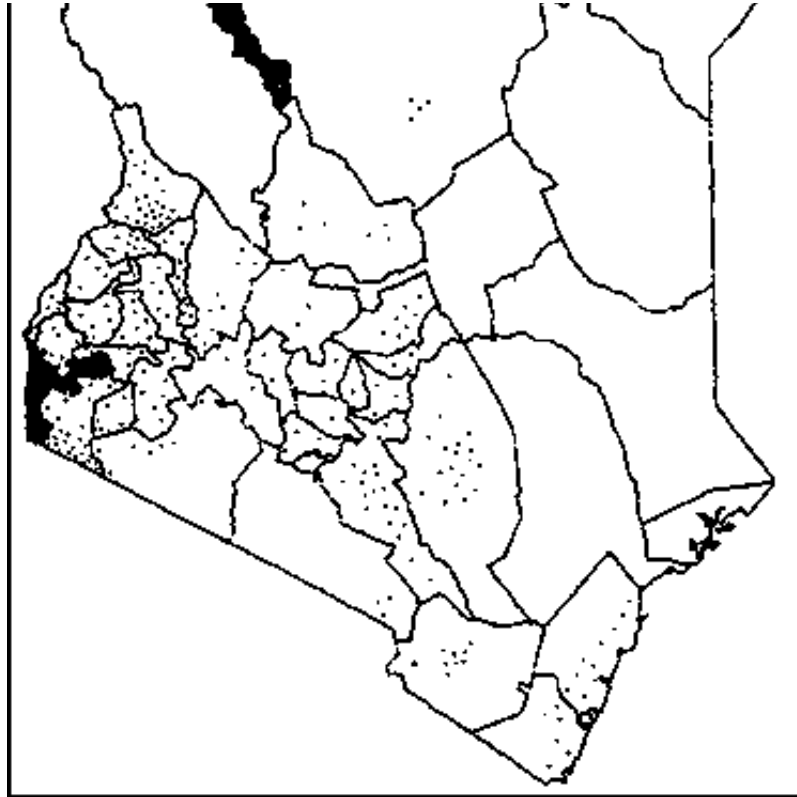
- Tedious traditional methods of preparing the grain.
- Not many people are used to eating it nowadays (mainly due to neglect). This has reduced demand and the market price for the grain. More recently, however, packaging and availability of the flour in shops and supermarkets has helped boost consumption in towns.



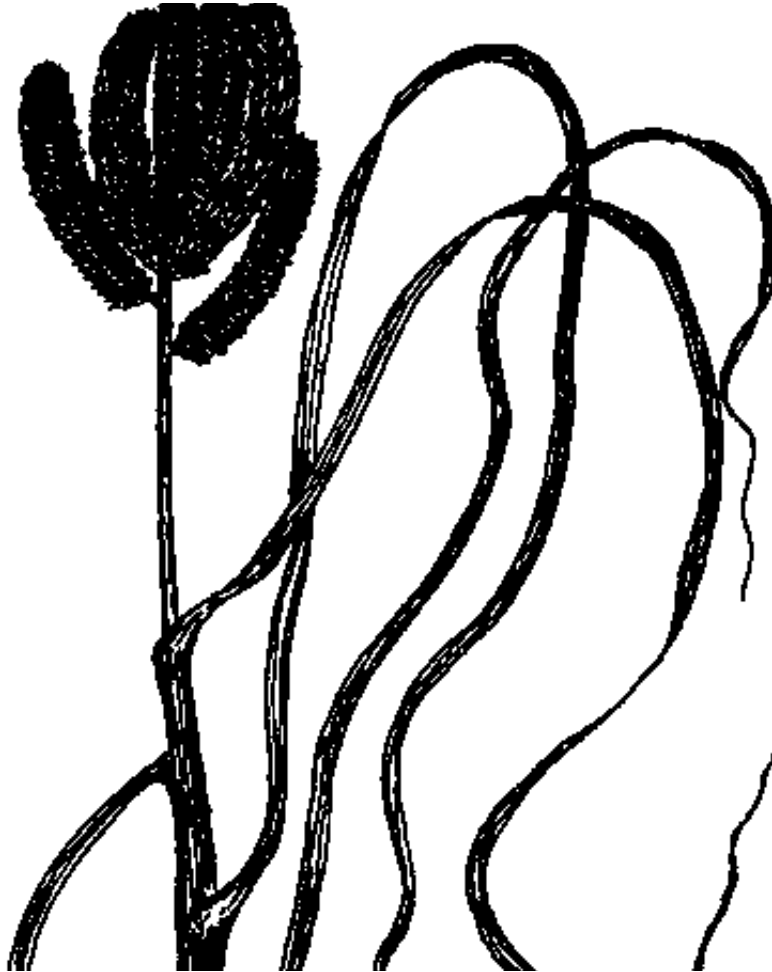


Figure





Figure





Figure

Eragrostis tef (Zucc.) Trotter

Gramineae (Poaceae)

Borana: tafi, thafi **English:** teff **Gabra:** tafi

Description: A small grass usually to 0.6 m high. **FLOWERS:** Inflorescence white or brown. **FRUITS:** Seeds small, ovoid, about 0.5-1.0 mm long, brown or white (cream) in colour.

Ecology: Teff is an almost exclusively Ethiopian cereal but in Kenya it is popular among the Boran groups and people of Ethiopian origin. Grows wild and also widely cultivated in the Ethiopian highlands. Occasionally cultivated on a small scale in the Marsabit and Moyale highlands, 1,000-2,500 m (in Kenya). Rainfall: 650-900 mm. Introduced further south for experimental purposes in agricultural research stations (Katumani, Kitale, Muguga). Also introduced in Lesotho and South Africa as a fodder crop.

Uses: FOOD: A traditional grain crop of the Oromo groups of people including the Boran. Grain is ground to flour (traditionally, stones are used for grinding) which may be used in the preparation of an Ethiopian bread (known as *injera* in Ethiopia and *anjera* by the Boran), porridge and cakes. *Injera* is made by fermenting dough for about three days. A handful of the fermented dough is put in hot water which is then used to prepare more dough. This is poured on a large hot plate up

to 60 cm across and a pancake made. *Anjera* (Boran) is served with meat stew (often spiced) or vegetables on large, shallow plates. The grain may be eaten alone. There is a cream type of grain and a brown type which has a similar but slightly bitter taste.

COMMERCIAL: Grain and flour are traded locally in northern Kenya. The cream type is tastier and more valued than the brown. The grain is sold in the purely brown or purely cream forms but mixtures with varying proportions of the two are more common, the price charged being a reflection of the ratio of the two.

Management: In Ethiopia, land is ploughed up to three times between April and August. Seeds are usually sown by broadcasting but may also be sown in lines. Harvesting is done in November-December. Weeding is usually done once. The two cultivars (cream and brown) are hard to separate once

mixed. For this reason the grain is often seen in varying mixtures of the brown and the cream seeds. Harvesting: Traditionally the grain is cut from the field and spread in a clean, usually round, clearing. The grain is separated from the heads on the stalks by driving oxen several times over the pile. Forked sticks are used to remove the stalks. The seeds are separated from the chaff by winnowing (usually with a wooden spade).

In Ethiopia teff is grown only once in a year. Heavy rain, especially when the grain has formed, spoils the teff. This, together with frequent droughts, has been a main cause of the famines in Ethiopia in recent years.

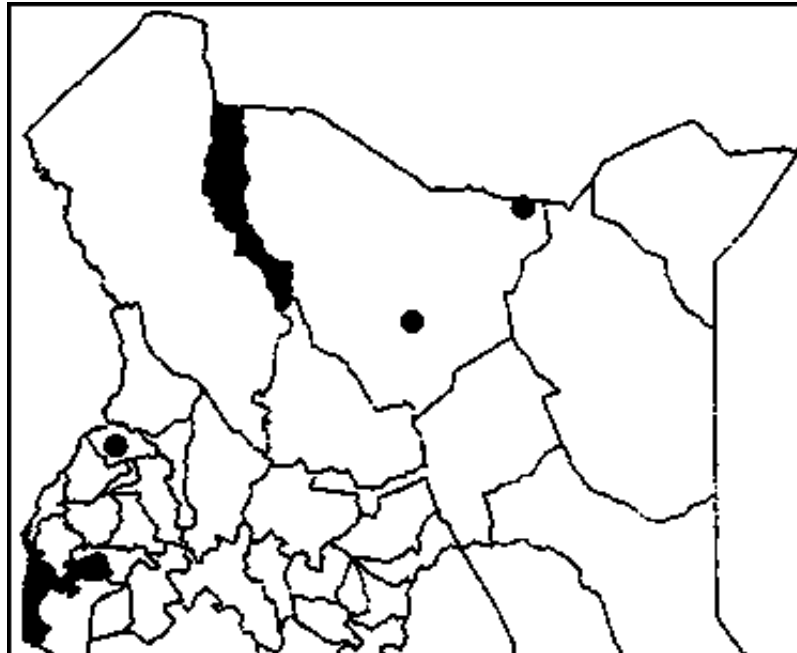
Remarks: Teff is an old and locally important crop of the Ethiopian communities but little known outside the country. *Injera* is the staple food of some communities, especially in north-western, central and southern Ethiopia. It is a common

food in Ethiopian restaurants throughout the world.





Figure





Figure

Eriosema shirensense Bak. f.

Papilionaceae (Fabaceae)

Kamba: ng'athu **Maa:** enkaikuinyoi (Loita)

Description: Small erect herb to 30 cm high, normally single stemmed (remains of older stem may be present) and arising from a chain of tubers formed from enlargements at intervals

along the taproot. Tubers one to several, surface brown or grey, white inside, usually found 10-25 cm below the soil surface. **LEAVES:** Long, hairy. **FLOWERS:** Yellow with dark purple lines. **FRUIT:** A broad hairy dark-brown pod to 1.5 cm, shrivelling after dehiscing.

Ecology: Apart from Kenya, it also grows in Uganda, Tanzania, Malawi, Cameroon, Rwanda, Ethiopia, Zimbabwe and Angola. In Kenya, e.g. in the Kitui hills, Loita hills, Thui Hill, northern Kyulu and Kilungu hills. Bushed grassland, especially on rocky hillsides, 1,400-2,200 m. Mainly in Zones in-IV.

Uses: FOOD: Tubers peeled and eaten (++) (Kamba, Maasai, Kipsigis). Very tasty and said to always leave one longing for more. They are, however, small. Plant often found in rocky areas and hence may be difficult to dig up. Tubers spoiled by rain. Also eaten in Tanzania and Malawi.

Season: Tubers in December-January and June-July in Thika, Machakos and Makueni.

Management: Propagated by seeds. Very specific to certain soil types.

Status: May be locally common though generally rare. Now threatened due to habitat destruction.



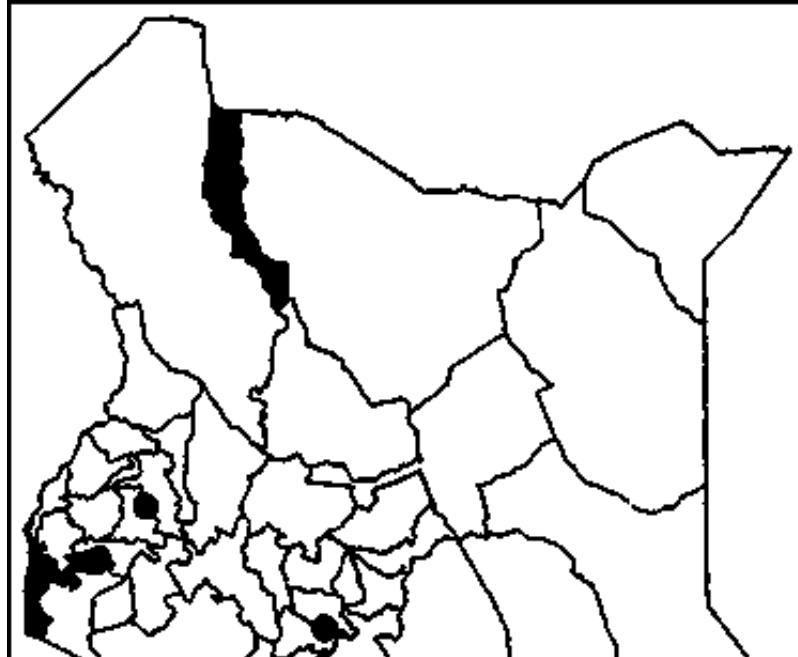


Figure





Figure





Figure

Erucastrum arabicum Fisch. & Meyer

Cruciferae (Brassicaceae)

Kikuyu: togotia **Kipsigis:** cheplemindet, chepleminik **Luhya:** itogotia **Luo:** nyaner kadhira **Maa:** enyaro, enyaru, olowon
Nandi: nonion, monion **Pokot:** churukechir **Samburu:** njunge
Somali: gomanza **Taita:** ngomba **Turkana:** etilelo, namunio

Description: Annual herb to 1 m high, often less. **LEAVES:** Slightly hairy, lobed or wavy. **FLOWERS:** Yellow to cream, borne on long slender shoots. **FRUIT:** A long slender capsule to 5 cm. Seeds brown, small, round. Fresh roots smell of mashed Irish potatoes.

Ecology: Grows from Arabia, Somalia, Ethiopia and Sudan through eastern and southern Africa south to Botswana and Namibia. Introduced in many other parts of Africa. In Kenya, e.g. on Mt Elgon and in the highlands of central and western Kenya in upland grassland, disturbed places in forests and cultivated land, 0-2,500 m. Most common at 1,500-2,000 m. Zones II-IV.

Uses: FOOD: Leaves eaten as a vegetable (++) (Kikuyu, Pokot, Kamba, Kipsigis, Maasai, Narok).

Status: Locally very common, e.g. in Nairobi.

Remarks: Many Kenyan species of the family Cruciferae (cabbage family) are introduced. As they are often weedy, they tend to escape easily from cultivation. *E. arabicum* has been introduced as a weed in many regions of Africa and is probably introduced in Kenya too. Other notable genera with members providing leafy vegetables are *Brassica* and *Rorippa*. *R. nasturtium-aquaticum* (L.) Hayek (English: water cress, Kikuyu: *mararia*) is used as a vegetable by the Kikuyu. It is a trailing herb with pinnate leaves, white flowers and short capsules. Stems root at the nodes. Found in the highlands east and west of the Rift Valley and Nairobi area at 1,500-2,750 m, mainly along streams.

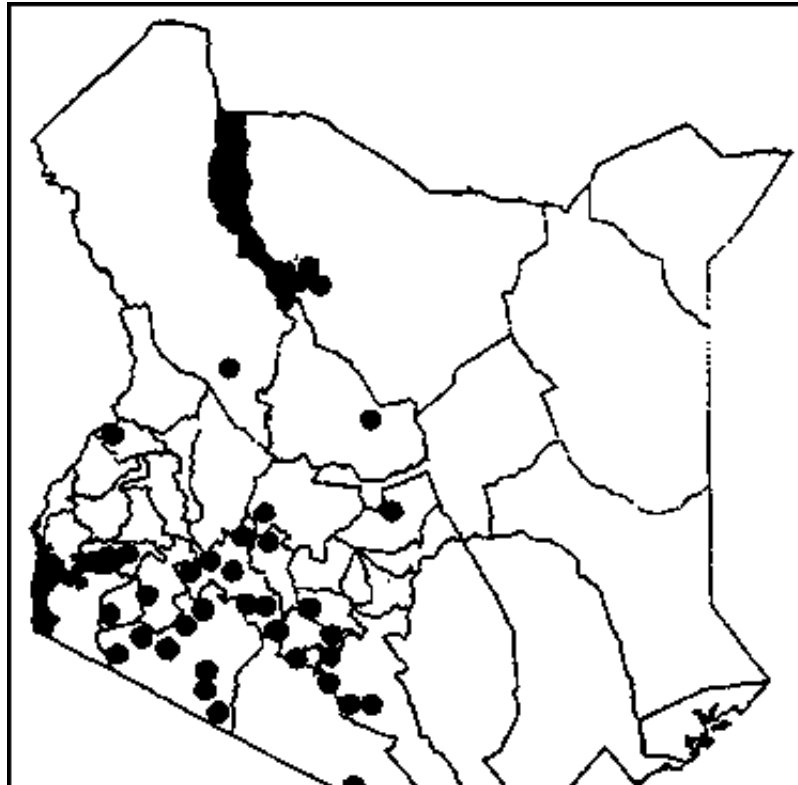


Rorippa nasturtium-aquaticum





Figure





Figure

Euclea divinorum Hiern

Ebenaceae

Kamba: mukinyai, mukuthi, (Mwala-Machakos) nginyai (fruit)
Kikuyu: mukinyai, mukinyei **Luo:** ochol, akado **Maa:** olkinyei, ilkinyei (plural), osojo (Narok), isojon (plural) **Mbeere:** mukiinyi, mukinyi **Nandi:** usuet **Pokomo:** munyiza **Pokot:** cheptuya **Sabaot:** shiendet, uswa, wuswet, cheptuishak
Samburu: shinghe, ilchinge, lchinge Taita: m'mbuku **Teso:** emus **Tharaka:** mukonde

Description: Evergreen shrub, bush or small tree usually 3-5 m with dense foliage. Bark ash grey. **LEAVES:** Elliptic, glossy above. **FLOWERS:** Yellowish white. **FRUITS:** To 8 mm in diameter, green turning purple-black on ripening.

Ecology: Widely distributed throughout Kenya and most of Africa on rocky hillsides, especially in middle altitudes, 0-2,500 m. Commonest between 1,400 and 2,200 m. In lowlands mainly found near watercourses and areas with groundwater, especially on black soil. Zones II-IV.

Uses: FOOD: Ripe purple-black fruits have a sweet edible pulp (+) (Kamba, Luhya, Kipsigis, Nandi, Kikuyu, Samburu, Pokot, Tugen, Maasai). The edible part is, however, scanty, much of the fruit being seed which is discarded. Fruit leaves a rough feeling in the mouth. Bark is added to soup together with *Rhamnus prinoides* L. Herit. *ol-konyil* (Maasai) as an appetizer (Kipsigis, Maasai); also added to children's milk as a

tonic.

FOOD/MEDICINAL: The root and bark are made into soup which is taken as a tonic (Maasai, Kikuyu).

MEDICINAL: One of the most important medicinal plants (+++). Roots are boiled with the roots of *Croton dichogamus* and the decoction used to treat chest pains, pneumonia and internal body pains (Kamba, *kati*). Root infusion or boiled root (occasionally the bark) extract widely used as a purgative (Luo, Kamba, Tharaka, Nandi). Medicine for spleen (Machakos). Soup made from the bark is taken as a worm medicine (Kamba, Pokot). Boiled root infusion used for stomach-ache (Kamba) and diarrhoea (Pokot, Kamba). Roots chewed for toothache (Kikuyu).

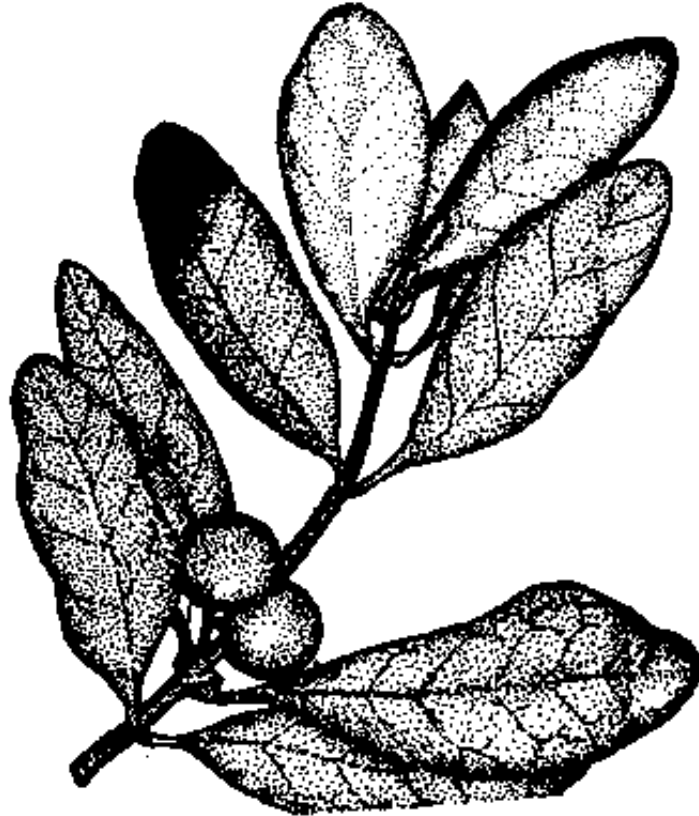
OTHER: Leaves used as sleeping mats for initiates during their period of seclusion (Sabaot). Roots (Kamba, Kikuyu) and

bark (Mbeere) sources of dye. Wood hard but usually small, used for building houses and grain stores, handles, walking sticks. Branches used as toothbrushes from which the Kikuyu and Mbeere names are probably derived. Fuelwood (+++), fodder (+), shade (++)).

Season: Fruits in August in West Pokot.

Status: Locally common.

Remarks: A closely related species is *E. racemosa* Murr. ssp. *schimperi* (*E. schimperi* A. DC.). This too has edible fruits and is normally used in the same manner. It is also common throughout the country.

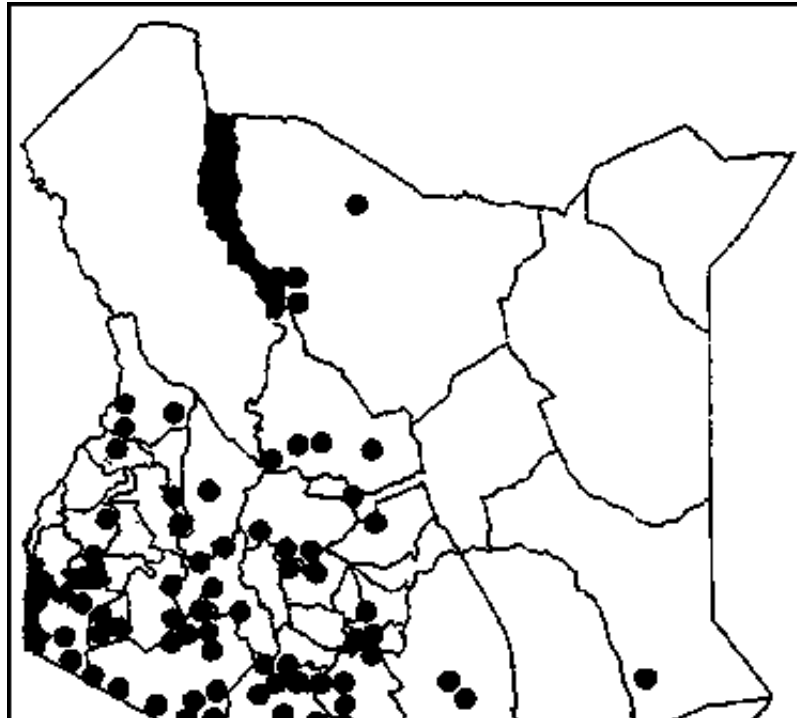


Figure





Figure





Figure

Ficus sycomorus L.

Moraceae

syn: *F. mucosa sensu* Dale & Greenway 1961

Borana: oda, woda, od **Chonyi:** mukuyu **Embu:** mukuyu, nguyu **English:** sycamore fig **Ilchamus:** Inaboli **Kamba:** mukuyu **Kikuyu:** mukuyu, nguyu (fruit) **Kipsigis:** mogoiwet **Luhya (Bukusu):** kumukhuyu kamakhuyu (fruit) **Luhya**

(Tachoni): omukhuyu amakhuyu (fruit) **Luo:** olam, odok (Ugenya) **Maa:** orng'aboli **Malakote:** mokoyo **Marakwet:** mokung'ua, mokongwo (singular), makany (plural) **Mbeere:** mukuyu **Meru:** mukuyu, mukuu, nguyu (fruit) **Nandi:** sebetwet **Orma:** odha **Pokot:** mokong'wo **Rendille:** bubunto, ilmo (fruit) **Samburu:** Ing'aboli **Sanya:** odha **Somali:** bardah (Tana River), berde **Swahili:** mkuyu **Taita:** muku **Teso:** eborborei, eduro **Tugen:** lokoitwo, lokoiiwo, lokoek (fruit) **Turkana:** echoke

Description: A large tree to 20 m with an upright branching habit and a dense or open rounded or occasionally spreading crown. **BARK:** Trunk and branches yellow, orange-red or yellow-green. Bark surface powdery. **LEAVES:** Rough. **FRUITS:** Figs to 2 cm across, slightly hairy, borne on small leafless branches.

Ecology: From Egypt and the Middle East to South Africa and

Namibia and the Comoro Islands. Widely distributed all over Kenya in riverine vegetation, flood plains and places with a high groundwater-table. In the wetter zones it can be found away from riverine vegetation. Alluvial, sandy or rocky soils, 0-1,850 m. Rainfall: 250 mm (riverine)-1,200 mm or more. Zones II-VII.

Uses: FOOD: Figs fleshy, sweet and eaten raw. Figs are split open, dried and stored, usually in honey (Pokot, Turkana). Dry figs may also be ground into flour which may be stored or mixed with grain flour and used to prepare *atap*, a type of thick porridge (Turkana). Figs cooked and eaten (Tugen). Figs are only very rarely eaten nowadays; they may occasionally be infested with insects.

MEDICINAL: Sap used for toothache (Kikuyu) and powdered bark infusion for dysentery (Kamba).

OTHER: Beehives (Kamba, Pokot, Turkana). Stools (Kamba). Door frames. Pestles and mortars (Maasai, Kipsigis, Kamba). Bow of a lyre (Turkana, Pokot). Hanging beehives (Pokot). Doors, house building (Kipsigis, Maasai (Narok)). Water troughs, *alio*, serving bowls, *tuwan* and *perta*, and movable doors, *tikichon* (Pokot, Turkana). Inner parts of bark beaten or chewed into fibre for weaving (Taita). Trunks used in Buganda for making the canoe-like troughs in which beer is made. Good shade tree, hence used as a meeting place. Figs also eaten by birds. Leaves cut for animal fodder (Pokot, Turkana). Latex applied to arrow shafts (Pokot, Kamba).

CULTURAL/BELIEFS: A sacred tree among many communities (Boran, Kamba, Kikuyu, Mbeere, Tharaka, Meru, Luo).

Season: Fruits in January-March in Tana River, Marsabit and southern Turkana and in April in Machakos, Makueni, Narok

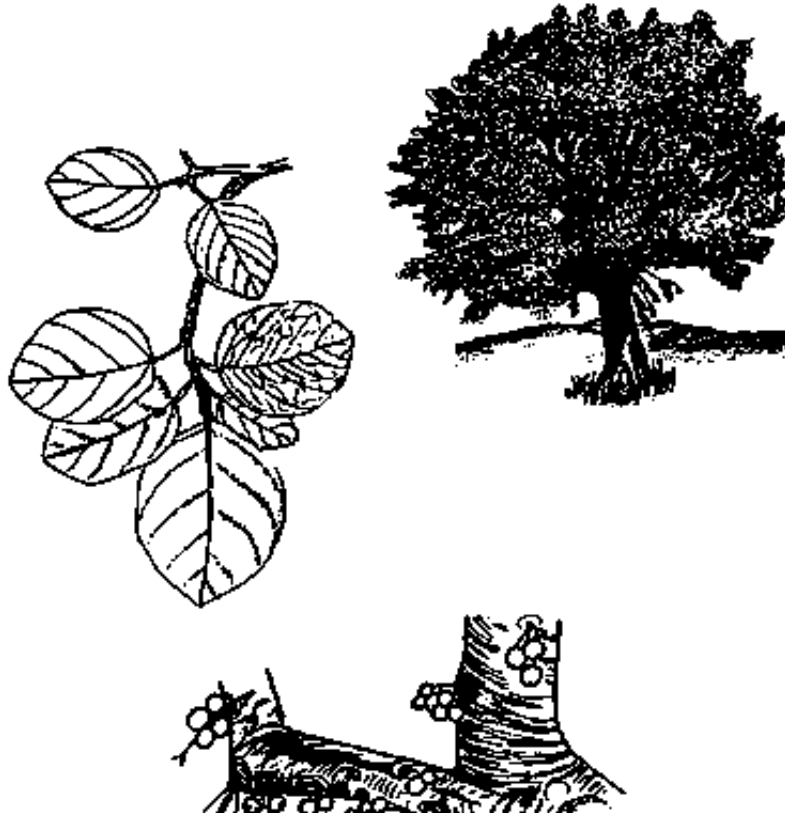
and Taita.

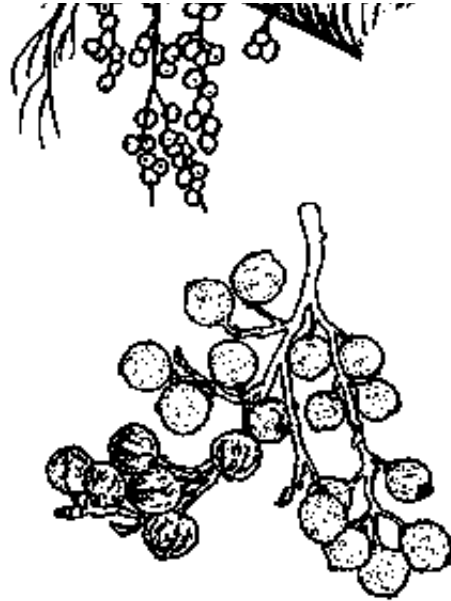
Status: Occasional.

Remarks: Most fig species have edible fruits. They were important famine foods in the past but their use has declined a great deal, especially in the agricultural areas. A closely related species is *F. sur* Forssk. (syn. *F. capensis* Thunb.) (English: Cape fig, Somali: *berde*, Luo: *bongu*) with greyish bark and figs that are borne in clusters on special branched stalks arising directly from the trunk. It is found in West Pokot, Makueni and most parts of Kenya south to KwaZulu Natal in South Africa, in riverine conditions but also away from such habitats. Local names as for *F. sycomorus*.

Another important fig is *F. vallis-choudae* Del. (Maa: *mutoyo*, Pokot: *nohow'o*, Luo: *ng'owo*), a huge tree to 25 m high with a low crown, large heart-shaped to almost circular leaves, and

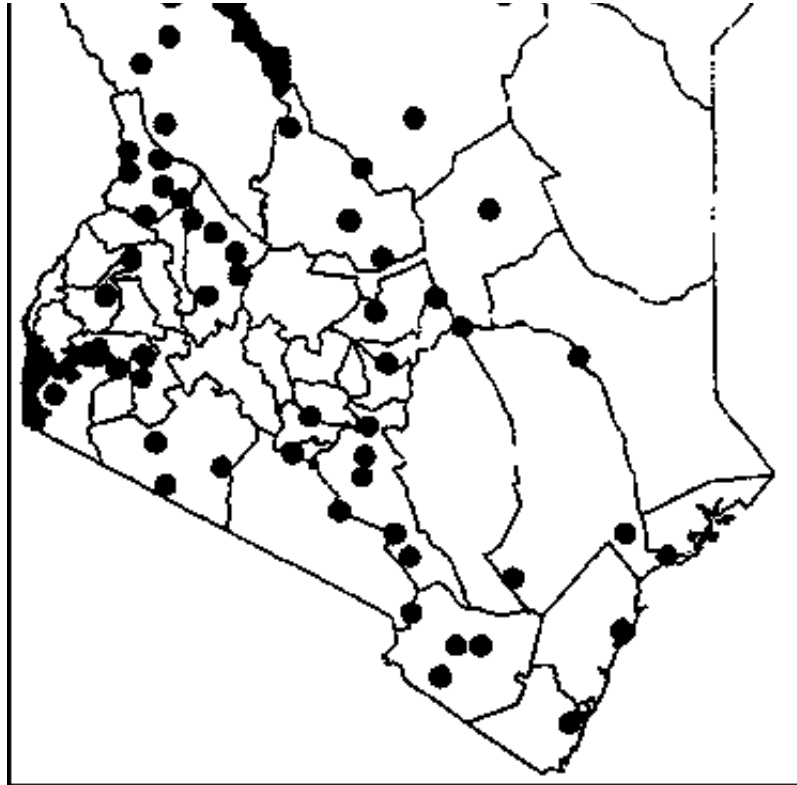
large finely hairy, solitary figs to 5 cm in diameter. This tree is usually riverine.



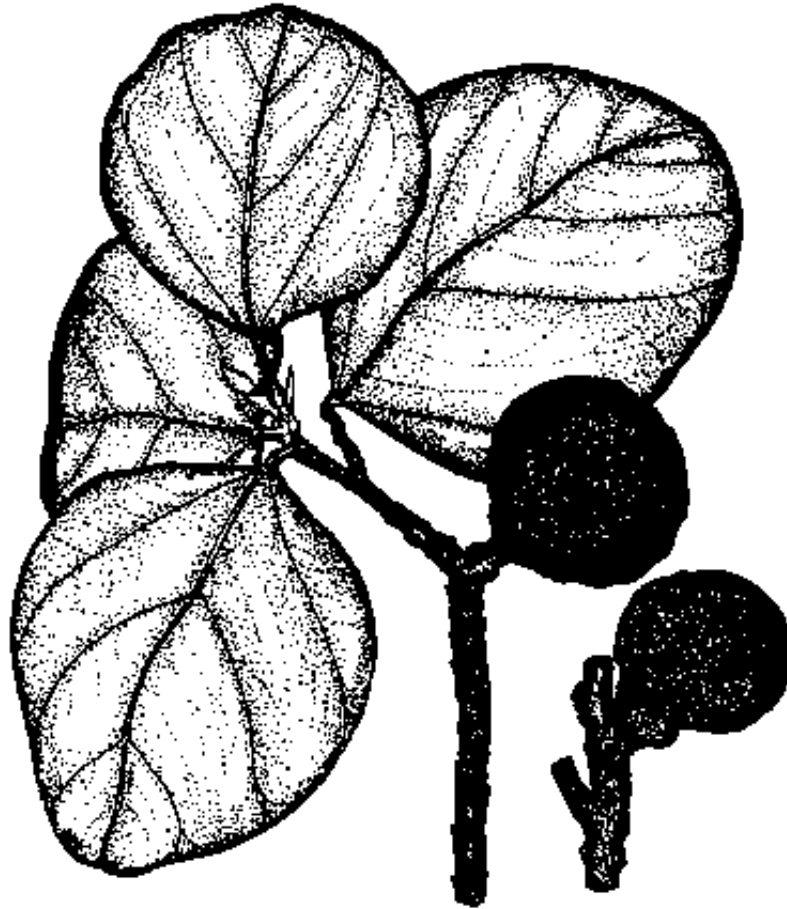


Figure





Figure



Ficus vallis-choudae

Ficus thonningii Bl.

Moraceae

syn: *F. dekdekana* (Miq.) A. Rich., *F. hochstetteri* (Miq.) A. Rich., *F. eriocarpa* Warb.

Kamba: kiumo **Kikuyu:** mugumo **Luo:** pocho **Maa:** oretiti
Marakwet: simotwo, simat **Mbeere:** mugumo **Meru:** mugumo
Pokot: simotwo **Samburu:** reteti **Somali:** kalejeje **Swahili:**
mlandege **Taita:** mvumo, mvumu

Description: Large evergreen tree to 20 m or more, with a low, dense, rounded crown often epiphytic initially (growing on other large trees; the association often leading to the death of the host species by strangling). **BARK:** Grey, smooth. Aerial

roots often dangling from stems. White latex produced when plant is injured. **LEAVES:** Dark green, shiny, elliptic, sides almost parallel. **FRUITS:** Figs without a visible stalk, round, often paired, yellow to red.

Ecology: From Ethiopia to South Africa and Angola. Widely distributed in Kenya in dry forest remnants and wooded grassland, 300-2,300 m. Often starting as an epiphyte. Zones II-V.

Uses: FOOD: Figs edible. Not important nowadays in most areas.

MEDICINAL: Latex used in the treatment of mouth sores, *mutata* (Kamba).

OTHER: Source of fibre for baskets (Machakos, Makueni). Fuelwood (++) (wood is soft). Dye (++) . Fodder(+). Gum

(birdlime) for trapping birds (Tharaka) and for arrow feathers is made from latex tapped from this plant. Good shade (+++) tree. A traditional place for offering sacrifices (Kamba, Kikuyu, Mbeere, Meru).

Management: Propagated by cuttings.

Status: Occasional. Preserved by most communities as it is considered sacred.

Remarks: A closely related fig, *F. natalensis* Hochst., has similar uses. Figs are small, 0.6-1.0 cm in diameter, smooth or slightly hairy and with or without a visible stalk. This species is less common but distinguished by its leaves which are usually smaller than in the other species. The leaves tend to be widest above the middle and taper to the base. The apex is more rounded. This is also a ceremonial tree in many communities. Distribution: Widely distributed in Kenya, south to KwaZulu

Natal in South Africa.

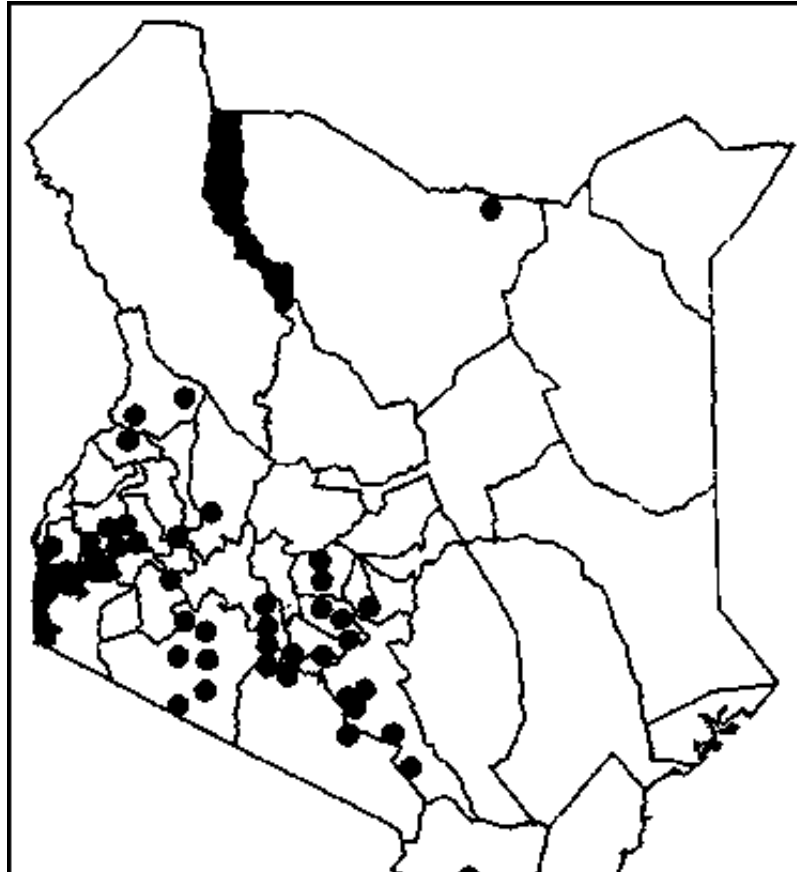




Ficus natalensis



Figure





Figure

Flacourtia indica (Burm. f.) Merr.

Flacourtiaceae

syn: *F. afra* Pichi-Serm.

Chonyi: mdungatundu **Digo:** mnyondoiya, duruma:
 madungatundu **English:** governor's plum, indian plum
Giriana: mdungatundu, mdevere **Kamba:** kiathani, kikathani
Kambe: mudungatundu **Keiyo:** tungururwet, tungururak
 (fruit) **Kikuyu:** mutuhacu, muroro **Kipsigis:** tunguroloet
Luhya (Bukusu): sinyungulwe, kumunyungululwe,
 bunyungululwe (fruit), bubwarakumba (fruit) **Maa:** oloireroi,

oldongururwo, oldongurgurwo **Marakwet:** tungururwa
Mbeere: mudundi, muraga, tingoswo (singular), tingas
(plural) **Meru:** muraga **Nandi:** tungururiet, liche **Pokot:**
tingoswa, tingoswo, tingas (plural) **Sabaot:** tungururu
Samburu: loloroi **Sanya:** mogodonya **Swahili:** mchongoma,
mkingiri, mgovigovi **Tugen:** tingoswo, tungururwo, talatany
(fruit) **Turkana:** echoge

Description: A much-branched shrub or a tree to 15 m high
with narrow or spreading crown. **BARK:** Grey or pale yellow,
smooth or slightly rough, scaling. Branches may or may not be
spiny. **LEAVES:** Usually ovate, glossy, margin entire or
serrated. **FLOWERS:** Yellowish green with a mass of yellow
stamens. **FRUITS:** To 2.5 cm in diameter, green, turning
reddish purple and soft on ripening. Seeds: Several.

Ecology: Widespread in tropical Africa, Madagascar,
Seychelles, Malaysia as well as other parts of Asia. Cultivated

for its fruit. Widespread in Kenya, e.g. at Kacheliba, Chepareria (West Pokot), Thika, Iveti, Karura, Baringo, Nandi and Gede. Although widely distributed in the country, it is locally rare. Grows in the wild in bushland on rocky hillsides, woodland, riparian forest, mainly on red clay, sandy and rocky soils, 0-2,400 m. Zones III-V.

Uses: FOOD: Soft, sweet, reddish purple, ripe fruit is eaten (+++). Seeds usually discarded but occasionally swallowed. Outer part of the fruit not eaten.

MEDICINAL: Root decoction used to treat diarrhoea and gonorrhoea (West Pokot).

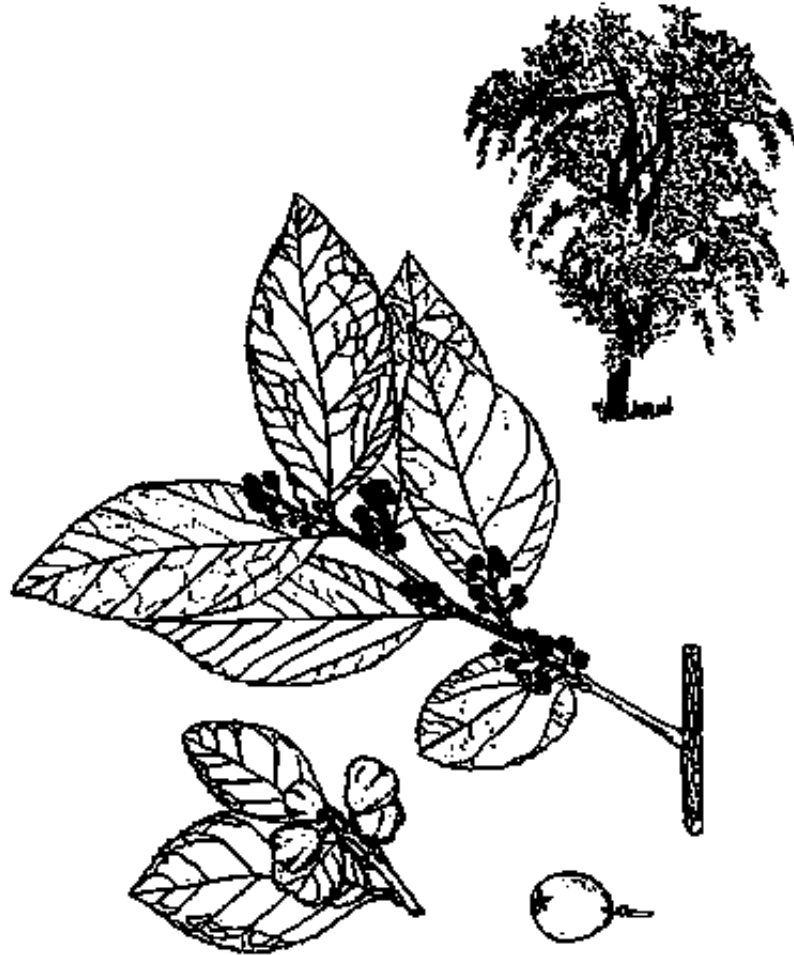
OTHER: Goat fodder. Stems used for building huts (Maasai). Branches used in fencing. Fuelwood.

COMMERCIAL: Fruits sold in West Pokot.

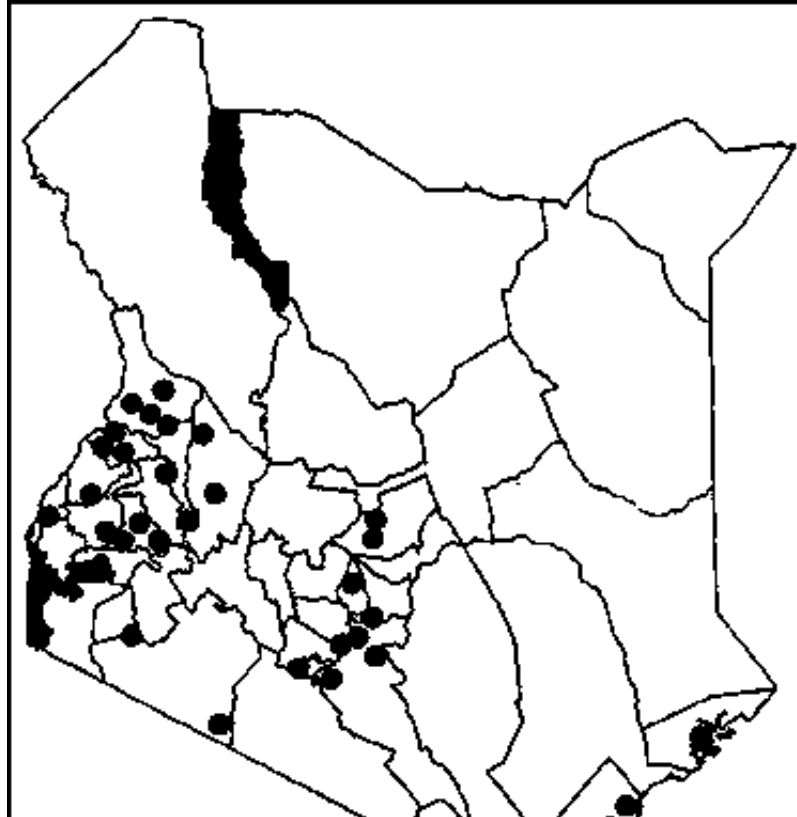
Season: Fruits in February-March (Embu and Machakos), in July-August (West Pokot, Malindi, Kilifi and Kwale), in October (Elgeyo) and in December (Nandi).

Status: Uncommon.

Remarks: Can make a good live fence.



Figure





Figure

Flueggea virosa (Willd.) J. Voigt

Euphorbiaceae

syn: *Securinega virosa* (Willd.) Baill.

Borana: awagino **Chonyi:** mukwamba, kwamba (fruits) **Digo:** mukwamba **Giriama:** mukwamba, kwamba (fruits) **Ilchamus:** longoosoiron **Kamba:** mukuluu, mukururu (Mwingi) **Kambe:** mukwamba, kwamba (fruits) **Kisii:** esarara **Luo:** rayuthu (Siaya), kagera, kagena, kagna, odok **Malakote:** mokororo **Mbeere:** mukururu **Orma:** kororo **Pokot:** kiptarpotich,

chepochepkai **Samburu:** Ikirebuk **Sanya:** mkibonyea **Swahili:** mkwamba, mteja **Teso:** elachas **Tharaka:** mukururu
Turkana: elakis, ekalis

Description: Much-branched deciduous shrub to 4 m or more (usually 2-3 m). Main stem hardly exceeding 10 cm in diameter. Branches normally straight and with numerous short side branchlets. **LEAVES:** Small, alternate, ovate or elliptic with a smell when crushed. **FLOWERS:** Dioecious, greenish yellow, numerous, clustered in leaf axils. **FRUITS:** Light green berries, to 1 cm across, turning white on ripening. Seeds numerous.

Ecology: A widely distributed species: Tropical Africa south to South Africa and Namibia, Arabia, Socotra, Madagascar, Pakistan to Japan and Timor. In Kenya in open bushland, bushed grassland. Soils variable but common-on sandy and clay-sandy soils. Commonest in Zones IV and V.

Uses: FOOD: Ripe white fruits eaten whole (+), soft and sweet with a slightly bitter taste. Mainly eaten by children.

MEDICINAL: Root decoction used to treat *muthyoi* (Kamba, bilharzia). Fruits used for itching skin, and partially fermented leaves used to treat malaria (Tharaka). Leaf extract (often mixed with *Lantana trifolia* leaves) is given to children to stop diarrhoea (Siaya).

OTHER: Fuelwood (++). Fruits given to chicken as fodder (+++) (Machakos) and loved by the larger birds. Ashes used for cleaning out milk gourds (Maasai (Narok)). Toothbrush (Maasai, Kipsigis). Twigs used in construction of huts and grain stores (++). Larger stems an excellent fuelwood and charcoal source. Goat fodder.

CULTURAL/BELIEFS: Used in *kitigo kia mburi*, a charm for good health in goats dusted on the animals as they pass the

entrance to the boma (Tharaka).

Season: Fruit in June-July in Tharaka, Machakos and Kitui.

Status: Common.

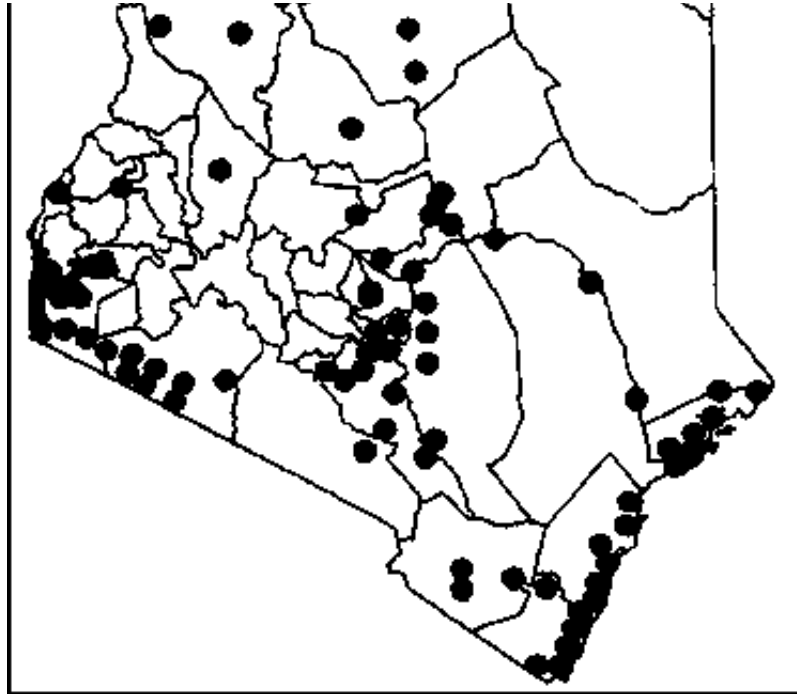
Remarks: A fast-growing shrub that can be planted for its firewood and as a source of chicken and bird food.





Figure





Figure

***Garcinia livingstonei* T. Anderson**

Guttiferae (Clusiaceae)

Boni: mangales, unglise **Digo:** kisambwe, mfunga-tanzu
Giriama: mufodzohi **Kamba:** mukanga, kikangakanywa, ngangakanywa (fruit) **Maa:** olkifulwa, enongeperen
Marakwet: nerkwo **Pokot:** merwo **Samburu:** Ikasiyoi, Iyoret
Sanya: magadhoguyo, dhembela **Somali:** daresa (Garissa)
Swahili: mpekechu, mpeketo, mtotozi **Taita:** munganga, munyanga **Teso:** atenum, ekwalakwala **Tharaka:** muthuthuura

Description: A shrub or small, narrow-crowned tree, occasionally deciduous, usually 3-6 m high but may be up to 15 m. Branches often arranged horizontally in whorls of 3 round the main stem. **BARK:** Grey, smooth or slightly reticulate exuding an oily yellow or orange sap when injured. **LEAVES:** Shiny, leathery, dark green, often in whorls of threes or opposite. **FLOWERS:** Cream or pale green and

scented. **FRUIT:** Ovoid, yellow to orange when ripe, 2-3 cm long.

Ecology: Kenya, Tanzania, Uganda, west to Cameroon and south to South Africa. In Kenya, e.g. along the Athi River (Mbiuni, Machakos) and in Kitui Central. Widely distributed in Kenya but generally uncommon. Found in riverine forest or thicket (often understory), or on rocky outcrops away from water in Coast Province, 0-1,900 m. Zones II-IV.

Uses: FOOD: Fruit edible, juicy with a sweet acid taste (+++).

MEDICINAL: Infusion made from roots and liquid mixed with milk and drunk by women for abdominal pains during pregnancy or shortly after giving birth. Fruit used in mumps (Kitui).

OTHER: Branched stems widely used as stirrers due to the branching habit, hence the Swahili and Giriama names for the plant. Good fuelwood. Shade tree. Yellow oily sap used to decorate arrows as well as in the manufacture of arrow poison (Tharaka).

Season: Fruits in February-March in Embu. Flowers in September in Lamu and Kilifi.

Status: Rare in most areas.

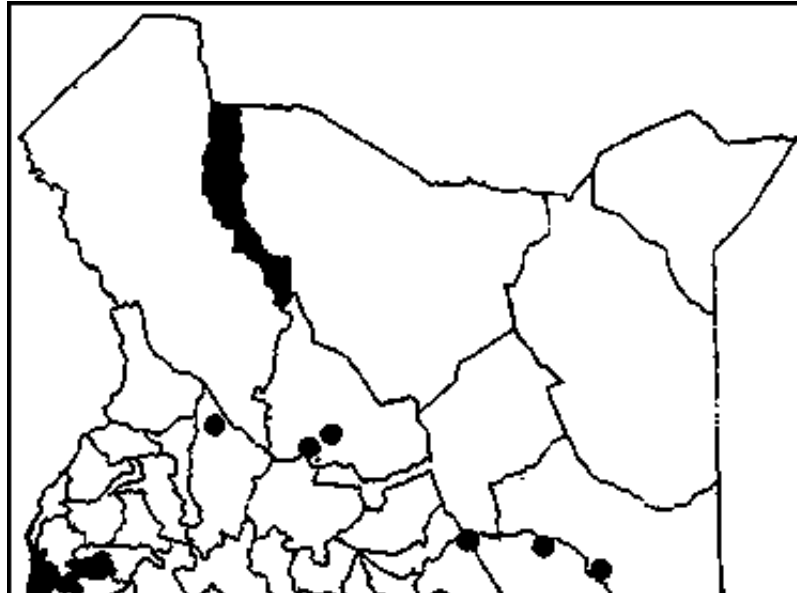
Remarks: *Lufudzo* is a stirrer in Giriama. Two other species of *Garcinia* are found in Kenya. *G. buchananii* Bak. (syn *G. huillensis* in Dale & Greenway 1961) is found at the coast and in western parts of Kenya in moist forest and bushland. It is distinguished from *G. livingstonei* by the leaves which are usually opposite. Ripe fruit fleshy, yellow to orange and edible *G. volkensii* Engl. is found from central Kenya to the coast in

evergreen forest. Flower petals and sepals are in fives but in fours in *G. buchananii*. There are no records of its use as food in Kenya.





Figure





Figure

Grewia bicolor Juss.

Tiliaceae

Chonyi: mkone **Daasanach:** suriech **Giriama:** mkone
Kamba: mulawa, kikalwa, ngalwa (fruit), ilawa **Kambe:**
 mkone **Kipsigis:** sitetet, sitetooik (plural) **Luo:** powo **Maa:**
 olsiteti **Marakwet:** siitet, siti (plural) **Mbeere:** muragwa,

murawa **Orma:** haroru **Pokot:** sitet **Rendille:** dabach, arlilo (fruit) **Samburu:** lagrat-denai, seteti, Ikarraiyo **Sanya:** haroru **Somali:** debhi (Tana River), dowee **Swahili:** mkone, mfukufuku, mikoche **Taita:** mmara, ndomoko **Tharaka:** murawa, muraagwa **Turkana:** ekali

Description: Spreading shrub or tree with a light crown and up to 7 m high. Branches hanging down. **BARK:** Smooth or fissured, dark grey. **LEAVES:** Usually asymmetrical at the base, whitish green underneath, margins toothed. **FLOWERS:** Yellow, on short stalks. **FRUIT:** Often divided into two lobes, each up to 0.7 cm, orange when ripe, rather hairy.

Ecology: Widely distributed in Africa and a common species all over Kenya, especially in lowlands in dry bushland, bushed grassland, 300-1,800 m. Soils very varied but mainly red clay, sandy and rocky soils. Zones III-V.

Uses: FOOD: Fruits eaten raw (+). The pulp, which is sweet but scanty, is sucked off the seeds and then the seeds are discarded. Occasionally the whole fruit may be crushed and eaten. Seeds are hard, however.

MEDICINAL: Bark chewed and placed on cuts as a bandage (Kitui). A cold infusion of the root is drunk for chest complaints (Maasai). Root decoction used for diarrhoea in humans and mixed with another species (*sokotwo*) for the extraction of the afterbirth in cattle (Pokot). The slimy pounded bark is applied locally for body itches.

OTHER: Sticks, bows and stirrers. Wood is tough and used to make knives, spears, clubs, bows, arrows, walking and fighting sticks (Daasanach), construction. Wood carving (Kamba). Bark used for string and rope. Animal fodder (++) . Shade tree (++) .

CULTURAL/BELIEFS: Leaves used by medicine men in exorcizing spirits and used to produce smoke in ceremonies for sick cattle (Pokot). Sticks used in an earthquake-prevention ceremony. Ritual sticks (Maasai).

Season: Flowers mainly in the rainy season. Fruits about 3 months later.

Status: Locally common.

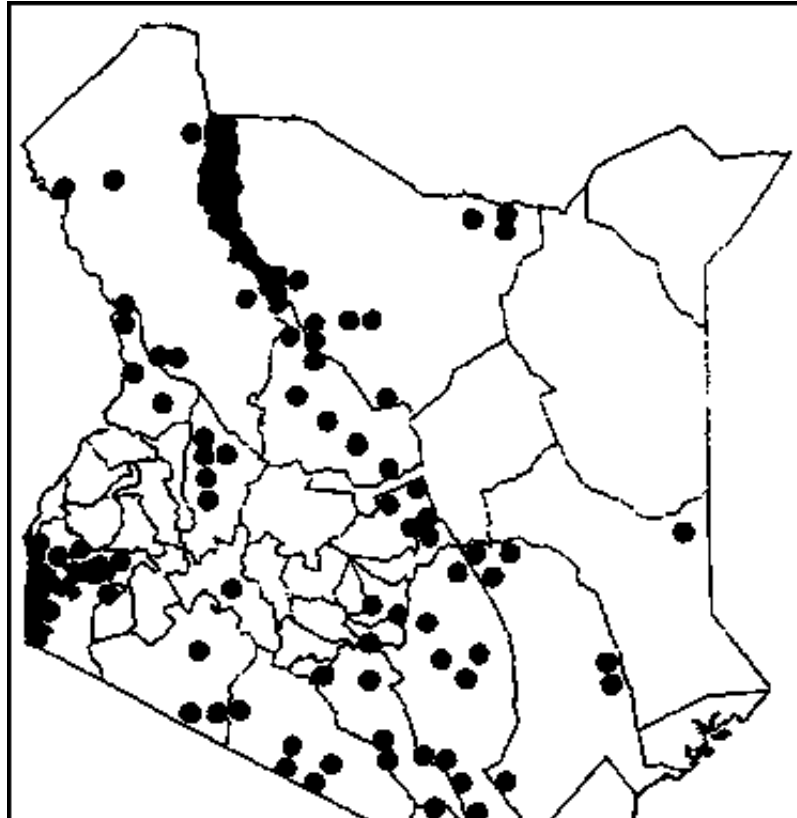
Remarks: Most of the 27 or so species of *Grewia* occurring in Kenya have edible fruits. They are generally shrubs, rarely attaining tree size, usually multi-stemmed and more common in dry areas. Leaves are simple, alternate and toothed. Flowers usually have 5 coloured sepals, usually joined below, and 5 petals which are often shorter than the sepals and free. Many, usually 10, stamens. The fruit is normally hairy and divided into 2-6 lobes (often 1, 2 and 4).

Fruits with smaller lobes such as *G. tenax*, *G. similis* and *G. tembensis* can be chewed and swallowed whole. With the larger ones, one can only scrape off the thin sweet outer pulp then throw away the seed. Fruits eaten whole have better food value, especially proteins. The seeds are, however, known for their constipating property and ingesting large amounts may lead to serious constipation. Due to their high prevalence in the dry areas, *Grewia* fruits may form a substantial part of the daily diet among the pastoral communities. Apart from providing food, *Grewia* species are good sources of fibre. Their stems are often tough and durable, thus they find many uses in the household.





Figure





Figure



Figure

Grewia tembensis Fres.

Tiliaceae

Borana: ogumdi, deka **Daasanach:** damich-arab **Digo:** mkone **Ilchamus:** Ikogomi, Ikogom **Kamba:** kituva, nduva (fruit) **Kipsigis:** chesarebut **Maa:** oyiri, oirri, iri (plural) **Mbeere:** muruba **Orma:** deka-dubra **Rendille:** mulahanyo, dook-gudhan **Samburu:** irri **Somali:** hashanli, dhamag, mured-bonati (Tana River), demag, dumag **Taita:** mmbogha Taveta: mwemba **Turkana:** emaleker, emaleger

Description: Small, usually multi-stemmed straggling shrub to 4 m or more. Stems long, narrow, whitish grey to dark grey, smooth. **LEAVES:** Ovate, thinly hairy, slightly rough above, margin serrated. **FLOWERS:** Buds pinkish green. Flower white to pink (sepals pinkish, petals white, stamens purplish pink). **FRUITS:** Usually 4-lobed, hairy, light green with some dark green patches (above), ripening to orange or bright red.

Ecology: Widespread in Kenya, but uncommon in western parts. Found in bushland, often riverine, 250-2,200 m. Surrounding bushes provide initial support for its long weak young stems. Soils varied, usually sandy or rocky, also red and black clay soils. Rainfall: 500-800 mm. Zones III-VI.

Uses: FOOD: The bright orange-red fruits are sweet and much liked (++) by people. Large quantities may be gathered and juice extracted (Kamba, Turkana). Fruits may be chewed and just the juice swallowed. Whole fruit together with seeds may be eaten but large amounts may cause constipation.

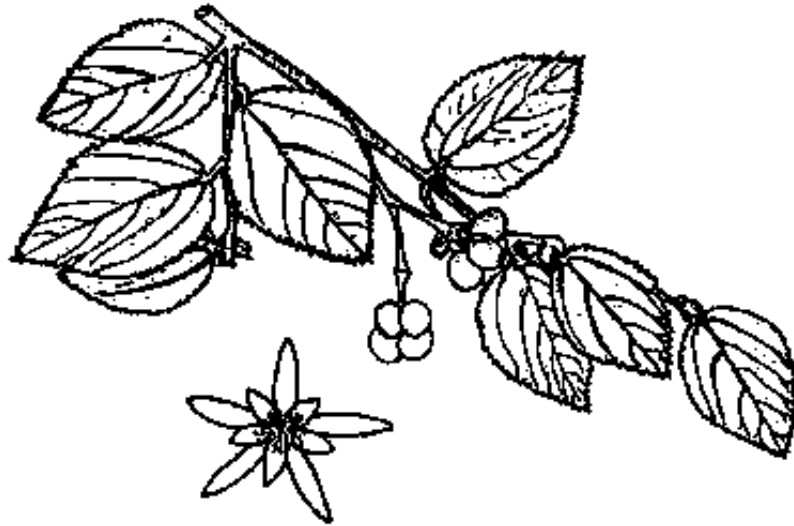
OTHER: Fuelwood (+). Stems used for weaving granaries and mud-walled houses, sticks, pegs, forked and hooked sticks for hives and fencing, bows; arrow shafts (Daasanach, Kamba, Mbeere), spits for roasting meat (Daasanach), stirrers. Good fodder plant (++).

Season: Flowers in the rainy season. Fruits two to three months later (usually March and June-July).

Management: Propagated by seeds. Also said to grow from cuttings (Kitui).

Status: Common.

Remarks: Resembling this species but usually with larger leaves, flowers and fruits is *G. similis* K. Schum. (Kamba: *mutuva wa kiima* (Mbiuni, Machakos), Kikuyu: *mutheregendi* (*mutheregendu*), *theregendu* (fruit), Maa: *oyirri*). Stems are dark grey to brown. Leaves usually obovate, short-stalked, conspicuously veined below. Flower bud greenish brown opening to a striking purple-blue or purple-pink blossom. Fruits 4-lobed, green ripening to orange. This is a bushland and forest-edge species normally found at medium altitude. It is common around Nairobi. Zones III-IV.

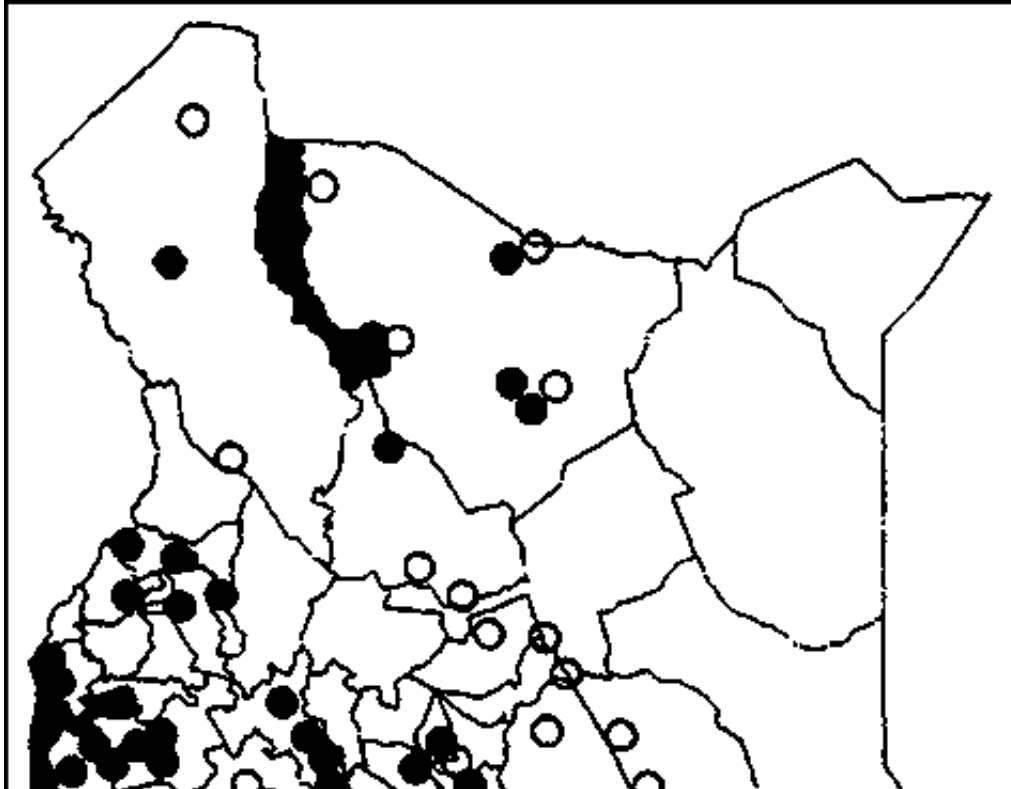


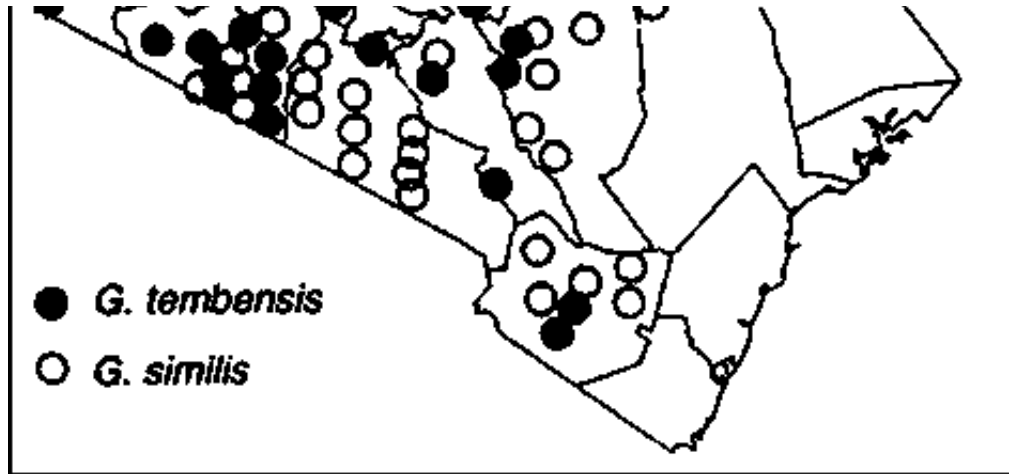
Grewia similis





Figure





Figure

***Grewia tenax* (Forsk.) Fiori**

Tiliaceae

syn: *G. erythraea* Schweinf.

Borana: deeka, deeka-imimo, irgegud, deeka-diima, murie,

sarkam **Daasanach:** damich, damis (plural) **Gabra:** d'eeka
Giriama: mkone-kilaa **Ilchamus:** ilkogomi **Maa:** oyirri, oirri,
iri (plural), eirri-narok (Magadi Road) **Pokot:** toronwo, taran
(plural) **Rendille:** mulahanyo, domook (fruit), domook derle
Samburu: irri, Ikarayoi, Ikogomi, Ingongomi loitipai, Ipuusani
Sanya: haroru korma **Somali:** amasha, deka, kamasha,
muryo, murie, nashimleh, damiek (Wajir), mared (Garissa)
Tugen: taran, taronwet **Turkana:** eng'omo

Description: Small much-branched, often multi-stemmed,
straggling deciduous shrub to 3 m or more. Stems narrow,
whitish grey with longitudinal streaks. Older stems dark grey.
LEAVES: Small, variety of shapes, often almost round and
papery with a serrated margin. **FLOWERS:** White. **FRUIT:**
Small, light green ripening to yellow or orange. Large amounts
of fruits may be produced.

Ecology: Widely distributed in most of Kenya except the

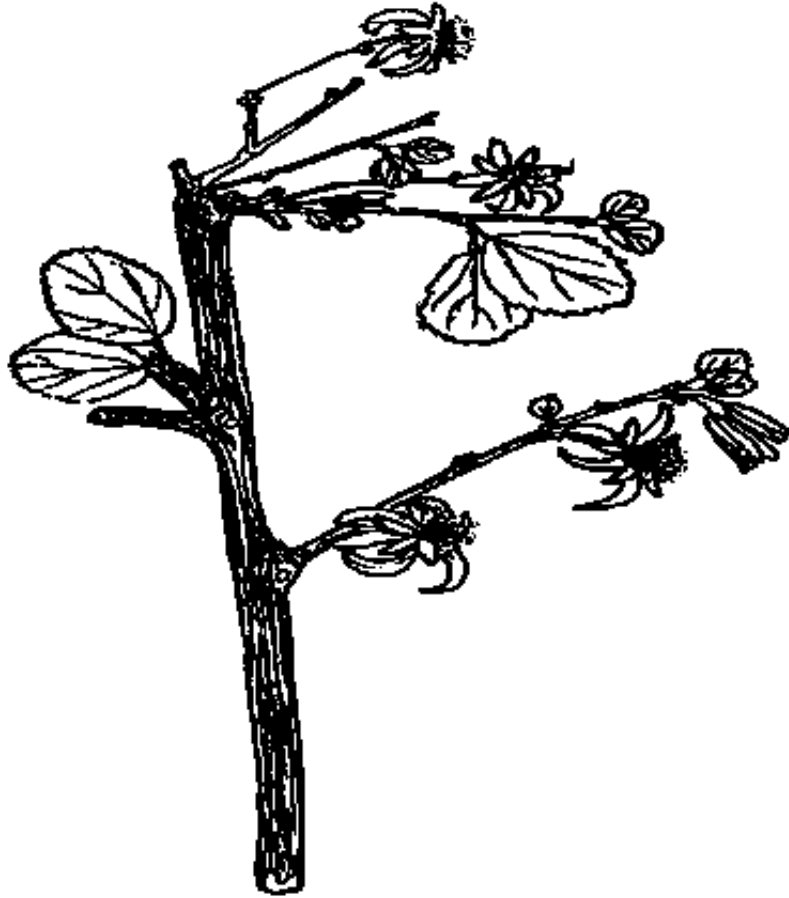
western part. Found in dry acacia bushland, 0-1,250 m. Soils varied but usually rocky and red clay. Zones V-VII.

Uses: FOOD: Ripe (and unripe) fruit eaten raw (+++). Fruits sweet, may be eaten whole or chewed and only the sweet juice swallowed. If large amounts of seeds are ingested they may cause severe constipation. Fruits may be pounded, dried and stored. This is normally eaten along with fat or milk to avoid constipation (Turkana). Juice may also be made by extracting the pulp in water (Turkana). Roots are boiled in milk and given to children as a tonic (Maasai).

MEDICINAL: Roots are mixed with those of *Diospyros scabra* (*tuwot*), boiled and used to treat tuberculosis (Pokot).

OTHER: Bows and arrows (Pokot). Toothbrushes (Maasai). Shoots and fruits good camel and goat fodder (+++).

Status: Very common in dry lands. The fruit of this species are the most preferred of all dry-land *Grewia* species.

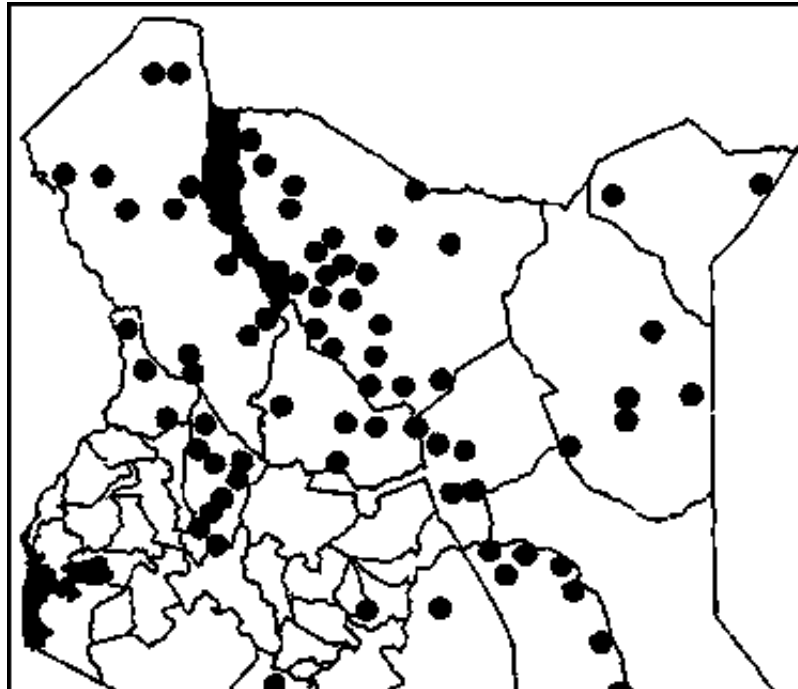


Figure





Figure





Figure

Grewia villosa Willd.

Tiliaceae

Borana: ogomdi, buruudo, moorodah **Daasanach:** barbar

Gabra: ogomdi **Ilchamus:** lpupoi, lpupo **Kamba:** muvu, mbu (fruit) **Maa:** olmankulai, emankulai, ilmankula (plural)

Mbeere: mubuu **Pokot:** mokoghio, mokuwo, makow (plural)

Rendille: obhoob **Samburu:** lpupoi, lpopoi **Swahili:**

mukorobosho **Taita:** mshashote, shoshoti **Tharaka:** mubuu
Tugen: mokuiwo **Turkana:** epong'ae, epokoo

Description: Small deciduous shrub to 3.5 m high but often 1.3-2.5 m. Branch tips soft, hairy. **LEAVES:** Large, heart-shaped, hairy, margins serrated. Underside light green, more hairy with prominent veins. **FLOWERS:** Brownish yellow, in clusters. **FRUITS:** Copper-red, covered with soft hairs. **FRUIT:** 1.0-1.5 cm in diameter, coat light green turning brown and brittle on drying.

Ecology: A common plant in dry bushland and thickets 0-1,500 m. Soils: red, sandy, rocky and occasionally black cotton. Zones: IV-VII.

Uses: Fruits edible (+++). Seeds are normally discarded. Fruits are rubbed between the palms to remove the outer skin which is then blown away. The fruit pulp is then sucked.

FOOD/MEDICINAL: Roots boiled in soup to fortify mothers after childbirth (Maasai). Root decoction with milk is used as child's tonic (Pokot).

MEDICINAL: Roots pounded, water added and used for diarrhoea (Mwingi). Roots boiled in soup used for stomachache (Kamba). Boiled plant extract used for aching bones. Roots boiled in soup for diarrhoea and general health.

OTHER: Stems used for the construction of small grain stores, large basket-like grain containers (Kamba, Mbeere), bird-trapping cages, arrows (Mbeere). Bark source of string. Fuelwood. Camel, sheep, goat and cattle fodder.

Management: Propagated by seed which are best planted directly.

Status: Locally common.

Remarks: *Grewia forbesii* Mast. (Digo: *mbavumbavu*, Giriama: *mbavung'ombe*, Kamba: *mutalenda*, *kivu kyotwa*) with a very warty fruit is prepared in a similar way and is used a great deal by the Orma.



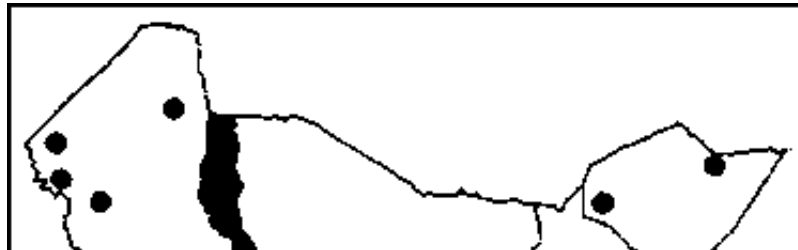


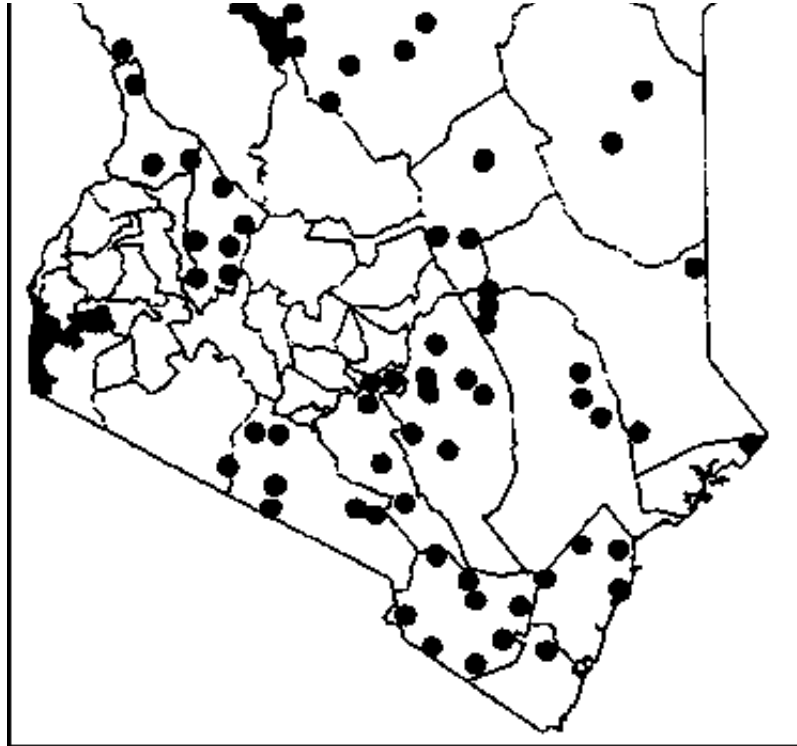
Figure





Figure





Figure

Hoslundia opposita Vahl

Labiatae (Lamiaceae)

Boni: gurguo, mishothie **Chonyi:** mutserere, mtserere **Digo:** mtserere **Giriama:** mutserere, mtserere **Kamba:** musovi, musovasovi **Kambe:** mtserere, mutserere **Kipsigis:** cherungut **Luhya (Bukusu):** bifwofwo **Luhya (Maragoli):** kihuma, shikuma **Luhya:** shikuma **Luo:** ofwong'o, ofuong'o, ngwenye, afwong'o **Maa:** olenaran, olemoran **Mbeere:** mucobi **Pokot:** simbaywa, simbai (plural), simaywa, simayon, chepiwa **Samburu:** labai **Sanya:** mtserere **Somali:** gedcad malmaki, maimasei **Swahili:** mlanyuni, moulambulo, mteremtere, mdahamwitu **Taita:** mvunde

Description: A dense much-branched shrub, often a short-lived perennial 1.0-1.5 m high, occasionally higher. Stems light grey, angled. **LEAVES:** Ovate to elliptic, opposite, clustered on older stems, softly hairy, aromatic with a toothed margin. **FLOWERS:** White to yellow. **FRUIT:** Up to 1 cm long,

with a fleshy calyx, green, turning yellow to orange on ripening.

Ecology: Widely distributed all over Kenya in bushland, at edges of bush and hedges, roadsides, disturbed bushland, 0-2,000 m. Fertile loam, sand or clay. Often in alluvial soils. Rainfall: 650-1,000 mm. Zones: II-VI.

Uses: FOOD: Ripe yellow or orange fruits eaten whole (+). They are sweet and soft. Leaves and stems occasionally used for tea (Maasai, Kipsigis).

MEDICINAL: Root decoction used to produce an aphrodisiac (Boni). Leaves crushed, chewed and then put on cuts.

OTHER: Goat fodder (++). Fuelwood (+). Branches made into brooms.

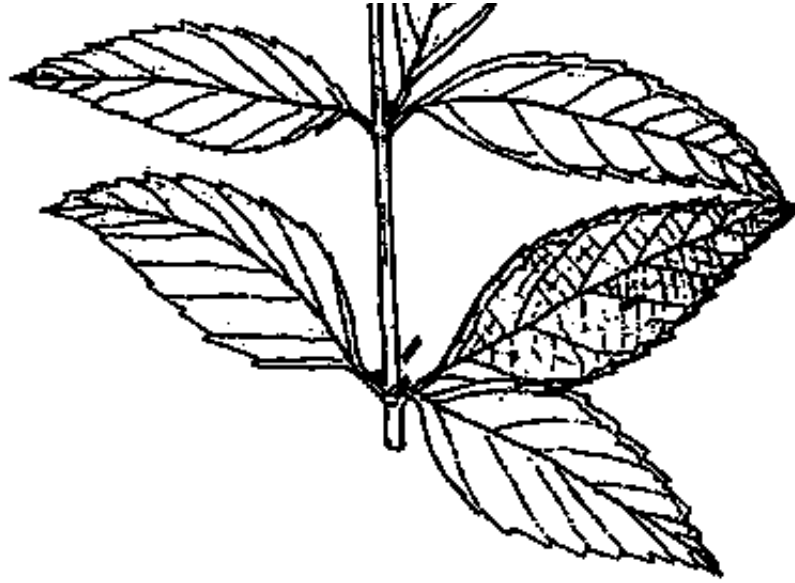
CULTURAL/BELIEFS: Leaves and roots used as a medicine

against evil spirits (Giriama). Boiled root and leaf extract is poured along a path to rid a child of epilepsy. The disease is said to be passed to the first person to walk along it (Pokot).

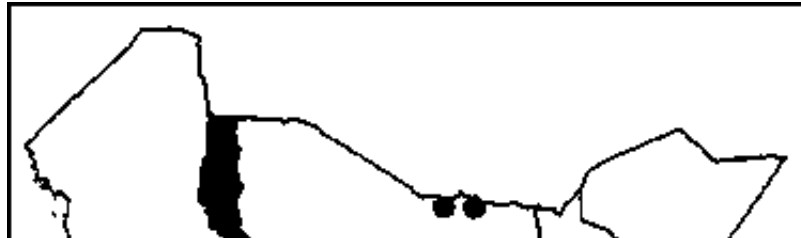
Season: Fruits ready in May-June and in January (Kajiado and Machakos), July-August (coastal area).

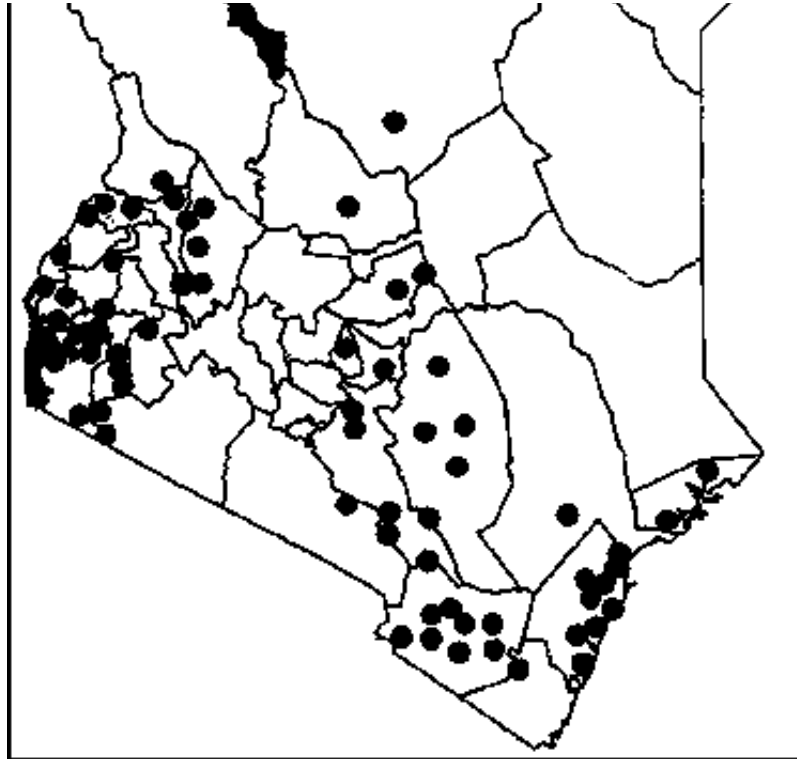
Status: Locally common.





Figure





Figure

***Hydnora abyssinica* Schweinf.**

Hydnoraceae

syn: *H. johannis* Becc.

Borana: toga **Burji:** guli **Kikuyu:** muthigira **Luo:** oyusu, osuyo **Maa:** erukunyi, erkunyi **Pokot:** aurieng'o, kaworiongo **Somali:** liki, like, laka, dingah **Swahili:** nyambo, mnyambo **Turkana:** auriong'o

Description: A plant parasite 10-15 cm high, usually growing on acacia roots, the floral parts being the only visible structure above ground. Below the ground are thick, hard, dark brown almost black, warty, usually branched rhizomes attached to the host's root. Flower bud bursts out of the ground and opens out. Bud angled, perianth lobes joined, fleshy with a red surface. Flesh of the bud thick, white, turning rusty red on exposure to air. Flower large, up to 15 cm long, brown, scaly, edges of lobes pink or red, covered with coarse bristles.

Stamens inside normally 4, joined to form a cream, convoluted fold. Anthers numerous and without a visible stalk. Fruit produced underground with numerous seeds embedded in a glutinous pulp.

Ecology: From Sudan south to South Africa and in Madagascar in dry acacia bushland or on hillsides with acacia. The species is common in *Acacia mellifera* woodland. Loose red or dark brown soil often rich in organic matter. Zones: V-VI.

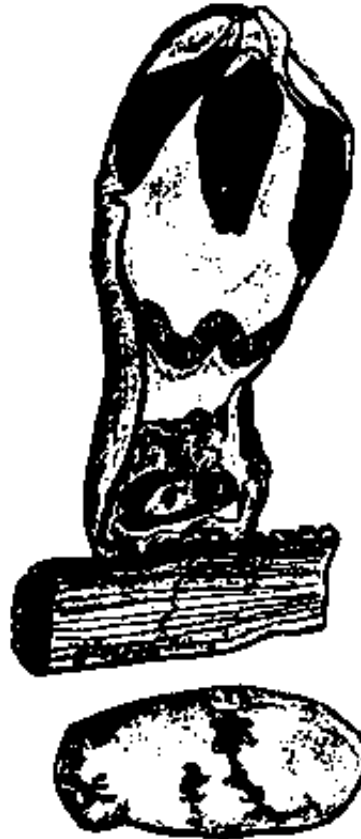
Uses: FOOD: The fleshy part of the flower bud (calyx), whole flower and the mealy underground fruit are eaten raw (++) (Somali, Pokot, Turkana, Maasai, Boran, Samburu). Among the Maasai, two parts of *Hydnora* are eaten at different stages. The smaller *erkunyi-e-ntari* (of goat) is the first to come out (the flower) and the bigger *erkunyi-e-ngishu* (of cattle), representing the edible underground parts (Elang'ata Wuas), is eaten later.

OTHER: Squirrels, cattle and other animals attracted by the smell may feed on the plant.

Season: Mainly rainy season April-May and October-November in Kajiado and Taita.

Status: Locally common.

Remarks: The other member of this genus in Kenya, *H. africana*, is different in that it has no hairs at the edge of the perianth lobes. The taxonomy of these species requires further work.

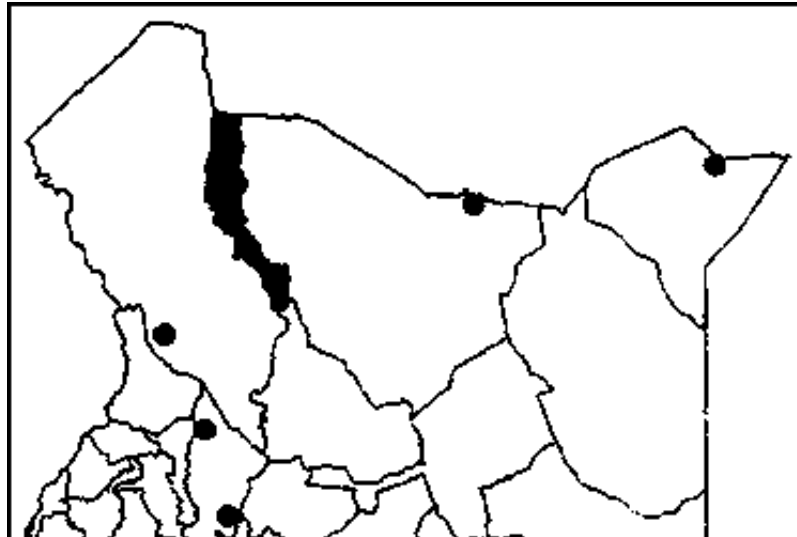


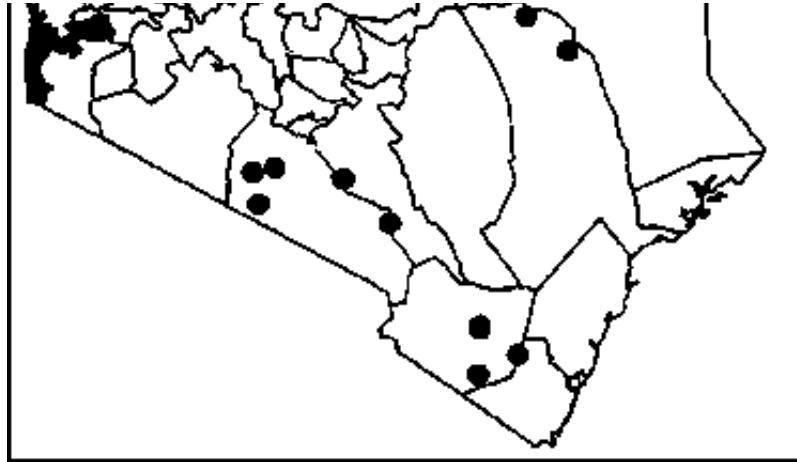
Figure





Figure





Figure

Hyphaene compressa H. Wendl.

Palmae (Arecaceae)

Borana: qoone, kone, meeti **Chonyi:** mkoma **Daasanach:** kulidhe **Digo:** mkoma, mkoma lume **English:** doum palm
Gabra: meetti **Giriama:** mkoma **Ilchamus:** Iparruai, Iparrua

Kamba: mukoma, ilala (Mbitini, Kitui) **Kambe:** mkoma
Malakote: mokoma, mezi (young) **Mbeere:** irara (Mavuria)
Orma: kone, meti (young) **Pokot:** takuyua, takaiw'a, takayua
Rendille: gey-i-khoona, baar **Samburu:** Iparwai, nkujit-ae-
nkeok **Sanya:** auwaki **Somali:** baar, qoona (fruit), dabell
(young. Tana River) **Swahili:** mkoma, mkoche, mlala, mnyaa,
muaa **Taveta:** irara **Tharaka:** muruguyu **Turkana:** eeng'ol,
eng'ol

Description: A branched or unbranched usually multi-stemmed palm tree up to 15 m high. Trunk grey. Leaves and petiole up to 2 m long. Petiole semicircular in cross-section, edges armed with sharp black spines. Leaf lamina up to 0.8 m long, spreading, with numerous longitudinal folds and segmented in the upper (third) part into up to 60 segments.
FLOWERS: Borne on long inflorescences to 1.5 m. **FRUITS:** Young fruit dark red or maroon. Mature fruit to 8 cm long, yellow to red, glossy, smooth with markings, laterally

compressed on 2 sides.

Ecology: Egypt, Sudan, Ethiopia, Somalia, and south to Mozambique. In Kenya along the Kerio and Turkwel Rivers and at Lokori, Lodwar, Kwale, Kilifi and Malindi. In northern Kenya along rivers and all along the coast, 0-1,400 m. Sandy coastal lowlands, places with a high water-table, along seasonal watercourses, open sandy flood plains. Often forming pure stands. Much affected by bushes and taller trees. Alluvial, deep sand. Rainfall: 200-900 mm. Zones: I-III (coastal)-VII (riverine).

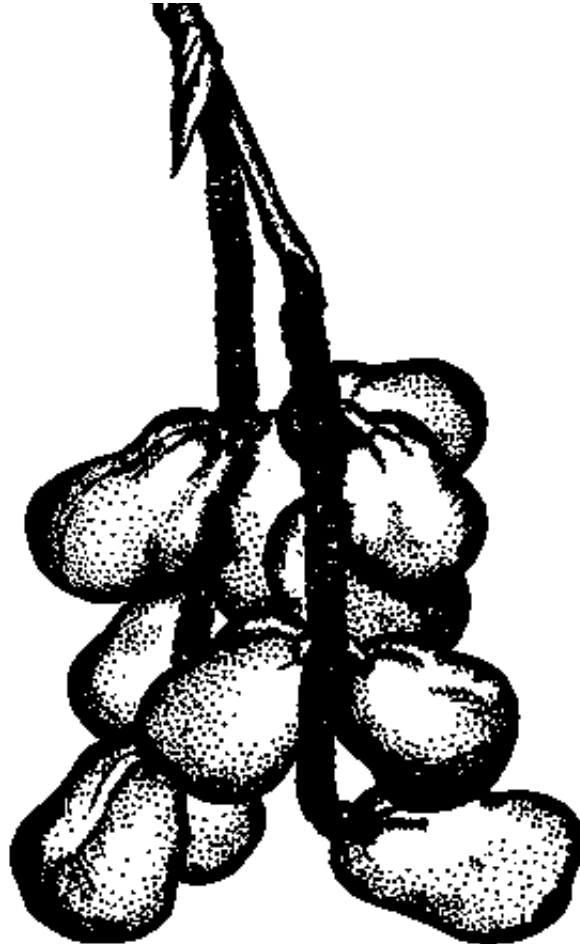
Uses: FOOD: The brown fibrous pulp of mature fruit eaten raw (+++). As with the coconut, the juice in immature fruits is drunk (Turkana, Pokot), also used in beer making. The fruit's outer coat (epicarp) is peeled, pulp is sliced off the stony "seed" (endocarp), sun-dried, ground, mixed with blood to a brown, sticky, fibrous mixture (*lokot*) and eaten or sold in

markets (Turkana). Young germinating seedling is dug up and embryo eaten (Turkana).

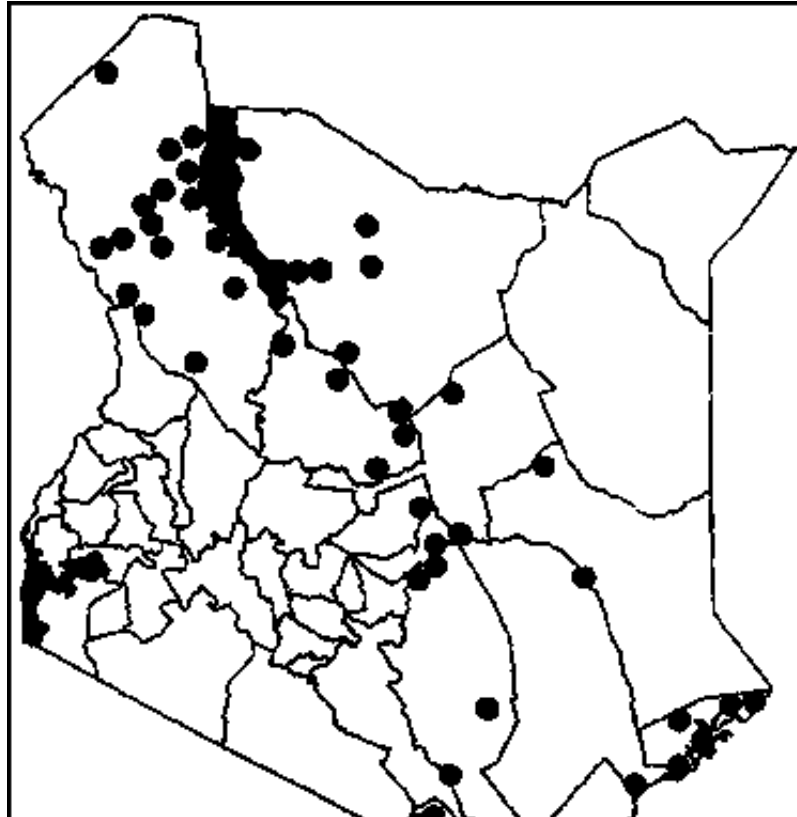
MEDICINAL: Fruit pulp eaten for worms (Giriama).

OTHER: Leaves used for making baskets, brooms, mats, hats, ropes, handbags, and in thatching (Turkana, Somali (Mandera), Boran, Gabra), sewing milk containers (Daasanach). Leaf rachis used as a stirrer for melted fat (Daasanach). Trunks strong, durable and used as poles in fencing (Turkana, Somali), in house construction, as fuelwood (Turkana, Somali, Boran, Gabra) and when bound together they make good fishing rafts (Turkana, El Molo). Hard fruit endocarp used as fuelwood. Roots are a source of dye used in the basketry industry (Turkana). Leaves may also be dyed black by soaking for a week in *lorimoch*, a herb, usually found in association with *Salvadora persica* roots.





Figure





Figure

COMMERCIAL: The fruit and its products are sold in Lodwar market. Items made from the leaves (baskets, brooms, mats, etc.) are sold throughout the country. Fibre sold in Mbeere (Ishiara). The endocarps are sold to the Kamba as snuff containers. A very important tree palm in Turkana district.

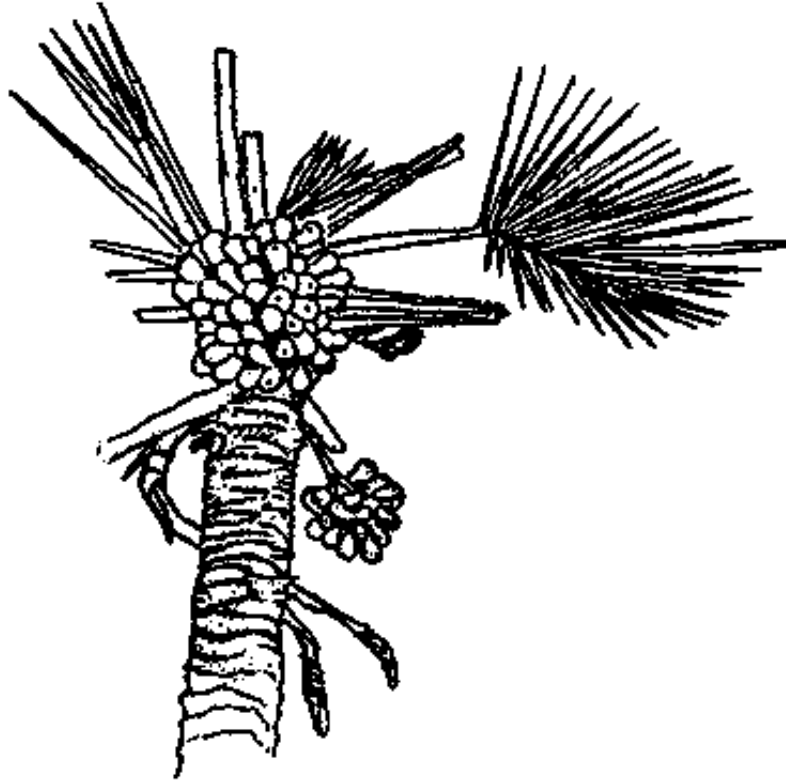
Management: Propagated by seed (endocarp) with pulp removed. Preferably it should be scarified to hasten germination, which, under normal conditions, may take several months to a year. Preferably plant deep in moist sand.

Season: Fruits in all seasons but mainly July-November in

Turkana.

Status: May be locally very common but over-exploited in some areas.

Remarks: Fruit pulp is also used as food in the Sudan and Egypt.



Figure



Figure

Hyphaene coriacea Gaertner

Palmae (Aracaceae)

Boni: oh, mede **Digo:** mkoma lume **English:** doum palm
Somali: bar, qoone (fruit) **Swahili:** makoma, mkoma, mlala

Description: A palm up to 8 m high, but rarely more than 5 m, more often forming shaggy thickets with some trunks lying along the ground; less often solitary. Trunk grey, to 25 cm in diameter with persistent leaf bases or numerous scars. Leaf stalks armed with black spines. **LEAVES:** Upper half or so of the leaf divided into 15-20 segments, each up to 40 cm long. **FLOWERS:** Dioecious. Inflorescences to 1 m long, usually arching. **FRUITS:** Variable in shape and size. Usually elongate, up to 6 cm long, light green when young maturing to dark brown, usually constricted in the middle, widest at the bottom.

Ecology: Grows in Somalia, Kenya, Tanzania, Mozambique,

South Africa and Madagascar. In Kenya confined to the coastal areas, e.g. Diani, Gazi creek, Malindi, sand dunes at Shela and elsewhere in Lamu, flood plains, places with a high water-table, 0-300 m. Zones I-V.

Uses: FOOD: The dark brown fruit pulp (mesocarp) is eaten raw (Pokomo, Boni, Swahili).

MEDICINAL: Stomach medicine (Swahili).

OTHER: Leaves used to make braiding around skin containers, forehead bands for newly circumcised girls (Pokomo) and to make baskets (Boni), mats (Digo). Leaves used for thatching. Old leaf midribs used to clean calabashes. The inner part of the fruit is called vegetable ivory and is used to make pendants (Pokomo).

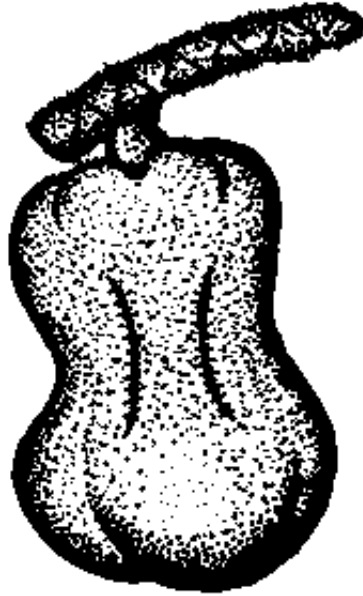
COMMERCIAL: Products made from the leaves (mats,

baskets, etc.) sold in coastal markets.

Management: Propagated by seed (endocarp) with pulp removed. Scarification may enhance germination rate.

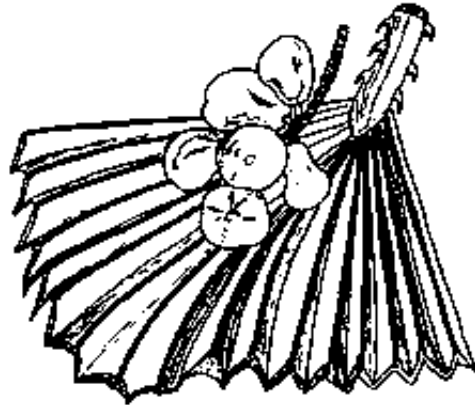
Status: May be locally common.

Remarks: Distinguished from *H. compressa* by its usually constricted fruit and unbranched trunks.

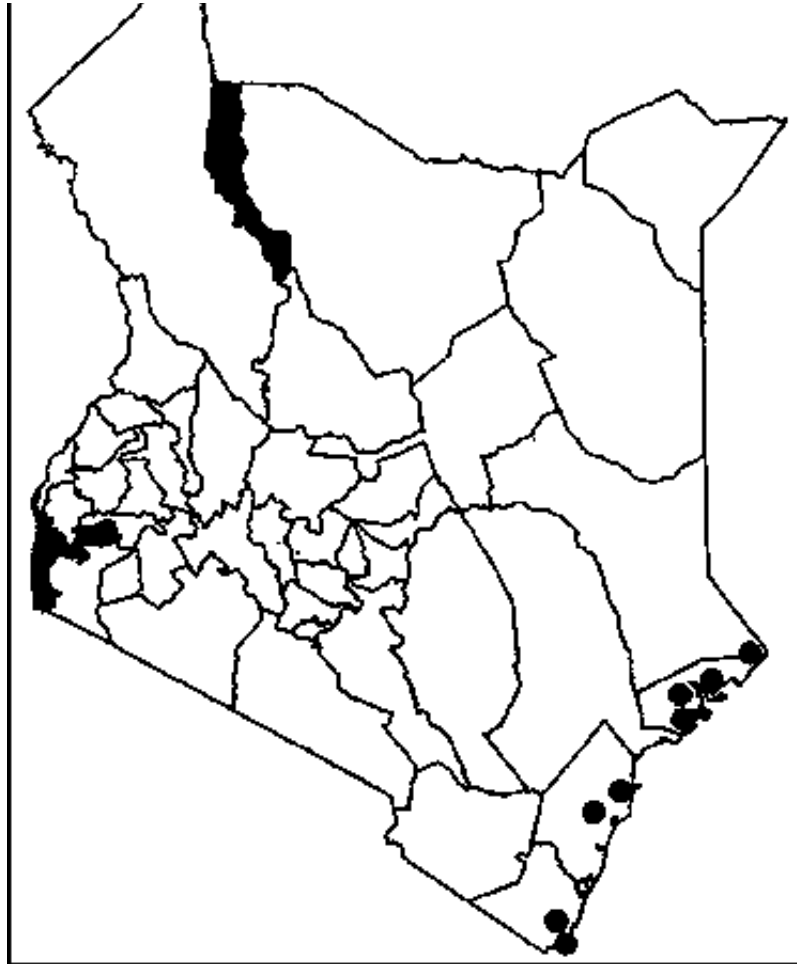


Figure





Figure



Figure

***Ipomoea aquatica* Forssk.**

Convolvulaceae

Chonyi: bwere-mlungu **English:** water spinach, winter spinach **Giriama:** bwere-mlungu **Sanya:** chamarirobia
Somali: balanbal

Description: Prostrate or ascending much-branched plant always associated with wetlands. Stems hollow, fleshy with white sap, dirty green, rather fat and with hairy roots arising from nodes when floating in water. **LEAVES:** Triangular to heart-shaped, up to 15 cm long. Apex usually pointed. Petioles long. **FLOWERS:** Mauve, purple or pink, tubular. **FRUITS:** Seeds hairy.

Ecology: Grows from Somalia to West Africa and south to Namibia. Widely distributed in the tropics. In Kenya at the coast, in the Lake basin and in the north in wetlands, on lake shores, in swampy places, seasonally flooded depressions, marshy river banks, rice fields, 0-1,400 m. On mud or shallow water.

Uses: FOOD: Leaves eaten as a vegetable (+++) (Giriama, Duruma, Digo). The leaf blade is separated from the leaf stalk before cooking for a few minutes. Also used as a vegetable in Tanzania, South East Asia and China.

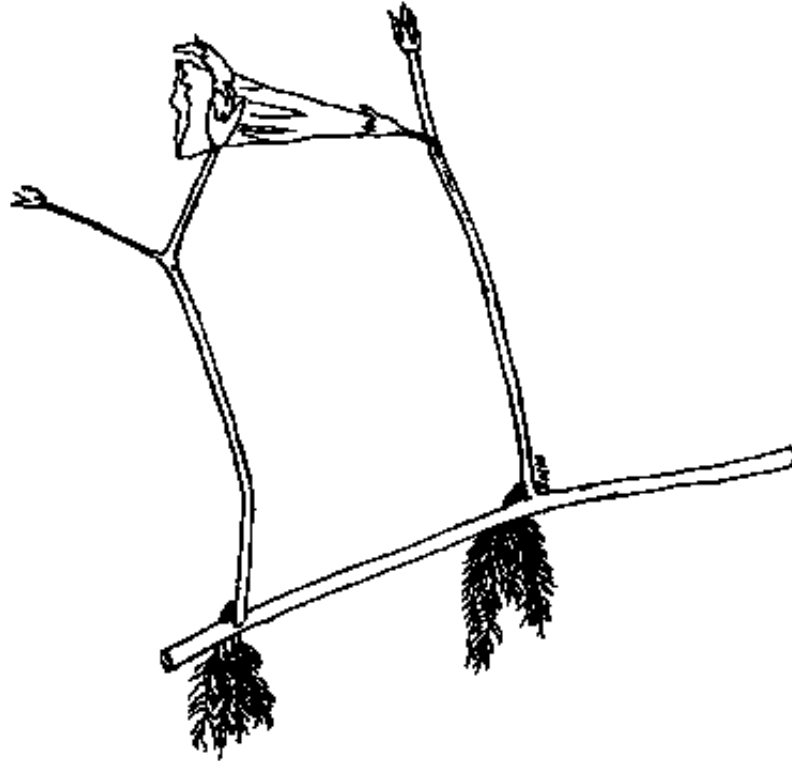
OTHER: Good fodder for most animals (+++).

COMMERCIAL: Leaves sold in Malindi.

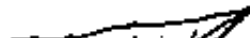
Management: Propagated by rhizomes, stem runners and possibly seeds. Grows easily from cuttings.

Status: Locally common.

Remarks: A cultivated variety has been reported in Malawi. This species resembles the sweet potato (*Ipomoea batatas* (L.) Lam.) (Giriama: *bwere*, Sanya: *chamai*, Chonyi: *mabwe* (leaves), *viyobwe* (roots), Kisii: *abanyabwasi*), usually planted for its tubers, but also used as a leafy vegetable (some forms). The leaves are rather slippery and are normally mixed with other leafy vegetables such as cocoyam (*maburu*), pumpkin (*mhango*), *Asystasia gangetica* (*thalakushe*), okra and cowpeas (*tsafe*). They are, however, said to aggravate stomach ulcers (Mijikenda). The sweet potato, though a traditional crop in Africa, is native to South America.



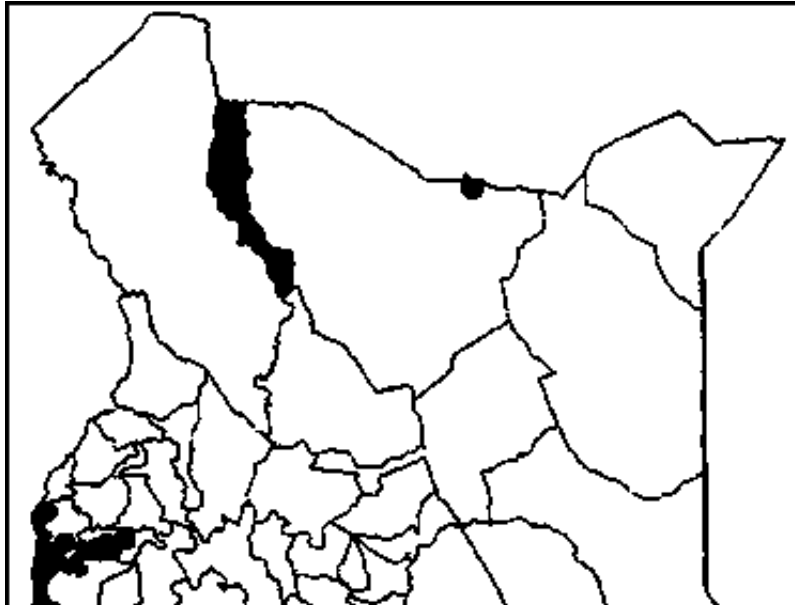
Figure







Figure





Figure

***Ipomoea lapathifolia* Hall. f.**

Convolvulaceae

Kamba: nzola, kinzola

Description: A perennial erect, occasionally climbing, herb, usually 20-30 cm high but attaining a height of 1 m or more, arising from a tuberous rootstock. Tubers carrot-like to 10 cm

long by 2 cm wide, occasionally nearly globose, up to 3.5 cm across. Young tubers cream, turning dark brown with pale longitudinal streaks at maturity. Stem usually one, rarely two or more, narrow, occasionally branched, green, often tinged purplish brown and exuding latex when bruised. **LEAVES:** Short stalked, narrow and long to 10 cm. **FLOWERS:** White, funnel-shaped, opening in the morning, short stalked, usually 1-4, on a short fat branch arising from a leaf axil. **FRUIT:** A 4-seeded round capsule turning from green (usually tinged purple) to smooth brown with a short stiff pointed structure at the end.

Ecology: Found in Kenya and Tanzania. In Kenya in Sultan Hamud area (Machakos, Kajiado), Yatta (Kitui) and Mwala (Machakos). Open grassland, 0-1,400 m. Soils black cotton, especially seasonally waterlogged depressions. Zones IV-V.

Uses: FOOD: The tubers are peeled (they peel easily by

hand) and the tasty white inner part is eaten raw (++). The tuber has the sweet, dry taste of a raw sweet potato. Much liked by children.

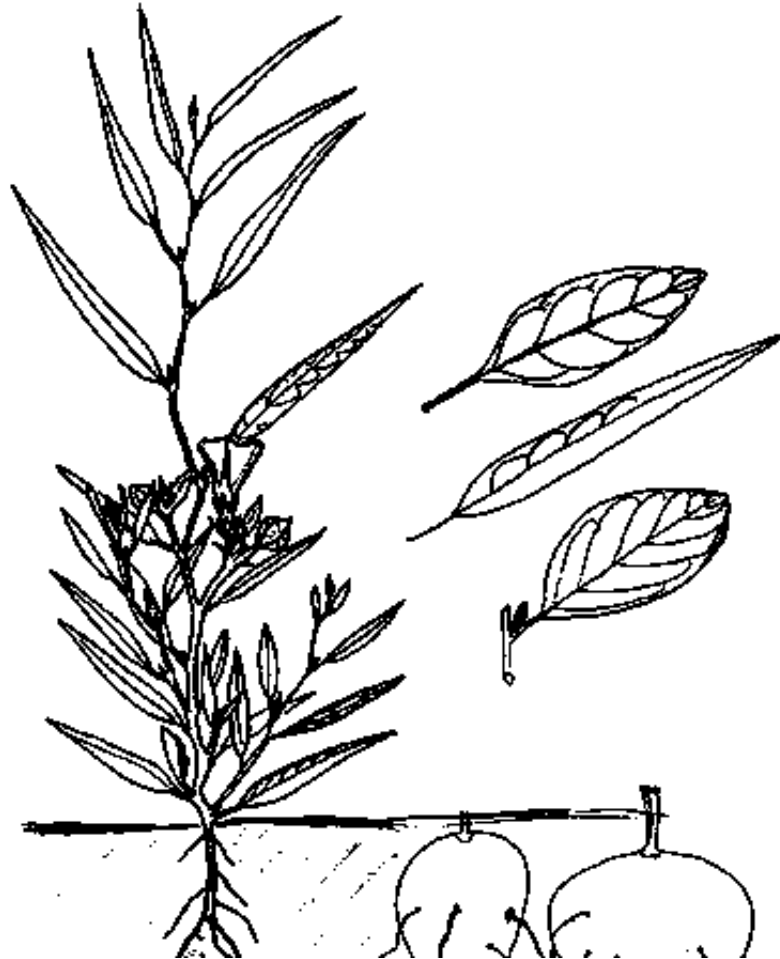
Season: Tubers in the rainy season.

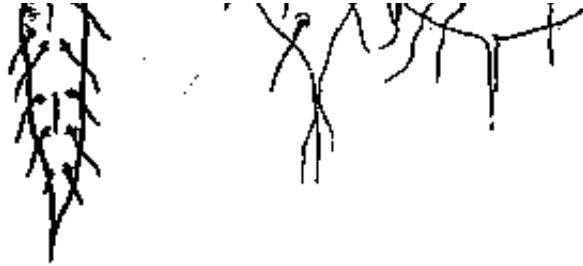
Management: Propagated by seeds or tubers.

Status: May be locally common. Generally uncommon. Its habitats are under threat from overgrazing and cultivation.

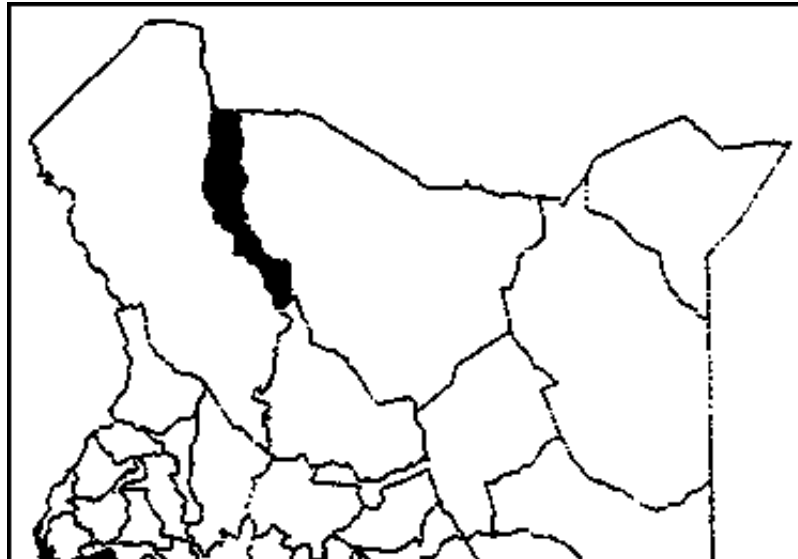
Remarks: Two varieties are distinguished:

- The Kenyan material is var. *lapathifolia* with entire leaves.
- var. *bussei* (Pilger) Verdc. usually has ovate leaves with an irregular margin. It is the variety common in southern Tanzania.





Figure





Figure

***Ipomoea longituba* Hall. f.**

Convolvulaceae

Kamba: iseembe **Maa:** enchilewa, ngoswaki, engoiswashi
(Narok) **Samburu:** loiswasi, loisiasi, loisiaci, loisietchi

Description: Prostrate or ascending deciduous perennial arising from a tuberous rootstock. Quick growing and spreading extensively in the rainy season, dying back during dry periods. Stems thin, green. Tubers grey-white, juicy, exuding white latex, up to 40 cm long by 15 cm at the widest part. There may be several tubers on one plant, growing near the ground. Larger older tubers often fibrous, giving rise to more fleshy, juicy smaller ones. **LEAVES:** Large, ovate, smooth or with numerous folds, hairy when young. **FLOWERS:** Clustered at the tips of ascending branches, white, large, with a long tubular corolla often coming when the plant is leafless. **FRUIT:** Brown when dry, dehiscent to release small seeds with thread-like hairs.

Ecology: In Uganda, Tanzania and in Kenya, e.g. at Rumuruti, Sultan Hamud, Kiimakiu (Machakos), Kisamis (Magadi Road), Ewaso-Nyiro (Narok). In open *Acacia drepanolobium* grassland (Kaputei plains), medium altitude

rocky hillsides, 1,200-2,000 m. Commonest about 1,400-1800 m. Light black cotton soil or rocky red soils. Zones III - V.

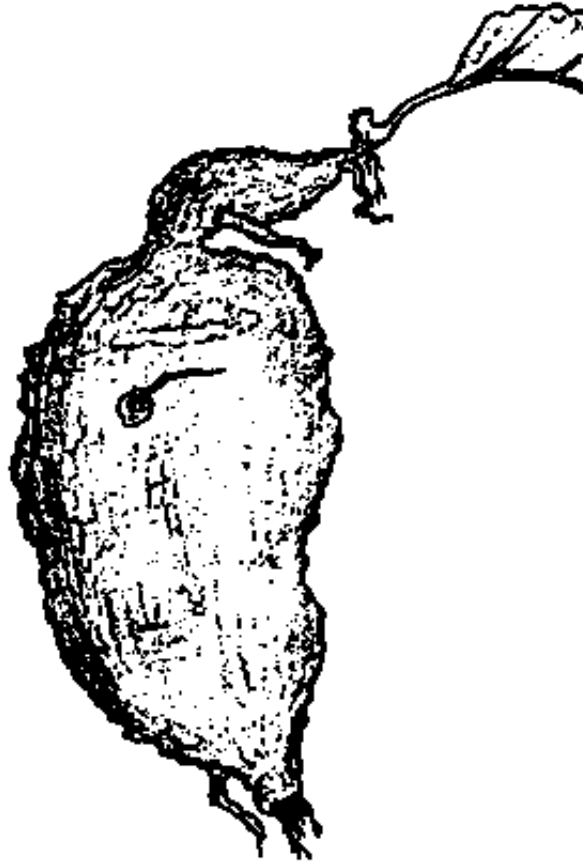
Uses: FOOD: Tubers eaten raw (++) (Kamba, Maasai, Pokot, Samburu) as food and to quench thirst. Peeled first then the juicy inside eaten. Tubers have a slightly sweet taste.

OTHER: Leaves do not seem to be liked by livestock, though reportedly browsed by goats and sheep.

Season: Tubers all year round. Said to be best during the dry season.

Management: Propagated by seeds, stem base or tubers. Plants grown from seeds develop good-sized tubers within 6-9 months.

Status: May be locally common.

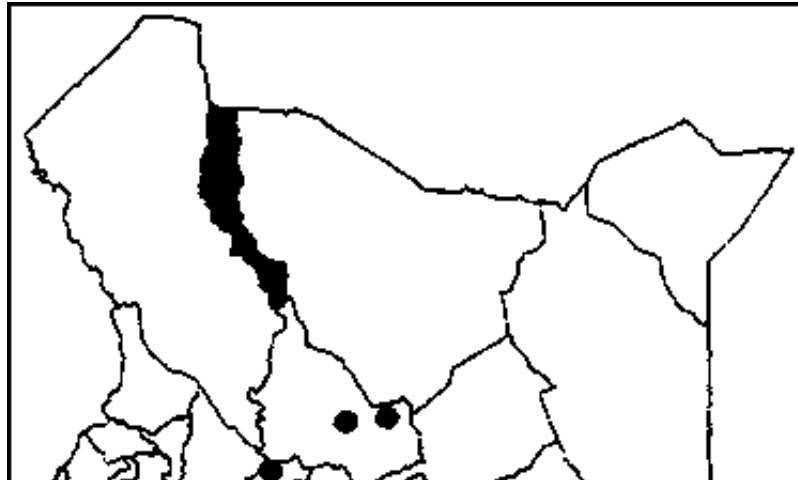


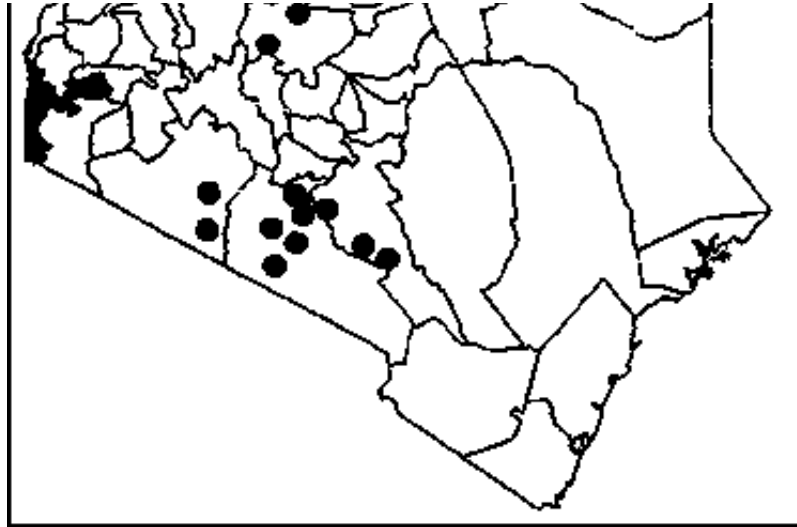
Figure





Figure





Figure

Ipomoea mombassana Vatke

Convolvulaceae

Giriama: kahedtho **Kamba:** ukwai-was-nthi, wimbua (Kitui),

musele, uthui (Machakos) **Maa:** enkoeniyeni **Samburu:** lokiteng' **Somali:** bire, barfo

Description: A trailing plant often climbing on grass and other plants. Stems weak, hairy. **LEAVES:** Ovate, often heart-shaped, usually slightly hairy. **FLOWERS:** Funnel-shaped, white with purple centre in the corolla, occasionally mauve.

Ecology: Widespread in Kenya and also found in Tanzania in grassland, disturbed bushland, cultivated areas, 0-1,600 m. Common at 0-1,300 m. A common weed in cultivation often seen twining on other erect plants in cropland. Soils mainly sandy or light clay.

Uses: FOOD: Leaves used as a vegetable (+) (Turkana, Kamba, Giriama, Mijikenda). May be cooked alone or mixed with amaranth, *Corchorus* spp. and *Oxygonum* spp. This lessens the slippery texture of the vegetable.

OTHER: Fodder. **Season:** Rainy season.

Status: Common.

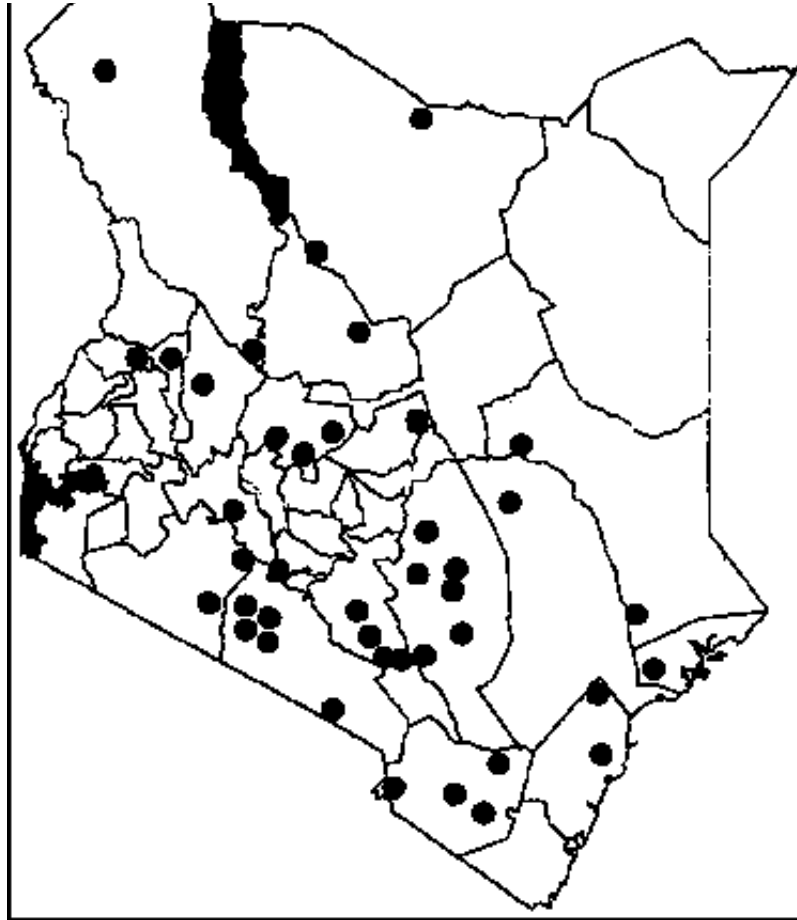
Remarks: This species may be a serious weed. A closely related species is *I. plebeia* R. Br. ssp. *africana* Meeuse (Turkana: *ataakunyuk*, *ekeju-apoo*, Somali: *saarsaar*) with a twining stem. Leaves somewhat triangular with a heart-shaped base. Corolla white with a purple centre. This species is also used as a vegetable (Turkana, Ng'ikebootok). Found in northern and eastern parts of Kenya and in southern Africa. A common trailing herb in open areas along the Turkwel River in southern Turkana.





Figure





Figure

***Ipomoea oenotherae* (Vatke) Hall. f.**

Convolvulaceae

Kamba: nzola **Kikuyu:** nguirubi **Kipsigis:** robuoniot-ab-tirita
Luo: ongeny **Maa:** oloiropiji, olorok-kilele, oloirobi-elongera
Samburu: Idelopiji

Description: Small spreading herb rarely more than 15 cm high arising from a small carrot-like tuber. Stems several, arising from the top of the tuber, weak, thin, often prostrate or ascending. **LEAVES:** Of two types. Young leaves recently developed from the tubers are long, ascending and usually with few side lobes. Older leaves from the branches are deeply lobed and often smaller. **FLOWERS:** Purplish pink (mauve)

usually opening in the morning. **FRUIT:** A small round capsule. Seeds few, grey or light brown. Tubers single or divided, up to 8 cm long by 2 cm wide, surface cream in young tubers, brown in older ones.

Ecology: Grows from Ethiopia and northern Somalia south to Zambia, Zimbabwe, South Africa and Namibia. In Kenya, e.g. at Ndaragwa (Nyandarua), Kaputei plains, Ildalalekutuk (Kajiado), Ong'ata Rongai (northern Kajiado), Nyandarua, Machakos, Makueni and Narok. Commonest in open grassland with short-grass species, 1,000-2,400 m. Common in the mid-altitudes, 1,500-1,800 m in rather damp but well-aerated clayish sandy soils, especially black cotton in transition to loam and in soils of volcanic origin. Rainfall: 650-1,200 mm. Zones: III-V.

Uses: FOOD: The carrot-like tuber is peeled and eaten raw (+++) (Kamba, Kikuyu, Samburu, Maasai, Luhya, Kuria, Luo,

Pokot, Kipsigis). Tubers have the texture and taste of a raw sweet potato (*Ipomoea batatas*) and are much liked by children. Cooking not tried yet.

OTHER: Good fodder.

Management: Propagated by seeds or tubers. The seeds are produced in small numbers and so bulking is necessary before one has enough for planting. Seeds may be planted the same way carrots are planted. Germination is within a few days. If conditions are favourable, good-sized tubers are seen within 2-3 months. Fruits containing seeds should be collected as soon as they turn brown and kept to dry ready for planting the following season. The shoot dries off leaving the tubers below the ground and it is in this form and from the seeds that the species is able to survive the dry season. Young leaves sprout soon after the start of the next rainy season.

Status: Occasional. Encroachment of its grassland habitat by expanding human population, coupled with overgrazing and the poor rate of production, are threatening this species.

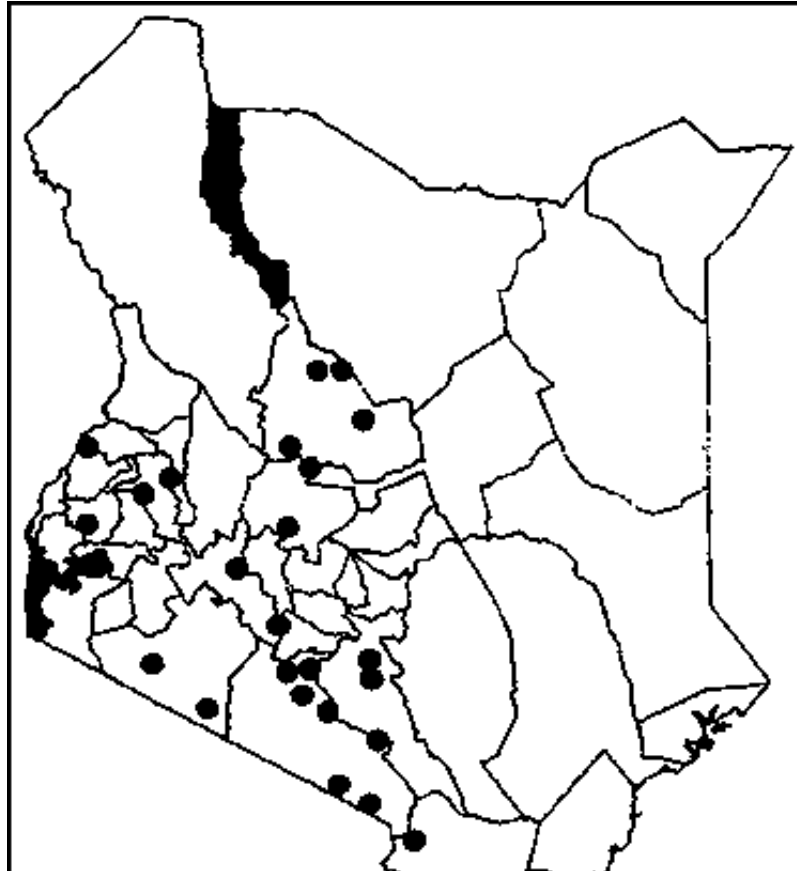
Remarks: Two varieties are distinguished:

- var. *oenotherae* with a corolla over 2 cm long. Found in Uganda, Tanzania, Ethiopia, northern Somalia, south to South Africa and Namibia.
- var. *angustifolia* (Oliv.) Verdc, has smaller flowers, the corolla hardly exceeding 1.5 cm and with narrow leaves and lobes. It is found only in western and north-western Kenya and in Uganda.





Figure





Figure

Kedrostis pseudogijef (Gilg) C. Jeffrey

Cucurbitaceae

Daasanach: yierit-etha **Kamba:** mukauw'u **Samburu:** sakurdumii

Description: Climbing deciduous liane with thick foliage. Stems greyish white, ridged, rough, with tendrils. **LEAVES:** Up to 5 cm long, divided into 3 leaflets with toothed margin. Leaflets without a stalk, may or may not be lobed. **FLOWERS:** Dioecious, usually appearing when the plant is leafless, often borne in clusters, male flowers numerous, female flowers one

to a few. **FRUITS:** Usually in clusters (1-7), conical, roughly hairy, grooved, fleshy, to 2 cm long.

Ecology: Grows in Ethiopia, Kenya, Uganda and Tanzania. Not known elsewhere. Found in many parts of Kenya, e.g. Moyale, Waita (Mwingi), Mutomo, south-eastern Makueni, Voi, Kitui, Taita and Marsabit. Dry *Acacia-Commiphora* bushland on red, sandy or rocky soil, 500-1,200 m. Often associated with *Adansonia*, *Delonix*, *Entada*, *Acacia brevispica*, *A. tortilis*. Rainfall: 450-600 mm. Zones V-VI.

Uses: FOOD: Young leaves and soft tips used as a vegetable (++) (Kamba, Taita). The vegetable emits an unpleasant odour during cooking but this disappears afterwards. The first water used in boiling is normally thrown away. A tasty vegetable even when not fried. Eaten along with *ugali* or mashed with a maize and beans or peas mixture (Kamba). Ripe fruits edible (Kitui, Marsabit).

OTHER: Branches made into mats for balancing loads on the head (Daasanach). Vine used as rope (Daasanach). Plant used in a ritual performed to purify cattle before movement to a new area (Daasanach).

COMMERCIAL: Leaves sold in Mutomo in southern Kitui and Voi. Much liked by the Ngulia people living near the Chyulu range.

Management: Can be propagated by cuttings and probably seed.

Status: May be locally common.

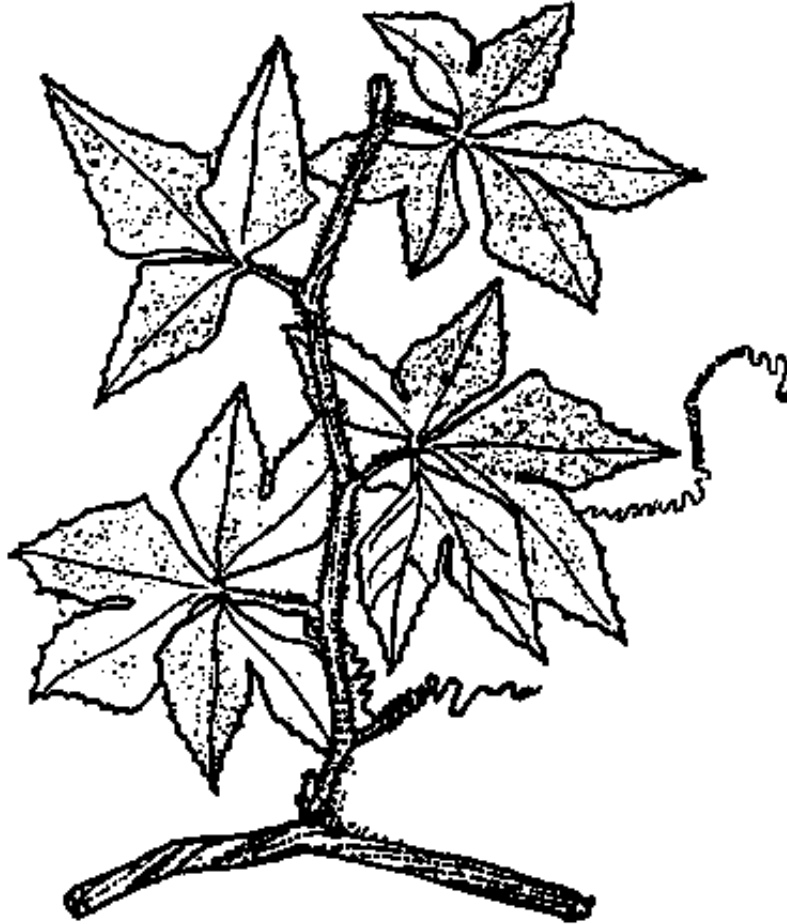
Remarks: A related species, *K. gijef* (J. F. Gmel.) C. Jeffrey (Gabra: *gaale*, Kamba: *witulu*), is probably also used as a vegetable. The fruits are edible (Gabra). Unlike *K. pseudogijef*, which has 3-foliolate leaves, this has simple, kidney- or heart-

shaped leaves. It is found in most dry lowland areas of Kenya north to Arabia. Important camel and goat fodder.

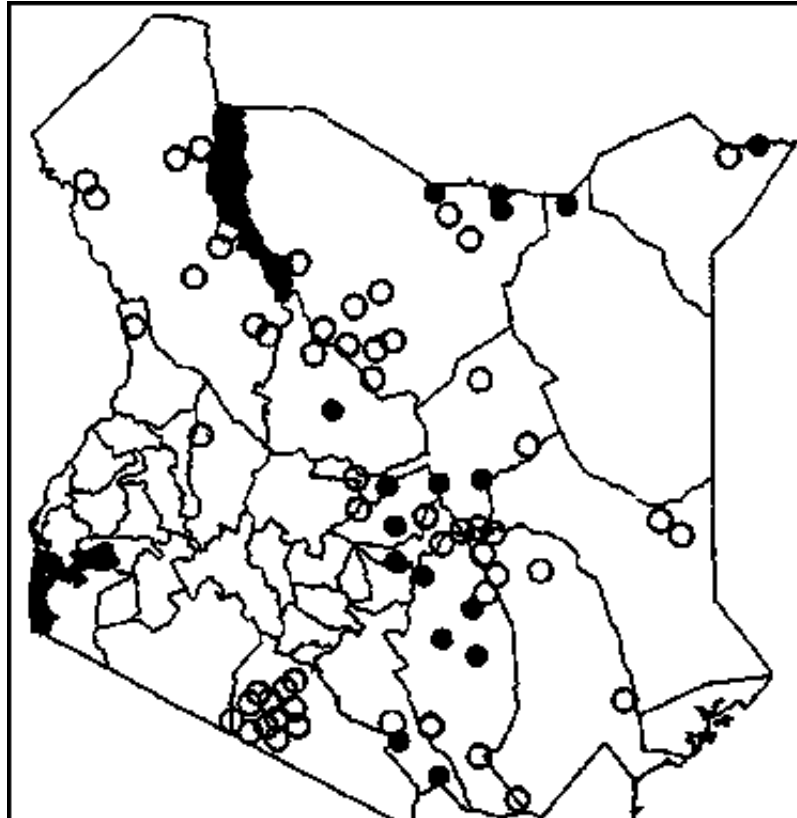




Kedrostis gijef



Figure





Figure

Kigelia pinnata (Jacq.) DC.

Bignoniaceae

syn: *K. aethiopium* (Fenzl) Dandy, *K. africana* (Lam.) Benth.

Boni: shelole **English:** sausage tree **Giriama:** mobwoka
Kamba: kiatine **Kikuyu:** muratina **Kipsigis:** ratuinet **Luhya**
(Bukusu): kumumungu **Luhya:** morabe **Luo:** yago **Maa:**
 oldarpoi, ortarboi **Marakwet:** rotio **Meru:** muratina **Nandi:**
 ratinuet **Orma:** bogh **Pokot:** rotin **Rendille:** muun **Samburu:**
 imombi **Somali:** bukorola **Swahili:** mwegea, mvungunya

Taita: mwaisina **Taveta:** mukisha **Turkana:** edot

Description: Tree to 12 m high (usually 5-8 m) with a light to medium dense rounded crown. **LEAVES:** Large, divided into 7-9 leaflets. Leaflets very rough and stiff with an entire or serrate margin and asymmetrical base. **FLOWERS:** In panicles, red, large and hanging. **FRUIT:** Long, usually 30-40 cm, sausage-like and hanging on long stalks. Very variable.

Ecology: Widely distributed in Kenya and the rest of Africa in wooded grassland, shrubland and riverine vegetation. Common on hillsides, 0-2,200 m. Loam, red clay or rocky ground. Rainfall: 500-1,500 mm. Zones II-V.

Uses: FOOD: Fruits, split in half longitudinally, are widely used for fermenting traditional beer (Kamba, Kikuyu, Mbeere, Embu, Tharaka, Giriama, Digo). The soft inner tissue is cleaned out in hot water then dried and inoculated with the

fermenting agent by mixing with old fruits (Kamba). To ferment beer, these fruits are left in a solution of water and sugar or honey for 3-5 days. A wide-mouthed gourd (*Lagenaria siceraria*) is the preferred container. This is placed near the fireplace in the house.

CULTURAL/BELIEFS: Plant revered in many communities. Often preserved. Fruit buried instead of the body of a lost person believed to be dead (Luo).

COMMERCIAL: Fruits occasionally seen in market places (Makueni, Machakos, Kitui, Mwi, Tharaka, Embu, Meru).

Season: Flowers in December-January (Kitui). Fruits in April-May in Kitui, Machakos, Tharaka, Makueni, Mwingi.

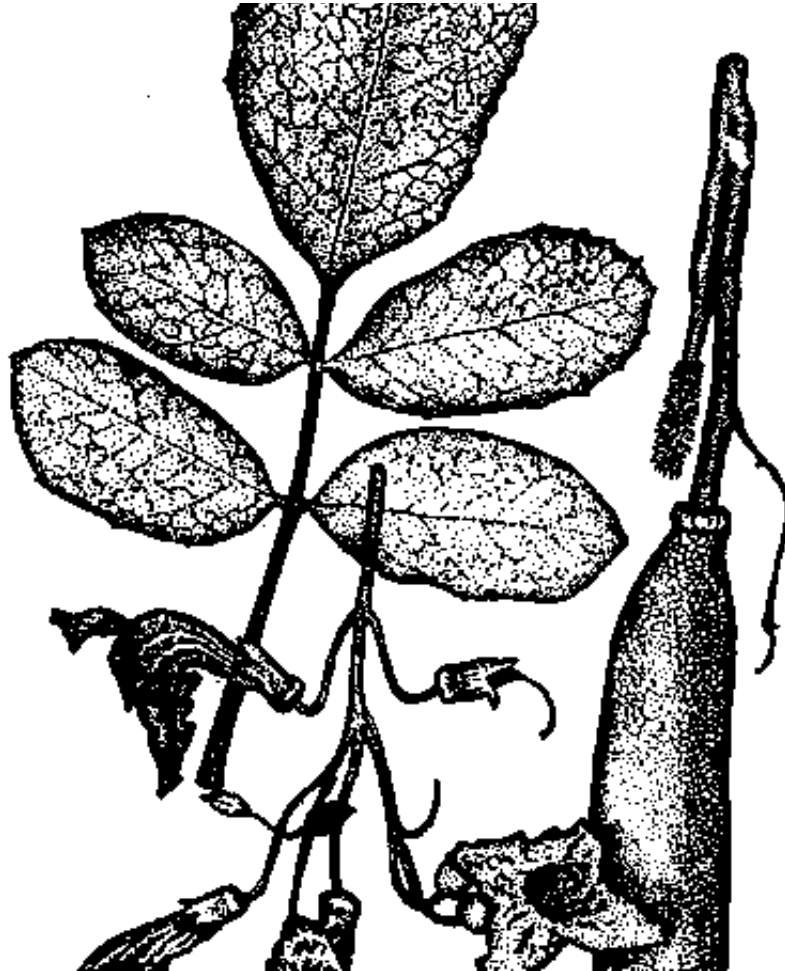
Status: Occasional but not threatened.

Remarks: May be a good ornamental plant. For fermentation

the Maasai also use the roots of *Aloe* species (Kamba: *kiluma*, Kikuyu: *kiruma*, *muguna nugu*, *thukurui*, Maa: *osuguroi*, Meru: *kiluma*, Kipsigis: *tangaratwet*, Luo: *ogaka*, Tharaka: *kiruma*, Turkana: *echuchuka*). Several species of *Aloe* are used for this purpose (*A. secundiflora* Engl., *A. deserti* Berger, *A. ngongensis* Christian, *A. kedongensis* Reynolds).

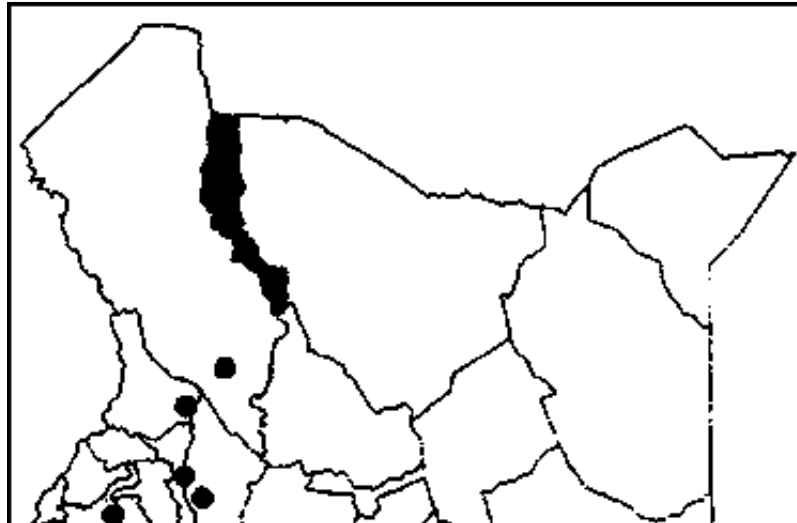
Aloes are perennial fleshy-leaved plants. Some are small and almost stemless while others attain tree size. Over 30 species have been recorded in Kenya. Uses: Nectar from the flowers of *A. secundiflora* is sucked by children (Machakos, Kajiado). The sweet base of the inflorescence may be chewed. The sap from the leaves of most species is applied to wounds to keep flies away. Leaves are dropped into drinking water for chickens as a treatment for coccidiosis and Newcastle disease.







Figure





Figure

Lablab purpureus (L.) Sweet

Papilionaceae (Fabaceae)

syn: *Dolichos lablab* L., *D. purpureus* L., *Lablab niger* Medic., *L. vulgaris* Savi

Borana: marage **Chonyi:** mpupu, pupu (fruit) **Embu:** njavi, njabi nzavi **English:** hyacinth bean, bonavist bean, lablab bean **Giriama:** mpupu **Kamba:** mbumbu, ngiima, nzavi **Kikuyu:** njahi **Luhya (Bukusu):** njawu, sikandakanda **Luhya (maragoli):** ihranda **Maa:** ormbombo, mbombo, irpombo **Mem:** njabi, ncabi **Nandi:** mangwanyet **Samburu:** lagat **Sanya:** pupu **Swahili:** mfiwi, fiwi (fruit) **Tharaka:** njavi

Description: A climbing perennial with thick foliage. **LEAVES:** With 3 leaflets, to 15 cm long. **FLOWERS:** Of varying colours, borne on long-stalked erect inflorescences arising from the leaf axils. Purple or cream with purple tinge. The wild subspecies *uncinatus* has a white keel and the standard and wing purple to violet. **FRUIT:** A pod variable in shape and size: broad and short (to 4 cm long by 1.5 cm wide) in ssp. *uncinatus*; a bit larger (up to 10 cm long) but the same shape in ssp. *purpureus*; long (up to 14 cm) and slender, resembling kidney bean in ssp. *bengalensis* of Indian origin. Seeds pink,

reddish brown to black, white, or mottled red with a white hilum and a long aril.

Ecology: Cultivated mainly in the Coast, Central, Eastern and Rift Valley (central part) Provinces, 0-2,500 m. Also in the rest of Africa and in Asia. In the wild state, found climbing on other plants at the edges of riverine forest and in mountain forest. Cultivated in various types of soils. Propped up or planted with other less leafy plants where it can get support. Rainfall: 600-1,200 mm. Zones II-V.

Uses: FOOD: Dry or green beans are cooked and eaten (Kikuyu, Kamba, Maasai, Meru, Embu, Nandi), often being soaked before cooking. Beans cooked for 2-3 hours, water used to boil seeds may or may not be poured out. The beans can be cooked with vegetables or maize (Kamba, Kikuyu) or mashed with potatoes (Kikuyu). Seeds may also be boiled, fried and used as *mboga* (relish) with *ugali*. An important

traditional food among the Kikuyu, almost always served to recuperating mothers after childbirth (said to increase mother's milk), important visitors (such as in-laws visiting a child named after them) and during important ceremonies. Leaves occasionally used as a vegetable in Central and Coast Provinces but a good knowledge of preparation is needed.

OTHER: A fodder crop.

Season: First crop harvested after 3½ months (at about the same time as maize). Continues to bear a crop so long as there is water in the ground, hence preferably planted in moist places.

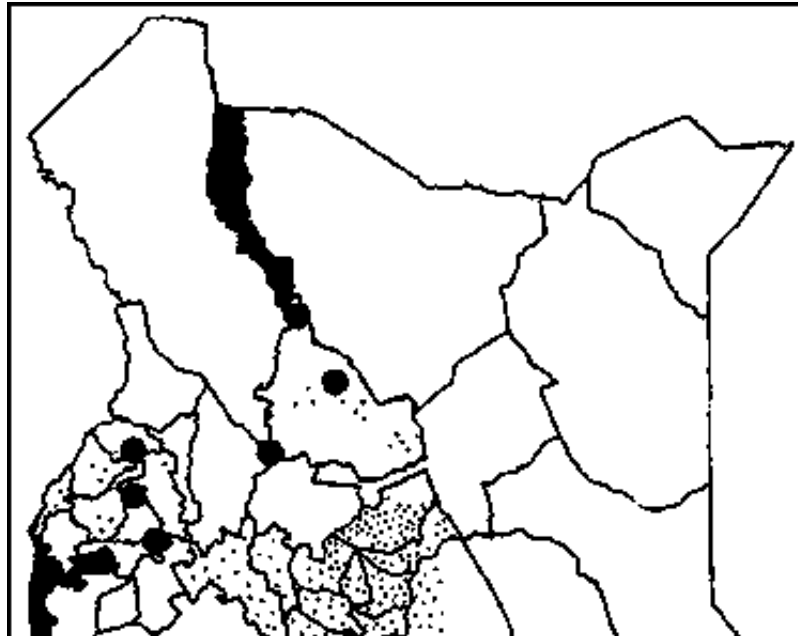
Management: Propagated by seed. Said to be planted with other crops but preferably at the edge of cropland. Staked or planted near hedges to climb on. Pods are normally harvested individually as they mature. The same plant may produce a

crop for several years.





Figure





Figure

Remarks: This bean is very variable with at least three subspecies in Kenya:

- *ssp. uncinatus* Verdc, is the wild form of local origin but also cultivated. Distribution: Throughout tropical Africa and south to South Africa.
- *ssp. purpureus* is the form widely cultivated throughout the tropics.

- *ssp. bengalensis* (Jacq.) Verdc. is a widely cultivated variety of Asian origin with long pods. This form is also grown in Kenya.

All the varieties are still grown in Kenya and are distinguished by the shape and colour of the seeds and pods. Seeds may be black, brown, white, speckled red or red. In Kitui the first two are referred to as *mbumbu* while the last three are known as *ngelenge*. The taxonomy of these last three with reference to the others is still dubious. Seeds of the red type may change to being poisonous after a few generations, a property which some seeds are said to have acquired at the middle of the century. To be on the safe side, throw away the first two rounds of the water used for boiling.

These are very drought-resistant pulses. Nowadays less commonly grown and the population is barely maintained by spontaneous growth in cropland or its edges. The consumption

and cultivation of this bean have diminished over the years, and its place has been taken by kidney beans, peas and cowpeas. It is, however, a drought-resistant plant that should not be forgotten, especially in drier areas.





Figure

Lagenaria siceraria (Molina) Standley

Cucurbitaceae

syn: L. vulgaris Ser., L. leucantha Rusby

Borana: buge **Chonyi:** vilonje, chirenje, vimumunye (edible), kiburu **Embu:** rungu, kinya (container) **English:** gourd, bottle gourd, calabash gourd, calabash **Giriama:** vipuru, kipuru,

muzungu wa mboke **Kamba:** ungu, kikuu (container), yungu (fruit, edible) **Kambe:** chirenje, vimumunye (edible) **Keiyo:** silangwet, soteet (fruit) **Kikuyu:** mungu, rungu, kinya (container) **Kipsigis:** soteet (fruit), monkwo (half) **Kisii:** ekerandi, egesanda (half), risosa (container) **Luhya (Bukusu):** lurabu, kumwendo (fruit), emuka (fruit-prepared) **Luhya (Samia):** sesebebe **Luhya (Tachoni):** emuka **Luhya:** rihondo, kimuga (gourd), kisanda (half) **Luo:** obudho (plant), budh-keno (fruit), poko (fruit-prepared), agwata (half) **Maa:** oltulet (plant), enkukuri (container) **Marakwet:** silangwa, sot (fruit) **Meru:** mungu, rungu, ungu, lungu, gikiri (container), pau, ncengerio (milk container, Mwimbi), kiuga (fruit, half-fruit) **Nandi:** silangwet, soteet (fruit) **Pokot:** silangwa **Rendille:** ororo, kuulal **Sanya:** buchuma, kumunye (edible) **Somali:** kula **Swahili:** kibuyu (fruit), mmunya, mmung'unya **Tharaka:** ikuru (plural), muungu **Turkana:** etyo

Description: A monoecious annual, long-trailing or climbing

herb with divided tendrils. **LEAVES:** Simple, kidney-shaped. **FLOWERS:** Male solitary, borne on long stalks, large, white, axillary, with funnel-shaped tube, opening in the evening. Female with short tube. **FRUIT:** Young fruit softly hairy, variable in colour from green, speckled to cream or pale yellow. Mature fruit with a dry, usually brown, hard but brittle shell with a smooth or warty surface. Cultivated forms very variable in shape and size, 5-100 cm or more long. Shapes may vary from spindly to spherical with almost infinite intermediate shapes- constricted, crescent-shaped, cylindrical, etc. Seeds cream to brown, compressed, embedded in a white spongy pulp. The size and shape of gourds is both genetically and environmentally determined. Flowers produced first give rise to bigger gourds as the growth of the plant is vigorous.

Ecology: *L. siceraria* is believed to be of African origin. Now widely grown in Kenya for its fruits which are used as containers and often escaping to the wild, 0-2,800 m.

Cultivated 0-2,500 m. Escapes common in the wetter areas, especially central highlands of Kenya and the Rift Valley west to Nyanza and Western Provinces. A traditional crop in many African cultures. Cultivated throughout the tropics and subtropics of both the New and Old World. Riverine and lakeshore conditions, in grassland and bushland. Common in abandoned homesteads. Pound in a wide range of soil types but common in well-aerated, fertile soils. Rainfall: 400-1,500 mm. Needs well-distributed rain. Moisture crucial during fruit growth since drought leads to dropping of the immature fruit. Zones I-VI.

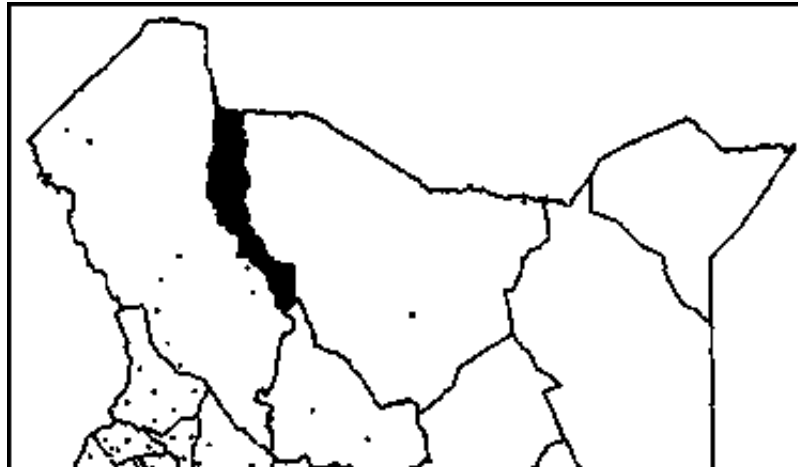
Uses: FOOD: Young, tender fruits of some small cultivars are eaten as a vegetable. The cooked fruit is soft, slightly sweet or almost without taste. These "sweet" types (Kikuyu: *mungu*, Kamba: *ungu wa muyo, makii* (Luo, Homa Bay), *nyatao* (Giriama: *vimumunye*) may be boiled, salted and eaten or boiled, mashed, fried and made into a stew. Mature fruits turn

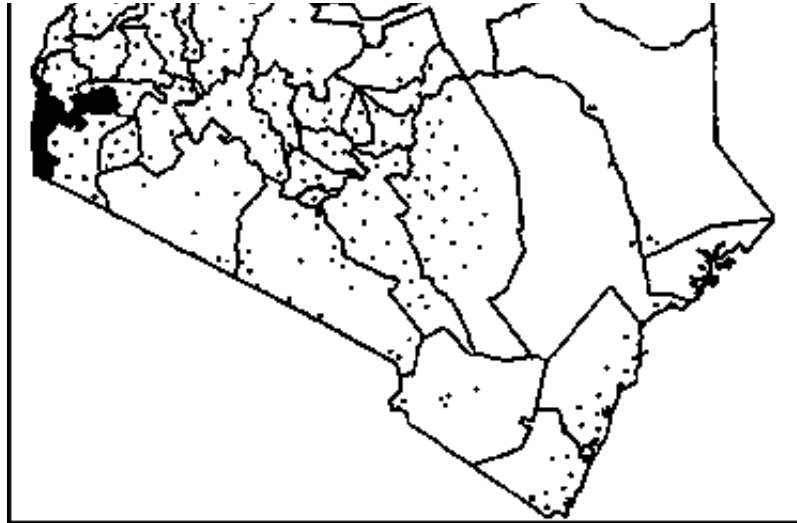
somewhat bitter and are not used as food. The seeds are edible and in some cultivars are high in protein and oil. Young shoots and leaves of some cultivars (Luo: *maguti*) are used as a leafy vegetable (Luo, Mijikenda). Several forms of these edible ones have been noted.





Figure





Figure

Edible gourds have variable shapes and sizes: they may be small, elongate with a smooth surface or spherical or nearly so with numerous lumps on the shell (Luo: *budh-nyatao*). Most other gourd cultivars, especially those producing large fruit, are bitter even when young and cannot be eaten. Neither are

the leaves eaten. These should not be confused with those of the pumpkin (*Cucurbita* spp.) which are widely cooked as a vegetable.

MEDICINAL: Roots and fruit are used as a purgative in some communities.

OTHER: Both edible and inedible cultivars are cultivated for a wide range of uses depending on their shape and size. The use of the gourd as a container is common in many African cultures, cultivators and pastoralists alike. When cut into two halves the various types, including the edible ones, find new uses-as open containers used for storage, ladling out food, fluids, seeds, etc., and as a cup, bowl or plate. Different cultivars have specific shapes with different end uses.

COMMERCIAL: Various forms of gourds are sold either as containers or in halves used as bowls or ladles. The very small

ones are sold as household ornaments (Nairobi). The long snake gourds are grown in Murang'a and sold among the Maasai where they are still valued as containers for milking and bottles for a child's milk.

Season: Planted during the rainy season. Flowers in January-February in Makueni. Fruits in April-May in Makueni and Kajiado.

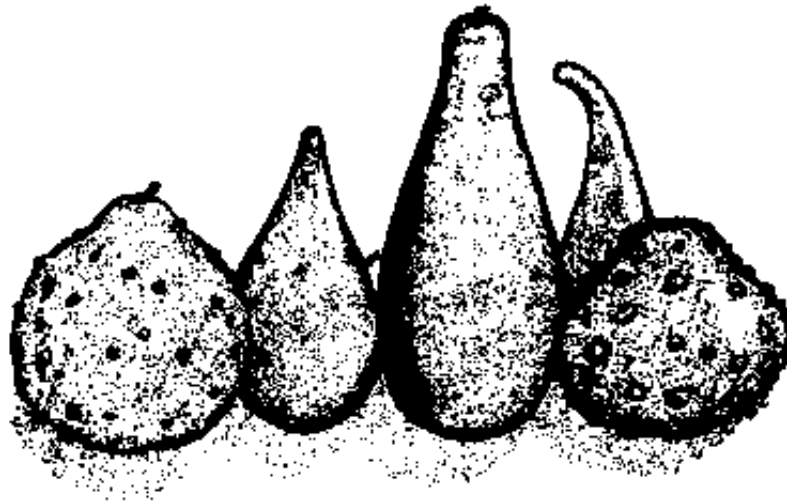
Management: Gourd plants grow easily from seed. Seedlings require well-aerated, fertile soils. Traditionally seeds for next season's planting may be in the form of stored gourds, or even seeds from broken gourds left in cropland. The plant is normally planted at the edge of cropland, next to a fence or on terraces to minimize on use of cropland. Among the Maasai the plants are not usually planted but grow spontaneously near cattle enclosures, on fences and in abandoned homesteads from where they are harvested. Occasionally

there is deliberate propagation when seeds are broadcast at specific places or seedlings uprooted from the wild and planted in the homestead (Maasai, Bukusu). The plant climbs on hedges, becoming further strengthened. The shape of the container is affected by its position during growth. Among the Mbeere, Tharaka and Kamba, the gourds are placed upright on flat ground so that they form with a flat bottom-to be stable later when in use.

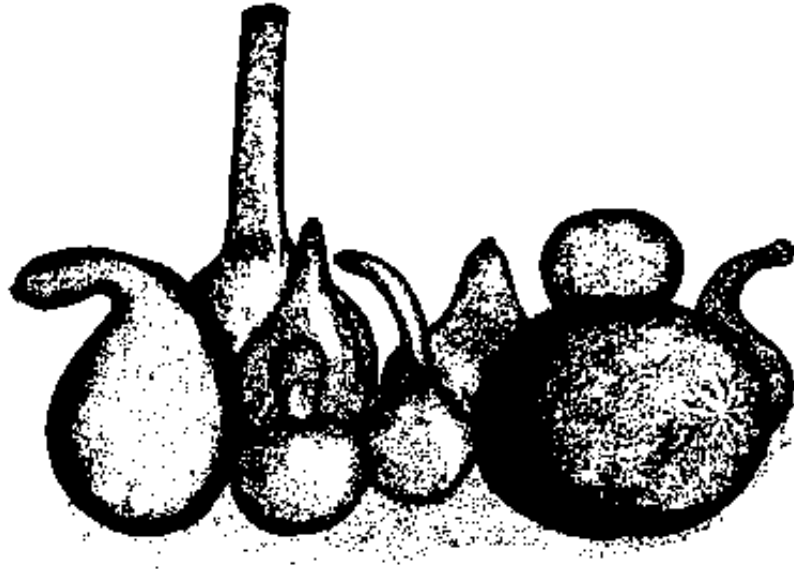
The fruit is harvested when the shell hardens and outer and inner layers begin to turn yellow. The container is prepared by soaking its contents (seeds and pulp) in water, dislodging the pulp with a stick, shaking it vigorously and emptying the contents.

Status: Species as a whole not threatened but genetic erosion taking place fast.

Remarks: Other important members of the genus are *L. sphaerica* (Sond.) Naud., an extensive climber, and *L. abyssinica* (Hook f.) C. Jeffrey, widespread from Kajiado and Embu to western Kenya. Common in bushland and evergreen forest.



Figure



Figure

Landolphia buchananii Stapf

Apocynaceae

Digo: mpira **Kamba:** kiongoa (Makueni), maongoa (fruits)
Kikuyu: mugu, mugu-wa-munyati **Kipsigis:** ngiingichet,
tunoiyet (south-west Mau) **Maa:** entiangege (Narok)
Marakwet: ng'eng'echwo, ng'eng'ech (plural) **Nandi:**
nyingiget, ngungyet **Pokot:** ng'eng'echwa, ng'eng'eech (fruit)
Samburu: lcutetei, sebit

Description: An extensive strong-stemmed liane. Stems narrow, flexible, strong with tendrils. Plant exudes white latex when any part is injured. **LEAVES:** Opposite, ovate or elliptic. Young leaves tinged red. **FLOWERS:** White, tubular, borne in axillary or terminal inflorescences. **FRUITS:** Round, 4-6 cm across, light green with corky, grey-white or brown patches on the surface. Ripe fruit the same colour, soft with several seeds embedded in a white juicy pulp.

Ecology: Found mainly in central and western Kenya, e.g. in Karura forest, Thika, Namanga, Thui Hill (Makueni), Marsabit,

Kisii, Nandi, Uasin Gishu, Baringo and Meru. Hillside thickets and bushland, riverine forest in clay loam, especially on sloping rocky areas. Zones I-IV.

Uses: FOOD: The ripe fruit is eaten (++). The white juicy pulp has a sour sweet taste. Seeds are usually discarded but may occasionally be swallowed like passion fruit seeds. They are, however, rather large and may cause choking. Unripe fruit is bitter. The pulp has been used to make jam.

MEDICINAL: Both ripe and unripe fruits used for "coated tongue"-*kivuti* (Kamba, Makueni), unripe ones said to be more effective; roots used for gonorrhoea and bilharzia (Kikuyu).

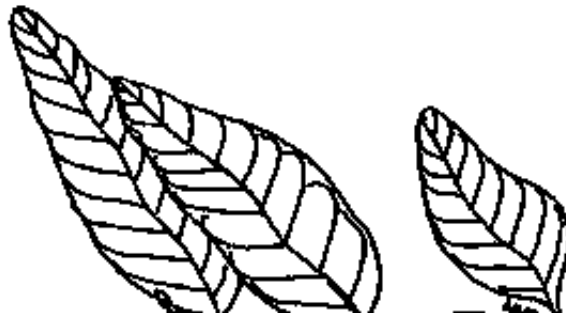
OTHER: Branches used as string (Kikuyu), for tying beehives (Kamba), for building (Maasai, Kamba), and weaving baskets and winnowing trays (Kikuyu). The twigs used to be sold in the past (Mukuyuni, Makueni). The liane is cut, warmed in water

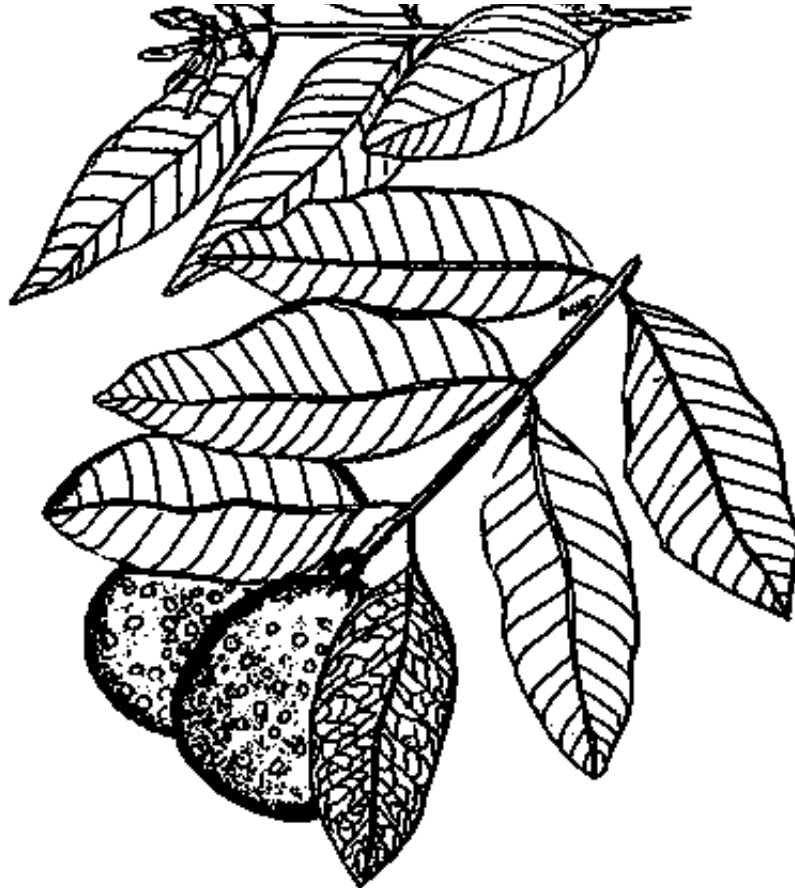
to avoid snapping then sold in rings as ropes. The copious latex produced has been used as a rubber substitute but it is said to be bad for clothes. Fodder plant for goats and sheep.

Season: Fruits in February in Kisii, July-August in Machakos and Meru, October in Baringo and November-December in Kiambu.

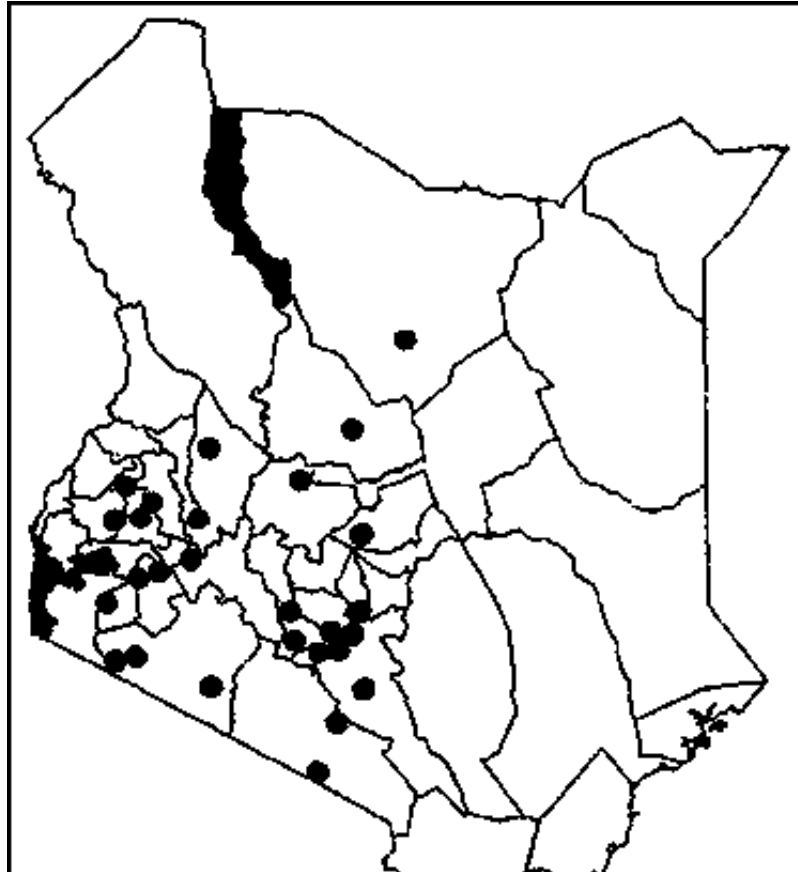
Management: Propagated by seeds which germinate readily after passing through gut.

Status: Generally rare but may be locally common.





Figure





Figure

Landolphia kirkii Dyer

Apocynaceae

Boni: dabeh, daber **Chonyi:** muungo **Digo:** mpira, libugu, kitoria (fmit) **English:** rubber vine **Giriama:** mutongazi, mtoria, muungo, vitoria (fruit), maungo (fruit) **Kambe:** muungo **Sanya:** hathocha **Swahili:** ulimbo, mpira, mbunga, kilungwana, moyo, mpyo **Taita:** mmeru-sukari

Description: Extensively climbing evergreen liane or spreading bush. Stems narrow, dark brown, with tendrils. Plant with a white latex. **LEAVES:** Opposite, small.

FLOWERS: White or pale pink, borne in axillary or terminal inflorescences. **FRUITS:** Round to 5 cm in diameter, green, turning reddish yellow when ripe.

Ecology: Grows in the coastal area, e.g. in Arabuko-Sokoke Forest, at forest margins, in *Brachystegia* woodland and coastal bushland, 0-300 m on sandy soils. Zones I-V.

Uses: FOOD: The ripe fruit is edible (+++) (Giriama, Digo, Duruma, Chonyi, Kambe). Fruits are sweet with an added acid taste. The fruit wall is opened and the yellow-orange pulp covering the seeds sucked. The seeds are then discarded. Leaves are said to be eaten as a vegetable (Boni).

OTHER: Source of wild rubber which is often used for trapping birds.

COMMERCIAL: Sold in most coastal towns including

Mombasa, Malindi and Kilifi. A very popular fruit eaten as a snack.

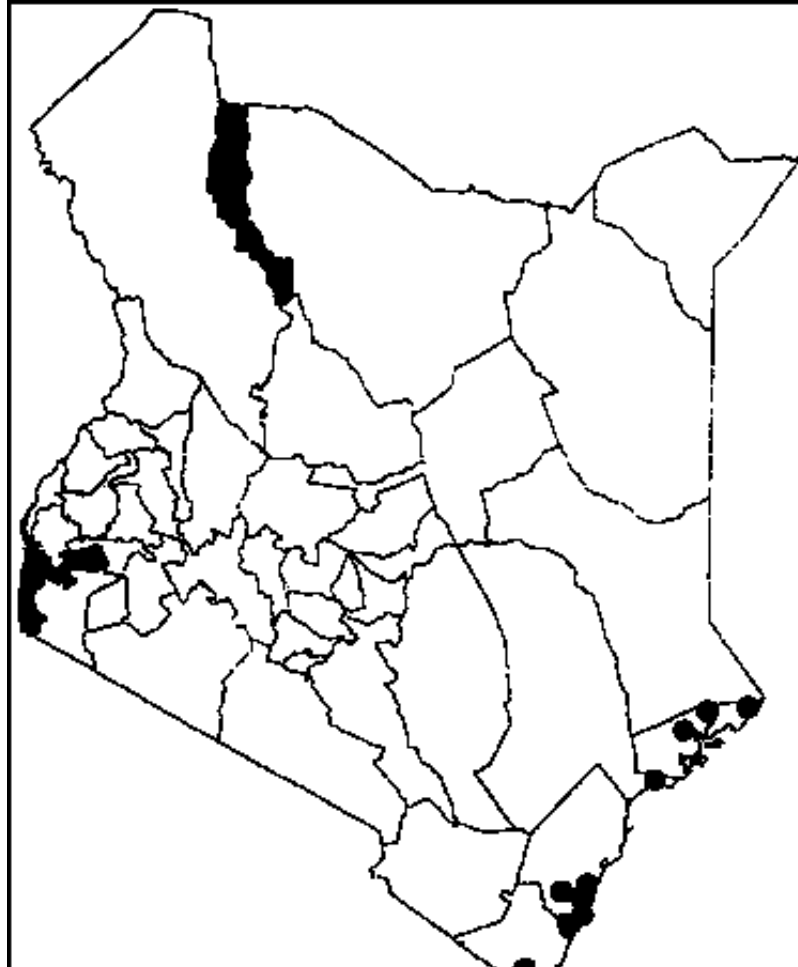
Season: Flowers in March and November and fruits in March-April and November-December in Kilifi.

Status: May be locally common.

Remarks: A fruit plant with a great potential for domestication.



Figure





Figure

Lannea alata (Engl.) Engl.

Anacardiaceae

Borana: wanreh, kumude **Giriama:** manga, mnthungu
Kamba: kikolya (Makueni), kitungu (Mwingi), ngolya (fruit),
ndungu (fruit) **Malakote:** sufi-bara **Orma:** kumudhe
Rendille: bejelo **Samburu:** Ikinoi **Somali:** waareh, kumudhe
(Tana River), waanreh **Taita:** mushiga, ngariso **Tharaka:**
mituungu

Description: Much-branched spreading deciduous shrub usually 1.5-4.0 m high, with drooping branches and a spiky appearance. **BARK:** Dark grey, smooth. Stem base and main roots normally covered with brown, thread-like growths

resembling cotton wool. **LEAVES:** Usually clustered on short shoots and divided into tiny leaflets which are bluntly toothed towards the apex. The leaf rachis is often winged. **FLOWERS:** Borne in inflorescences arising together with leaves from the short shoots, greenish yellow, small, inconspicuous. **FRUITS:** Up to 2 cm across, fleshy, green turning yellow to orange or reddish brown on ripening. Seeds green with a rough surface.

Ecology: Grows in Somalia, coastal, eastern and northeastern parts of Kenya and northern Tanzania. In Kenya may be found at El Wak (Wajir), Mtito Andei, Kurawa (Tana River), Mutwang'ombe (Kitui). Found on rocky hillsides, in *Acacia-Commiphora* bushland, often associated with *Delonix alata*, *Lannea triphylla*, *Adansonia digitata*. *Acacia tortilis*, *Sterculia stenocarpa* and *Grewia* species in light red clay and in rocky areas, 0-1,200 m. Rainfall: 400-600 mm. Zones V-VI.

Uses: FOOD: Fruits edible and much liked (+++) (Samburu,

Somali, Rendille, Boran, Kamba, Taita). These are sweet but also with a rather sour taste. With good rains fruits are juicy.

MEDICINAL: Used for fever, malaria, snakebite, fractures and injuries (Samburu).

OTHER: Goat and camel fodder (++). Fruits eaten by goats. Fuelwood (+). Wool from roots used for stuffing pillows and mattresses (Somali, Tharaka, Kamba, Mbeere).

COMMERCIAL: Fruits sold in Mwingi District.

Season: Flowers in September-October in Makueni, Tharaka, Kitui and Taita, in December in Tana River. Fruits in February-March in Makueni, Tharaka, Kitui, Taita and Wajir, in May in Mandera, in July-August in Kilifi and Kwale and in December in Garissa.

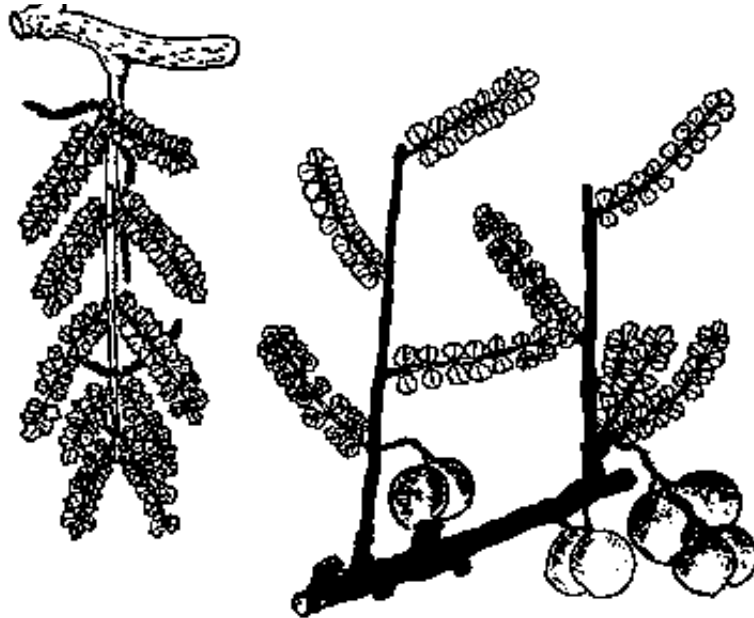
Status: May be locally common.

Remarks: An excellent fruit tree for dry lands. Needs good management to control the poor spreading habit. Fruits of many Kenyan species of *Lannea* are edible. They are deciduous shrubs, rarely trees, often with thick bark. Leaves are pinnately compound. Flowers normally have 4 floral parts. The fruit has one hard seed, often with persistent style.

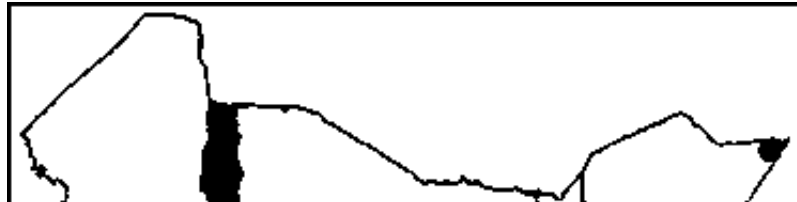
L. schweinfurthii (Engl.) Engl. syn: *L. stuhlmannii* (Engl.) Engl. (Swahili: *mnyumbu*, Chonyi: *mnyumbu*, Digo: *mnyumbu*, Giriama: *mnyumbu*, Kamba: *kyuasi*, Mbeere: *muracu*, Luo: *kuogo* Maa: *orpande*, Marakwet: *monwo* (singular), Pokot: *moino*, Samburu: *lapurori*, Sanya: *hadaraku*, Somali: *deen*, Tharaka: *muthuchi*) is a tree to 15 m high with a rounded usually dense crown. Ripe fruits are reddish brown and edible but unimportant as a food source. Like most other *Lannea* species it has soft fleshy bark which is used for tea (Maasai, Pokot), medicine for fever (Mbeere). The inner bark is a source of string (Maasai). Fibre from bark used to make grain

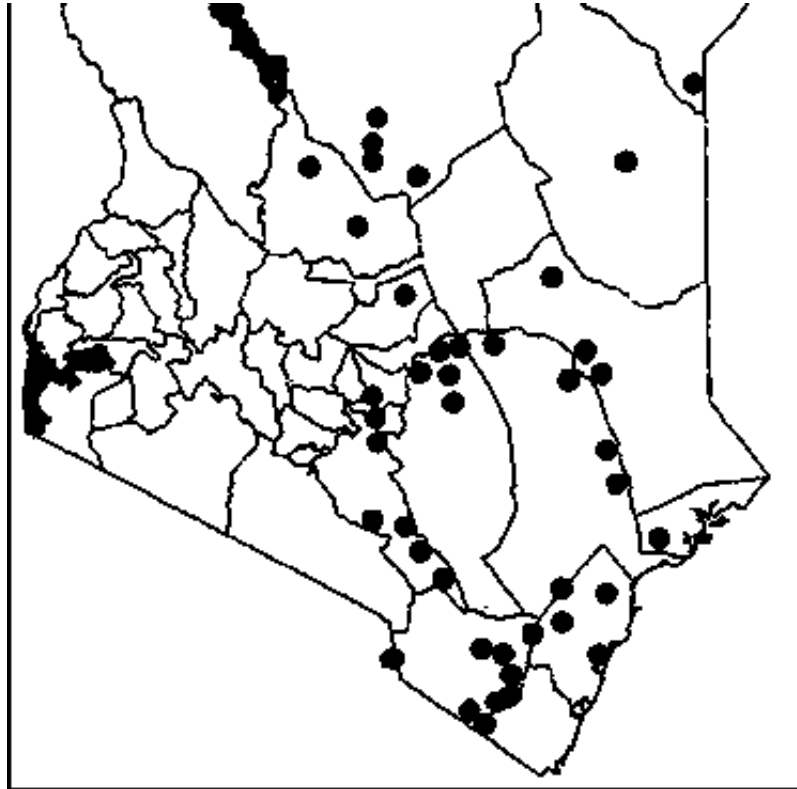
containers and baskets, *syondo* (Kamba). The brown dye obtained from bark was used to decorate the baskets. A brown wool used for stuffing mattresses is obtained from roots just below the ground surface (Kamba, Tharaka, Mbeere). The large trunk is carved into stools, beehives, mortars, and drums for storing honey (Kamba, Tharaka). A good shade tree and bee forage. Grows fast. A widespread tree in Kenya and in Africa from Sudan to South Africa. Season: Flowers in December-January (Kitui). Fruits in February-March (Kitui).



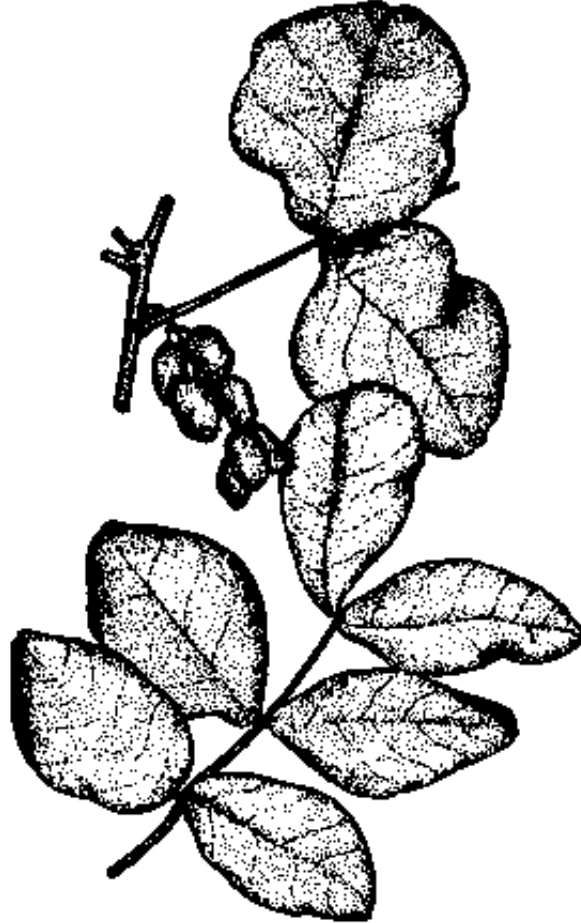


Figure





Figure



Lanea schweinfurthii



Lannea schweinfurthii

Lannea edulis (Sond.) Engl.

Anacardiaceae

Pokot: cheptapesyit **Luhya (Bukusu):** neloba, burobelo (fruit), namwirobelo

Description: An extremely short shrub with underground branches which produce leaves and fruits hardly 30 cm above the ground. Shoots resemble those of *L. schimperi*.

FLOWERS: Yellow, borne in clusters near ground level. Often coming when the plant is leafless. **FRUITS:** Numerous, bright red, oval, up to 1.5 cm long.

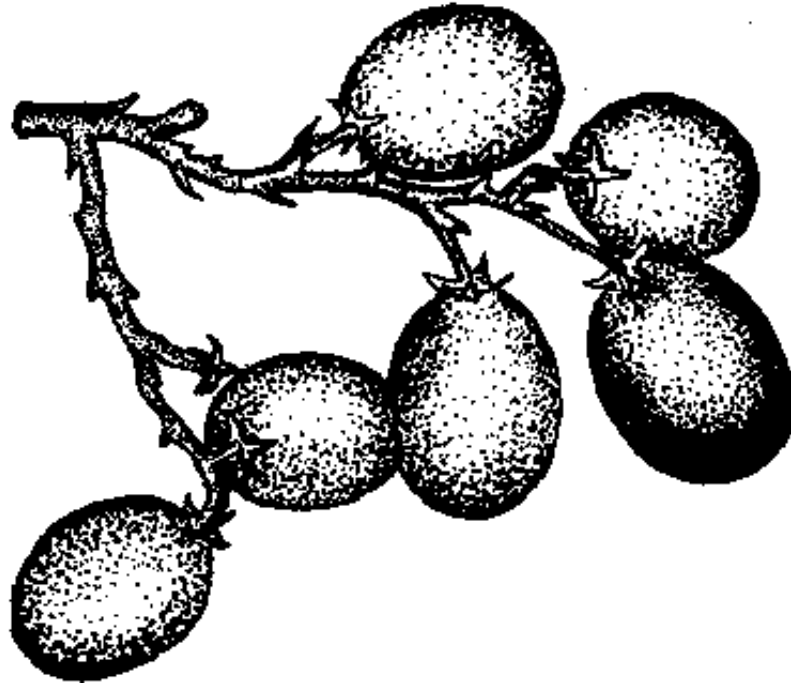
Ecology: East and Central Africa south to Mozambique, Angola and South Africa. In Kenya it grows, e.g. at Kitale and

Soy (Uasin Gishu). It is common in humid areas in wooded grassland, especially areas that are frequently burnt, 900-2,200 m. Zones I-II.

Uses: FOOD: Fruits eaten mainly by children.

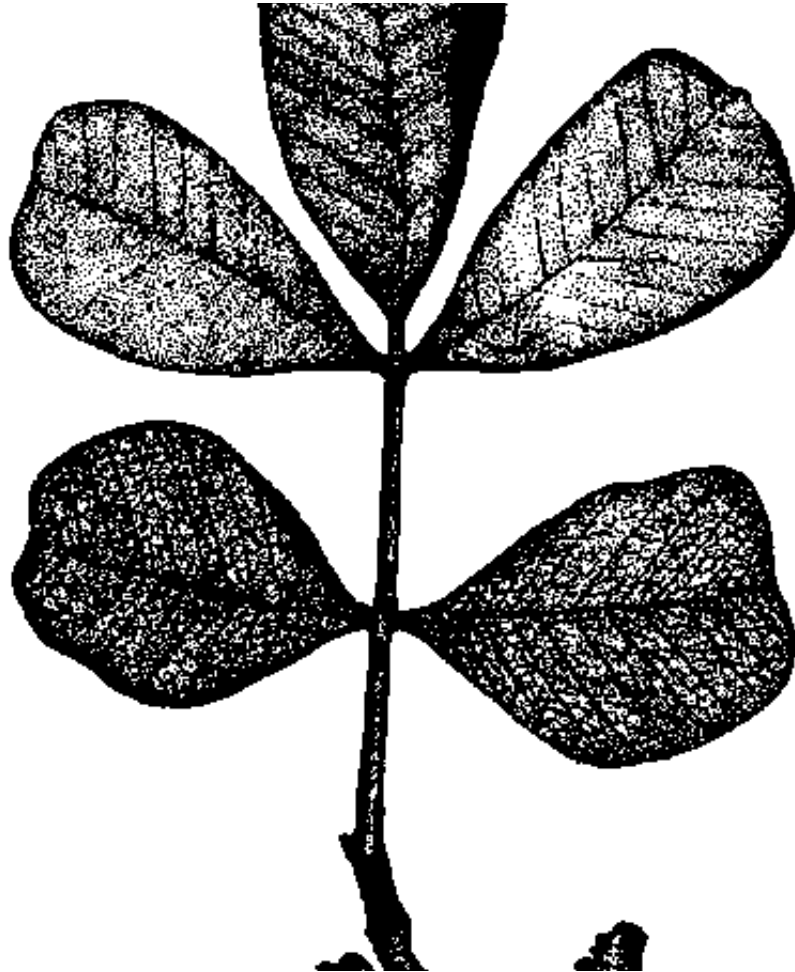
Status: Occasional.

Remarks: Variety *edulis* with compound leaves is the one described here; var. *integrifolia* Engl. is reported in Tanzania and Zimbabwe.



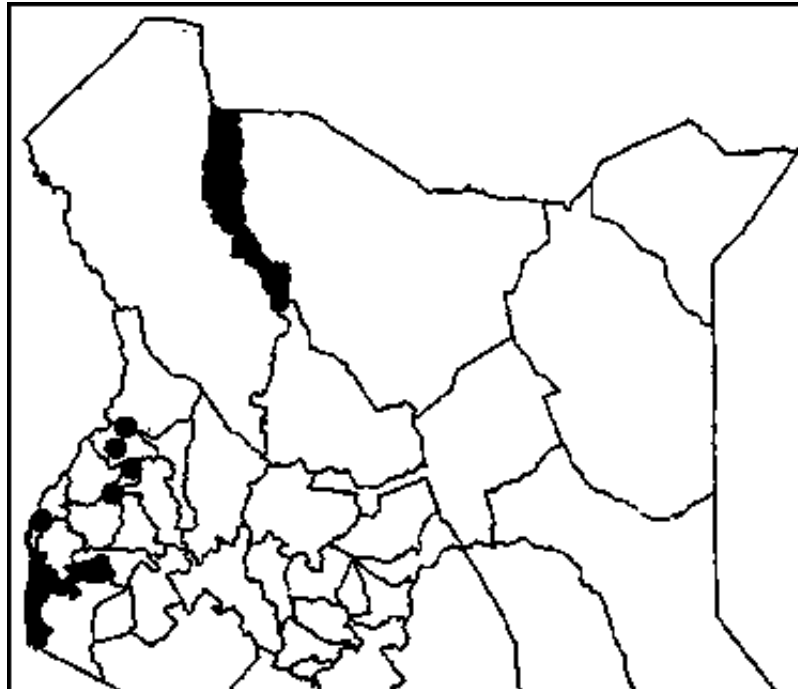
Figure







Figure





Figure

Lannea rivae (Chiov.) Sacleux

Anacardiaceae

syn: *L. floccosa* Sacleux

Kamba: muthaalwa, kithaala, kithaalua kya kiima **Marakwet:** latat (plural), lolowe (singular) **Pokot:** lolotwo **Somali:** jidwey
Turkana: etopojo

Description: Much-branched, spreading, deciduous shrub or tree usually 3-6 m. Trunk and branches rather thick. **BARK:** Thick, smooth or rough, grey to dark grey. **LEAVES:** Often simple, dull green, softly hairy, especially beneath, usually borne in clusters on short, stout branchlets. **FLOWERS:** Yellowish with red patches. Fruit to 1.5 cm long, densely hairy.

Ecology: Grows in southern Ethiopia, Kenya and northern Tanzania. In Kenya, e.g. at Moyale, Masii (Machakos), Bisili (Kajiado). Open *Terminalia-Combretum* bushland and wooded grassland, 300-2,000 m. Common at 1,400-1,900 m on well-aerated sandy, rocky and loam soils. Zones IV-V.

Uses: FOOD: Inner bark chewed for its sweet taste and as a source of water (++) . Fruits edible but unimportant.

FOOD/MEDICINAL: Inner bark chewed for colds.

OTHER: Fibre obtained after chewing is used for ropes and weaving; "wool" of dug up roots is used for stuffing mattresses (Mbeere); tree used as a bird-scaring platform (Kamba) in millet fields. Toothbrush. Hedge. Shade.

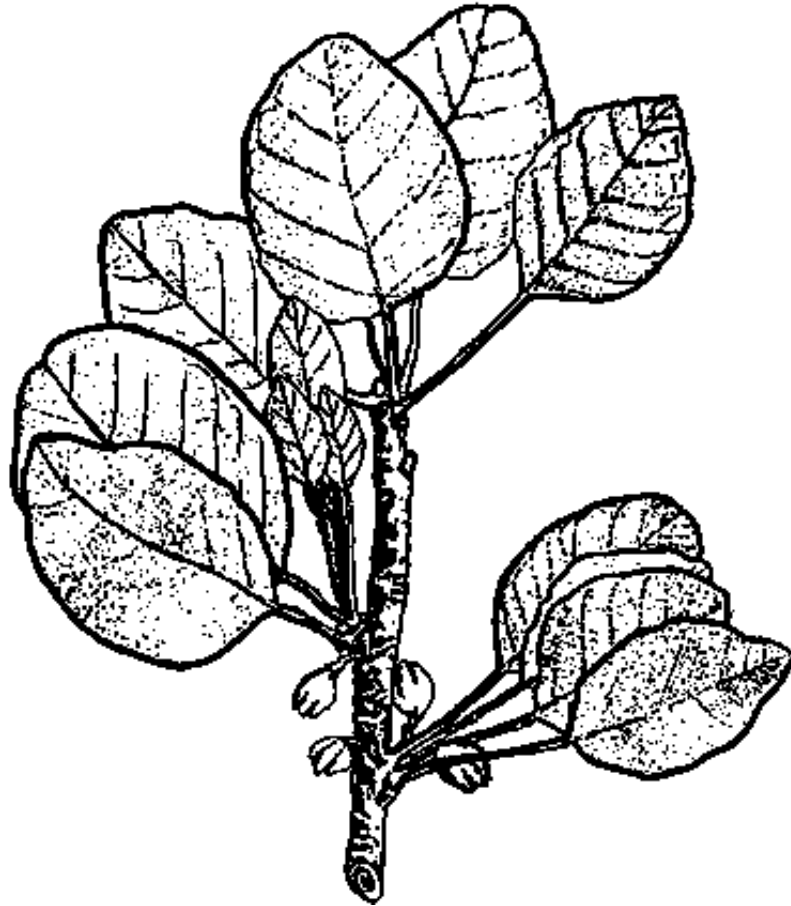
Management: Propagated by cuttings and seed. Regenerates easily when cut.

Status: Generally uncommon but common in some areas.

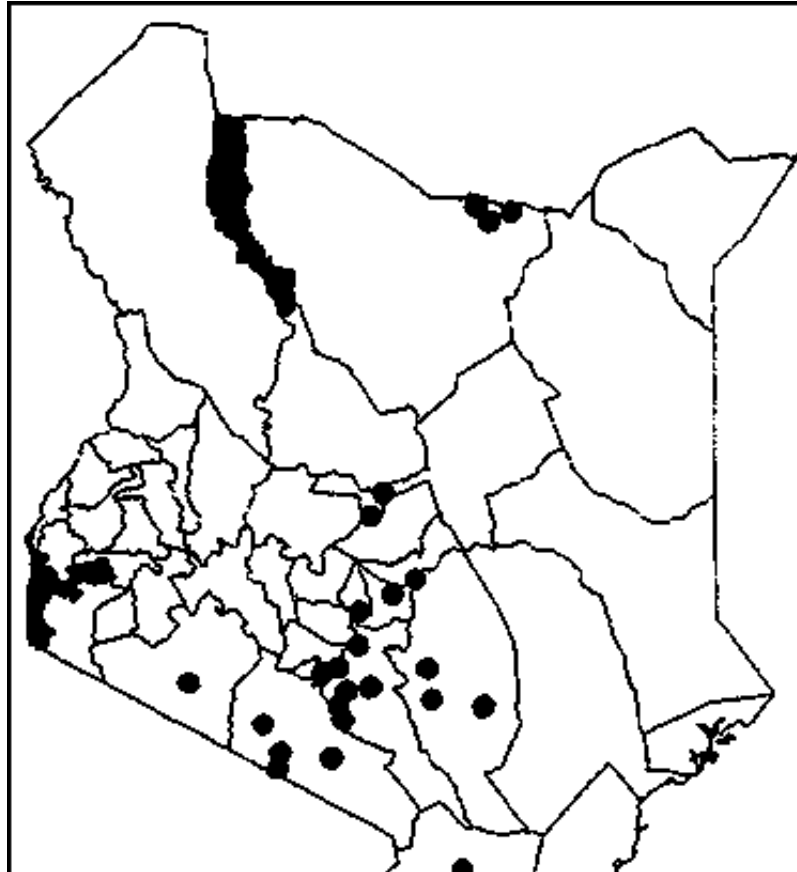
Remarks: This species may be a useful support for lianas used for fruit. It resembles *L. triphylla*, distinguished by its 3-foliolate leaves, smaller growth habit and narrower branches.



Figure



Figure





Figure

Lananea schimperi (A. Rich.) Engl.

Anacardiaceae

Borana: andaraka **Giriama:** mwanakabaga **Kamba:** kithoona, kithauna (Kitui), nthoona (fruit) **Luhya (Bukusu):** kumuumbu (tree) **Luo:** kwogo, kuogo **Marakwet:** lolotwa (singular), latat (plural) **Nandi:** kwetingwet **Pokot:** cheprukwo, cheprukwo **Turkana:** etopojo

Description: Tree to 7 m high. Trunk to 45 cm or more in diameter. **BARK:** Smooth or fissured, pale grey. **LEAVES:**

Long, pinnately compound, often on stout branches. Underside of leaflets and young leaves rusty hairy. **FLOWERS:** Greenish yellow, borne on long usually unbranched inflorescences. **FRUIT:** Ovoid, to 1.5 cm long.

Ecology: Nigeria, east to Ethiopia and south to Zimbabwe and Mozambique. In Kenya it may be found, e.g. at Kanzalu Range (Machakos), Wikililye (Kitui), Loima hills (Turkana), Mt Elgon, Eldoret, West Pokot and Marakwet. Shrubland on rocky hillsides, especially on sandy soils, 750-1,900 m. Zones II-IV.

Uses: FOOD: Fruit eaten (++) (Pokot, Kamba, Turkana, Marakwet). Bark used in tea (Pokot).

MEDICINAL: Roots and bark decoction used for chest troubles (Kamba, Pokot).

OTHER: A source of fuelwood, poles and a good shade tree.

Trunk made into seats and bowls (Pokot).

Management: Said to grow from cuttings.

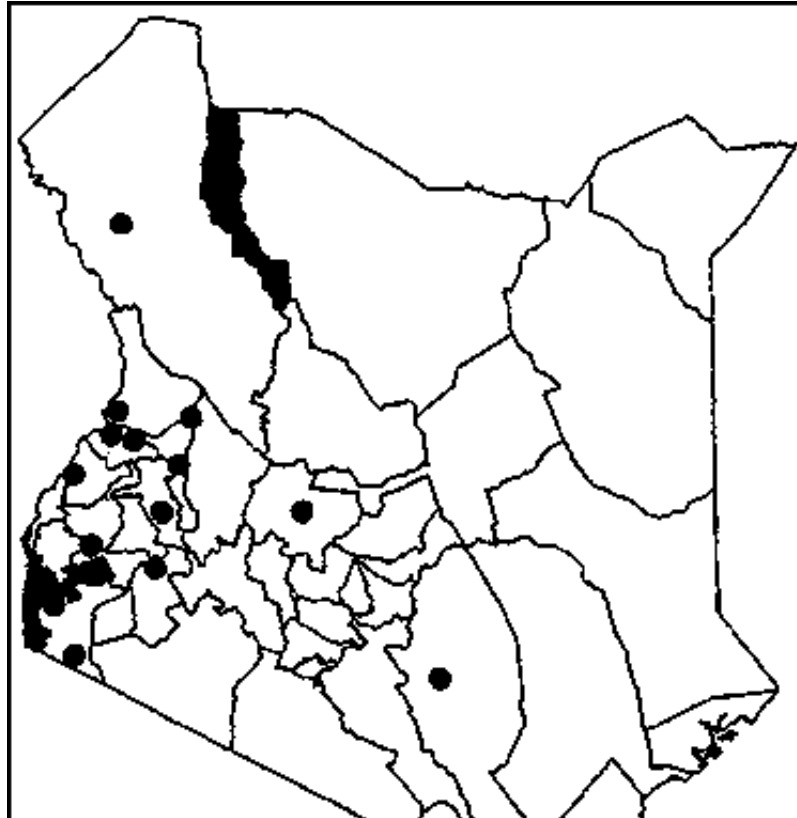
Status: Generally uncommon.



Figure



Figure





Figure

Lannea triphylla (A. Rich.) Engl.

Anacardiaceae

Borana: andarak **Ilchamus:** nkampurori, nkampurok, nkampiror **Kamba:** kithaala, kithaalwa, nzaala (fruit) **Kambe:** mnyumbe **Luo:** kuogo **Maa:** orpande **Marakwet:** monwo (plural), man (singular) **Mbeere:** muracu **Orma:** hadaraku **Pokot:** moino **Rendille:** niondoh **Samburu:** lapuroi **Somali:** anri, anthri, wankhri, waanri (Tana River), baaror **Tugen:** tapuya **Turkana:** etopojo, atopojo

Description: Deciduous spreading shrub or small tree to about 5 m high. Branches flexible. **BARK:** Fleshy, smooth, grey to dark grey on the surface. **LEAVES:** Softly hairy, often divided into 3 leaflets. **FLOWERS:** Cream, in spikes. **FRUIT:** Dirty green, softly hairy, turning dirty red on ripening. Seed red.

Ecology: Uganda, north-eastern Tanzania, Ethiopia, Somalia and Arabia. In Kenya, found, e.g. at Moyale, Nginyang (Baringo), Mtito Andei, Mackinnon Road, southern Turkana, Baringo, Kwale, Machakos and Marsabit in *Acacia-Commiphora* bushland, 340-1,400 m. Common on red clay, sandy clay and in rocky areas. Zones IV-VI.

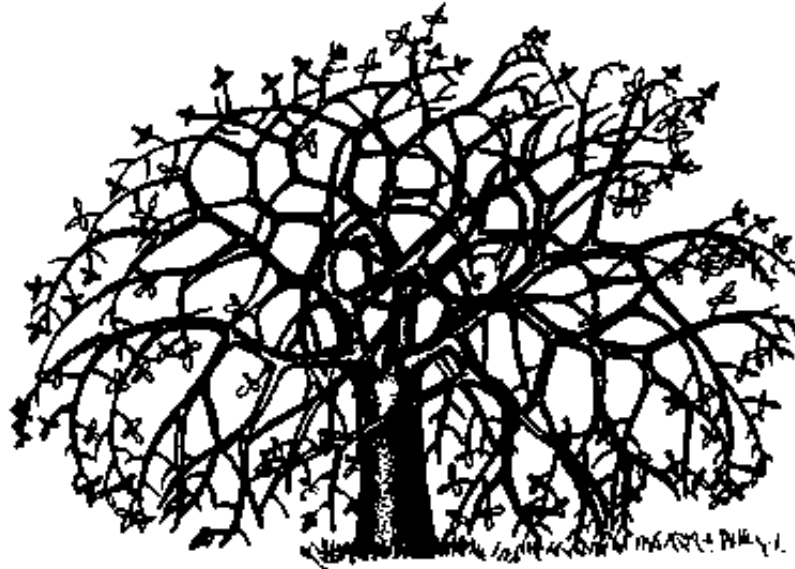
Uses: FOOD: Roots, especially from young plants, peeled and chewed raw during the dry season, sweet and succulent inside (+) (Turkana, Pokot, Kamba). Ripe fruit edible (++). Inner bark chewed for its water and sweetness. Bark boiled for "tea".

FOOD/MEDICINAL: Boiled bark used as child's tonic. It is believed to cleanse the stomach (Pokot). String is chewed for colds.

OTHER: Flexible stems used in hut building. Inner bark a source of fibre used for weaving baskets and ropes (Pokot, Kamba). Toothbrushes (Pokot, Kamba). Wood used in construction and said to be termite-resistant. Camel and goat fodder. Planted as a hedge in dry areas.

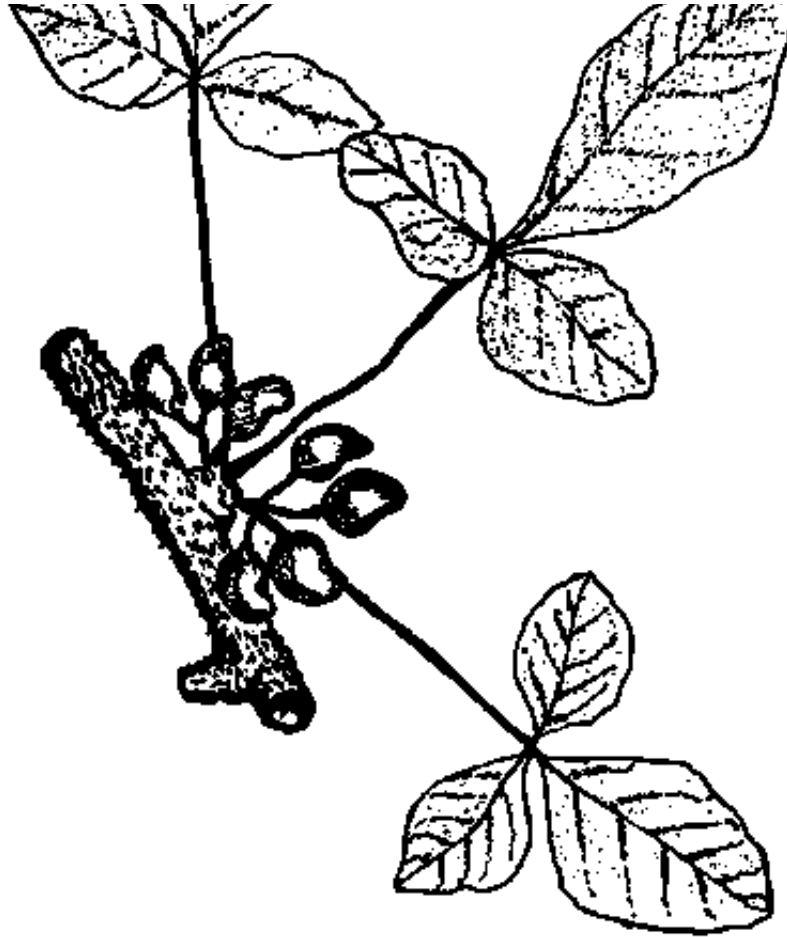
Management: Propagated by stem cuttings and probably by seed too.

Remarks: This plant may easily be confused with *L. rivae* which it resembles in habit. The leaves are a distinguishing feature.

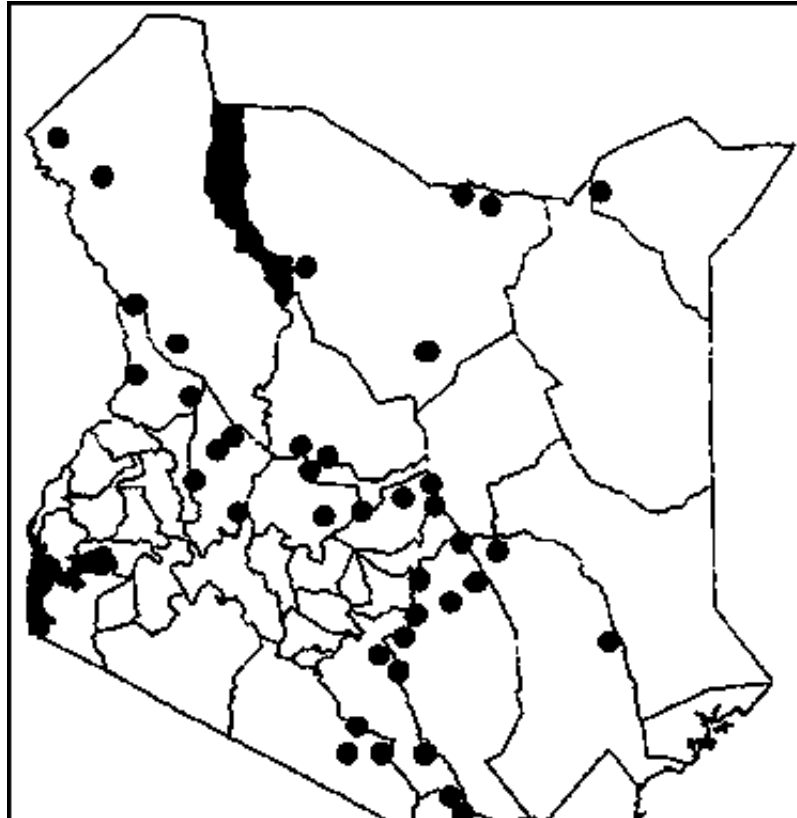


Figure





Figure





Figure

Lantana trifolia L.

Verbenaceae

Borana: kate **Kamba:** muvisavisi; musyavisi, mbisavisi (fruit), nzavisi (fruit) **Kikuyu:** mukenia **Kipsigis:** bek ap tarit **Luhya:** biembaemba, lumenenambuli **Luhya (Marachi):** obengele **Luo:** magwagwa, magwaga, nyabend-winy, teg-tagwari, obengle **Maa:** enkurma-onkayiok, lukurman-oonkayiok, olmagirigiriani **Mbeere:** mukenia **Nandi:** pipterit, petiapteriet **Samburu:** seketeti **Swahili:** mvepe **Taita:** mwemberi **Tharaka:** mukenia **Tugen:** sekechewo

Description: Small much-branched shrub usually 1.0-1.5 m high, occasionally to 3 m. Stems ridged. **LEAVES:** Aromatic, in threes, opposite, margin serrated, coarse above. **FLOWERS:** Purplish pink, borne in clusters. Corolla over 3 mm across at apex. **FRUITS:** Small (2-3 mm), green, shiny, turning reddish purple when ripe, numerous on one head, each one-seeded.

Ecology: Widespread in Africa and throughout the tropics in forest and at bush edges, disturbed forests and roadsides. Common in the Kenya highlands on fertile sandy and light clay soils, 900-2,500 m. Zones II-V.

Uses: FOOD: The sweet fruits are eaten whole, mainly by children (+); fruit used for dyeing paper and fingers by children.

OTHER: Branches used as a broom. Leaves were used as perfume by old ladies (Mbeere). Branches used for

constructing grain stores (Kikuyu) and as torches while harvesting honey (Mbeere). Important goat fodder (++) and bird food.

CULTURAL/BELIEFS: A ritual plant (Mbeere).

Season: Fruits in May-July and January-February.

Status: Common.

Remarks: A potential hedge plant and ornamental. Virtually all *Lantana* species in Kenya have edible fruit. These include:

- *L. ukambensis* (Vatke) Verdc. (syn. *L. rhodesiensis* Mold.) (Kamba: *muvisavisi*) a small plant to 1.5 m high, often multi-stemmed with ovate leaves which are paired or in whorls of threes. Corolla reddish purple, often with a white centre, generally shorter (less than 2 mm at apex). Found in Trans Nzoia, Uasin Gishu,

Murang'a, most of Africa.

- *L. viburnoides* (Forssk.) Vahl, has opposite leaves and usually white (rarely pink) flowers (Somali: *geedxamar*). It is an important fodder and is used in the preparation of male and female aphrodisiacs (Tharaka). Distribution: Egypt south to Angola, Mozambique.
- *L. camara* L. (Chonyi: *mshomoro*, Digo: *shomoro mjesasa*, English: curse of India, tick-berry, Giriama: *mushomoro*, Kamba: *mukiti, musomolo*, Kikuyu: *mukigi, kagiri, rutana, nyatana, mushomoro, mucimoro*, Luo: *obengle, onyalobiro* (both Homa Bay), *tek-taguari, nyamridhi* (both Siaya), Mbeere: *musamburu, mucimoro*, Meru: *mucimoro* (in Mwimbi), Sanya: *mushomoro*, Somali: *dumod*, Swahili: *mshomoro*, Taita: *mvudi, mwemberi*) is of American

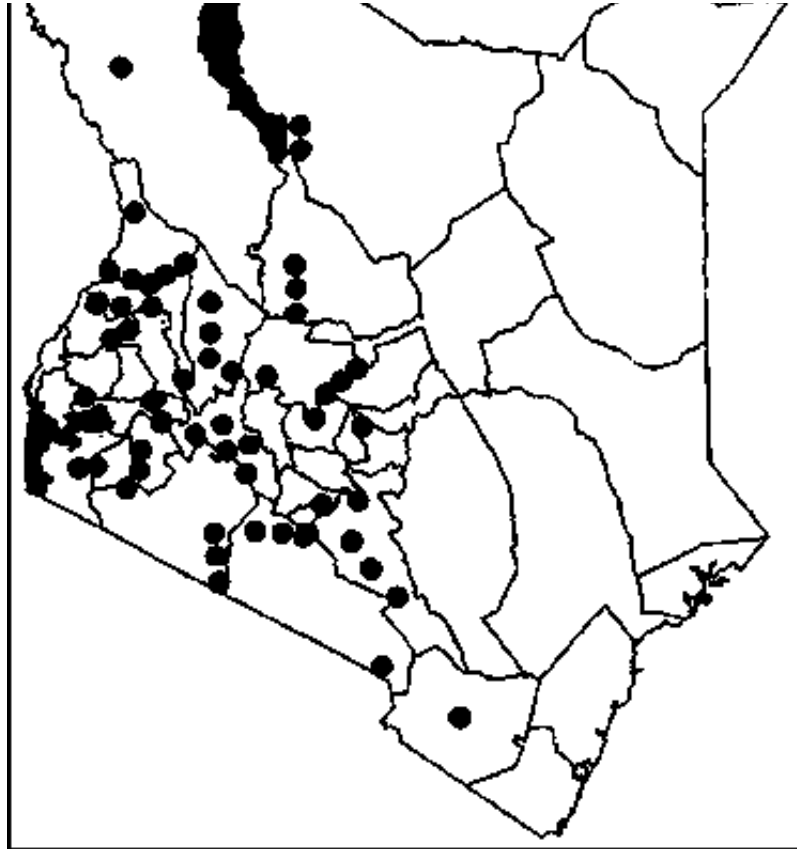
origin and now widely distributed in the tropics and subtropics. It has prickly stems and larger (5-8 mm) blue-black fruits. It has been spread by running water and birds, which feed on it, to become a major weed in all agricultural zones. It is common in mid-altitudes forming dense thickets. In Nyanza Province these have provided an ideal habitat for tsetse flies and hence the persistent problem of trypanosomiasis in the region. The fruits are edible and are also used as a dye for baskets (Kitui).





Figure





Figure





Lantana camara

Launaea cornuta (Oliv. & Hiern) Jeffr.

Compositae (Asteraceae)

Chonyi: mutsungu, mtsunga wa utsungu **Digo:** mutsungu
Giriama: mutsungu **Kamba:** muthunga, uthunga **Kambe:**
mutsungu **Kikuyu:** muthuga **Luo:** achak **Mbeere:** muthunga
Samburu: lekulee **Sanya:** mtsunga **Taita:** mnyinya **Turkana:**
lukwaras

Description: Erect herb with underground rhizomes. Usually 0.3-1.5 m, branching above into branchlets which end in flower heads. **LEAVES:** Grey-green, long, narrow, lobed laterally, often on one side and with a toothed margin. **FLOWERS:** Yellow, borne on numerous heads.

Ecology: Widely distributed in Kenya in cultivated land, abandoned cultivation, at roadsides, disturbed grassland, 0-2,000 m. Found on all soil types from sandy to black-cotton soils. Seems to prefer sandy soils. Zones II-V.

Uses: FOOD: Eaten as a vegetable (Kamba, Kikuyu, Luo, Giriama, Taita). Often cooked with *Solarium nigrum* leaves. Vegetable said to be good for stomach disorders, ulcers, dysentery, etc. (Taita, Kamba). An important vegetable among the Giriama, often cooked during wedding ceremonies (+++).

FOOD/MEDICINAL: Vegetable believed to have curative as

well as prophylactic properties against malaria.

MEDICINAL: Leaves given to chickens for *mavui* (lung diseases) (Kamba).

OTHER: Fodder, especially for rabbits.

COMMERCIAL: Leaves sold in most coastal urban centres.

Management: Not normally planted as it is a common weed where it is used as a vegetable. May be grown from stem bases which have some roots. The plant readily sends out new shoots even in dry weather and when harvested intensively.

Status: Very common.

Remarks: Among the Chonyi, the name *mutsunga* is occasionally used as a general term for a leafy vegetable. Among the Mijikenda this vegetable is never cooked alone. It

is usually mixed with less bitter ones such as *Asystasia gangetica* (*talakushe*), amaranth, pumpkin leaves, cowpea leaves and *Vernonia cinerea*, but never with sweet potato leaves, okra leaves, *Corchorus* spp. and *Oxygonum salicifolium* (*kimbiri*), which are slippery. This vegetable is very important in Mijikenda culture. Its preparation is considered an important role of a married woman and is often given as the reason why a bride should leave her parents for her new home (Giriama). Related to this species is the exotic *Sonchus oleraceus* (sow thistle) whose leaves are occasionally used.





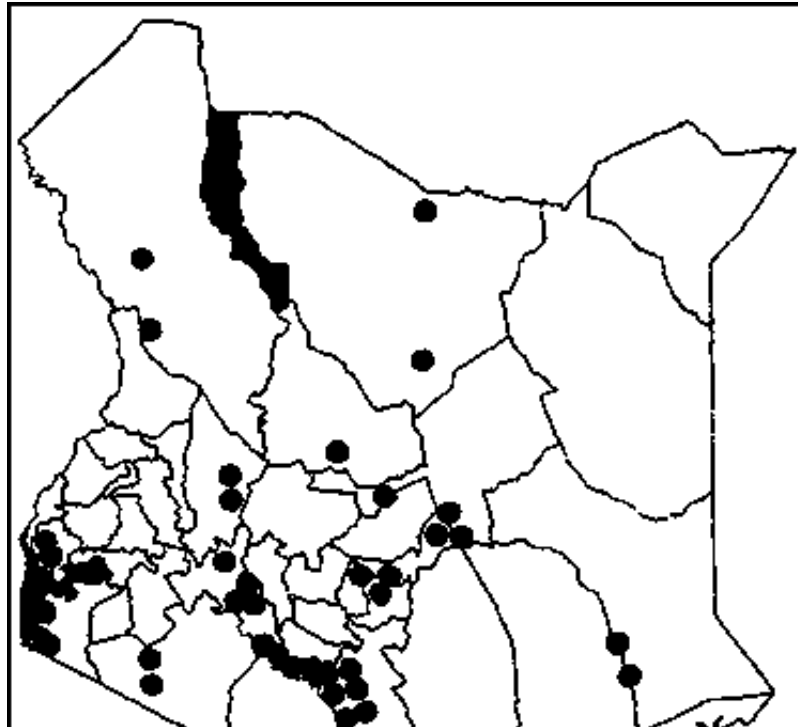
Sonchus oleraceus







Figure





Figure

Leptadenia hastata (Pers.) Decne.

Asclepiadaceae

Pokot: chesakisyon **Somali:** moroh **Turkana:** ekamong'o

Description: A trailing or climbing plant. Stems light green, young shoots of climbing plants spreading out into the air with long internodes. **LEAVES:** To 10 cm long, mostly ovate, light green. **FLOWERS:** Cream or yellowish green. **FRUIT:** Two-

valved, conical, dehiscing to release cottony winged seeds.

Ecology: Found in Kenya along Turkwel and Kerio rivers and elsewhere in Baringo, Turkana and West Pokot in bushland, riverine bushland, prostrate in open areas or climbing on bushes, 500-1,500 m. Zones VI-VII (riverine).

Uses: FOOD: Leaves used as a vegetable (Turkana, Pokot). Normally cooked with other vegetables such as cowpea leaves.

MEDICINAL: Sap from stems is applied to wounds (Turkana, Ng'ikebootok).

OTHER: Important camel, goat, cattle fodder.

Management: Can probably be propagated by seeds.

Status: Locally common.

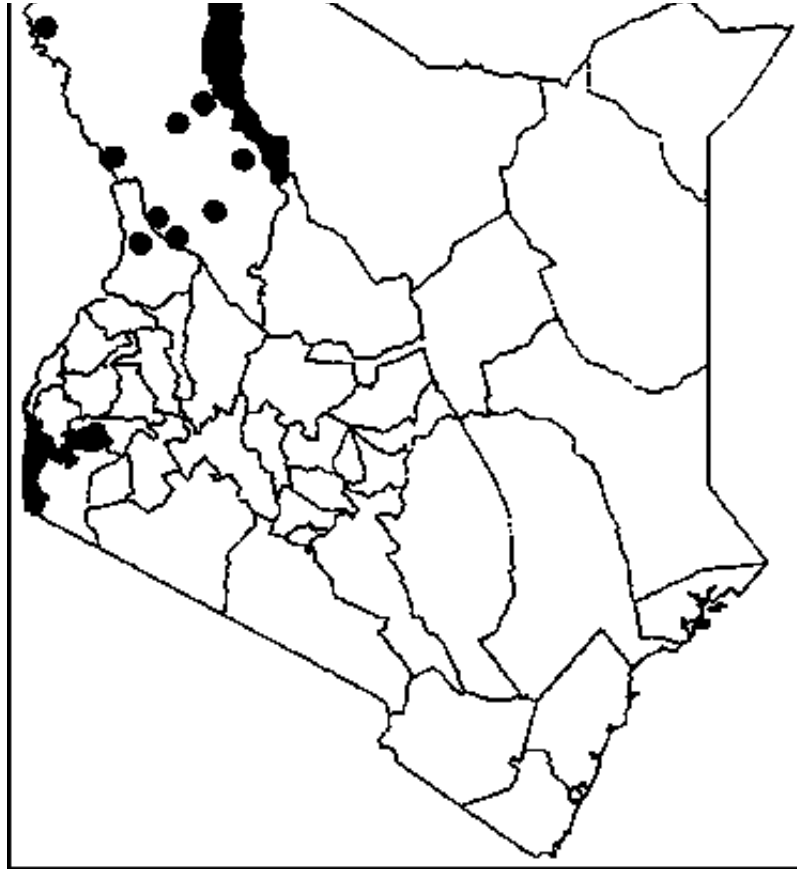
Remarks: In the same family is *Pentarrhinum insipidum* E. Mey. (Maa: *orkorirr*, Samburu: *Ing'arboi, ng'arboi*, Somali: *ayab*), a climber with simple, entire, cordate leaves. Fruit to 10 cm long, with a milky latex and numerous protrusions on the surface. Widely distributed in Kenya (such as at Mile-46, Kajiado District) in bushland, especially in low-lying seasonally flooded areas. Common on alluvial and light sandy clay soils. The leaves are used as a vegetable and said to be tasty (Maasai). The ripe fruits are edible and liked by children and women (Maasai).





Figure





Figure

Lippia carviadora Meikle

Verbenaceae

Pokot: chemchai, tapa-murkutwo **Rendille:** galafu **Samburu:** leminyani, lomunyanyi, Imakutikuti, reexam **Somali:** ged hamu, dhaye dhabe **Turkana:** eur

Description: A small much-branched shrub usually 0.5-1.3 m. Stems ribbed, dark grey, branchlets grey with peeling surface. **LEAVES:** To 4 cm long, broadly ovate, very aromatic with a blunt or rounded apex, margin with blunt notches (crenate), upper surface rough. **FLOWERS:** In spikes, white or cream with large conspicuous papery bracts.

Ecology: Found in Kenya, south-eastern Ethiopia and Somalia. In Kenya in Turkana, Marsabit, Samburu, Tana River

and Tsavo East in dry bushed grassland usually on rocky ground, 500-1,150 m. Zone VI.

Uses: FOOD: Used for flavouring tea (Turkana, Pokot, Somali). Dried leaves are crushed and added to boiling water and may be used with or without tea leaves. In the past chewed as tobacco and to cleanse the breath (Pokot).

COMMERCIAL: Leaves sold in Lodwar market (Turkana).

Season: Leaves available during the rainy season in April-May in Turkana and Baringo.

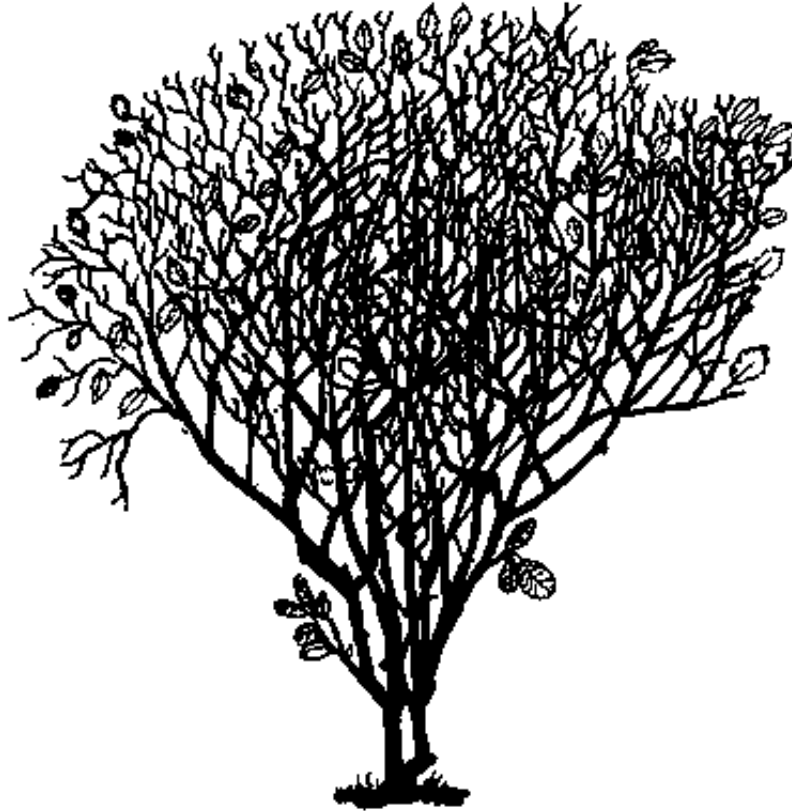
Management: Propagated by seeds.

Status: May be locally common, often forming pure stands.

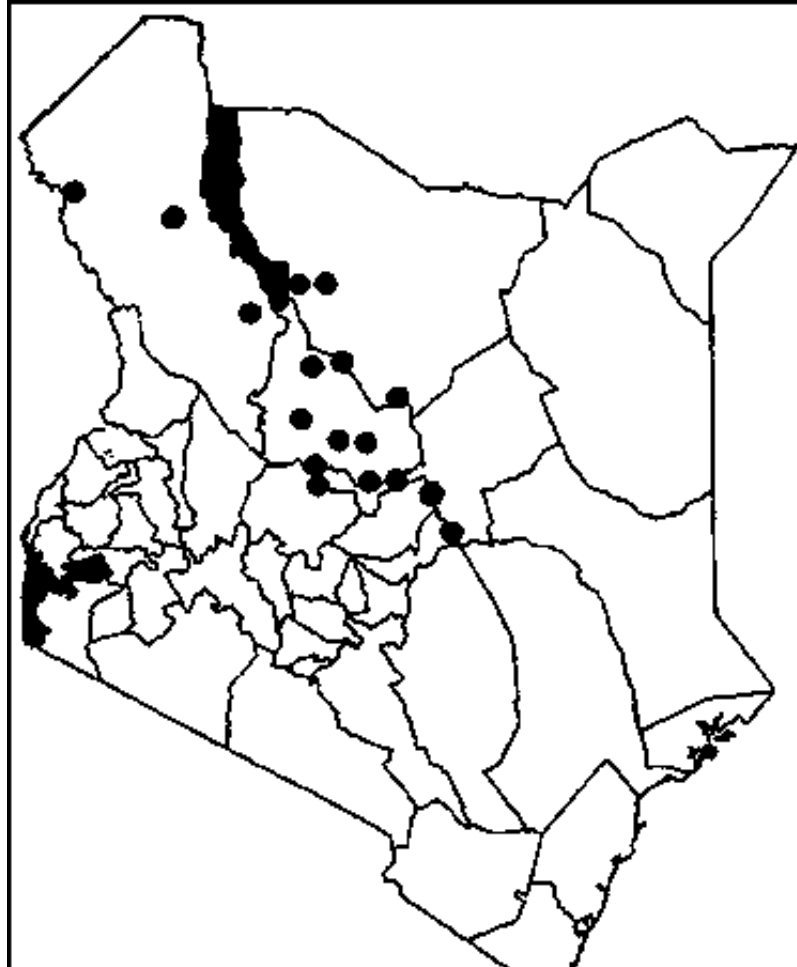
Remarks: This is a popular flavouring plant in northern Kenya.



Figure



Figure





Figure

Lippia kituiensis Vatke

Verbenaceae

syn: *L. ukambensis* Vatke (in Dale & Greenway 1961)

English: wild tea **Kamba:** muthiiti, muthyeti **Kikuyu:** muthiriti, muthoroti, mucohi **Kipsigis:** mwokiot **Maa:** osinoni, olsinoni, isinon (plural) **Meru:** muthirith, muthiritii **Pokot:** mosonyon **Pokot:** mojonyon, chepchai **Samburu:** sinoni, senoni **Taita:** mvudi

Description: A much-branched aromatic herb or shrub, usually 1-2 m high, occasionally higher. Stems hairy. **BARK:** Rough, longitudinally fissured in old stems. **LEAVES:** To 10 cm

long, usually opposite, ovate to elliptic with a crenate (bluntly notched) margin, rough above, softly hairy below. **FLOWERS:** White to cream.

Ecology: Found in many parts of Kenya in bushed grassland, especially on rocky ground and lava, 400-2,550 m. Zones II-IV.

Uses: FOOD: Leaves used to make tea (Pokot, Taita, Maasai). Fruits and seeds are eaten.

MEDICINAL: Leaves are crushed and the vapour inhaled to relieve nasal congestion. Leaves are boiled for colds (Maasai). Inhalation of steaming leaves is good for coughs and chest congestion.

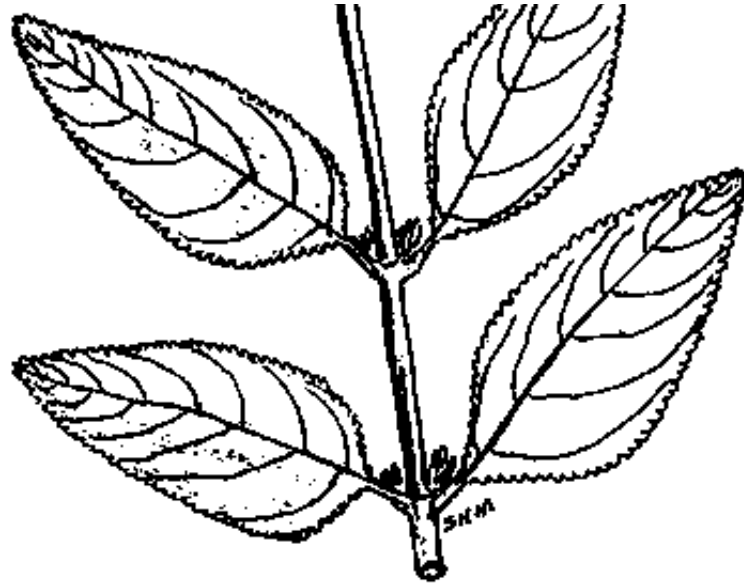
OTHER: Said to be a termite repellent, hence used for constructing traditional grain stores (Kikuyu). Goat and camel

fodder.

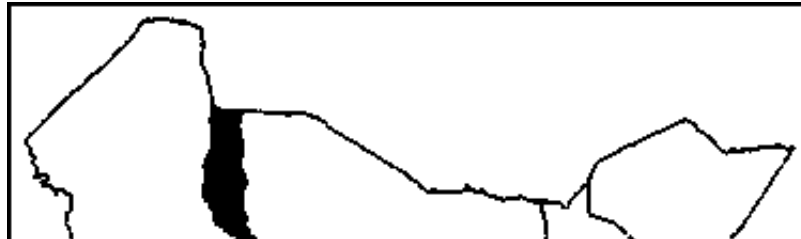
Status: Common. Often forming pure stands.

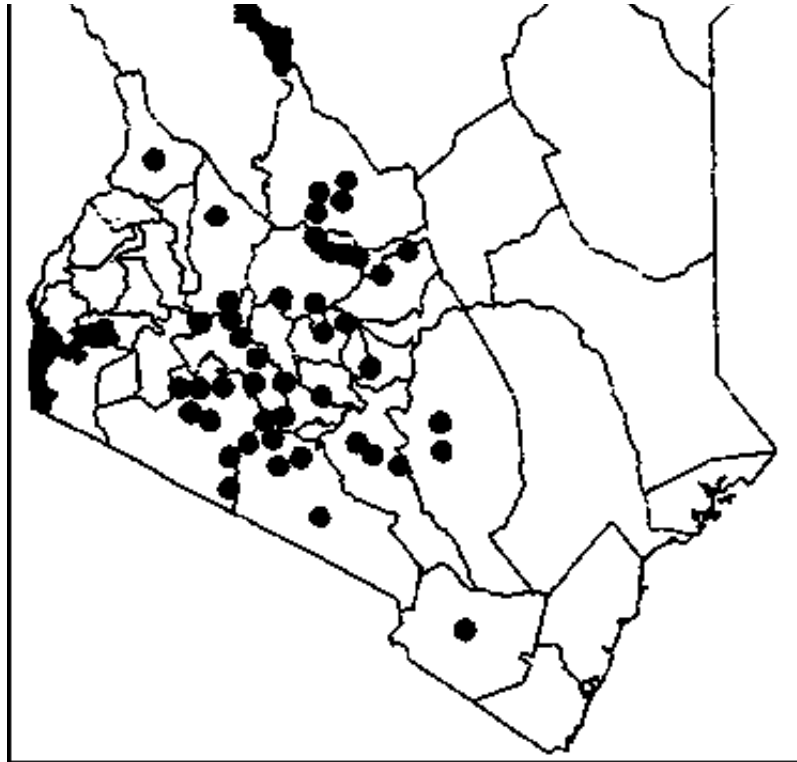
Remarks: *Lippia javanica* (English: wild tea, Luo: *ang'were-rao, mweny*), a common species in the middle highlands, is used in a similar manner.





Figure





Figure

Maerua decumbens (Brongn.) De Wolf

Capparidaceae (Capparaceae)

syn: *M. subcordata* (Gilg) De Wolf, *M. edulis* De Wolf

Bajun: abiro **Borana:** bariyub, agarnyaab **Daasanach:** haluf
Giriana: mkulube **Ilchamus:** lamayoki, lamayokin, lamaloki,
lamalogi **Kamba:** munatha **Luo: amoyo Maa:** olkiage
Malakote: dawa-nyoka, dawa-aaze **Marakwet:** chebillio
(plural) chepiliowo (singular) **Mbeere:** mukindaarithi,
mutunguarithi, mundarithi, gindarithi **Orma:** kukube-tari,
kukube-dik dik **Pokot:** chepuluswo, chepiliswo, chebliswo
Samburu: lamuyaki **Somali:** abarmog (Mandera), ohia-sagara
(Tana River) **Taita:** kangalige **Tharaka:** munatha **Turkana:**
eerut

Description: A small shrub to 3 m high (more commonly 1.2-1.8 m), often multi-stemmed, arising from a tuberous rootstock. **LEAVES:** Greyish green, broadly ovate. **FLOWERS:**

Generally white (due to the numerous large white male parts).

FRUITS: Ellipsoid up to 3 cm long and borne on a long stalk. Ripe fruits yellow or orange.

Ecology: Kenya, Uganda, Tanzania, Sudan, Ethiopia and Somalia. Widespread in Kenya, e.g. at Nginyang (Baringo), Kaputir (southern Turkana), Mutha (Kitui) and Marafa (Kilifi) in dry bushland and open areas in riverine vegetation. Commonly found in sandy areas, light clay soils and rocky areas. Zones IV-VI.

Uses: FOOD: Sweet ripe fruits are sucked. Seeds boiled for 3-4 hours with water being replaced 4-6 times, then eaten (Pokot, Turkana, Bajun). Seeds soaked for up to two days, rinsed and cooked (Bajun). Roots added to water to make it sweet. The water is used for preparing tea or as a drink which causes thirst, enabling one to drink a lot. Good before one sets out on a long journey (Pokot). Root bark chewed by women

when pregnant because of its sweet taste (Maasai).

FOOD/MEDICINAL: Roots boiled and mixed with broth for health and strength (Kipsigis).

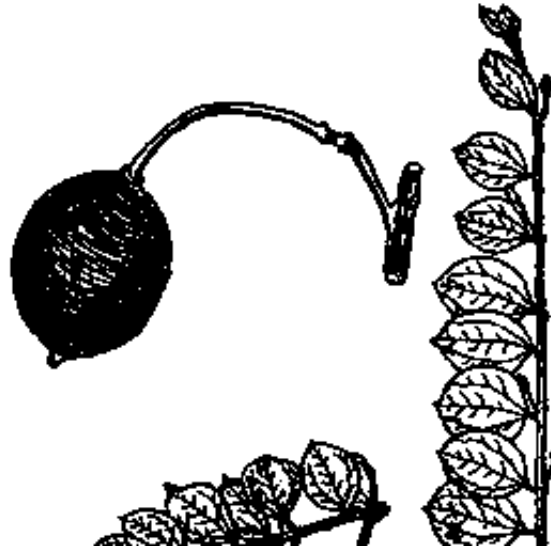
MEDICINAL: Leaves and flowers boiled in a little water and the mixture applied in a poultice and bandaged firmly on sore joints (Boran). Roots a strong purgative (Pokomo; Pare, Tanzania).

OTHER: Camel and goat fodder (eaten sparingly) in the dry season; said to provide salt (Pokot). Roots added to muddy water and left overnight for purification (Pokomo, Pokot, Turkana, Somali, Samburu, Bajun, Maasai (Narok), Daasanach).

Status: Common.

Remarks: Beentje in *Kenya Trees, Shrubs and Lianas*

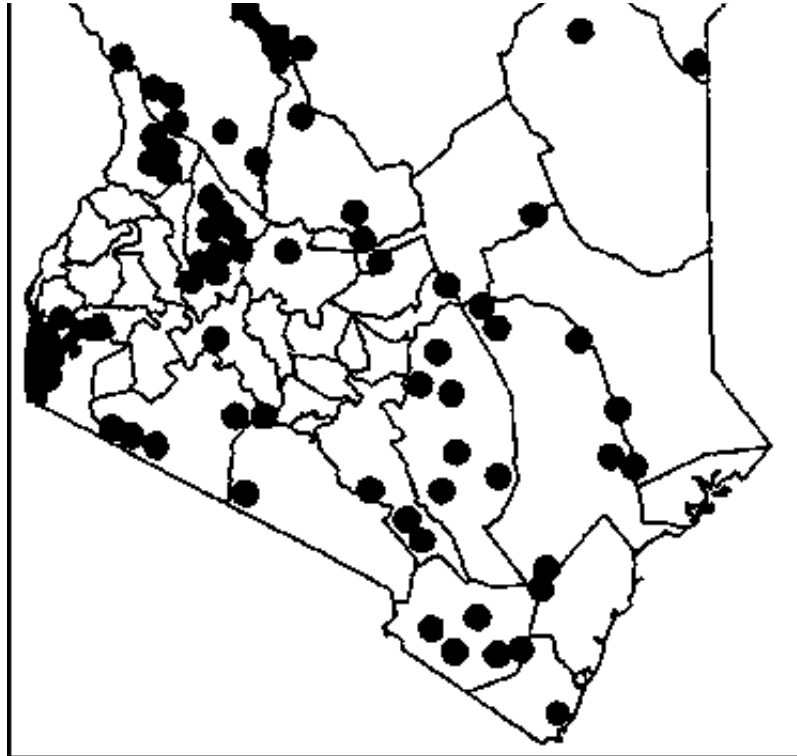
combines *M. subcordata* (Gilg) De Wolf, and *M. edulis* De Wolf putting them under *M. decumbens* (Brongn.) De Wolf. Roots of this species may be toxic if used improperly. Many species in the family Capparidaceae (Capparaceae) are known for their sweetening and flocculating (water purification) properties. Preparation, however, needs care and should be left to those with sufficient knowledge.





Figure





Figure

***Manilkara mochisia* (Baker) Dubard**

Sapotaceae

Bajun: warendi **Chonyi:** munago, nago (fruits) **Giriama:** munago, nago (fruits) **Kamba:** kisaa (Mwala), kinako (Kibwezi), kyaa **Malakote:** muwarande **Orma:** waradhe **Samburu:** ltooj **Somali:** waradhe (Tana River) **Swahili:** mtalawanda, mnago **Tugen:** noswo

Description: A tree usually 3-6 m high, or a bushy stunted shrub, often browsed back, or occasionally a tree to 30 m (once to 45 m) high. Crown open, usually narrow, with an untidy branching habit. **BARK:** Trunk bark dark grey to almost black, longitudinally fissured. Branches entwined, twigs short, light grey. **LEAVES:** Leathery, in whorls or clusters at end of branchlets. **FLOWERS:** Greenish white or cream, clustered in leaf axils. **FRUIT:** Yellow to 2 cm long.

Ecology: Found from Somalia south to South Africa and

Angola. In Kenya, e.g. in Kwale, Kilifi, Tana River, Kibwezi forest, Mwala Taita and Lamu in dry deciduous bushland and bushed grassland, especially along dry watercourses, 0-1,400 m. Sandy, light red clay and occasionally black-cotton soils. Zones IV-V.

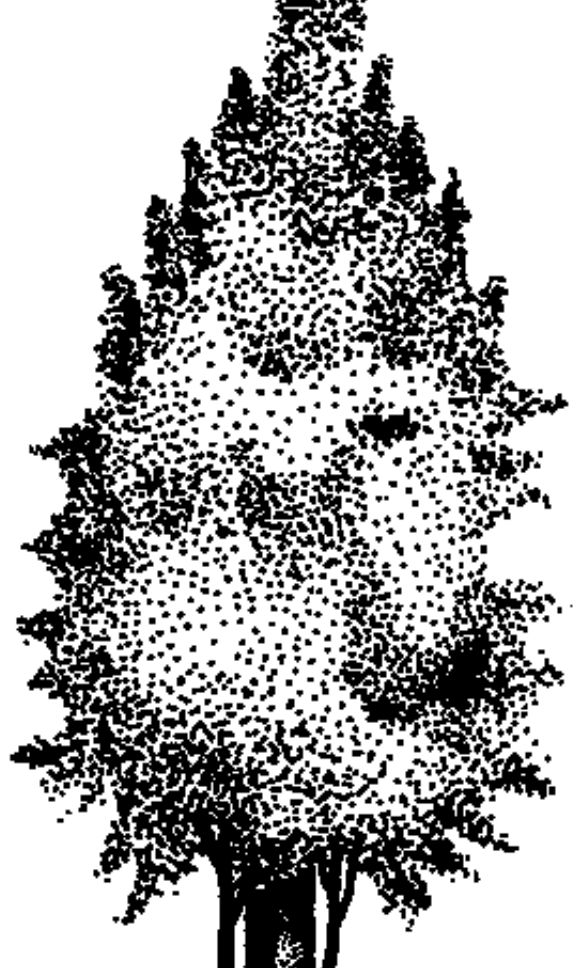
Uses: FOOD: Fruit eaten raw when ripe (++).

OTHER: Fuelwood. Wood very hard, used in the carving industry and in carpentry.

Season: Flowers in November-December in Tana River and Kilifi.

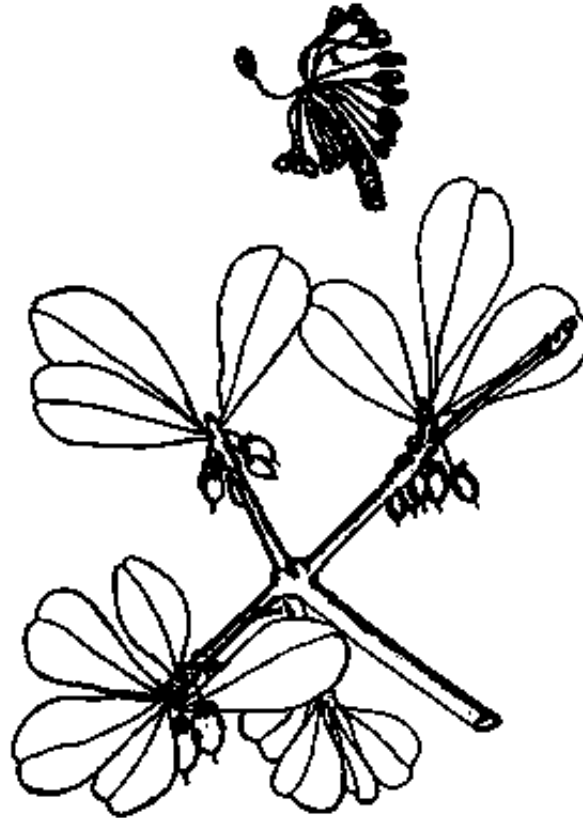
Status: Uncommon.



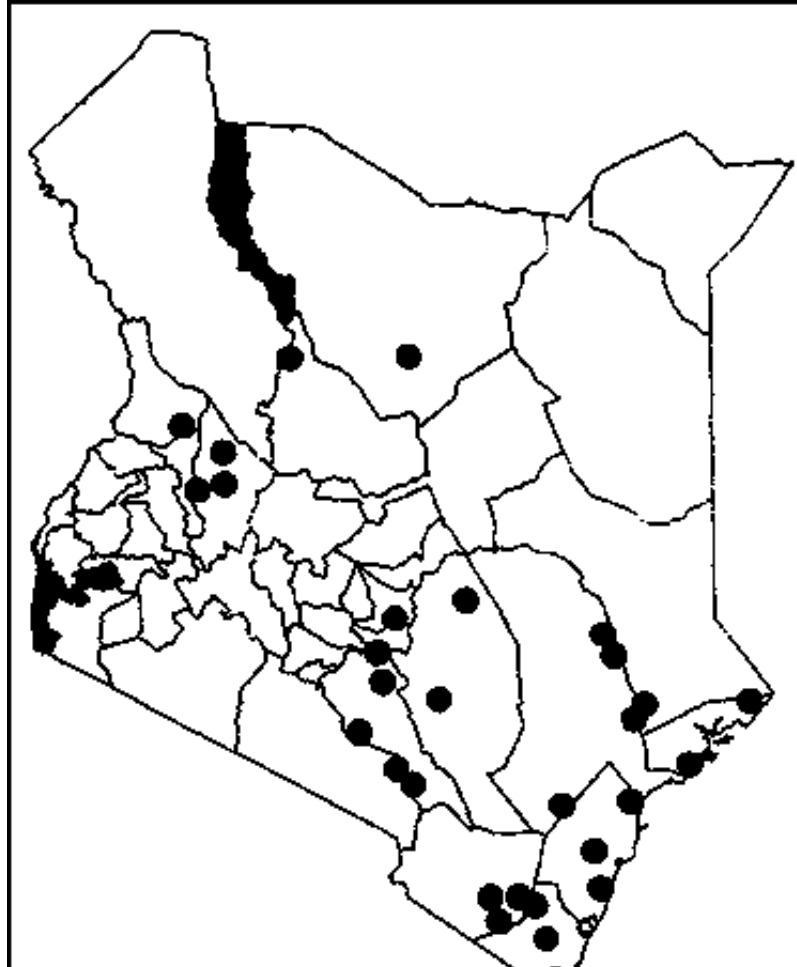




Figure



Figure





Figure

Manilkara sansibarensis (Engl.) Dubard

Sapotaceae

Chonyi: mng'ambo, mung'ambo, ng'ambo (fruit) **Digo:** mung'ambo **Giriama:** mung'ambo, mng'ambo, ng'ambo
Kambe: mng'ambo **Sanya:** doka, dhoka **Swahili:** mshonjie, mguvi, mchegi

Description: A tree usually 5-10 m with a dense crown.
BARK: Grey to almost black, fissured. **LEAVES:** Dark green, usually ovate but wider towards the apex. Leaves smaller than those of *M. mochisia*. **FLOWERS:** Cream, borne in clusters in leaf axils. **FRUIT:** Ellipsoid, to 1.8 cm long.

Ecology: Found in Kenya, Tanzania and Mozambique. In Kenya confined to the coastal region in *Brachystegia* woodland and coastal forests, e.g., Marafa, Arabuk Sokoke Forest, 0-300 m. Deep coastal red sandy soils. Zones II-IV.

Uses: FOOD: Ripe fruits have a milky sweet pulp which is eaten (+++), the seed normally being discarded.

MEDICINAL: Strips of bark are cut, pounded into powder and drunk with warm water as a remedy for pneumonia (Digo).

OTHER: Wood is used for tool handles and furniture. Strong and long lasting. Used in boat building, construction and in the carving industry. Fuelwood, shade.

Management: Propagated by seeds.

Season: Flowers in May-June, November-December and fruits in February-March and August-September in Kwale and Kilifi.

Status: Common.

Remarks: An important fruit plant of the coastal zone, often eaten in sufficient quantity to stave off hunger.



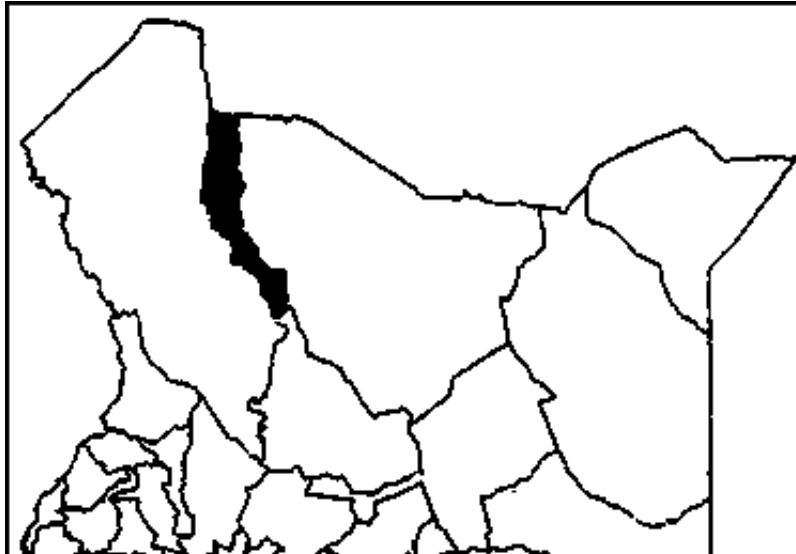
Figure

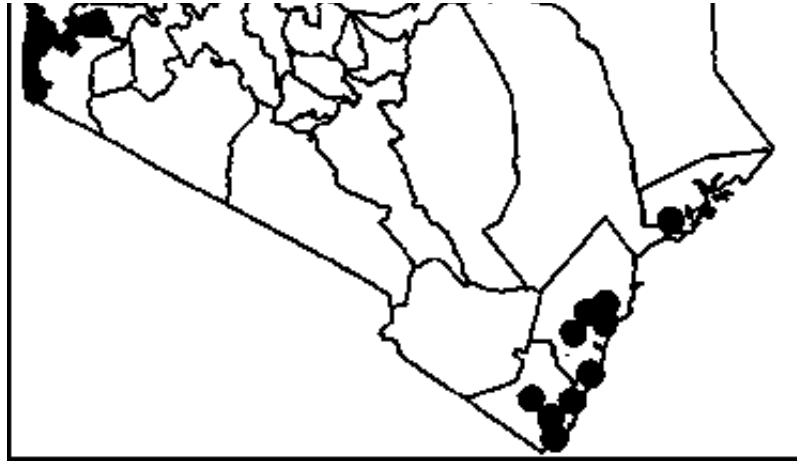






Figure





Figure

Manilkara sulcata (Engl.) Dubard

Sapotaceae

syn: *Mimusops sulcata* Engl.

Bajun: mkurati **Boni:** kuragi **Digo:** nzezi, mzezi **Giriama:**

mtsezi, mtsedzi **Sanya:** kuraga **Swahili:** mchambigi, mchedi, mcheje mume, mteweji

Description: Shrub or small tree usually 3-6 m tall. **BARK:** Grey, fissured. **LEAVES:** Small, normally clustered towards branch tips, shiny, light green, apex usually rounded and notched. **FLOWERS:** Cream. **FRUIT:** Ellipsoid, 0.8-1.3 cm long, light green turning greyish yellow on ripening. **Ecology:** Only known from the coastal region and adjacent areas in Kenya, north-eastern Tanzania, Zanzibar and Pemba. Grows in *Cynometra* thickets, coastal bushland, *Brachystegia* woodland and coastal forests, mainly sandy and especially coastal red sandy soils, 0-1,000 m. Zones III-IV.

Uses: FOOD: Ripe fruits edible and sweet (++).

MEDICINAL: Roots used to treat snake bite.

OTHER: Fruits (Malindi: Marafa) much liked by elephants. Wood is hard and used in construction, and for carvings, combs, wooden spoons, fishing rods (Giriama). Excellent fuelwood.

Management: Propagated by seed.

Season: Flowers in May-June, November-December and fruits in February-March and August-September in Kwale and Kilifi).

Status: Common.

Remarks: Most *Manilkara* species in Kenya have edible fruit. Fruits are sweet and much liked despite their usually small size. Other notable species are:

- *M. discolor* (Sond.) J. H. Hemsel, a dry forest, usually riverine, tree to 20 m with a dark grey bark. Leaves clustered towards the end of branchlets. Flowers

yellow, in clusters. Found in northern, central and southern parts of Kenya.

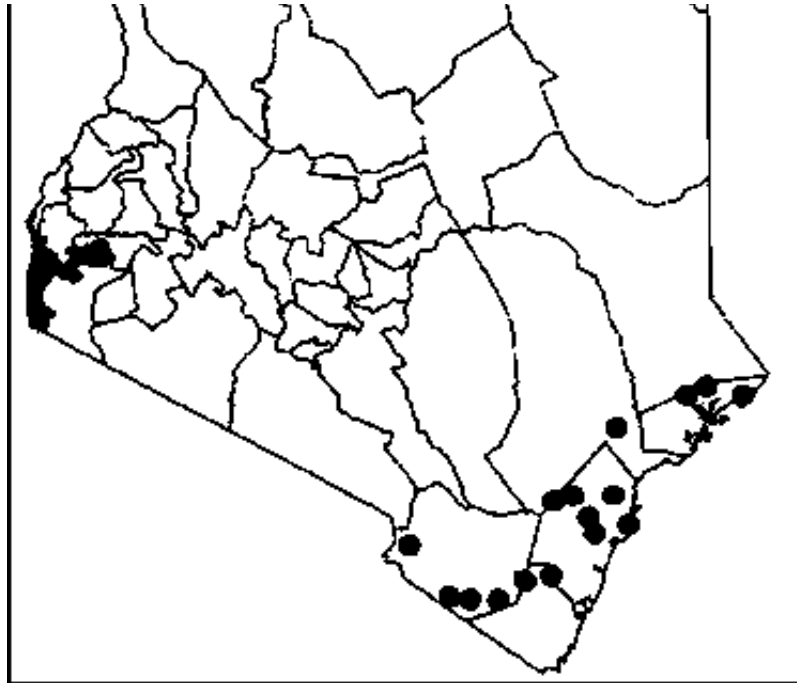
- *M. butugi* Chiov. is a tall upland and western Kenya forests or riverine tree species, usually with spreading crown, a straight bole and relatively large fruit. Found in central and western parts of Kenya and in Uganda, south Sudan and Ethiopia.





Figure





Figure

Meyna tetraphylla (Hiern) Robyns

Rubiaceae

Borana: qaaleda **Chonyi:** mtamba-kiko **Giriama:** mtamba-kiko **Kamba:** kitotoo, kitootoo, kakomoa, kitolousuu **Kambe:** tamba-kiko **Malakote:** mubururi **Marakwet:** tiling'wo (singular), tiliny (plural) **Orma:** bururi **Pokot:** tiling'wo, tiling (plural) **Rendille:** yeho **Samburu:** Ikiremichoi, leturmet **Tharaka:** mukurungu, ngurungu (fruit) **Tugen:** tilingwo, tilinyek (fruit) **Turkana:** esugumaran

Description: Spiny shrub 2-4 m high with ascending branches and a narrow crown or, rarely, a liana. **BARK:** Grey-brown. Stems armed with strong paired spines above leaf nodes. **LEAVES:** Yellow-green, slightly glossy. **FLOWERS:** Cream to green, densely clustered in leaf axils. **FRUIT:** A more or less round 5-angled berry up to 2 cm across.

Ecology: Found in East Africa, southern Ethiopia, Somalia and

Comoro Islands. In Kenya, e.g. at Endau (Kitui), Kaputir (Turkana), Nginyang (Baringo) and Samburu, 0-1,100 m. Riverine bushland and along dry watercourses in dry country. At the coast, in bushland. Mainly rocky and sandy soils. Zones: III (coast)-VI.

Uses: FOOD: Fruit edible, sweet (+++), (Pokot, Turkana, Samburu, Boran, Kamba). Much liked by pastoralists.

MEDICINAL: Root decoction given to pregnant women to ease pain (Pokot) and to protect them against bad spirits. Crushed leaves are applied to infected hooves of animals.

OTHER: Camel and goat fodder.

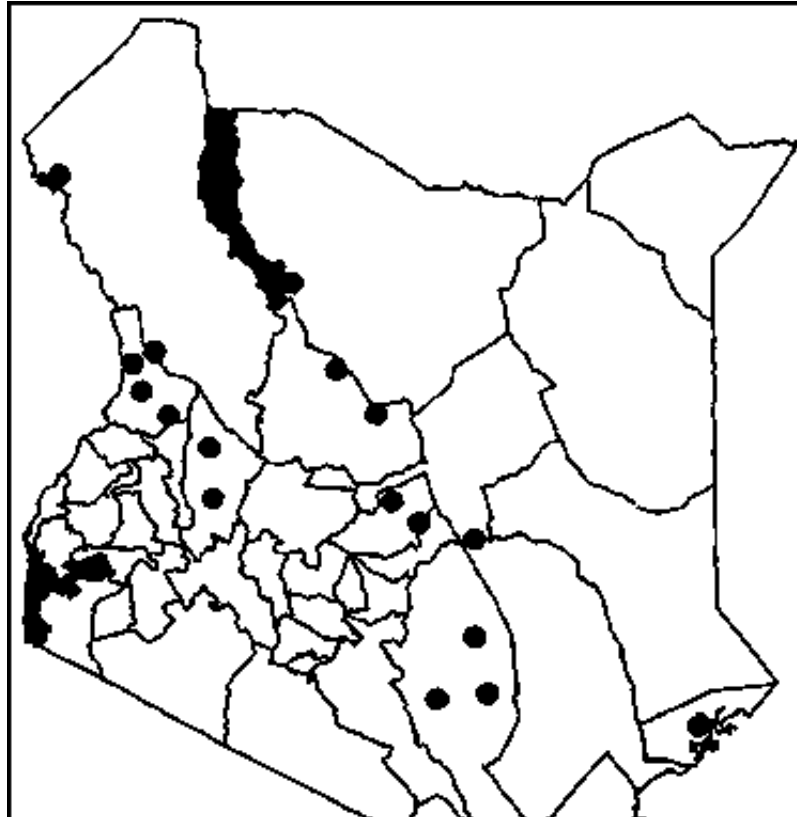
Status: Occasional.

Remarks: Two subspecies are recognized:

- *ssp. comorensis* (Robyns) Verdc. The more common of the two, and
- *ssp. tetraphylla* only found at 1,000-1,400 m. The latter subspecies is recognized by its densely hairy flower stalk and grey-green leaves and it is only found in northern Kenya.



Figure





Figure

Mimusops fruticosa Bojer

Sapotaceae

Borana: denyo **Chonyi:** mng'ambo-kapehe **Giriama:** mng'ambo-kapehe, mtsami **Kambe:** mng'ambo-kapehe **Luhya:** ekiragai **Malakote:** munugau **Orma:** qolati **Sanya:** badhesa **Somali:** kolati (Tana River) **Swahili:** mng'ambo kope, mnguvi

Description: Large tree to 15 m or more or, rarely, a shrub and resembling *Manilkara sansibarensis*. **BARK:** Dark grey,

rough. **FLOWERS:** Cream. **FRUIT:** Orange to red to 2.5 cm in diameter.

Ecology: Grows in eastern and southern Africa. In Kenya confined to the coastal areas in dry coastal forests, bushland and near sand dunes. Zone IV.

Uses: FOOD: Fruits eaten.

OTHER: Timber tree; stems used for spear shafts; fuelwood.

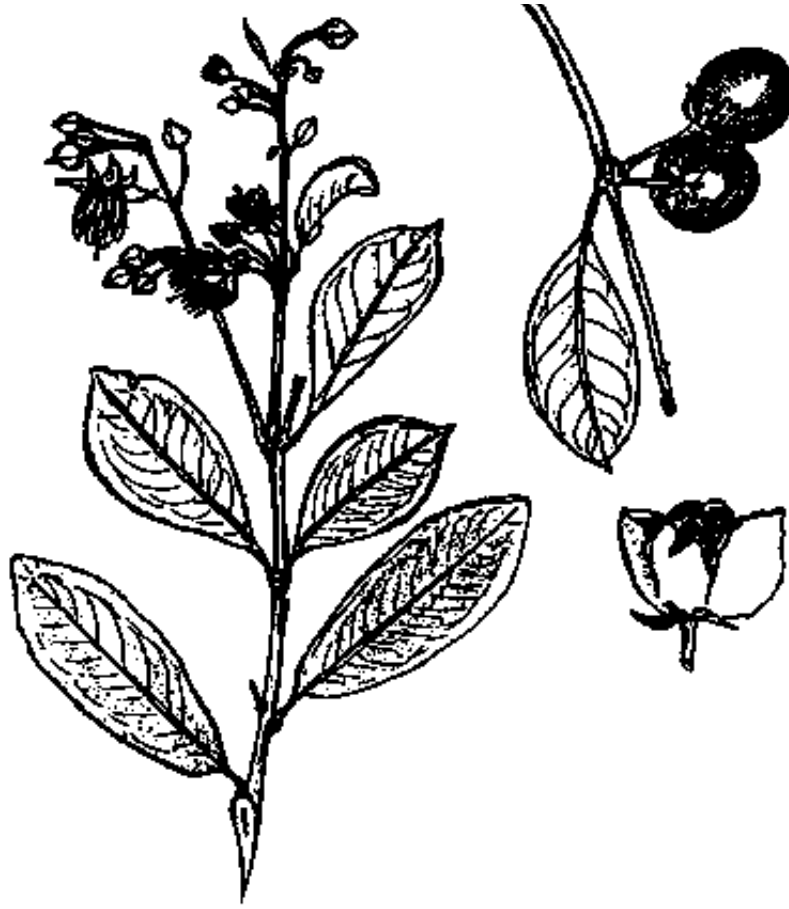
Remarks:

- *M. somaliensis* Chiov. (syn. *M. schliebenii* Mildbr. & G. M. Schuize) is a medium-sized tree with leaves clustered at the end of shoots. Fruit are good to eat. Found in coastal Kenya and Tanzania only. A good fruit, fuelwood and timber tree.

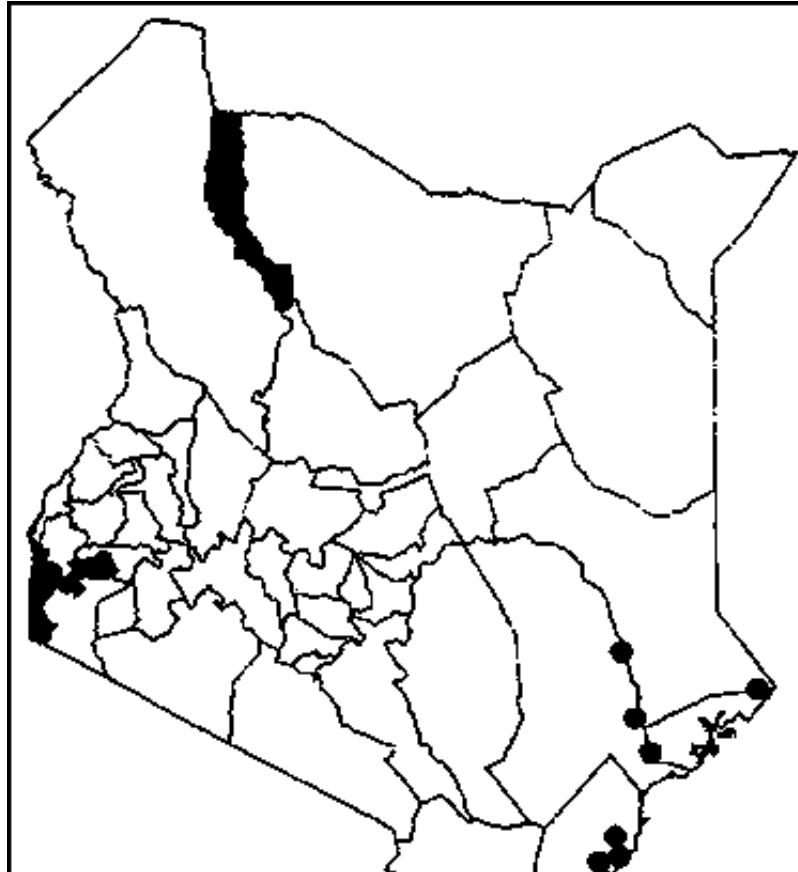
The related genus, *Synsepalum* (formerly *Pachystela*) also has members with edible fruit:

- *S. brevipes* (Baker) Pennington (syn: *Pachystela brevipes* (Baker) Engl.) (Giriama: *mtsami*, Swahili: *msamvi*, Luo: *kang'o*) is an evergreen tree with dense clusters of cream flowers and pointed orange or yellow fruit to 25 mm long.
- *Synsepalum msolo* (Engl.) Pennington (syn: *Pachystela msolo* (Engl.) (Giriama: *mtsami*, Digo: *mtsami*) is a tree with long stipules on the branches and is found in riverine forests. Fruit nearly spherical, to 25 mm long.





Figure





Figure

Mimusops kummel A. DC.

Sapotaceae

Kikuyu: mugumo-ciano **Luo:** nyabondo **Maa:** olkirenyi
Mbeere: mugumo-ciano **Pokot:** pusyoon, chemalokutan

Description: A shrub, or more often a tree, usually 4-8 m, occasionally much higher. **BARK:** Dark grey. **FLOWERS:** White, scented. **FRUIT:** Orange to red, ellipsoid to 2.5 cm long. The plant exudes a white latex when bruised.

Ecology: From Eritrea and Ethiopia to West Africa. In Kenya,

e.g. in Baringo, Kiambu, Ngong Forest (Nairobi) in riparian vegetation and dry forests, 500-2,250 m. Zones II-III.

Uses: FOOD: Fruit is edible, sweet (+). Inner bark used for tea (Pokot).

OTHER: Wood used in construction and as fuelwood.

Status: May be locally common.

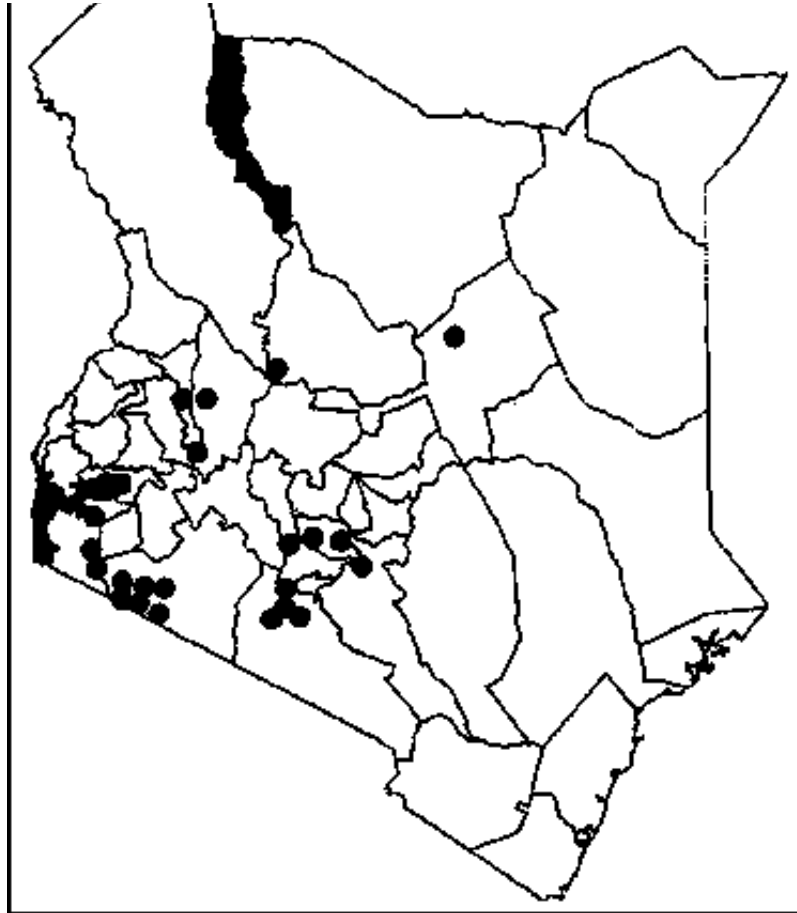
Remarks: As in the related genus, *Manilkara*, many of the members of this genus in Kenya have edible fruits.





Figure





Figure

Momordica rostrata A. Zimm.

Cucurbitaceae

Kamba: kiongoa, kyongoa **Kikuyu:** rukiri **Maa:** olamposhi, enkamposhi **Mbeere:** king'ong'oya

Description: A climbing or trailing plant arising from a tuberous rootstock often seen exposed above ground, the exposed part usually green to dark grey and narrowing to the stem. Stems weak, narrow and green when young, turning grey-white when older, bearing simple tendrils. **LEAVES:** Divided into three leaflets which are further divided into several other leaflets not necessarily arising from the same point. **FLOWERS:** Dioecious. **FRUITS:** Ovoid, 3-7 cm long by 2-4 cm wide and beaked, usually with 8 longitudinal ridges,

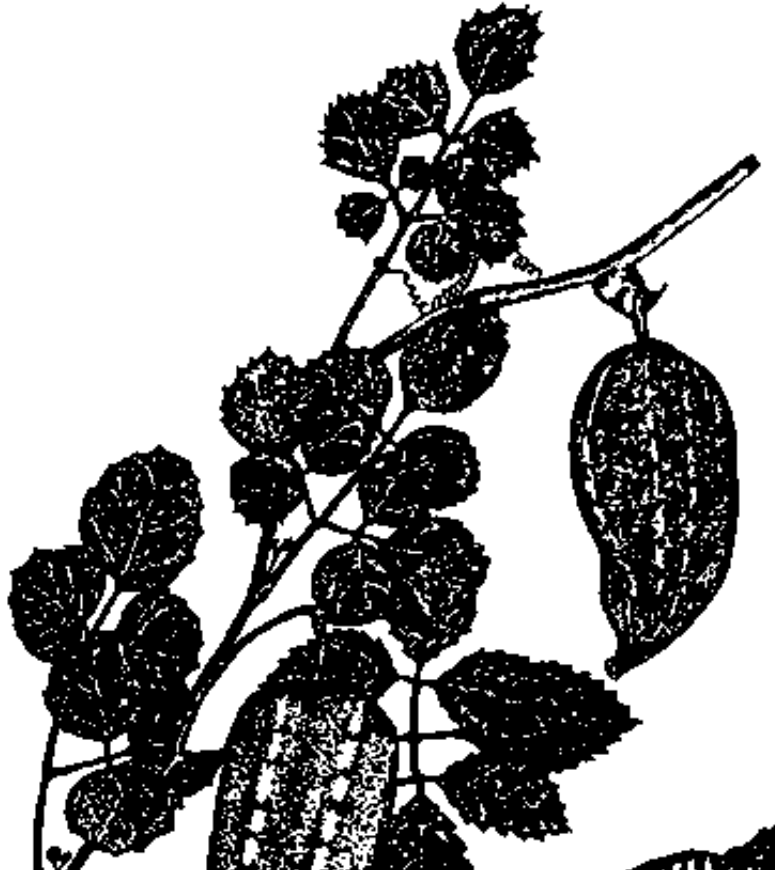
fleshy, bright red when ripe. Seeds brown to brownish black, embedded in a yellow pulp.

Ecology: Grows in northern Uganda, northern Tanzania, Ethiopia and Kenya. In Kenya, e.g. at Elang'ata Wuas (Kajiado), Embu, Machakos and Kwale in *Acacia-Commiphora* bushland and thickets and wooded grassland. Soils mainly red clay but also sandy and even black cotton. Zones IV-VI.

Uses: FOOD: Ripe fruits are edible (Maasai, Mbeere, Samburu) (++). Young leaves are picked and used as a vegetable, while the seeds may be roasted and eaten. Leaves may also be mashed with maize and pulses (Mbeere). Leaves do not last for long on the plant and are lost soon after the onset of the dry season.

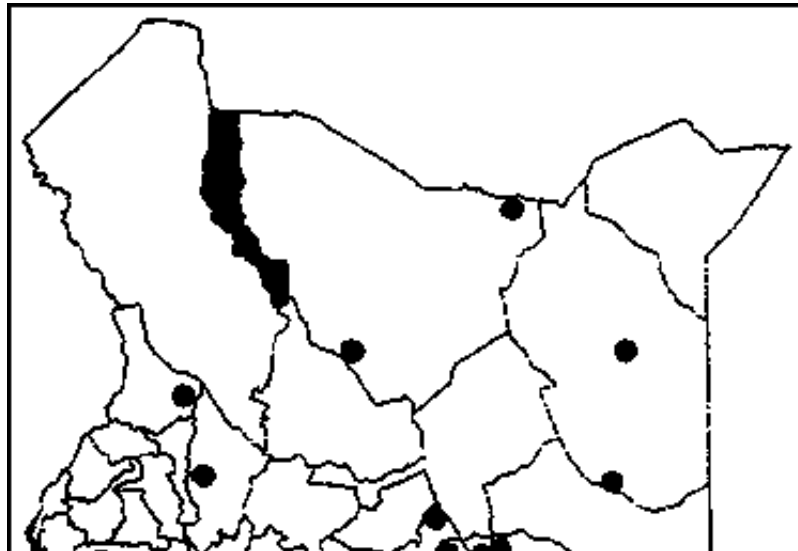
OTHER: The tuber was used as soap in the past (Kamba, Mbeere).

Status: Occasional.





Figure





Figure

Mondia whitei (Hook. f.) Skeels

Asclepiadaceae

syn: *M. ecornuta* (N. E. Br.) Bullock

Kikuyu: muhukura **Luhya (Bukusu):** kumokombera **Luhya**

(Marachi): omugombera **Luhya** (Marama): omukombera
Luhya (Tachoni): omikobela **Luo:** ogombo

Description: A trailing or climbing plant with thin hairy stems. **LEAVES:** Large, opposite, softly hairy and heart-shaped or nearly so. Roots yellow and strongly aromatic. Stems, roots and leaves exude a white latex. Roots may spread out just beneath the ground surface covering large areas.

Ecology: Tropical Africa. In Kenya, may be found in Kakamega Forest, Busia, Bungoma, Murang'a at forest edges, especially *Markhamia lutea* woodland and riverine vegetation, 1,500-2,000 m. Common under trees on soft ground with plenty of humus. Zones I-III.

Uses: FOOD: The fleshy bark of the narrow roots is eaten raw or occasionally in the dried state (Kikuyu, Luhya, Nandi, Luo)

for its good taste, as an appetizer (Luhya), to freshen the mouth (Luhya, Kikuyu) and for pleasure (Kikuyu). The root tastes rather hot and bitter at first then slightly sweet later. It leaves a persistent spicy taste in the mouth which is easily recognized. The root may be dried, stored and eaten when desired.

MEDICINAL: Roots used for gonorrhoea and said to cause profuse urination (Maasai). Roots chewed as an aphrodisiac and a cure for impotence (Luhya, Kikuyu) and by women to contract the uterus after delivery (Kikuyu).

OTHER: The woody middle part of thicker roots is reported to be used as a toothbrush.

CULTURAL/BELIEFS: Roots chewed for good luck (Luhya) before setting out to perform a difficult task.

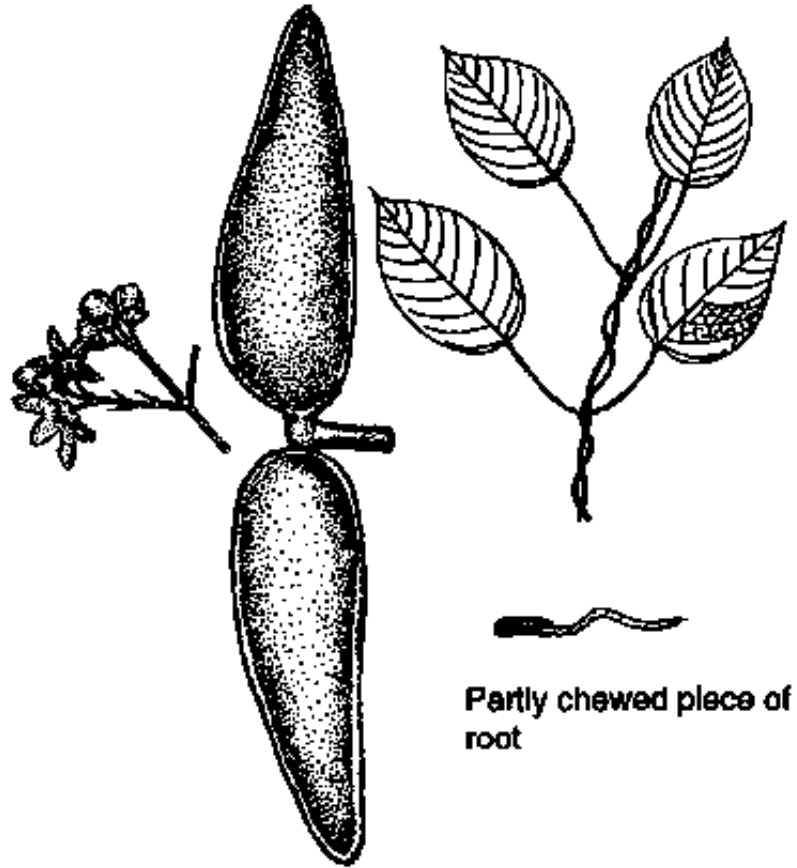
COMMERCIAL: A species with the potential for commercialization. Roots reportedly sold in Western, Nairobi and Central Provinces.

Status: Nowadays generally rare, mainly because of destruction of its habitat and over-exploitation.

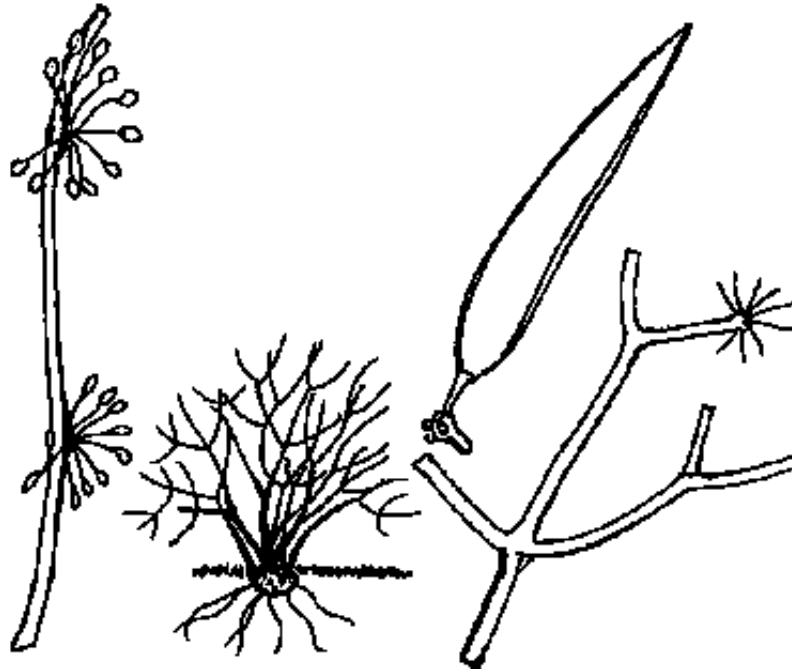
Remarks: Several species in this family have stem parts that are chewed, mainly by pastoral groups, for their taste and water content. Several *Caralluma* species and *Sarcostemma viminale* (L.) R. Br. have succulent edible stems. *S. viminale* (Maa: *ol'loilei, endepeu*, Pokot: *cheporewo, mosolion*, Samburu: *loiyei*, Kipsigis: *ngolinyit, ngololiet*, Luo: *ohao*, Turkana: *eligo, egis*) is a scrambling, usually leafless plant often confused with *Euphorbia* species. Stems are green, narrow, smooth, sometimes twining and with a milky juice. Flowers are cream, borne in a cluster. Widely distributed in Kenya and the rest of Africa, also in Asia. **Habitat:** Rocky, dry

areas especially *Acacia-Commiphora* bushland on rocky ground and along dry streams. Altitude: 0-2,000 m. **Uses:** The young soft stems are chewed and may be swallowed. In older stems, only the juicy extract is swallowed (Turkana, Pokot, Maasai, Luo, Samburu, Somali, Boran). Stems have an acid taste.

MEDICINAL: Roots are used for the treatment of gonorrhoea (Maasai). **Status:** Common. **Remarks:** A variable species with several subspecies in Kenya.

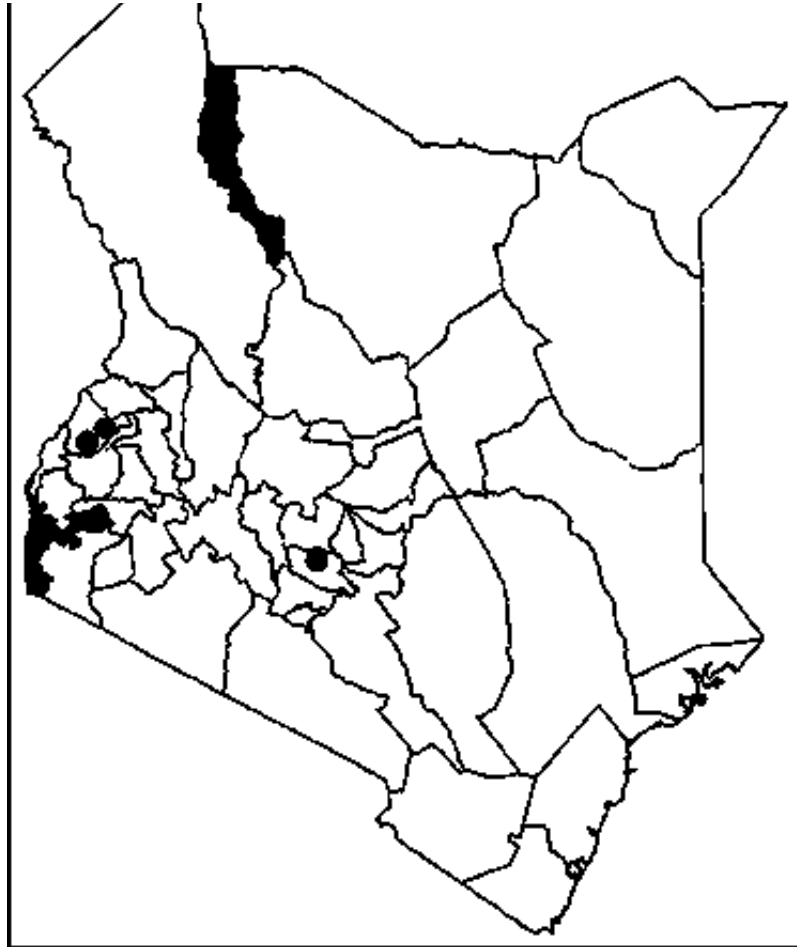


Figure



Sarcostemma viminale





Figure

Moringa oleifera Lam.

Moringaceae

syn: *M. pterygosperma* Gaertn.

English: ben oil tree, horseradish tree, moringo, drumstick tree
Swahili: *mrongo, mzunz.e* **Chonyi:** *mzungwi*
Daasanach: *hocholoch* **Giriamma:** *mzungi, muzumbwi, muzungwi*
Kambe: *mzungwi* **Tharaka:** *muguunda* **Sanya:** *mzungwa*

Description: A usually deciduous tree 4-6 m or higher, roots tuberous, bark whitish grey, wood soft and branches drooping. Capsules to 30 cm or more, splitting into three valves. Seeds brown, 3-winged.

Ecology: This species is native to northern India but it is cultivated throughout the tropics, especially in arid areas. It is a very drought-resistant and valuable tree, grown at the coast, Makindu and drier parts of the country. Prefers sandy soils. 0-1,450 m. Zones III-VI.

Uses: FOOD: The leaves of the horseradish tree are used as a vegetable (Mijikenda) while the tender young capsules (drumsticks) are a delicacy, especially among the Asian community. An oil may be extracted from the seeds. Immature seeds can be used like green peas. Planted by the Mijikenda who use the leaves as a vegetable. Normally mixed with other vegetables. Leaves have a slight odour. To prepare the vegetable, remove the small leaflets from the main branch by pressing on the branchlet between the fingers and pulling. Mix the leaves with cowpea leaves (*tsafe*), *kimbiri* (*Oxygonum salicifolium*), *kiswenya* (*Amaranthus dubius*) and *talakushe* (*Asystasia gangetica*). *Kiswenya* and *tsafe* are normally cut

into small pieces. Boil, add salt and serve. The vegetable may also be fried (Mijikenda). Cooking is normally brief.

MEDICINAL: The plant is said to cure impotence (Tharaka).

OTHER: Seeds are used in water purification.

Management: *M. oleifera* Lam. is propagated by large stem cuttings, by seeds and also roots. Germination from seeds ranges from a few days to 2 weeks. It is often used as a living fence in coastal homesteads.

Remarks: Root bark contains poisonous alkaloids, so care should be taken in its use as food and medicine. It is said to cause dizziness (*kisuzi*, Mijikenda).

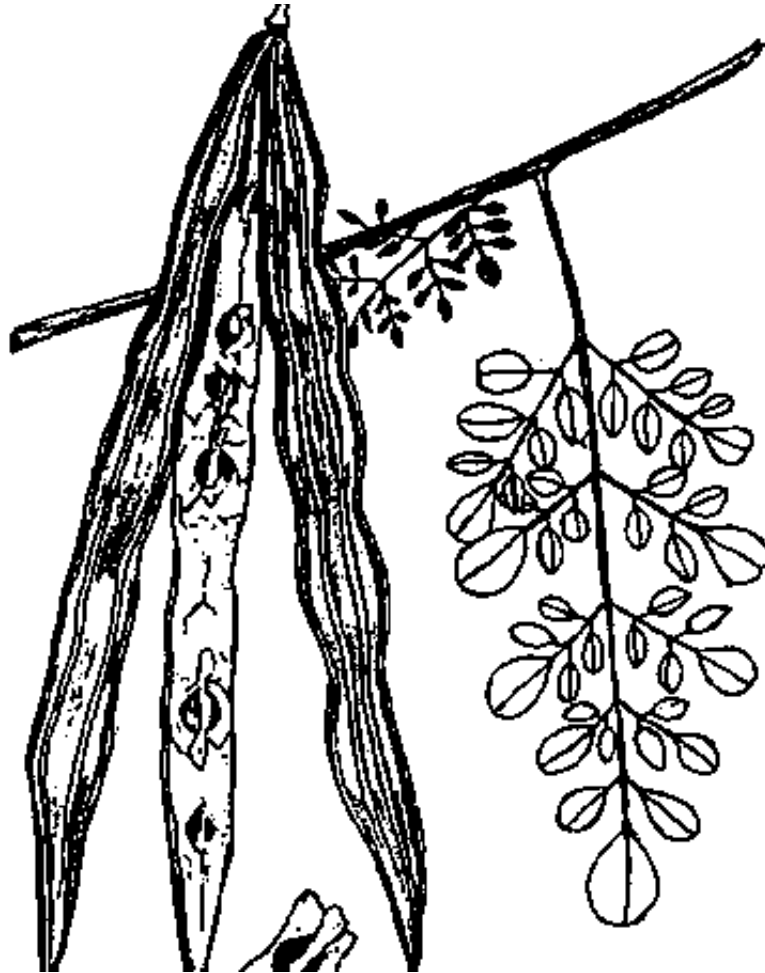
A related indigenous species is *M. stenopetala* (Bak. f.) Cuf. (Daasanach: *hocholoch*, English: horseradish tree, Somali: *mawa* (Mandera), *mrongo*, Tharaka: *muguunda*).

Description: Tree up to 9 m with smooth bark and soft branches. **LEAVES:** Compound, 2-3 pinnate, alternate. **FLOWERS:** Parts in fives, sweet-scented, white, numerous in lax inflorescences. **FRUIT:** Long, pod-like, reddish with a grey bloom, dehiscing to release seeds that are 3-winged. Ecology: Found in Ethiopia and Kenya. In Kenya, e.g. in Baringo, Marsabit and Turkana. Riverine, especially in sandy areas with a high water-table. Zones V-VI.

Uses: FOOD: It is thought that this species, like its relative *M. oleifera*, may have potential as a food plant. The pod-like fruits and the leaves may be used as a vegetable. Reportedly used as a vegetable in Mandera and in Ethiopia by the Konso. Seeds are used for purifying muddy water (Somali).

MEDICINAL: Roots are medicine for stomach-ache and infertility (Somali, Mandera).

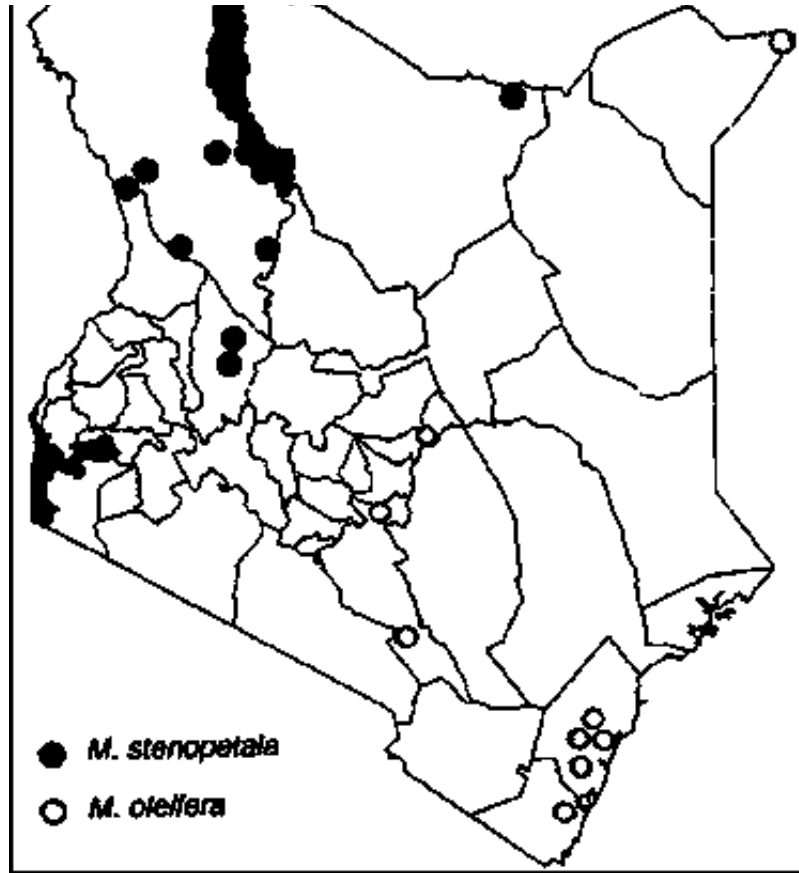






Moringa stenopetala





Figure

Myrianthus holstii Engl.

Moraceae

English: giant yellow mulberry **Kikuyu:** mutuya

Description: A medium-sized or large tree to 20 m, often with stilt roots, and branching close to the ground into several branches. **BARK:** Brown, exuding a watery sap that turns black. **LEAVES:** Large, digitate or deeply digitately lobed into 5-7 segments. Leaflets often serrated, veins very conspicuous underneath, softly hairy, almost without a stalk. **FLOWERS:** Inflorescences dioecious, borne in leaf axils. **FRUIT:** Compound, rough, resembling a pineapple or custard apple (*Annona cherimola*, Swahili: *mtomoko*), fleshy, to 6 cm across, yellow to orange when ripe. Seeds embedded in pulp.

Ecology: Found in East, Central and southern Africa. In Kenya only found in the central zone such as Mt Kenya, Nyambene Hills, and in Murang'a, Kiambu and Meru in highland forests, especially on forest edges and near watercourses, 900-2,400 m. Zones I-II.

Uses: FOOD: Fruit pulp surrounding seeds edible (+++) (Kikuyu, Meru). It has a slightly acid taste.

COMMERCIAL: At one time (1930s) sold in some local markets in Central Province.

Status: Rare.

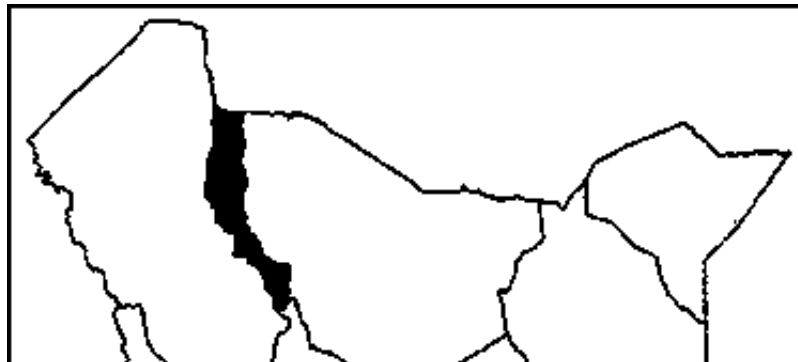
Remarks: *M. arboreus* is a related species usually with bigger fruits. It is found in Uganda, Tanzania and westwards to Guinea. The name mulberry is used for *Moms alba* L. an exotic plant in the same family introduced from Asia and now widely

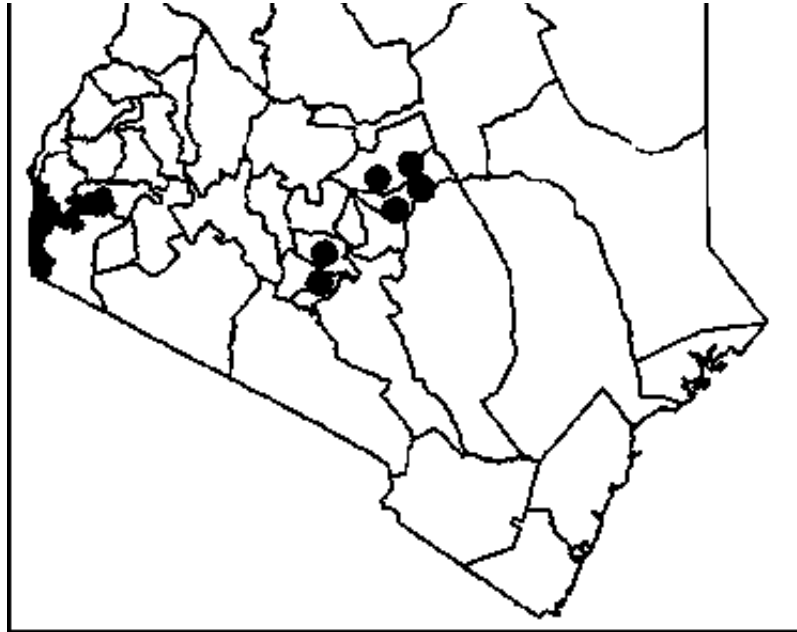
planted in homesteads and in cropland (Kikuyu: *ndare*, Kamba: *ndae*-these local names are derived from those of *Rubus* spp. which have similar fruits). Muberry grows easily from cuttings. The ripe dark-red-to-black fruits are a favourite with children and birds. The plant is commonly used as a food for silkworms.





Figure





Figure

***Nymphaea nouchali* Burm. f. var. *caerulea* (Savigny)
Verdc.**

Nymphaeaceae

syn: *N. caerulea* Savigny, *N. capensis* Thunb.

Chonyi: chirunji **Digo:** toro **English:** water lily, blue lotus of Egypt, blue water lily **Giriama:** kirunji, t(h)oro (tubers), gune (tubers) **Kambe:** chirunji **Kikuyu:** marera **Luo:** yunga **Sanya:** gune (tuber) **Somali:** qomisho (tuber), sobagel (fruit), bocore **Swahili:** myungiyungi **Tugen:** narogeki **Turkana:** nkuram

Description: A large-leaved weak-stemmed aquatic herb to 1.2 m high arising from tuberous rhizomes. Stems dark red. **LEAVES:** Floating, often heart-shaped with an almost round shape and smooth or toothed margin. Green and smooth above, wholly or partly blotched greenish purple below. **FLOWERS:** Usually blue, occasionally pink to white. **FRUIT:** To 4 cm in diameter, almost round.

Ecology: From Egypt and Sudan south to South Africa and also in West Africa. Widespread in Kenya in seasonally flooded depressions, rivers, reservoirs and ponds. Cultivated as an ornamental, 0-2,700 m.

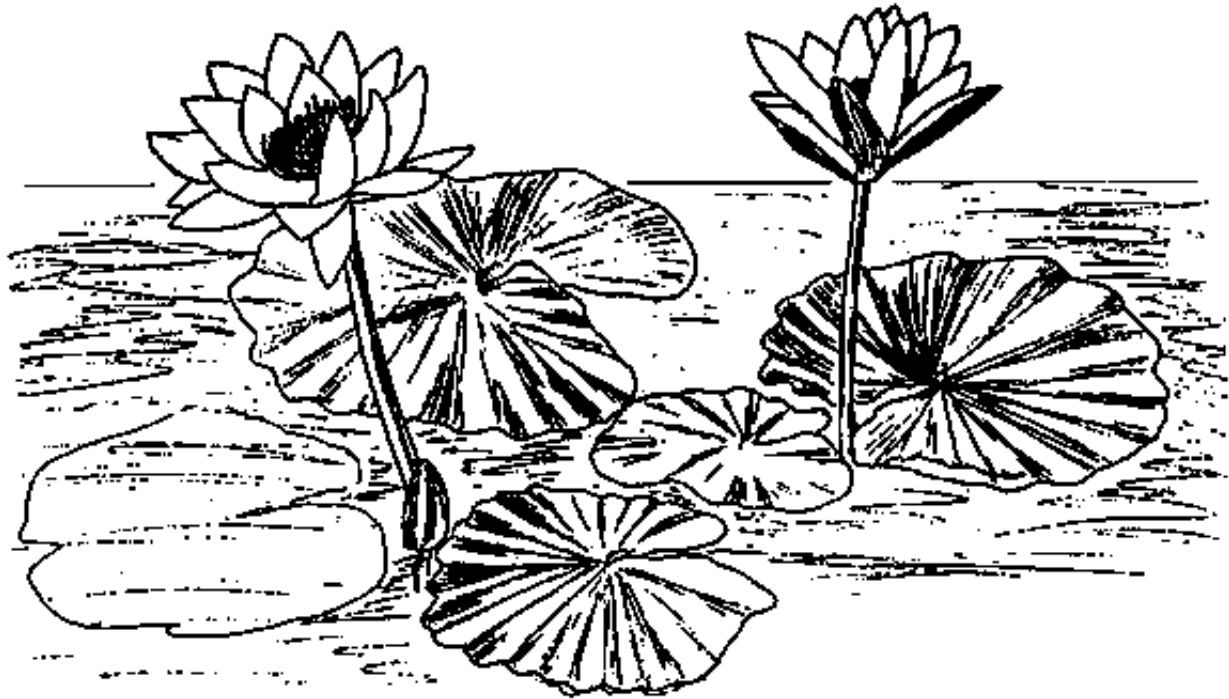
Uses: FOOD: The tuberous rhizomes are edible (+) (Turkana, Pokot, Giriama, Tugen). Eaten fresh, boiled or roasted. Normally used with milk (Turkana). Tubers may be boiled and stirred to a viscous mixture and eaten. Maize or sorghum flour may be added and cooked together. Boiled tubers may be mashed and ghee added. The dried tubers may be ground into flour and stored (Turkana, Somali, Pokot). When a pond dries out, the tuber (*dale* - Somali), which is enclosed in a hard coat, is cracked, eaten fresh or boiled (Somali). Fruit and seeds are edible (Pokot, Somali). Flowers eaten in certain ceremonies (Tugen).

FOOD/MEDICINAL: Rhizomes are chopped up with the

flowers, mixed with honey and then chewed as a remedy for kidney problems (Digo).

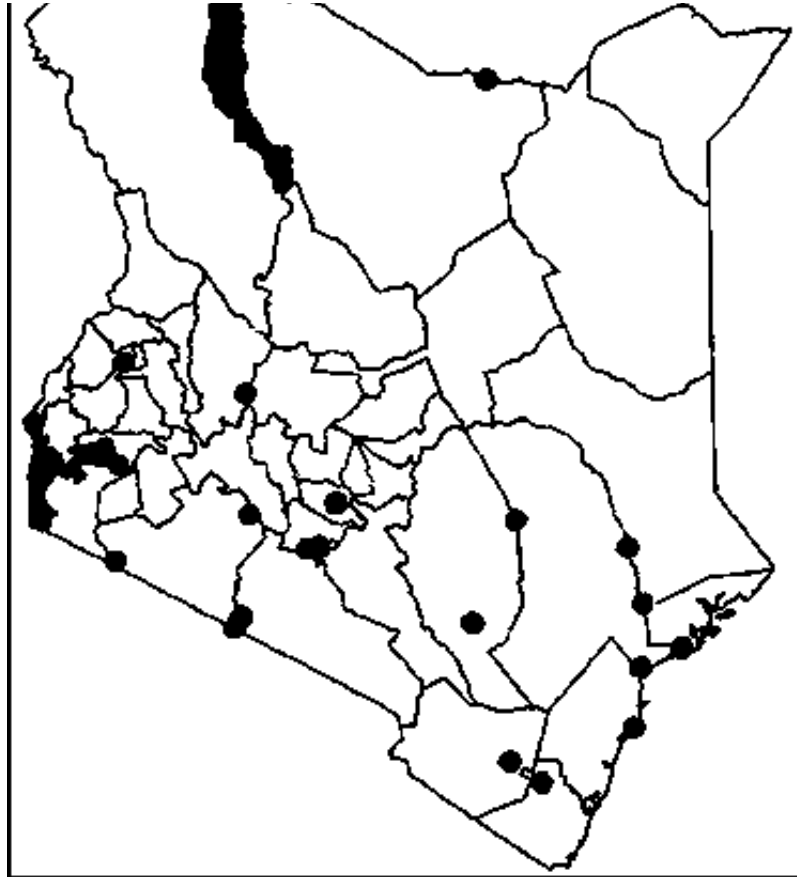
OTHER: Ornamental.

Remarks: Variety *zanzibariensis* (Casp.) Verdc., syn: *N. zanzibariensis* Casp. is found at the coast in Kenya and Tanzania, Zanzibar, Pemba, Mozambique and South Africa. Other varieties exist outside Kenya. Another water lily used as food in the same manner is *N. lotus* L. (English: white lotus, winter lotus, Luo: *yunga*) which is much like *N. nouchali* but with white-to-cream flowers and toothed leaves which have a sharp point at the tip (mucronate). Widespread in Kenya, tropical Africa and South America. The species is used as food in many parts of Africa and Asia. An important plant in ancient Egypt, symbolizing love. A number of exotic *Nymphaea* species are cultivated in ponds as ornamentals and should not be confused with the above.



Figure





Figure

Oxygonum sinuatum (Meisn.) Dammer

Polygonaceae

Chonyi: chimbiri **Giriama:** kimbiri, mchetwatongo **Kamba:** song'e **Kambe:** chimbiri **Kikuyu:** cong'e **Luhya (Bukusu):** namawa, echirikukwai, nabikumba **Luo:** awayo, okuru, nyatiend-gueno **Maa:** enkaisijoi, echunge **Marakwet:** mendiril **Mbeere:** cong'e, ng'onge **Pokot:** chementril, emeworil **Samburu:** njunge, nchunge **Swahili:** kindri, bamba **Taita:** makongo **Turkana:** apadita

Description: An erect or prostrate herb 20-40 cm high. Stems green to reddish brown. **LEAVES:** With bases sheathing round the stem, usually obovate to elliptic with deep lobes and usually with bristles at base of leaf stalk. **FLOWERS:** Borne on

a long inflorescence to 25 cm, white to pink. **FRUIT:** Angled with three sharp prickles.

Ecology: Widespread in Kenya and also in Uganda, Tanzania, Sudan, the Democratic Republic of Congo (Zaire) and Ethiopia. A common weed in cultivation, waste places, roadsides and in grassland, 0-2,400 m. Common on poor sandy soils. Zones I-VI.

Uses: FOOD: Leaves boiled as a vegetable (+) (Kamba, Luo, Luhya). Leaves eaten raw for their acid taste (Luo, Maasai).

MEDICINAL: Leaves used for *muimu* (boils) (Kamba, Kitui) and stems chewed for tonsillitis (Kikuyu). Juice squeezed from leaves used in eye treatment (Kikuyu).

Remarks: The coast species, *Oxygonum salicifolium* (Giriama: *kimbiri*) is widely used by the Mijikenda as a leafy vegetable. It

is normally mixed with *Amaranthus* spp. (*kiswenya*) to improve its taste.





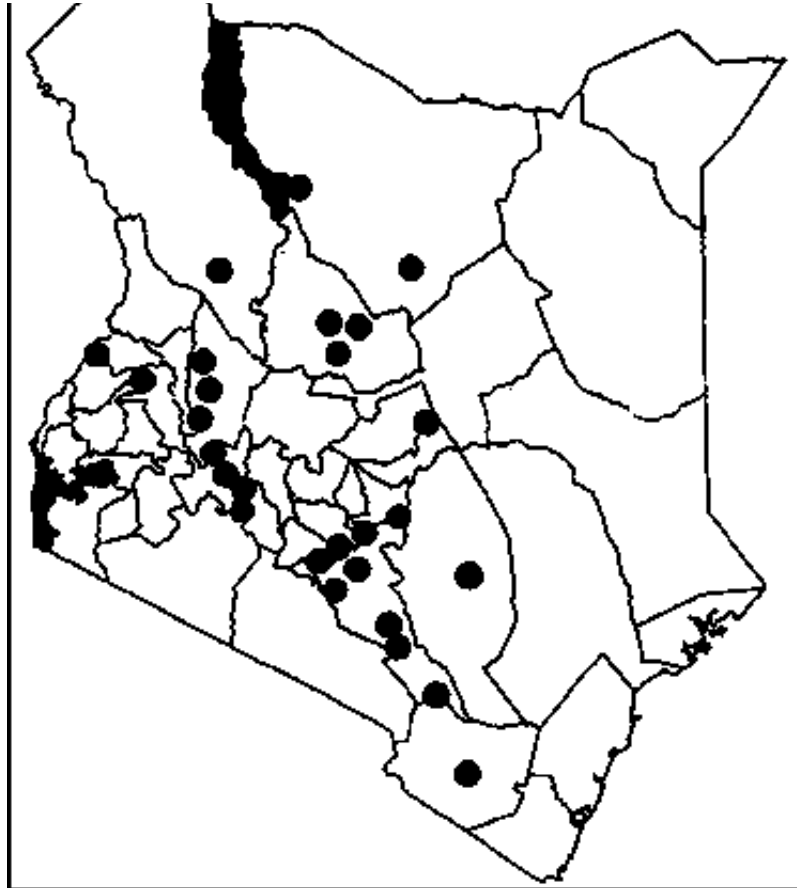
Oxygonum salicifolium





Figure





Figure

Pachystigma schumannianum (Robyns) Bridson & Verdc.

Rubiaceae

syn: *Tapiphyllum schumannianum* Robyns, *Rytigynia tomentosa* (K. Schum.) Robyns

Embu: mtogotogo **Kamba:** kitootoo (Kitui), mukomole (Machakos), ngomole (fruit), ndootoo (fruit)

Description: Much branched narrow shrub up to 3-4 m high. Main branches ascending, each with numerous short lateral branches. **LEAVES:** Light green and hairy. **FLOWERS:** Cream. **FRUITS:** To 1.5 cm across, green, turning soft and yellowish brown on ripening.

Ecology: Found in northern Tanzania and in coastal and south-eastern Kenya, e.g. at Ngong Hills, Masii (Machakos), Makueni, Kitui, Embu, Tharaka and Taita in *Combretum* bushland, bushed grassland, 1,000-2,000m. Commonest at about 1,400 m on sandy and red soils. Rainfall: 500-700 mm. Zones IV-V.

Uses: FOOD: Ripe fruits edible (occasionally eaten unripe). Seeds discarded. Fruits sweet.

OTHER: Smoking stems inserted in milk gourds to impart a good flavour to milk (Kamba).

Season: Fruits in February-March in Kajiado and Machakos.

Status: Locally common.

Remarks: Two subspecies are recognized:

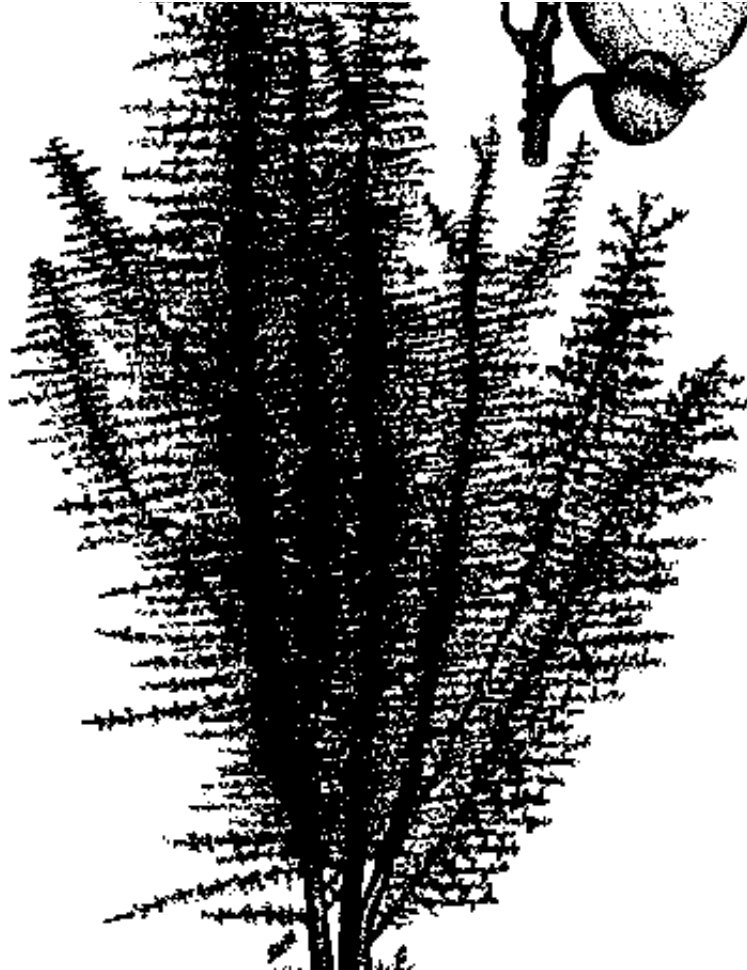
- *ssp. schumannianum* with smaller leaves found west of Ngong to northern Tanzania only.
- *ssp. mucronulatum* (Robyns) Bridson & Verdc. with larger more hairy leaves and found only in coastal and south-eastern parts of Kenya.





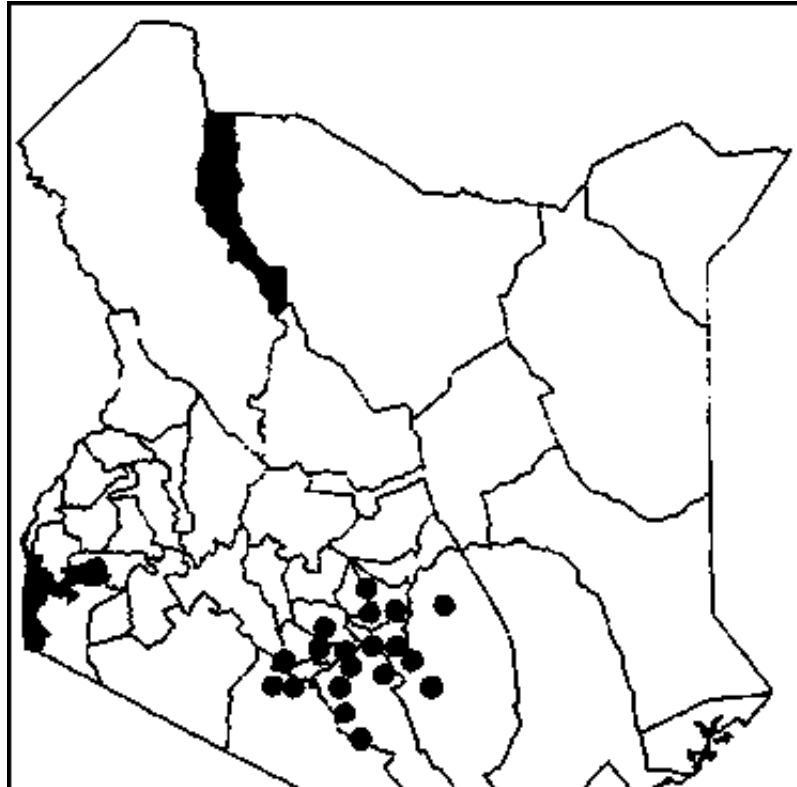
Figure







Figure





Figure

Pappia capensis Eckl. & Zeyh.

Sapindaceae

Borana: pika **English:** jackal plum **Kamba:** kiva, mba (fruit)
Kikuyu: ndirikumi **Kipsigis:** ngohyet, engongaat **Luhya**
(Bukusu): kumurinda (tree), kamarinda (fruits),
 sinyamanyama, bunyamanyama (fruit) **Luhya (Tachoni):**
 omurinda (tree) amarinda (fruit) **Luo:** okuro (Siaya),
 omaange (Homa Bay) Maa: oltimigomi, orkisikong'o, natua-
 ekong'u, natwa-ong'o **Marakwet:** kipiriokwa, kibiriokwo

(singular), piriak (plural) **Mbeere:** mubaa **Meru:** ntirikomi, dilikoni **Pokot:** puriokwo, priokwo, priak (plural) **Samburu:** lopoteta, lopisedi, Igurugu, Igurong'ui, leroongo **Somali:** asel, adadak **Taita:** mndendele, ndendele (fruit), mkongori **Tugen:** biriokwo **Turkana:** etolerh

Description: An evergreen tree, normally small (4-6 m) but sometimes attaining 10 m or more. Crown usually dense. Branches low, often drooping, young branches usually ascending. **BARK:** Grey-white to dark grey, smooth except for lower parts of trunk which are corky. **LEAVES;** Entire or serrate, usually borne from short shoots. **FLOWERS:** Yellowish green in long racemes. **FRUITS:** Small, 7-10 mm across, round and borne in clusters. At maturity the skin bursts splitting the fruit into two and exposing juicy orange-to-pink flesh. Seed globose, dark red, smooth, shiny.

Ecology: From Kenya and Uganda to southern Africa.

Widespread in Kenya, e.g. at Kisamis (Magadi Road), Iikerin (Loita), Juja, Thika, Churo (Baringo), Chepareria (West Pokot), Makueni, Machakos and Kitui, especially in the wetter and higher parts of the semi-arid zones on rocky hillsides and sandy lowlands. Found in bushland and wooded or bushed grassland, 1,050-2,400 m in black clay, sandy soil, sloping rocky ground with clay or sand. Zones II-V.

Uses: FOOD: The pinkish yellow or orange flesh of the fruit is eaten (++). Seed may be discarded but are often swallowed. Both ripe and unripe fruits are eaten. Fruits have a sweet acid taste. Unripe ones are sour. Inner bark is dried and grated to make tea (Maasai, Loita).

MEDICINAL: The bark is boiled to make a kind of soup which is taken for stomach disorders (Maasai) and roots or stems are boiled in soup by Maasai warriors. Leaves are used for stomach-ache and diarrhoea (Kamba).

OTHER: Wood very strong and durable. Source of excellent firewood (+++) and charcoal (+++). Used for making forked and hooked sticks for hanging beehives, bows (Kamba), handles, mortars and pestles, traditional sticks for cooking *ugali*, yokes (very durable), building poles, stools, and bows. Ripe fruits liked by birds. Forage for bees. Dye. Fodder for cattle and goats during dry periods (++). Shade (+++).

Season: Flowers in February-March in Narok, June in Makueni and Machakos, August in Homa Bay, November-December in Baringo and Marsabit. Fruits in February-March in Laikipia, August-September in Kajiado, Machakos, Kitui and Samburu.

Management: Propagated by seeds. Coppices well. A slow-growing tree.

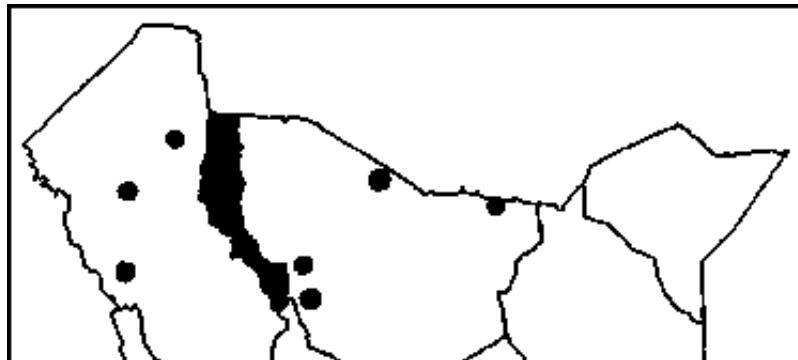
Status: Locally common.

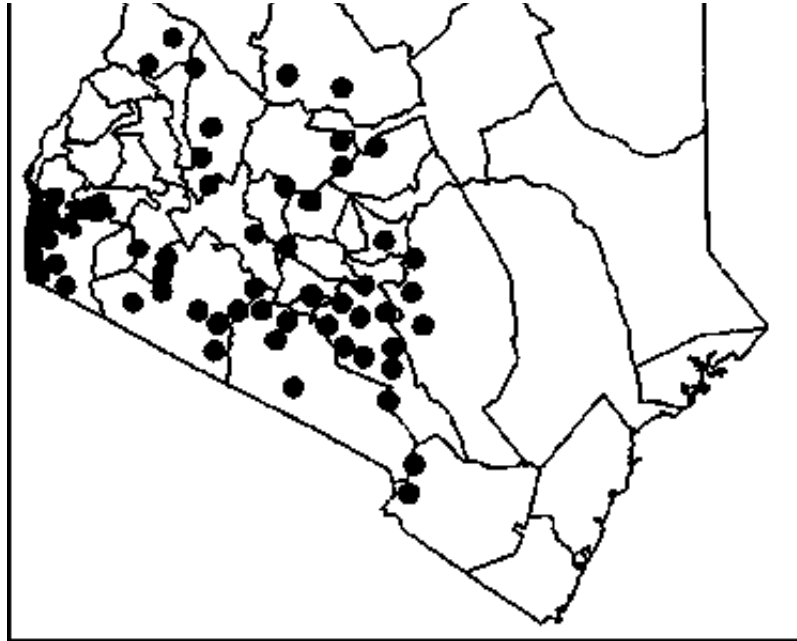
Remarks: A useful tree in agroforestry.





Figure





Figure

***Parinari curatellifolia* Planch. ex Benth.**

Chrysobalanaceae

syn: *P. mobola* Oliver

English: mobola plum **Kisii:** omoraa **Kuria:** mutaburu **Luo:** ongoro **Maa:** ol'matakuroi **Mbeere:** muura, maura (fruits)

Description: An evergreen tree to 15 m high, usually much smaller. Crown normally rounded. Bark dark grey, rough and longitudinally fissured. Young branches covered with lenticels.

LEAVES: Alternate with short petiole hardly 3 mm long, usually elliptic with a rounded tip, base cuneate or slightly cordate, blade leathery, light green above, silvery grey and softly hairy underneath. Veins conspicuous and parallel.

FLOWERS: Small, lightly scented, borne on hairy terminal or axillary inflorescences, calyx grey and hairy, corolla mauve, pink or purple. **FRUIT:** Ellipsoid nearly spherical, to 5 cm long, yellow to orange and soft when ripe, turning dark brown as it dries. Fruit covered with numerous white or brown specks of cork. Pulp yellow, enclosing a single hard seed.

Ecology: Senegal east to Sudan and south to north-eastern South Africa and north-eastern Namibia. In Kenya, e.g. at Siakago (Embu), Keumbu, Wanjare (Kisii), Suna, Lolgorien, Maasai Mara, Homa Bay, Kuria, Kwale, in bushland, wooded grassland, forest edges, &-2.100 m. Common on sandy and light clay soils and rocky hill slopes. Rainfall: 700-1500 mm. Zones I-V.

Uses: Food: Ripe fruit pulp is edible (+++). Sweet, with a strong pineapple smell. An important fruit tree, usually preserved by farmers. In southern Africa it is made into alcoholic and non-alcoholic drinks.

OTHER: Fuelwood. Source of timber (++). Wood red, hard, heavy and durable (++).

COMMERCIAL: Reportedly sold in Tanzania.

Season: Rowers in March in Embu, December in Kisii, July in Narok, September in Kwale. Fruits in May-June in Embu.

Management: Propagated by seed which may need pre-treatment with hot water to speed up germination. Produces suckers.

Status: Generally uncommon.

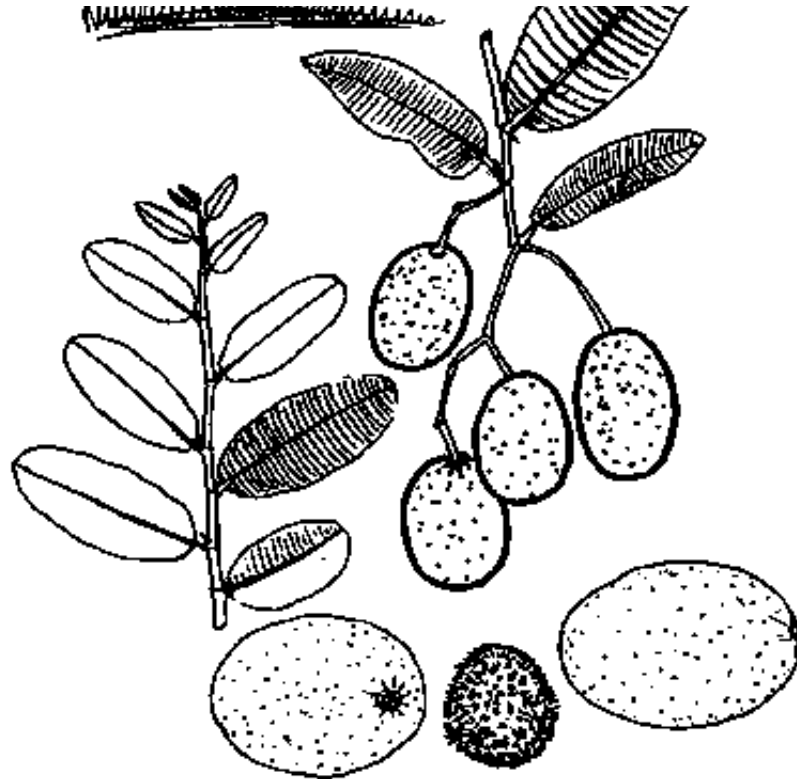
Remarks: Seeds have a high oil content. Two subspecies are recognized:

- *ssp. curatellifolia* with leaves which have silvery grey hairs on the lower surface and in Kenya found inland in Embu, Kisii, Narok, Kuria, Homa Bay and Migori. It is commonest from Tanzania north-west to Senegal.
- *ssp. mobola* (Oliv.) R. Grah. (syn. *P. mobola* Oliv.) with brown hairy underside of leaves and, on average,

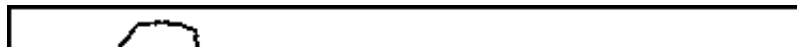
longer flowers. It is common in coastal areas and is the commonest in southern Africa. The presence of intermediate characters such as pubescence and flower size, however, make it hard to differentiate the two subspecies.

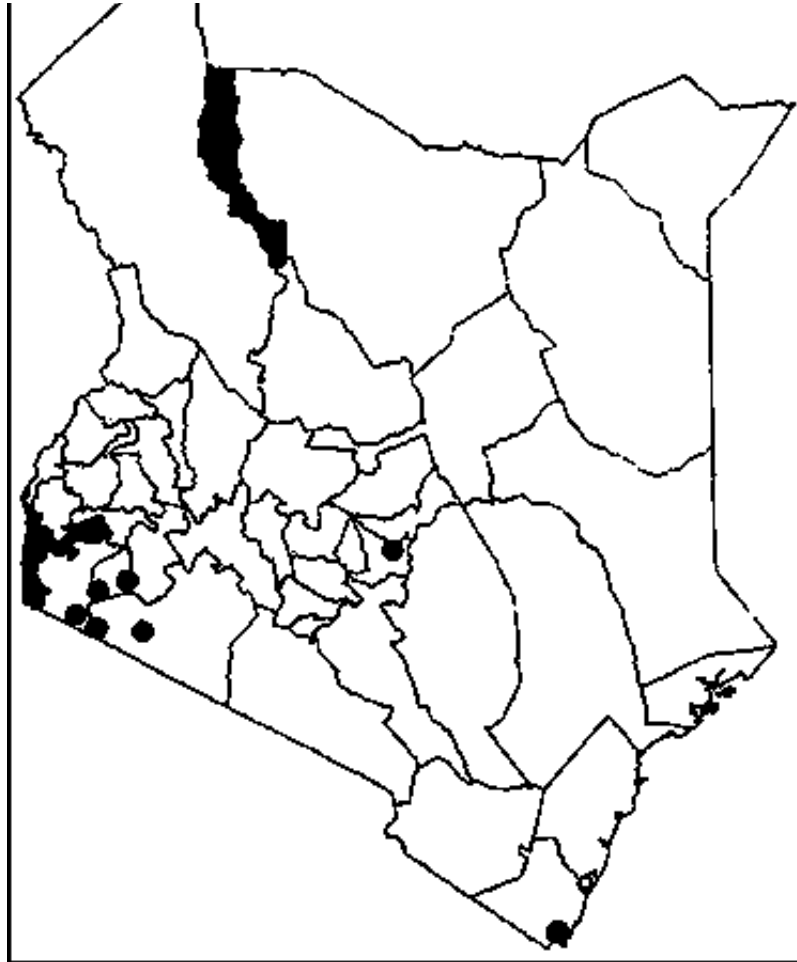
P. goetzeniana Engl., an evergreen forest tree with edible black fruits, has been reported in the Usambara Mountains in north-eastern Tanzania. *P. capensis*, on the other hand, is a small shrub found in southern Africa, south of the Zambezi River.





Figure





Figure

The other member in this family in Kenya is *Hirtella zanzibarica* Oliv., an evergreen tree with a buttressed base and smooth dark bark. Flowers in axillary or terminal panicles. The ripe reddish fruits, which may be up to 25 mm long, are edible. **Distribution:** Southern Kenyan coast, especially the Shimba Hills (Digo: *mwawa*). All these species were earlier placed in the family Rosaceae. *P. curatellifolia* is valued almost as much as *Sclerocarya birrea*. Their fruits resemble each other and are used in a similar manner; hence the local names are sometimes the same or share a common root.



Hirtella zanzibarica

Pennisetum glaucum (L.) R. Br.

Gramineae (Poaceae)

syn: *P. typhoides* (Burm.) Stapf and Hubbard, *P. americanum* (L.) Leeke, *P. echinurus* Stapf & Hubbard, *P. malacochaete* Stapf & Hubbard, *P. spicatum* (L.) Koem

Embu: mwere **English:** bulrush millet, pearl millet, spiked millet **Kamba:** mwee **Kambe:** muwele **Kikuyu:** mwere **Mbeere:** mwere **Meru:** mwere **Swahili:** uwele, mawele (plural), mwele, miwele (plural) **Tharaka:** mwere **Turkana:** erau

Description: Tall grass, usually 1.5-2.5 m (some varieties up to 5 m) cultivated for its grain. Stems often branched and in many cases several arising from the rootstock. **LEAVES:**

Slightly hairy, long and narrow. **FLOWERS:** Head cylindrical, up to 20 cm long (some cultivars up to 50 cm) greenish white at first (due to styles), turning dirty yellow-brown (due to anthers) then grey as grain matures. Large amounts of pollen produced. **FRUITS:** Grains 1.5-2.5 mm long, greenish grey, oval and may be conspicuous or, as in some varieties, hidden by long bristles.

Ecology: Cultivated in the drier parts of Kenya and especially the Tharaka region of Tharaka-Nithi District, Mbeere and also in Mwingi where it may be a staple food. Occasionally seen in parts of Coast Province, Makueni, Machakos, Embu, Mbeere and Kirinyaga Districts. Recently introduced in Turkana District. Also grown in the drier parts of Uganda and Tanzania and many other parts of Africa. A very drought-resistant crop of the low semi-arid regions, below 1,500 m. Does well on sandy soils but can also be grown on heavy clay soils. Can even produce a crop on infertile soils. Rainfall: 400-800 mm.

Best suited to Zones IV and V.

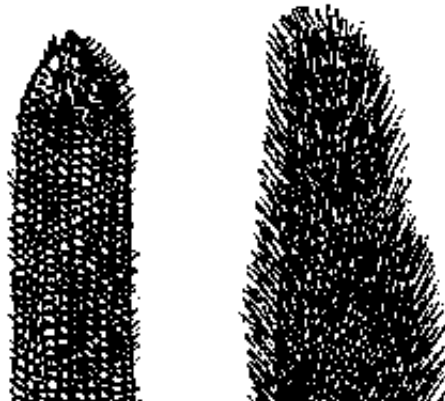
Uses: FOOD: The grain is ground into flour which is used in the preparation of *uji or ugali* (Giriama, Duruma, Digo, Kamba, Embu, Tharaka). Among the Kamba the flour may be mixed with fermented milk and eaten on its own (*kinaa*) or fermented in a gourd to a form of porridge (*isandi*). More recently the grain is also prepared like rice to make dishes similar to *pilau* and the flour for a type of chapatti. Boiled like rice in Turkana but not popular.

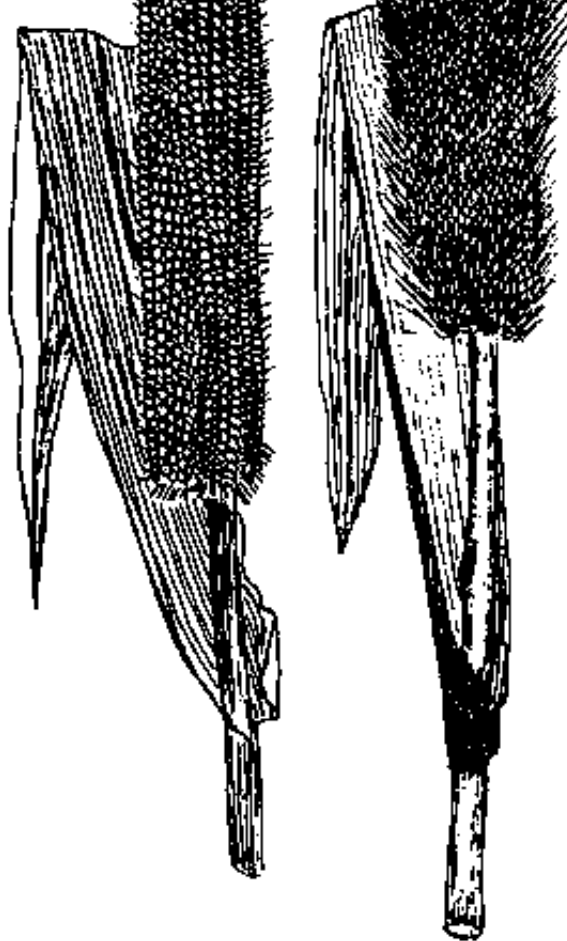
MEDICINAL: Grain flour in water said to be excellent for diarrhoea.

OTHER: The stalks are used as mulch and are said to improve the soil for other crops like maize. They are not good fodder. Grain is used as bird food, hence the use of the name bird millet in some shops.

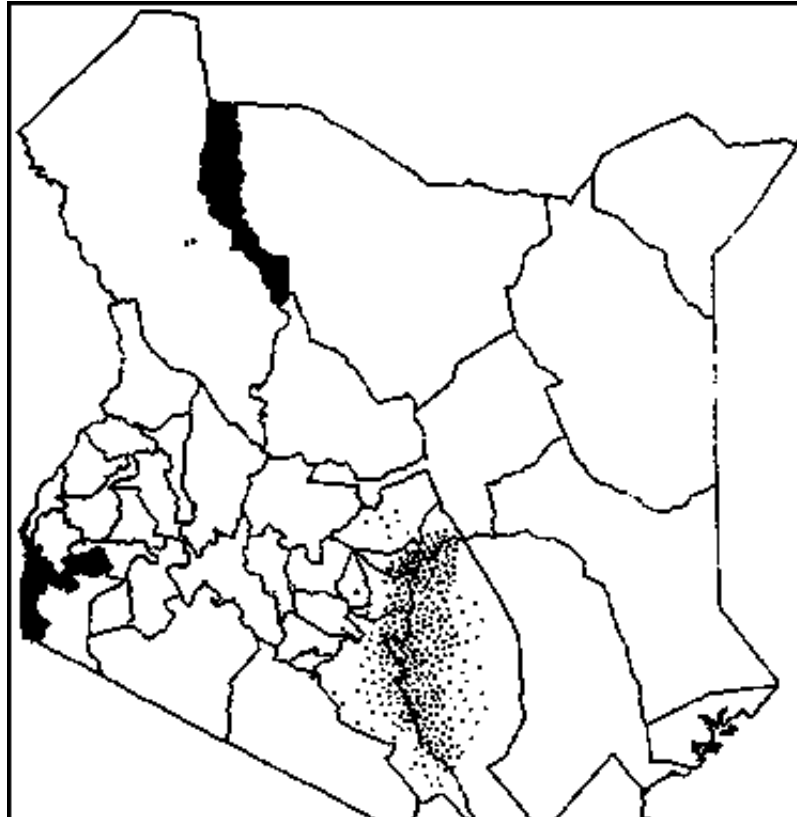
COMMERCIAL: Flour and grain sold in markets in central and coastal parts of Kenya when in season. Grain and flour sold in Nairobi supermarkets.

Management: May be sown by broadcasting or in lines then covered with a little soil. Traditionally several grains are dropped at intervals of about 30 cm. Crop lines can be at intervals of 0.5-0.7 m. Bulrush millet may be intercropped with maize but in different lines. Maize thinly scattered among the millet also gives good results.





Figure





Figure

Harvesting: Traditionally the heads are cut, spread to dry out, threshed and winnowed. The grain may store almost indefinitely when well kept. Before using it, it is further pounded to remove the husks. Among the Kamba, Mbeere and Tharaka, millet is stored in large (up to 2 m³) containers (*kiinga*, Kamba) made from twigs and grass stalks (such as this millet). The container is smeared all over with cow dung to keep insects away. In such a store the millet can last for more than ten years. The grain is normally used during hard times.

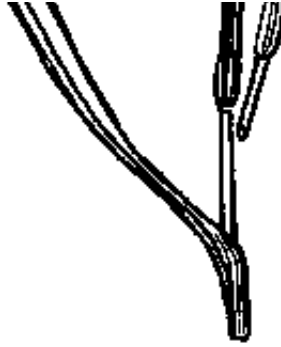
Remarks: The cultivation and consumption of bulrush millet in Kenya (and the rest of Africa) has declined over the years.

This has been attributed mainly to the tedious preparation methods involved, and lack of labour, especially for keeping away birds from the crop now that most children attend school. Surveys have shown that many farmers would be willing to return to this crop only if the bird problem could be addressed. Some argue that if everybody in the growing areas could plant the crop they would share the burden and growing it would be less risky. As the millet needs little moisture and matures fast, one is almost assured of harvesting a crop even at times of severe drought. It would, therefore, be better than maize in the drier areas.

Another millet worth mentioning is *Setaria italica* (English: foxtail or Italian millet, Kikuyu, Mbeere, Meru, Embu: *mukobi*). A traditional grain of the Kikuyu, Embu and Meru it is presumed to be native to East Asia where it has been grown for thousands of years. Now it is cultivated in both the Old and New Worlds. Culms may reach a height of 1.5 m. Due to its

early-maturing nature, it is suitable for growing in the short rainy season.





Setaria italica

Phoenix reclinata Jacq.

Palmae (Aracaceae)

Boni: gonyooriya **Borana:** meti **Digo:** mchindu, makindu
English: wild date palm, Senegal date **Giriama:** mkindu,
mkindwi, kindwi (fruit) **Kamba:** mukindu **Kikuyu:** mukindu,
muthuthi **Kipsigis:** sosiyot **Luhya (Marachi):** lushindu **Luo:**
othith **Maa:** oltukai **Malakote:** gedo **Orma:** konchor

Samburu: lekawai **Sanya:** itkindu, gonyora **Somali:** alol (Tana River), maydho **Swahili:** mkindu **Taita:** kigangachi **Taveta:** mhongana **Teso:** emusogot **Tharaka:** mukiindu **Turkana:** nakadoki

Description: A tree palm 4-6 m high, rarely to 10m, solitary or in tufts. **LEAVES:** Pinnate, pinnate sharply pointed. **FLOWERS:** Cream, in much-branched panicles. **FRUITS:** Oval, to 2.5 cm long, yellow to orange, ripening almost to dark red.

Ecology: Widely distributed in Kenya and southern Africa. Found in Kenya, e.g. in Loita forest (Narok), Nandi Hills (Nandi) and cultivated in towns as an ornamental.

Naturally growing in hillside gulleys, at forest edges and along watercourses, 0-2,600 m. Zones II-IV.

Uses: FOOD: Ripe fruits edible (+). A type of palm wine (*muyence*) may be tapped from the palm, though not a common practice nowadays (Tharaka).

OTHER: Leaves are used in making baskets, mats, hats, brooms and in thatching; a skirt (*manyugi*) is made from leaves for use during circumcision ceremonies (Tharaka); leaf rachis used to clean the inside of milk gourds (Maasai (Narok), Kipsigis). Charcoal is used as the scouring agent; roots a source of brown dye (Kikuyu).

CULTURAL/BELIEFS: Leaves are weaved and used for adorning women during the *irua* ceremony (Tharaka).

Management: Seeds or offshoots from the base of the palm can be used for propagation. If not thinned, the palms form a thick clump.

Status: May be locally common.

Remarks: This is related to the cultivated date palm of North Africa, *P. dactylifera* L. (Borana: *tende*, Luo: *tembe*, Meru: *ntende*, Kama: *ndende*, Somali: *limits*, Swahili: *tende*, Teso: *epapai*). Grown near water in arid areas for its dates. A spiny, unbranched palm which may grow extremely tall. The date has a very high sugar and carbohydrate content and is an important food for desert communities of Arabia and North Africa. It is cultivated along the Turkwel River near Lodwar. Also grown as an ornamental plant in dry areas (Tseikuru-Mwingi). It is presumed to be native to west Asia from where it spread to North Africa and the Nile Valley several millennia ago and to the rest of the dry tropics where it may be cultivated on a commercial scale.

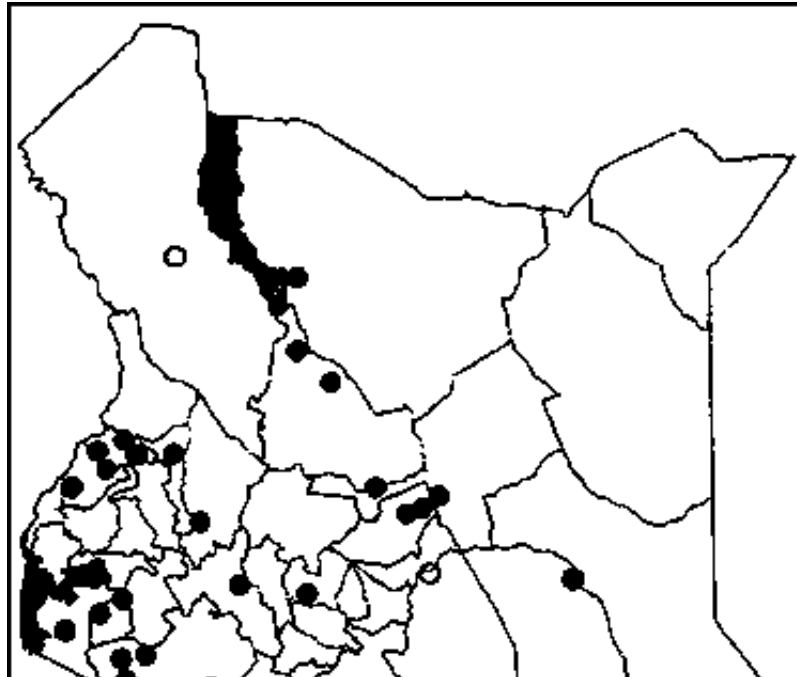


Phoenix dactylifera





Figure





Figure

Piliostigma thonningii (Schum.) Milne-Redh.

Caesalpiniaceae (Fabaceae)

syn: *Bauhinia thonningii* Schum.

Chonyi: mkayamba **Digo:** mtsekeshe, mutseketse **English:** camel foot **Giriama:** mkayamba **Kamba:** mukolokolo **Kambe:** mkayamba **Kikuyu:** mulama **Luhya (Bukusu):**

kumuyenjajenja (tree), kumulamalama (tree) **Luo:** ogal, ogalo **Maa:** olsagararam, ilsagararam (plural) **Mbeere:** mukuura **Nandi:** kipsarkiat **Sanya:** kimanjala **Swahili:** msegese, mchekeche, mchikichi **Teso:** epapai **Tharaka:** mukuura

Description: Shrub or small tree with a few scattered branches and a light crown. **BARK:** Fissured, grey. Buds rusty hairy. **LEAVES:** Large, 2-lobed (the shape of a camel's footprint), grey-green. **FLOWERS:** White to pink. **FRUIT:** A large smooth flattened yellowish brown pod, turning dark brown to almost black and with fine cracks on drying. Young pods brownish, hairy.

Ecology: Widespread in Africa from Senegal to Sudan south to Namibia and South Africa. Found in western and central Kenya and at the coast in woodland and wooded grassland, 0-2,200 m. Common in open, often disturbed, sandy areas.

Zones I-IV.

Uses: FOOD: Fruit pulp of the drying pod edible (+). It has a sweet acid taste. Young shoots used in porridge preparation to give it a sour taste (Luo). Leaves chewed.

MEDICINAL: Leaves eaten while green as a stomach medicine. Bark used in the treatment of gonorrhoea. Leaves chewed as a treatment for snake bite. Root and leaf infusion drunk for cough and chest complaints.

OTHER: Roots and pods used as a substitute for soap. Roots and bark yield a red-brown dye (Kikuyu, Maasai). Pods and seeds are said to yield a black or blue-black dye. Shade (++)
Fuelwood (++)

Season: Flowers in January in Kitui central, May-June in Kisumu, Kirinyaga, Machakos, Kakamega and Kwale, in

October-November in Uasin Gishu, Siaya, Meru. Fruits in February-March and September-October.

Management: Propagated by seeds which can be sown directly on site. Soaking for a day improves germination rate.

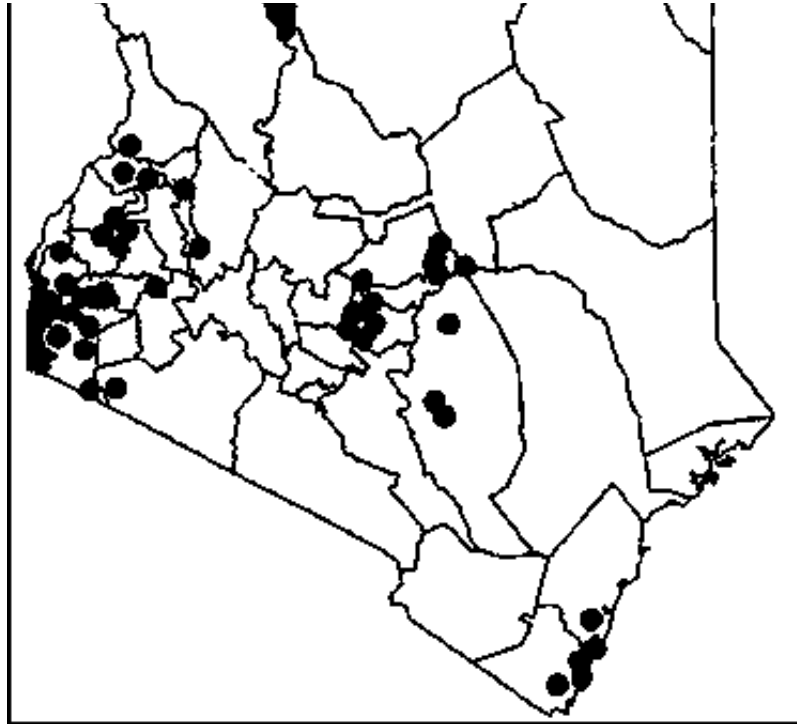
Status: Locally common.





Figure





Figure

***Portulaca oleracea* L.**

Portulacaceae

English: purselane, pursley, purslane **Kamba:** kamama, kamumama (Kitui), kinyukwi **Kikuyu:** gatumia **Luo:** obwanda **Luhya (Bukusu):** litoto-lia-bamia **Maa:** engaiyagut **Pokot:** tumeighio, tumeiw'o, kelpomough **Samburu:** nturmayei **Tharaka:** mwere **Turkana:** ekaletelete

Description: An erect or prostrate decumbent fleshy herb with spreading branches. **LEAVES:** Fleshy, shiny, widest towards the tips. **FLOWERS:** Yellow, borne terminally in clusters.

Ecology: Widespread in most warm countries and cultivated in a few sub-tropical countries. Also widespread in Kenya and commonly found in less weedy areas, especially near homes, along paths and in cultivated land, 0-2,000 m. Found in a variety of soil types but common on sand and loam. Zone I-VII

(riverine).

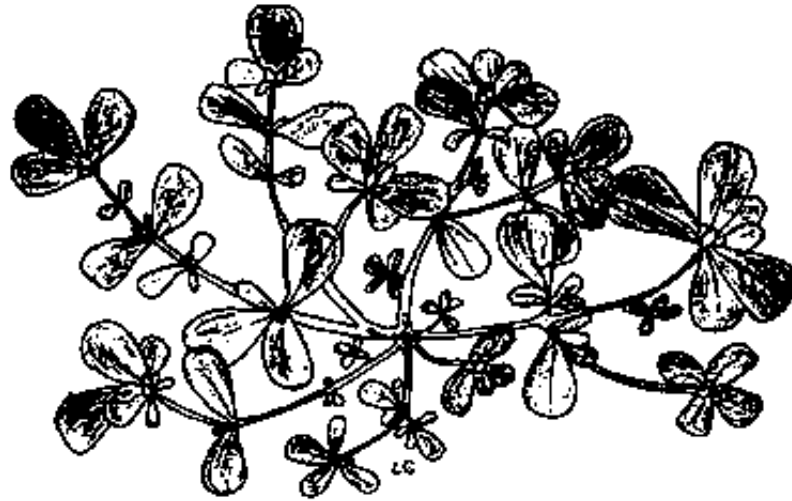
Uses: FOOD: The leaves and tender stems are all used as a vegetable (+) (Kipsigis, Pokot, Turkana (Ng'ikebootok), Tugen, Marakwet). Leaves eaten raw (Pokot). Seeds eaten (Pokot, Turkana (Ng'ikebootok)). Seeds are ground into flour that is made into porridge. Used as a salad and soup plant in some European countries. The flour is said to have an unpleasant smell (Turkana (Ng'ikebootok)).

OTHER: Fodder, especially for cows and camels. Liked by baboons (Turkana). Fodder plant for pigs.

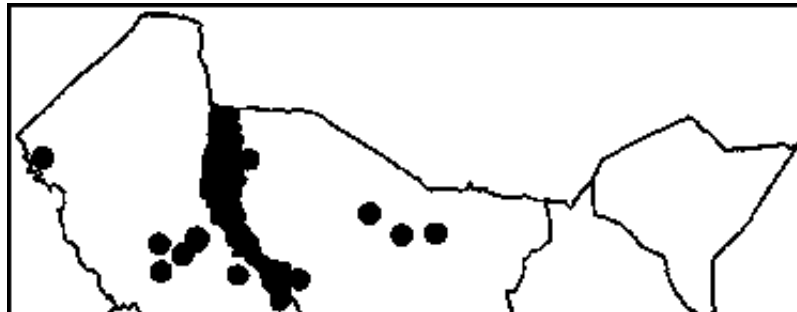
Management: Propagated by shoots or rooted stem parts. The plant dries with difficulty and hence germinates easily if still in contact with the soil.

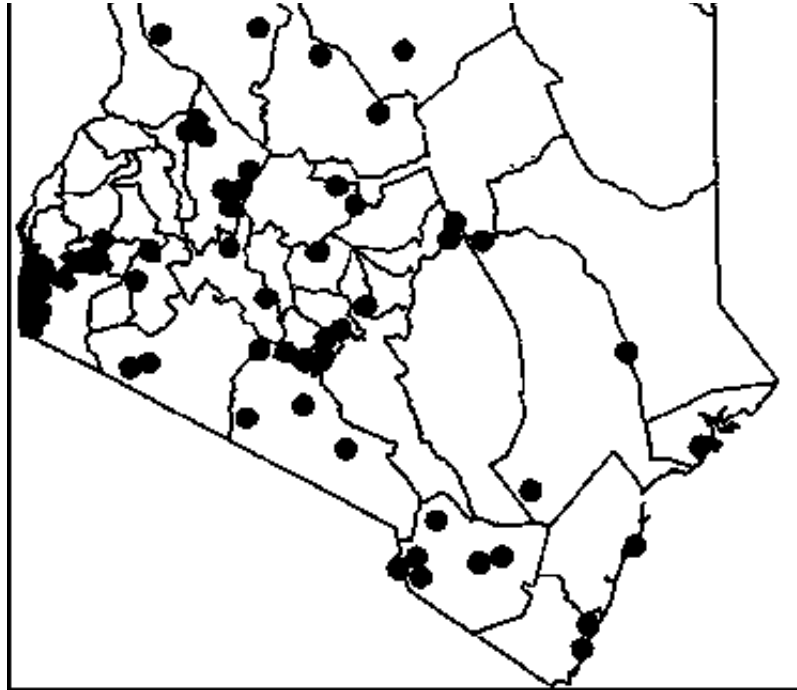
Status: Common.

Remarks: This plant has a high vitamin E content. Improved erect cultivars have been reported in Europe. Cultivated in France, Denmark and the Netherlands. A related species, *P. quadrifida* (Kamba: *kenyinyia*, *kamumama*, Samburu: *nchungee*), is used in the same manner but the leaves are tiny. It is usually prostrate with slender stem nodes which are usually covered with brown hairs. Flowers usually yellow to orange. Widely distributed in Kenya, 1,000-2,400 m in cultivated land, roadsides, grasslands and open bushed grasslands.



Figure





Figure

Rhus natalensis Krauss

Anacardiaceae

Borana: daboobes, adesa **Digo:** mgwanyahi, mbwananyahi
English: KwaZulu Natal rhus **Gabra:** dabobbessa **Ilchamus:**
Imisigiyo, Imisigiyo **Kamba:** mutheu **Kikuyu:** muthigio
Kipsigis: suriat **Luhya (Bukusu):** kumusangura kumusecha,
busangura busecha (fruit) **Luhya (Tachoni):** obusangura,
busecha (fruit) **Luo:** sangla, osangla **Maa:** olmisigiyo, ilmisi-
giyo (plural) **Mbeere:** muthanguta, mutheru, muthigiyo,
muthigi **Meru:** murikitha **Nandi:** monjororoyot, okiek:
srontet **Pokot:** siriewo, siria (plural), **Sabaot:** sirwa
Samburu: ilmisingiyot, musigio, Imisigiyo **Swahili:**
mtishangwe, mvunja kondo, mkuna chuma, mkono chuma
Teso: ewayo, ebubu **Turkana:** ekadetewa

Description: A bush or spreading shrub to 5 m high. **BARK:**
Fissured, dark brown. **LEAVES:** With 3 leaflets. **FLOWERS:**
Greenish yellow. **FRUITS:** Small, 1.5-2.5 mm across, green,

turning reddish brown on ripening, shiny, numerous.

Ecology: Found from Guinea to Arabia and from Somalia south to South Africa. Widespread in Kenya in thickets, bushland, dry forest margins, riverine thickets and wooded grassland, 0-3,000 m. Very common at about 2,000 m on clay soils (red and black cotton) but can grow on various soil types. Zones I-V.

Uses: FOOD: Fruits have a sweet-sour taste (+). Eaten mainly by children. Bark made into tea (Maasai, Kipsigis). Roots used in soup (Kikuyu). Tender shoots and young leaves are chewed (Maasai).

MEDICINAL: Leaves used for heartburn, roots for influenza and abdominal pains, leaves for cough and stomach-ache (Kamba). A decoction of the roots is taken as a remedy for diarrhoea (Digo). Branches are boiled for stomach problems

(Maasai, Samburu).

OTHER: Fuelwood (++) . Charcoal (+). Goat, camel and cattle fodder (+). Toothbrushes. Root bark source of dye.

CULTURAL/BELIEFS: Fresh young shoots along with roasted liver and spleen obtained from an animal that had died of anthrax or blackwater were given to 7-8-month-pregnant mothers. It was believed to protect the child from diseases when born, a process nowadays seen as a kind of immunization (Maasai, Narok).

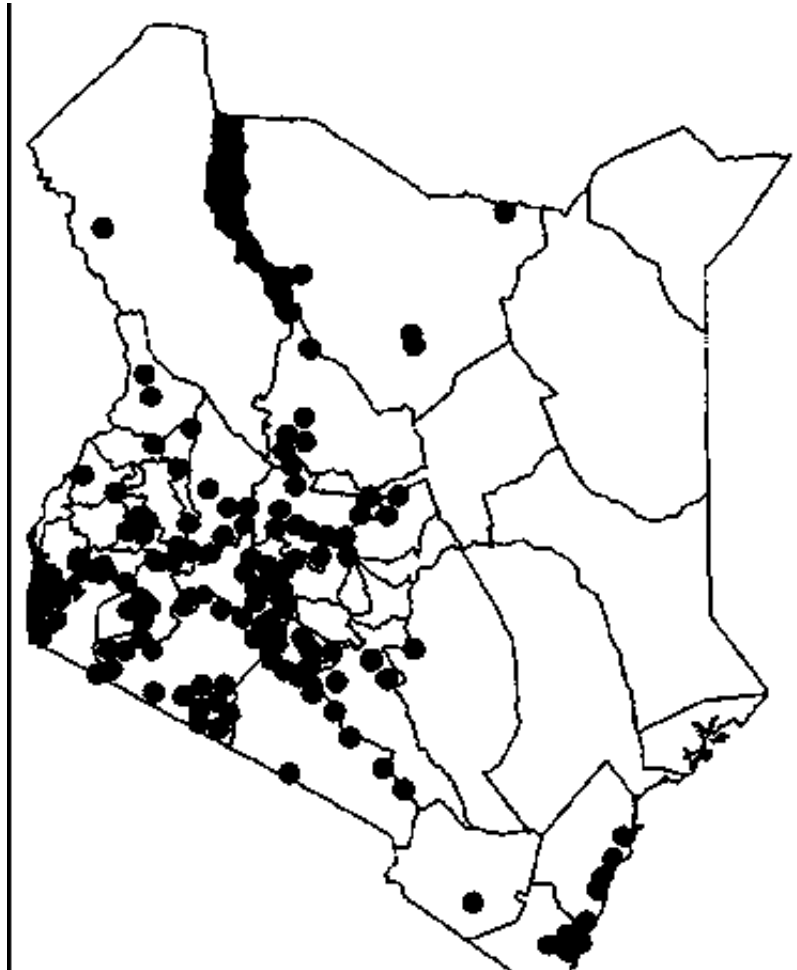
Status: Very common.

Remarks: Lower branches need constant pruning.





Figure





Figure

Rhus tenuinervis Engl.

Anacardiaceae

Kamba: kitheu **Maa:** olmisigiyo

Description: Shrub or small tree to 6 m, usually 2.5-4.0 m. Branches twiggy, some thorn-like. **LEAVES:** With three leaflets which are small and slightly softly hairy. **FLOWERS:** Greenish yellow, borne on large branched inflorescences. **FRUITS:** Small, angled, compressed, green, turning brownish yellow on ripening.

Ecology: From Ethiopia and Sudan south to South Africa. In Kenya mainly found in Kitui, Embu, Machakos and Kajiado in

Combretum bushland and bushed grassland, 900-1,850 m. Sandy, red clay and also in black-cotton soil. Rainfall: 500-800 mm. Zones IV-V.

Uses: FOOD: Fruits eaten mainly by children (++) and have an appealing sweet-acid taste. Young shoots and leaves are sour and are chewed like *khat* (*Catha edulis*), the juice is swallowed and the rest thrown out (Maasai, Kikuyu).

MEDICINAL: Leaves used for heartburn (*kiunguia*, Kamba).

OTHER: Fuelwood (++) . Charcoal (+++); trunk produces intense heat when burned, hence used by blacksmiths (Kamba). Fodder (+). Fences (+). Branches cut and stuck into the ground in a row to form a fence (Kamba). Tooth-brushes (Maasai, Kamba). Root bark source of dye. Provides good shade but often harbours hairy caterpillars at certain seasons.

Status: Locally very common, especially in Machakos and Kajiado Districts.

Remarks: Most species in the genus *Rhus* have edible fruits. Because they share many characteristics they are usually known locally by the same names. Other notable members are:

- *R. longipes* Engl., leaves with large hairless leaflets and large greenish white inflorescences. Common on hillsides and forest margins all over the country.
- *R. ruspolii* Engl., a usually large-leafed *Rhus* with hairy leaflets commonly found in the highlands of central and northern Kenya, and
- *R. quartiniana* A. Rich. with small, slightly hairy leaflets, common in Maasai land but also occurs

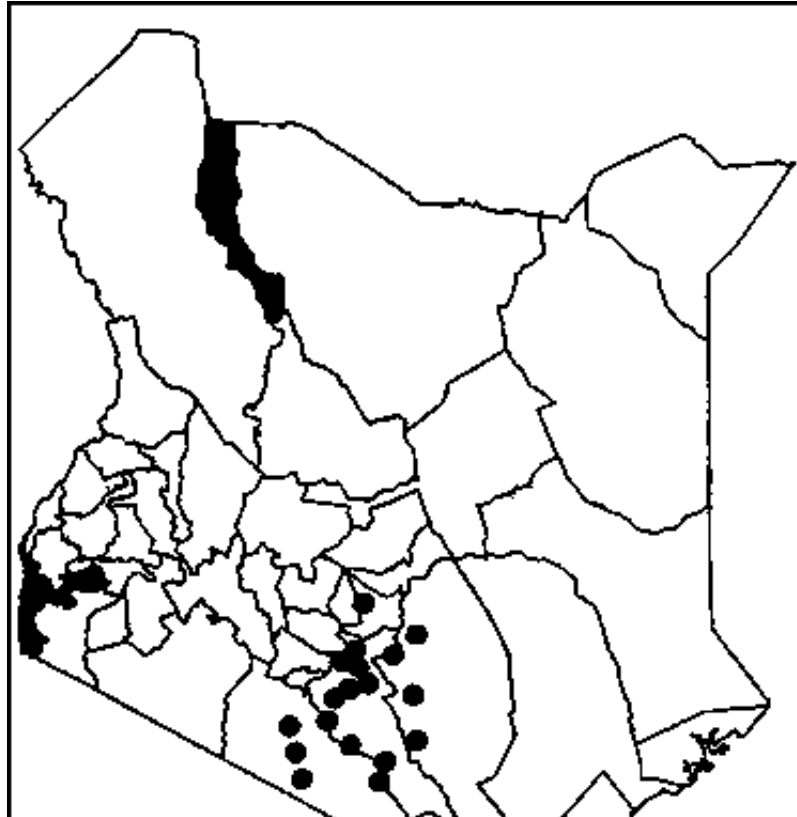
elsewhere in the country.



Figure



Figure





Figure

Rhus vulgaris Meikle

Anacardiaceae

Digo: mbwana nyahi **Embu:** terere, muthigi **Kamba:** mutheu, mutheu munene **Kikuyu:** muthigio **Kipsigis:** suriet, mon-foronat, monjororriat **Luhya (Bukusu):** busangura, kumu-sangura (fruit) **Luhya (Tachoni):** obusangura (fruit) omusangura (tree) **Luo:** awayo **Maa:** olmisigiyoi, ilmisigyo (plural), msigwe, emungushi, engarachi **Mbeere:** mubebiaiciya **Mbeere:** muthanguta, mutheru, muthigiya, muthiigi **Meru:** mirimuthu, mirimamuthua **Pokot:** siriewo-kaptamu, **Sabaot:**

njowaruwa **Samburu:** sioloran, lejoro **Swahili:** mlishangwe, mlama-mwitu, mkonochuma, mrinja-kondo **Taita:** vikunguu, seria **Teso:** ekwatet, ekwayu, epwatet.

Description: A shrub or small tree usually 3-5 m high.

BARK: Rough. Branchlets densely (softly) hairy. **LEAVES:** With 3 leaflets which are usually densely hairy underneath, entire, occasionally toothed in the upper part, the middle leaflet usually larger than lateral ones. **FLOWERS:** Greenish yellow, borne in long panicles. **FRUITS:** Small, up to 6 mm in diameter, almost round, slightly flattened when dry, reddish brown.

Ecology: In Africa from Cameroon east to Ethiopia and south to Mozambique, Malawi, Zambia and Zimbabwe. Widespread in Kenya, e.g. in the Chyulu Hills, Mt Elgon, Ngong Hills, Thui Hill (Makueni), Kitui hills, Chepareria (West Pokot), in bushland (usually disturbed), 800-2,700 m. Soils vary-clay, sandy or

rocky. Rainfall: 700-1,500 mm. Zones II-IV.

Uses: FOOD: Fruits eaten (++) . Small, but large quantities produced. Have a sweetish acid taste.

MEDICINAL: Stems boiled and liquid applied to wounds (Maasai).

OTHER: Toothbrushes. Wedges for enlarging ear-lobe holes (Kikuyu). Branches used for fencing (Kipsigis).

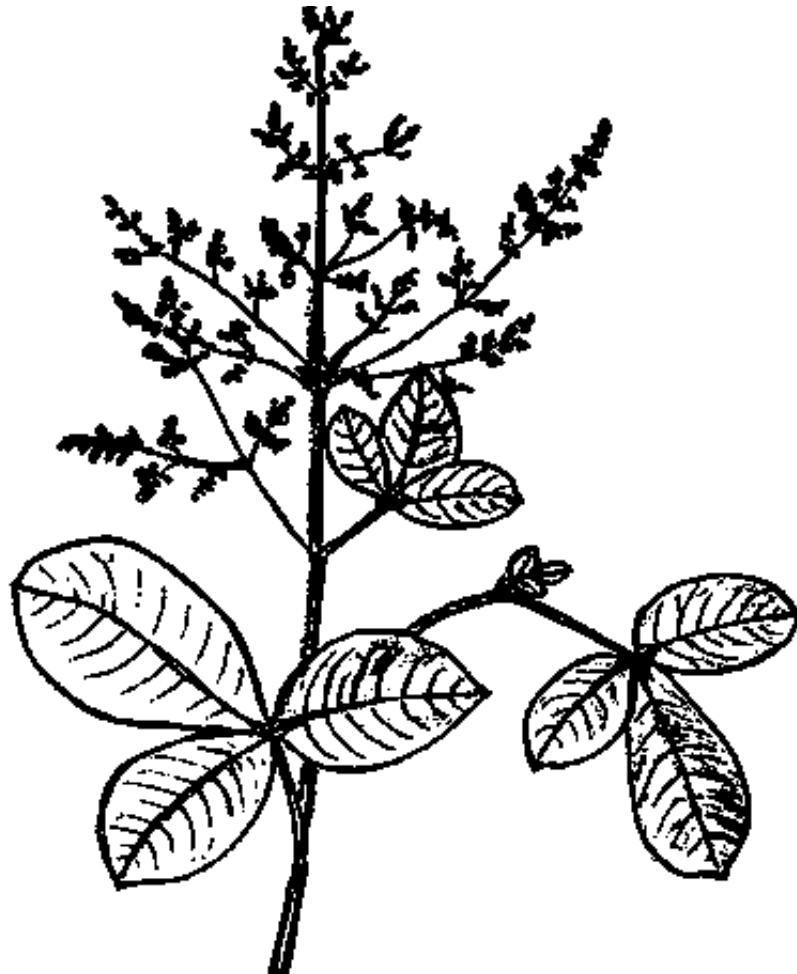
Remarks: The taxonomic status of this species needs further work.





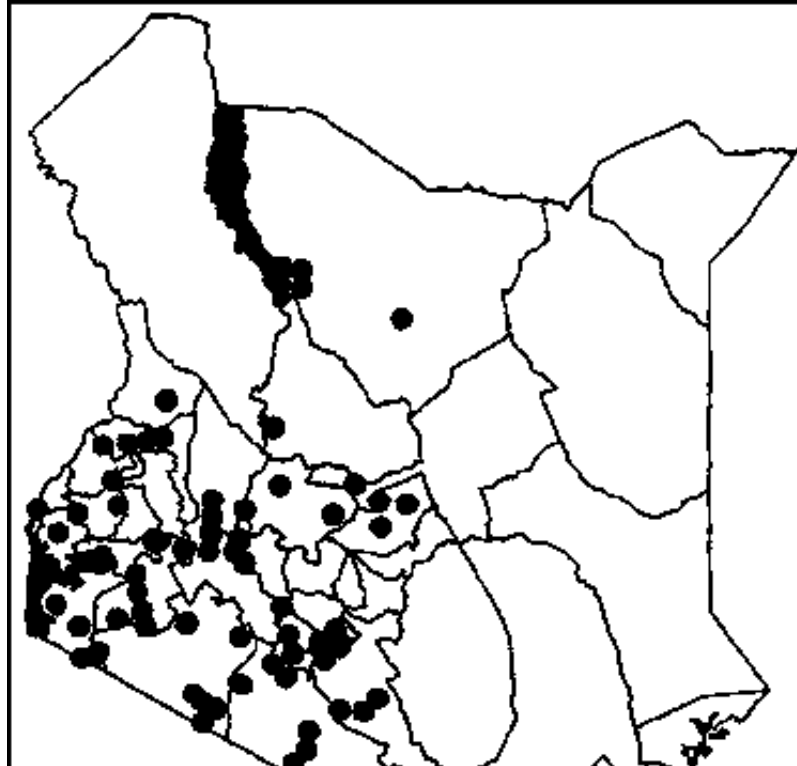
Figure







Figure





Figure

Rubus apetalus Poir.

Rosaceae

syn: *Rubus rigidus* Sm.

Kikuyu: mutare **Luhya (Bukusu):** bukararambi **Luhya (Tachoni):** obukararambi **Taita:** ndaindai

Description: A scrambling prickly shrub. Branches hairy, armed with hooked prickles. **LEAVES:** With 3-7 leaflets, each

ovate, hairy, pale green beneath with serrated margins.

FLOWERS: White to pink. **FRUITS:** Light green, turning yellow to purple-black on ripening. **Ecology:** From West Africa to Ethiopia south to Malawi. Widely distributed in Kenya, e.g. in the Nyambene Hills, Mt Nyiru, Mt Kulal, Kandara (Maragua), Chania Falls, Ngong Hills, Maasai Mara, Meru, Kisii and Marsabit in riverine vegetation, forest edges, humid bushland, hillside springs, 1,450-2,700 m. Zones II-IV.

Uses: FOOD: Fruits edible with a sweet-acid taste.

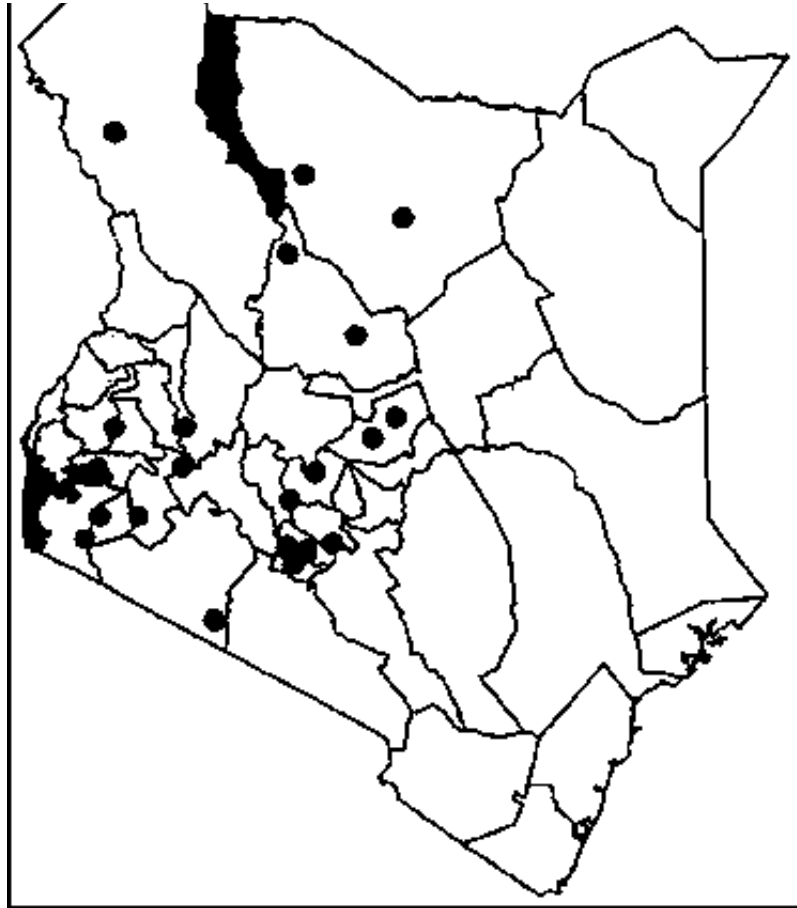
Remarks: A species with the potential for use as a hedge and an ornamental.





Figure





Figure

Rubus pinnatus Willd.

Rosaceae

Embu: ndare **Kamba:** kitae, ndae (fruit) **Kikuyu:** mutare, ndare (fruit) **Kipsigis:** tangaimamiet **Luhya (Bukusu):** bukararambi **Luhya (Tachoni):** obukararambi **Maa:** engaiyagut **Marakwet:** momoon **Pokot:** monmonwo, monmoon (plural) **Swahili:** mtoje, matoje (fruit) **Taita:** ndandai, ndaendae, maratua, ndaindai **Tugen:** momonwo, mowonwo

Description: A prickly scrambling shrub. Branches occasionally white, armed with hooked prickles. **LEAVES:** With up to 9 leaflets, each ovate with serrated margins. **FLOWERS:** White to pink. **FRUITS:** Turning reddish black on ripening.

Ecology: Found in tropical Africa to South Africa. Widely distributed in Kenya in riverine vegetation, near hillside springs, forest edges, 1,500-2,750 m.

Uses: FOOD: Fruits edible, sweet.

Remarks: May be used as a hedge plant.



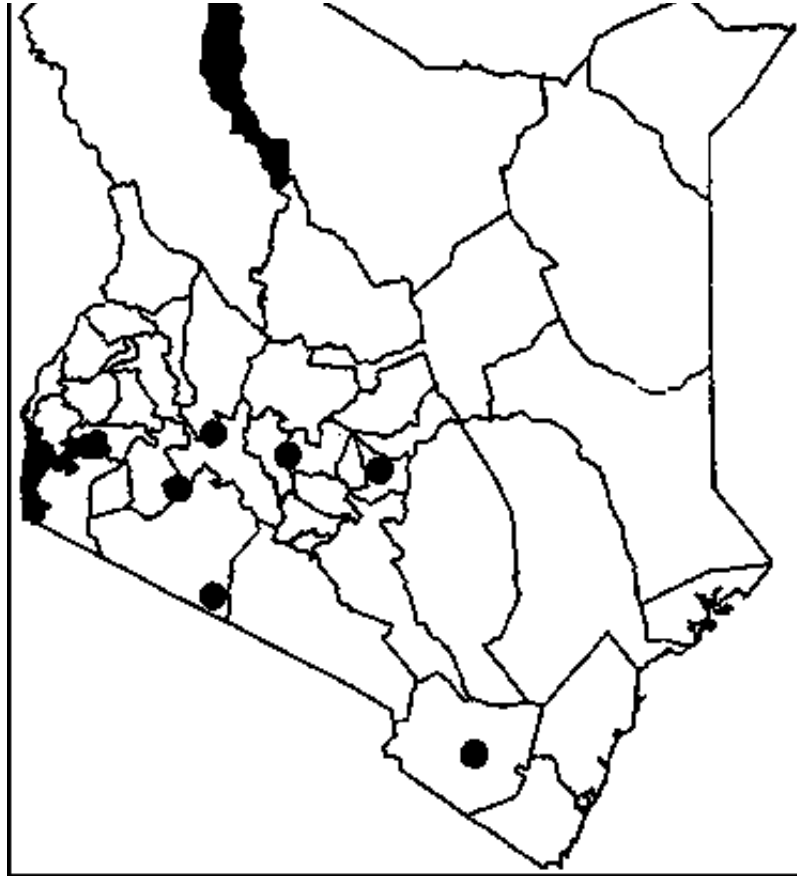


Figure



Figure





Figure

Rubus volkensii Engl.

Rosaceae

Kikuyu: Mutare-kigombe, mutare, ndare (fruit), **Kipsigis:** Kipsoeniot, nemingin, degainmamiet, tagaimamiet, **Maa:** Engaiyaguji, engaiyagut

Description: Prickly shrub up to 4 m. Stems with hooked prickles, covered with brown sticky hairs. **LEAVES:** Compound with up to 7 leaflets, the stalk and rachis prickly. Leaflets hairy, with serrated margins. Top leaflets often incompletely divided. **FLOWERS:** Yellow-white, borne in panicles. Fruit to 1.5 cm across, orange to red when ripe.

Ecology: Found in Uganda, northern Tanzania, Kenya and Ethiopia. In Kenya, e.g. at Limuru, Lari, Aberdares in high-

altitude forest edges and bushland, bamboo margins, 2,150-3,550 m. Zones I-II.

Uses: FOOD: Fruit edible, delicious.

Season: Fruits in December in Central Province.

Status: May be locally common.

Remarks: Many of the Kenyan *Rubus* species are edible. Other notable species are:

- *R. scheffleri* Engl., usually with densely hairy red-to-black fruit and found in central and north-western Kenya, Uganda and Tanzania at forest margins and in evergreen bushland.
- *R. niveus* Thunb., distinguished by the white undersurface of the leaf and a white bloom on the

stems is believed to have been introduced from the Indian/Malayan region. It is naturalized in many forested areas. Also cultivated as an ornamental.

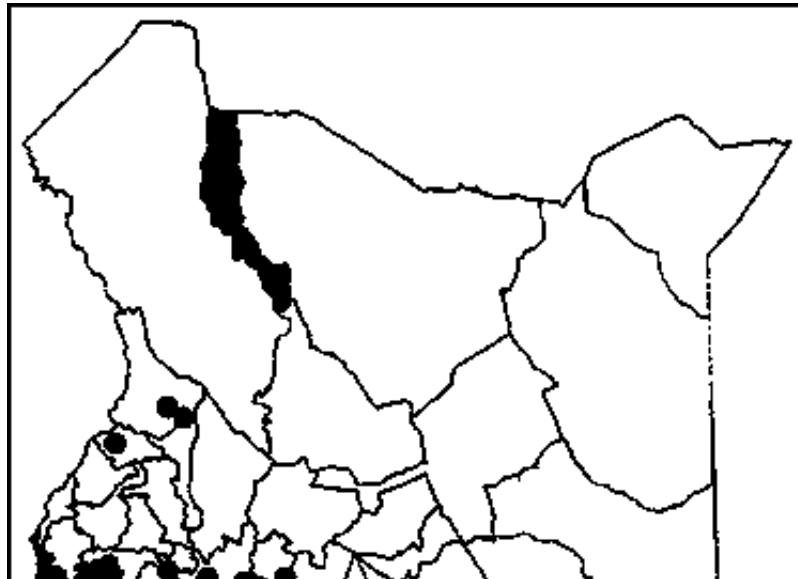


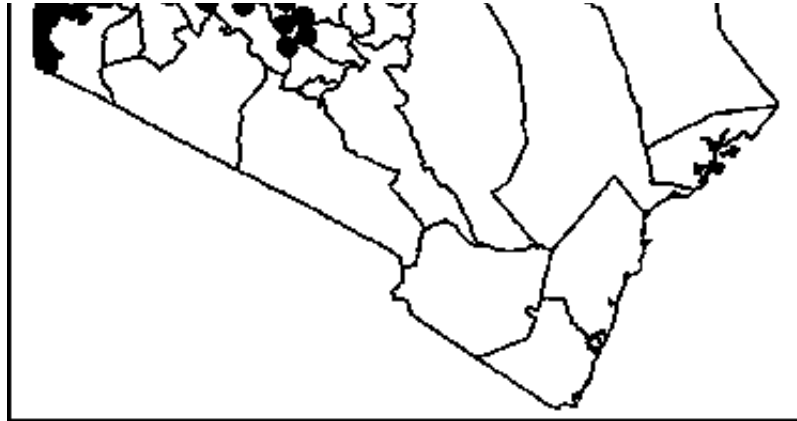
Rubus niveus





Figure





Figure

Rumex usambarensis (Damm.) Damm.

Polygonaceae

English: sorrel **Kamba:** kinyonywe, kyongonywe **Kikuyu:** mugagatio **Okiek:** mindoywet **Kipsigis:** mindeiywet **Maa:** enkaiswishoi, enkaisijoi **Taita:** bule, mwakiserere, msheshere

Description: A soft-stemmed erect or straggling plant usually 1-2 m high. Stems tinged brown, soft, juicy. **LEAVES:** With two short lobes towards the base and 3 distinct veins. **FLOWERS:** Borne on a much-branched red inflorescence. **FRUIT:** Ovoid, 3-sided.

Ecology: Found in Kenya, Uganda, Tanzania, the Democratic Republic of Congo (Zaire) and Malawi. In Kenya in highland bushland and grassland, at roadsides, forest edges, rocky areas, 900-2,500 m. Zones III-IV.

Uses: FOOD: Raw stems chewed for their sour taste. Stems may be roasted and eaten with sugar or salt (Taita). Leaves eaten raw (Taita) or cooked as a vegetable (Kipsigis). Stems should be peeled or cleaned before chewing.

MEDICINAL: Roots used in the treatment of scabies (Kikuyu). Roots a source of dye (Kikuyu).

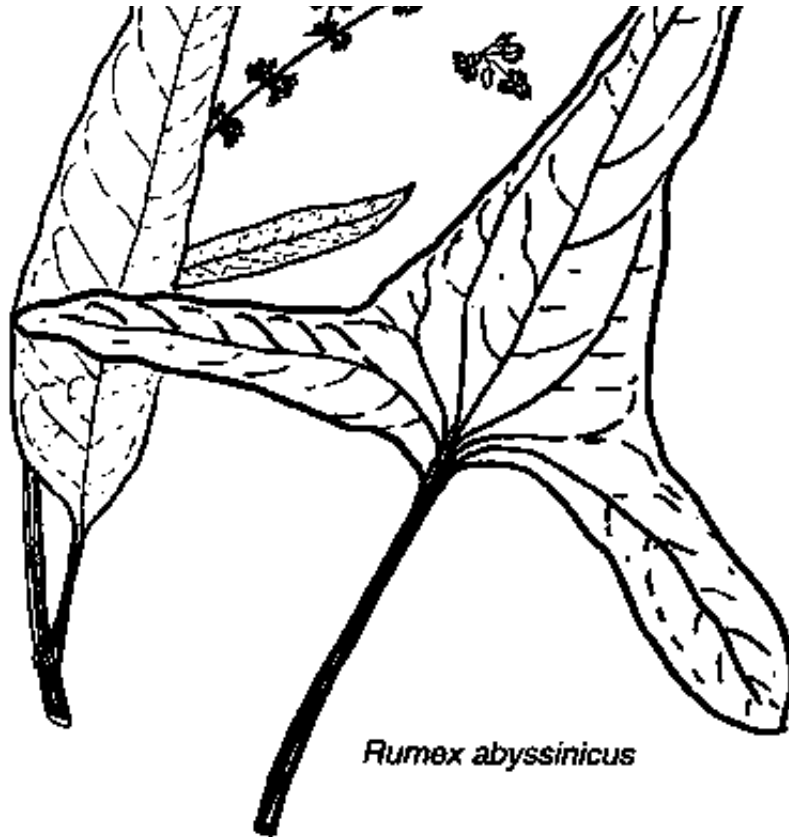
Status: Common.

Remarks: *Rumex* species mainly occur in the highlands of tropical Africa and on Madagascar. Some other commonly used species include:

- *R. abyssinicus* Jacq. (Samburu: *naisichoi*), a stout plant with palmately veined leaves and relatively larger basal lobes.
- *R. steudelii* A. Rich. (syn: *R. bequaertii* De Wild.) has long narrow leaves without lobes and a long, dark brown branched inflorescence. The plant is used in the same manner as *R. usambarensis*.

Rumex steudelii

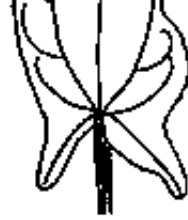




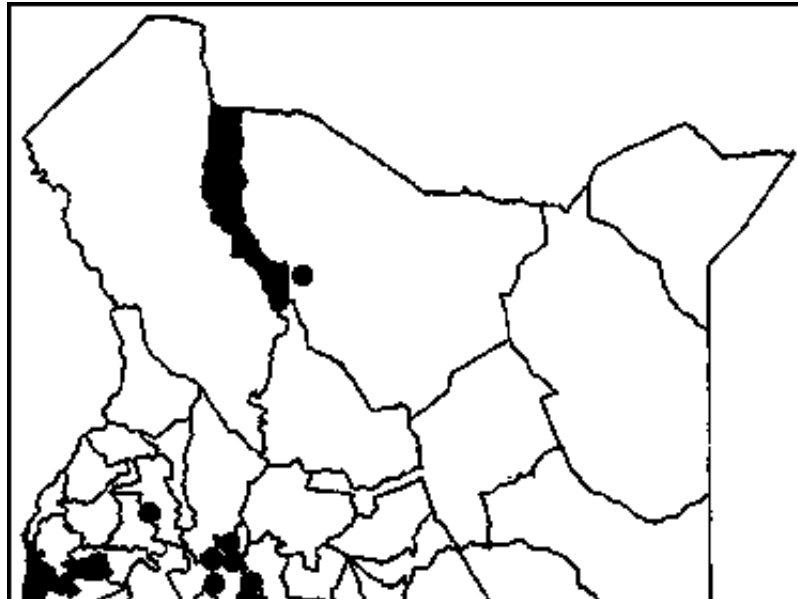
Rumex abyssinicus

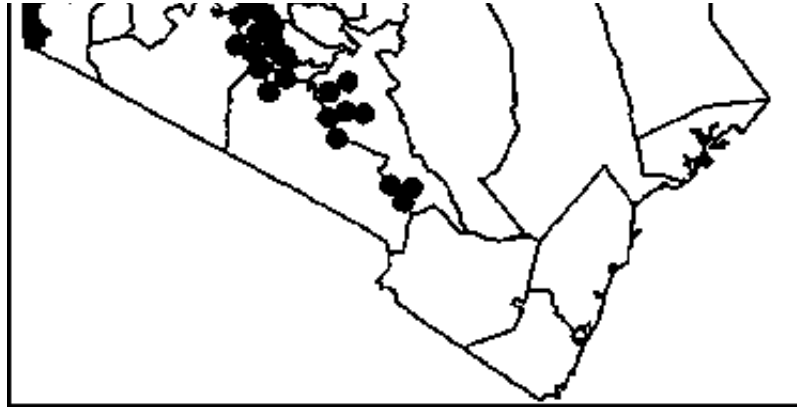
Figure





Figure





Figure

***Saba comorensis* (Bojer) Pichon**

Apocynaceae

syn: *Saba florida* (Benth.) Bullock, *Landolphia comorensis* (Bojer) K. Schum. var. *florida* (Benth.) K. Schum.

Kamba: kilia (Makueni), kiongwa (Kitui), kyongoa (Kitui),

mongoa (fruits, Kitui) **Luhya (Bukusu):** kumuchabungwe (plant), kamachabungwe (fruit) **Luo:** abune, jobune, abuna **Malakote:** loguo **Marakwet:** ochon **Mbeere:** mungo, rwonge, rwongi **Somali:** dhangalow, dongola **Swahili:** mbungo, mpira, bungo (fruit) **Taita:** meru, mameru (plural), ndimu **Taveta:** ivungu

Description: An extensive liana climbing up to the tops of trees and capable of creeping over low bushes for over 50 m. Stems smooth with long strong tendrils. All parts of the plant exuding milky white latex when injured. **LEAVES:** Large, dark green, glossy, often with a rounded apex. **FLOWERS:** In dense clusters, white, scented, corolla tubular. **FRUIT:** Light green, large, the size of a small orange (up to 7 cm across), turning yellow to orange-brown on ripening, coat drying to a hard brown shell. Seeds numerous, embedded in a brown pulp.

Ecology: Found in most parts of Kenya (except the dry

north), e.g. in Thui Hill (Makueni), Kitui hills and Nzeeu River (Kitui), Kuja River (Migori), Cherangani, Muhoroni, west Bukusu, Kihanja, Pengo Hill (Kwale), Wundanyi, Witu, Murang'a and along the Thiba River. Usually in riverine vegetation, on rocky hillsides, often forming thickets, or in lowland evergreen forest on alluvial, sandy clay or on rocky ground, 0-1,800m. Zones II-III.

Uses: FOOD: Fruit is edible (+++). Ripe fruits burst open when pressed. Seeds are sucked and discarded. Fruit have a sweet-acid taste and are much liked by both children and adults.

MEDICINAL: Fruits sucked for "coated tongue" (Kamba).

OTHER: Stems used for weaving granaries and as wall-plate in traditional houses (Kamba, Luo). Stems used for supporting beehives (Taita). Rubber obtained from it during the Second

World War.

Season: Flowers in September-November in Siaya, Kwale and Taita, in March in Kitui and Makueni. Fruits in April in Kitui and in August in Migori, Bungoma and Kitui, in September in Makueni and Kitui.

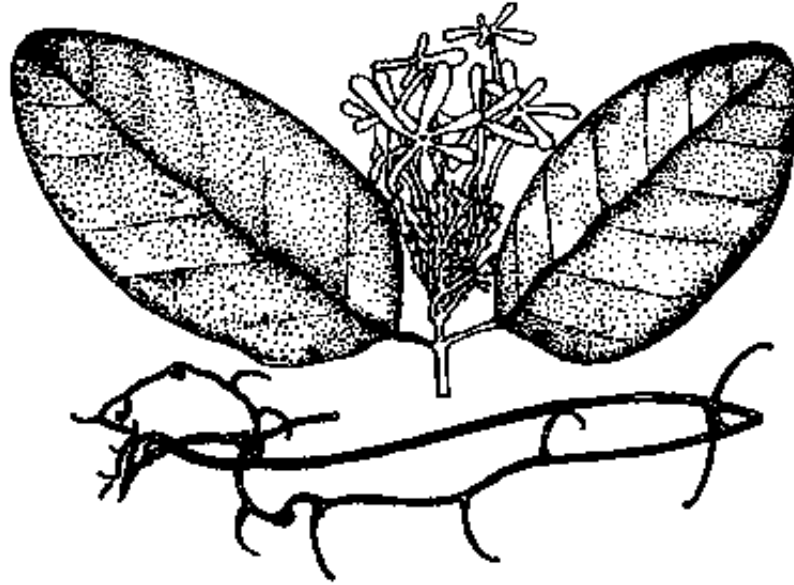
Management: Propagated by seed. Germinate readily after passing through animal gut.

Status: Generally rare but locally common in a few areas. Much reduced in recent years due to encroachment into its habitats.

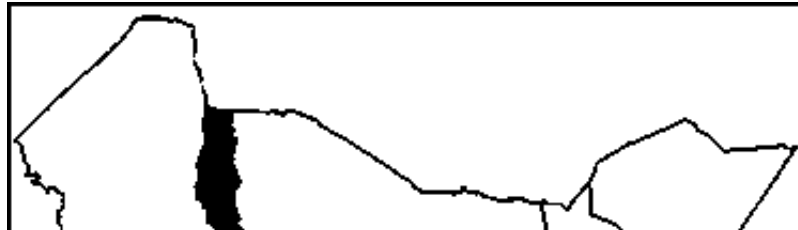
Remarks: Can be used as a living fence (climber) or as an ornamental. Beautiful flowers and leaves and flowers with a nice scent.

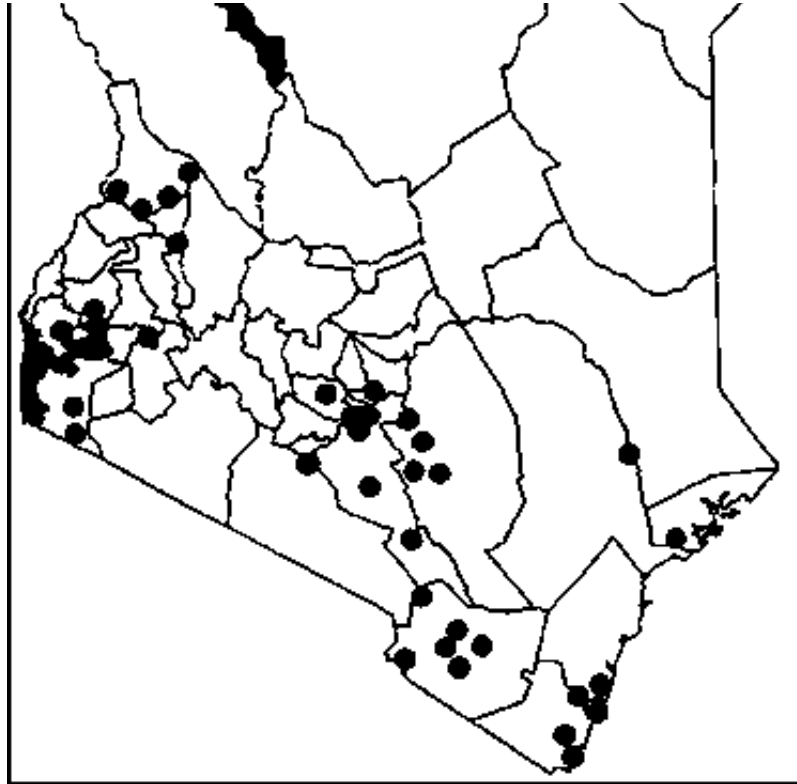


Figure



Figure





Figure

Salacia madagascariensis (Lam.) DC.

Celastraceae

Chonyi: mudzipo **Giriama:** mukipo, mudzipo **Kambe:** mudzipo **Malakote:** mwitwa-mow **Sanya:** kukube, **Somali:** madderie

Description: Evergreen bush, shrub or liana. **LEAVES:** Shiny, elliptic with a serrated margin. **FLOWERS:** Greenish yellow, in clusters. **FRUIT:** To 3 cm in diameter, round, bright red to orange when ripe.

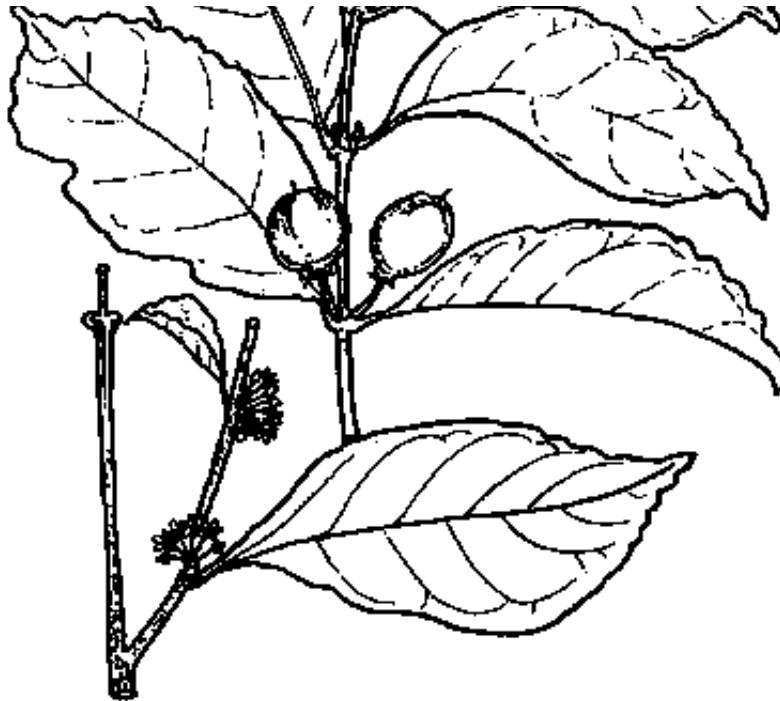
Ecology: In Kenya found in the coastal area, e.g. at Diani, Kwale town, Boni Reserve and Lamu in bushland, dry evergreen coastal forests, coastal sands, rocky areas, 0-500 m. Zones III-VI (riverine).

Uses: FOOD: Fruits edible with a sweet taste (++) . The edible

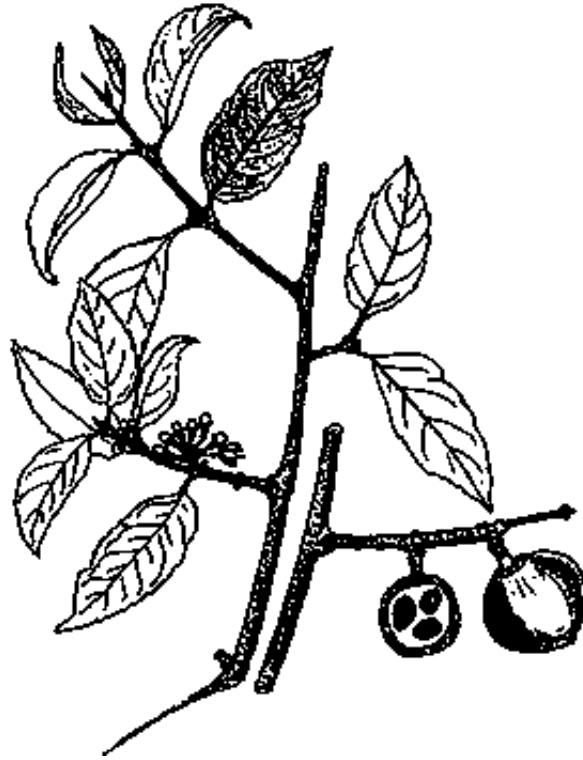
portion is meagre, however. The seed is large and not swallowed. Fruit coat removed before eating.

Remarks: A related species with edible fruits is *S. erecta* (G. Don) Walp found in the coastal and western parts of Kenya. An unidentified species, *Salacia sp.-ndendela* (Thui Hill, Makueni District)-also has edible fruit much liked by children. Shrub or liana with large shiny serrate leaves. Fruits bright yellow or orange. Produced in large quantities but the edible portion is small.

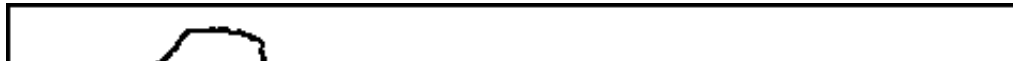


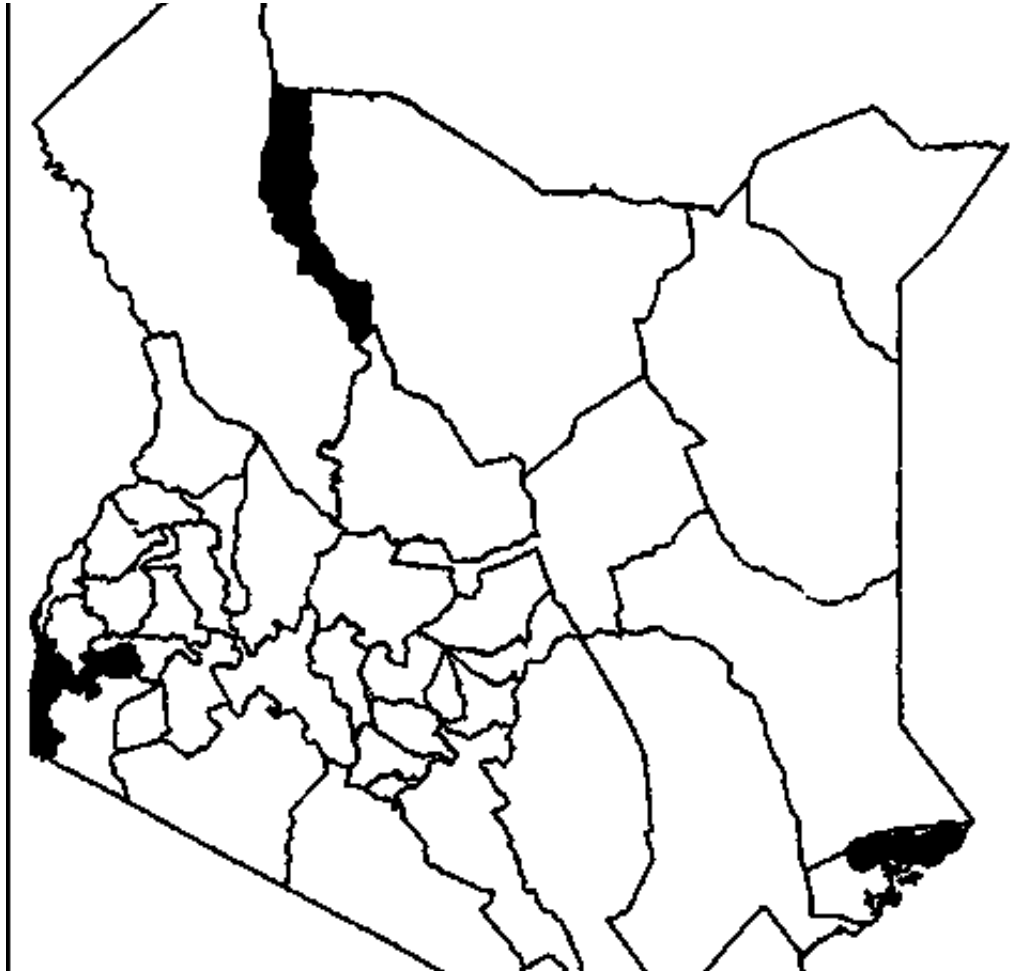


Salacia erecta



Figure







Figure

Salvadora persica L.

Salvadoraceae

English: toothbrush bush, mustard tree **Swahili:** mswaki
Borana: huda **Chonyi:** mswaki, mueza-moyo **Daasanach:** nyedhe, nyaa (plural)
Gabra: aadde **Giriama:** mswaki, mjungumoto, mueza-moyo **Kamba:** mukayau **Kambe:** mswaki, mueza-moyo
Maa: oremit, iremito (plural), olremit **Malakote:** muswaki **Orma:** adhe **Pokot:** asiokon, ashokonyon, chokow'o, asiokonion **Rendille:** hayay, akhai

(fruit) **Samburu:** sokotu, sokotei **Sanya:** adhe **Somali:** ade, adhei (Tana River), cadei, adde **Tugen:** sogotaiwa, barsute **Turkana:** esokon, esekon

Description: An evergreen bush to 4 m, a climbing shrub or an insubstantial tree to about 8 m. Trunk usually convoluted or prostrate, bark rough in older trees. Branches often hanging down. **BARK:** Greyish white. **LEAVES:** Slightly succulent or appearing so. **FLOWERS:** Small, greenish white, borne in large axillary or terminal panicles. **FRUITS:** Small and dark purple when ripe.

Ecology: Found in Arabia, Somalia, the Sudan, south to Mozambique, Malawi, Zambia and Angola and in West Africa, North Africa, the Middle East to north-west India and Sri Lanka. Grows in most low-altitude areas of Kenya, especially arid, semi-arid and coastal regions in riverine vegetation on sandy, sandy-loam and alluvial soils or on rocky ground, 0-

1,500 m. Occasionally in bushland, especially in red soils.
Zones V-VI.

Uses: FOOD: The ripe purple fruits are eaten whole (+). Also may be chewed or sucked. Fruit, especially seeds, have a slightly hot taste. Occasionally large quantities are gathered and brought home (Pokot, Turkana). Among some communities in northern Kenya fruits may be dried and stored for future use. Ripe fruits pounded and made into a sugary ball eaten as a snack (Turkana).

MEDICINAL: Roots mixed with *Acacia oerfota* (syn: *A. nubica*) bark in soup are used for dizziness, tuberculosis and fever (Pokot, Somali). Roots used as a toothbrush or chewed when one has bad teeth (Pokot). Plant used to cure worms (Kamba, Maasai). A decoction of the root used to cure gonorrhoea; also added to child's milk as a tonic (Maasai Kajiado); roots used for stomach-ache (Samburu). Dried root bark is boiled with tea

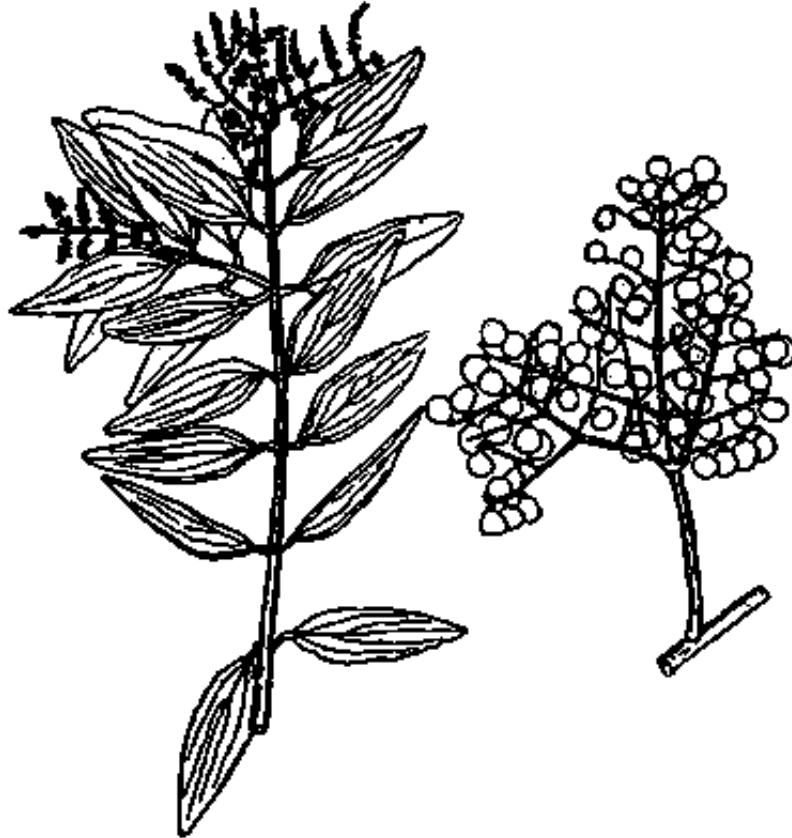
and taken as a health drink, a spice when one has a cold or to freshen the mouth (Maasai, Kajiado). Roots boiled and mixed with soup as a tonic and for stronger bones (Pokot, Maasai), this mixture is said to cure fever and colds; boiled root infusion given to breast-feeding mothers to increase milk (Maasai, Magadi).

OTHER: Leaves and fruit are fodder for camels (+++) and goats (++) . Branches used as toothbrushes (+++).

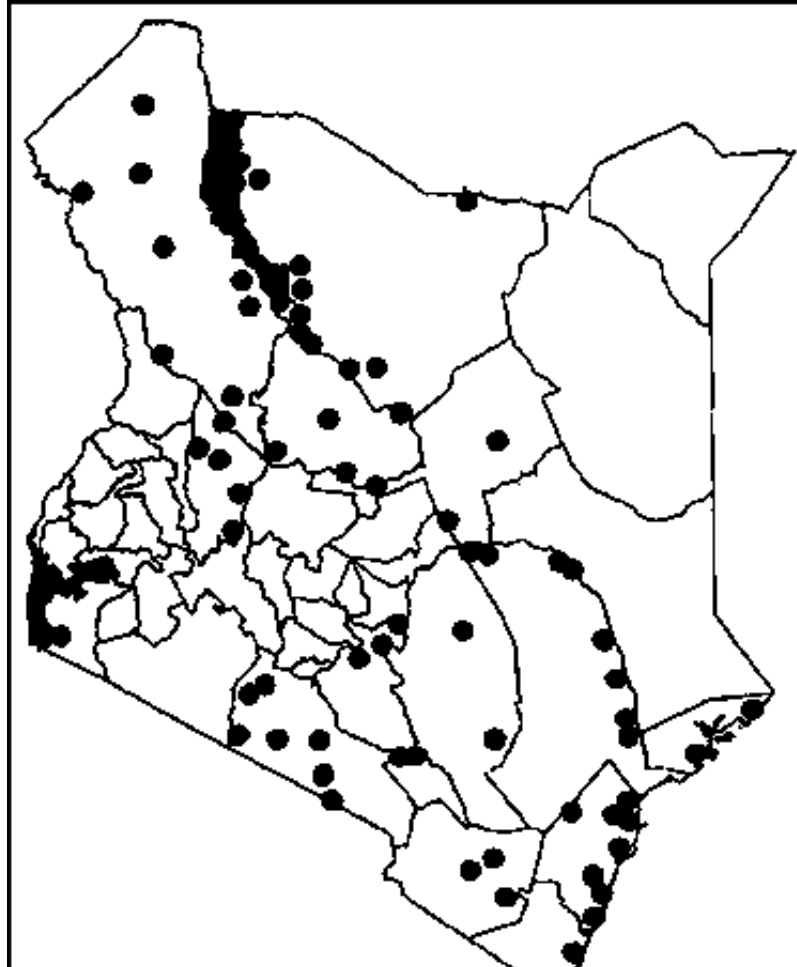
COMMERCIAL: Toothbrush sticks sold throughout the country.

Season: Fruits in June-July in Lodwar.

Management: Propagated by seeds and root suckers. Trees for shade should be planted near other trees such as *Acacia tortilis* for support.



Figure





Figure

Remarks: *S. persica* is an evergreen tree and often the only green plant seen during the dry season in areas where it grows. It provides excellent shade. In riverine vegetation, the bushy plant is good for erosion control. Said to be the mustard of the Bible. Three varieties found in Kenya:

- var. *persica* with slightly succulent, narrow, usually pointed leaves is widely distributed and by far the commonest.
- var. *cyclophylla* (Chiov.) Cut, distinguished by its broad leaves. Kenya coast and Somalia on coral.
- var. *pubescens* Brenan with hairy leaves. Maasai land in Kenya, also in Tanzania, Zambia, Zimbabwe

and Angola.



Figure

***Sclerocarya birrea* (A. Rich.) Hochst.**

Anacardiaceae

syn: *S. caffra* Sond.

Borana: didisa, **Chonyi:** fula (fruit), mfula **Digo:** mngongo, mng'ongo **English:** cider tree, morula **Giriana:** mfula, mfula, tulafula (fruit), fula **Ilchamus:** Imang'wai, Imang'wa **Kamba:** muuw'a, mauw'a (fruit) **Luo:** ong'ong'o (Gwasi), ng'ong'o (Kanyamwa), olemo, mang'u (Kadem) **Maa:** olmang'uai, ilmang'ua (plural) **Marakwet:** arol, oroluo (singular) **Mbeere:** mukomothi **Pokot:** oroluo, oroluwo, **Sabaot:** kotelalam **Swahili:** mng'ongo, mongo, mungango **Teso:** ekajikai **Tugen:** tololokwo **Turkana:** ekajiket

Description: A deciduous shrub or medium-sized tree to about 15 m, usually with a rather dense rounded crown.

BARK: Grey, finely fissured, scaling. **LEAVES:** Pinnate, borne at tips of branchlets that end bluntly. Leaflet margins entire or

undulate. **FLOWERS:** Dioecious. Female flowers reddish, borne on long stalks at the tips of branches. **FRUIT:** Light green, oval or nearly globose, 3-4 cm long, turning yellow on ripening. Fruit skin tough, leathery, enclosing a juicy white pulp and a single large hard nut.

Ecology: A widely distributed species in the dry zones. Ssp. *birrea*: Found from Senegal to Ethiopia and widespread in Kenya, e.g. in Lambwe Valley (Ruma National Park), Moyale, Ortum (West Pokot) and Baringo. Wooded grassland and rocky hillsides. Commonest on sandy and loam soils as well as dry rocky riverbeds. Ssp. *caffra*: Found in Tanzania and the Democratic Republic of Congo (Zaire) south to South Africa and Madagascar. A very common plant in Botswana. In Kenya, in coastal and adjoining areas. Open bushland, especially on sandy loam soils and rocky hillsides. Altitude: ssp. *birrea*, 500-1,600 m; ssp. *caffra*, 0-1,200 m. Zones IV-V.

Uses: FOOD: Ripe fruit eaten raw, fruit cover removed (often after squeezing the fruit several times) and the cream fruit pulp sucked. Pleasantly acid (+++) and strongly scented. Fruits can make a refreshing drink and are exceptionally high in vitamin C. The oil-rich seeds are edible. The stone is cracked and the contents eaten raw (Pokot, Kamba). Children are advised against swallowing the seed as it can easily cause choking. In southern Africa, the fruits are used for making a kind of alcoholic drink.

FOOD/MEDICINAL: Root or bark decoction added to milk as child's health drink (Pokot, Maasai). The bark is added to boiling *Balanites pedicellaris* cotyledons in the last hour of the 10 hours of cooking to improve taste and colour (Pokot).

MEDICINAL: Bark used for the treatment of dysentery (Pokot). Bark decoction used for diarrhoea, for adults with enlarged spleen as well as for liver diseases (Pokot). Medicine

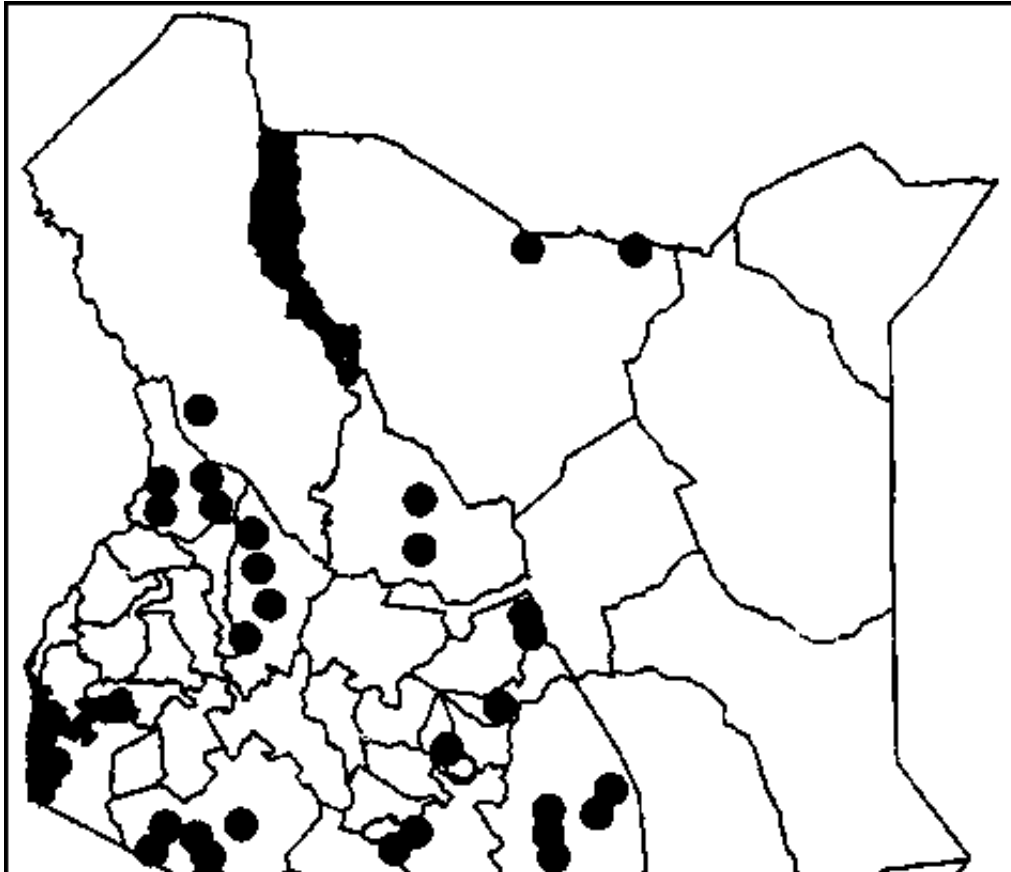
19/10/2011

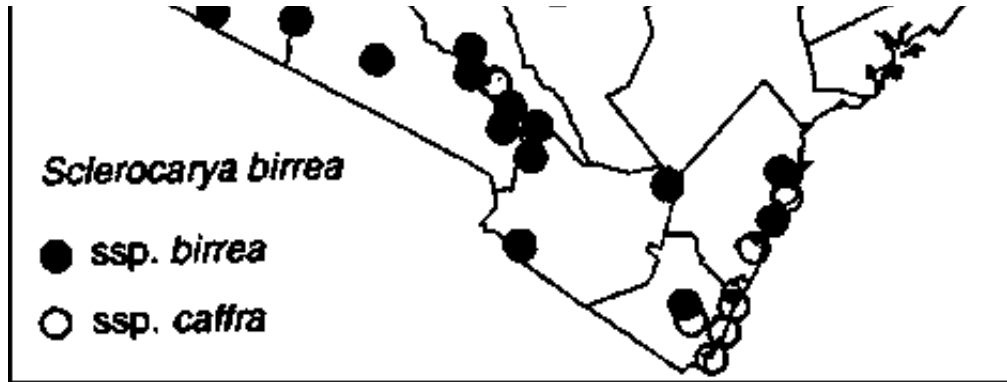
meister12.htm

for toothache (Swahili).



Figure





Figure

OTHER: Wood used for making bowls (Pokot), wood carving, mortars, stools, beehives (Kamba). Bark is used for cleaning gourds used in beer brewing. It is left for 3-4 days then washed out (Pokot). The bark also yields a dye as well as fibre. Trees can serve as shade trees but are deciduous. The plant is also a source of soft fuelwood (takes time to dry). Fruit eaten by elephants and goats; the seeds are regurgitated by the latter and are still of value to humans (Pokot).

COMMERCIAL: Fruits sold (Pokot). Wine made from the fruits.

Season: Fruits in April-May in Kerio Valley, Baringo, Makueni and Sultan Hamud, in July in Homa Bay and Lambwe Valley.

Management: This species does not readily propagate itself by seed. Due to the hard coat, seeds require pre-treatment by nicking or applying concentrated sulphuric acid to enhance germination. The species does not respond well to coppicing.

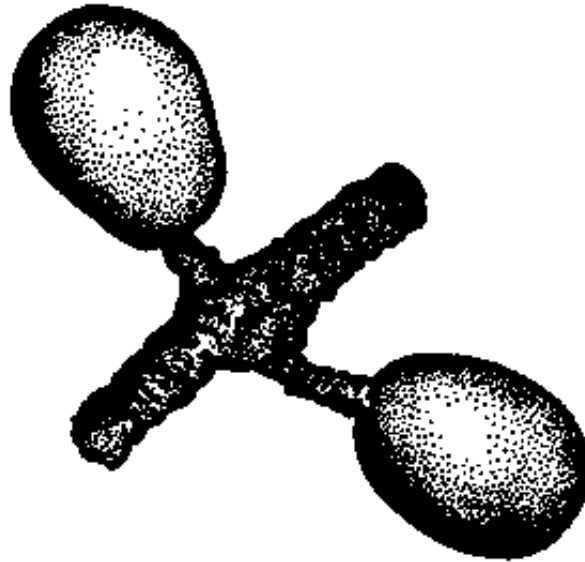
Status: May be locally uncommon.

Remarks: A quite variable species, especially in leaf shape, fruit size and taste. The two subspecies may be distinguished by the shape of the leaflets:

- *ssp. birrea*: Leaflets are usually shorter with obtuse or acute tips, and

- *ssp. caffra* (Sond.) Kokwaro (syn: *S. caffra* Sond.):

Leaflets have narrower and more elongate tips. This is the marula fruit which is much valued in southern Africa, especially in Botswana. Ripe fruits fall from the tree to the ground where they ferment naturally and can be quite intoxicating to humans, goats and wild game. In Botswana, varieties with exceptionally large fruit have been bred. Fruiting has been achieved in about 3 years in grafted plants.



Figure

Scutia myrtina (Burm. f.) Kurz

Rhamnaceae

Boni: tsina **Kamba:** kitumbuu, mbombo-kenya, (Museve,

Kitui) **Kikuyu:** murangari **Kipsigis:** saiyakirur **Luo:** migodha
Maa: osanankururi, osanankuruti, osinon-kurruti **Sabaot:**
letwa **Samburu:** sananguri

Description: A spiny often scrambling shrub 2-4 m high, occasionally higher. Branches scattered and spreading with recurved thorns which are normally in pairs. **BARK:** Grey, smooth, older bark longitudinally fissured. **FLOWERS:** Pale green. **FRUITS:** Green turning purple-black on ripening, up to 1 cm in diameter.

Ecology: From Kenya and Uganda south to South Africa and Madagascar; India and Sri Lanka east to Vietnam. Widely distributed in Kenya and common in dry middle- to high-altitude areas in bushed grassland and thickets, 0-2,700 m. Confined to riverine vegetation in the lower dry altitudes. Common on clay soils, red and black cotton. Zones II-IV.

Uses: FOOD: Fruit edible, sweet, but leaving a rough feeling in the mouth. Edible portion small (+). Seed discarded. Roots used a great deal by Maasai morans in soup.

MEDICINAL: Roots are mixed with those of *Ximenia americana* and eaten mixed with goat and sheep fat in the treatment of gonorrhoea (Maasai). Pounded leaves and a little water used for ringworm, *ieya* (Kamba).

Season: Flowers in June in Narok and fruits in February and July in Kajiado and Kitui.

Management: Easily grown from seeds.

Status: Very common in some areas.

Remarks: May be grown as a hedge but would require constant trimming.

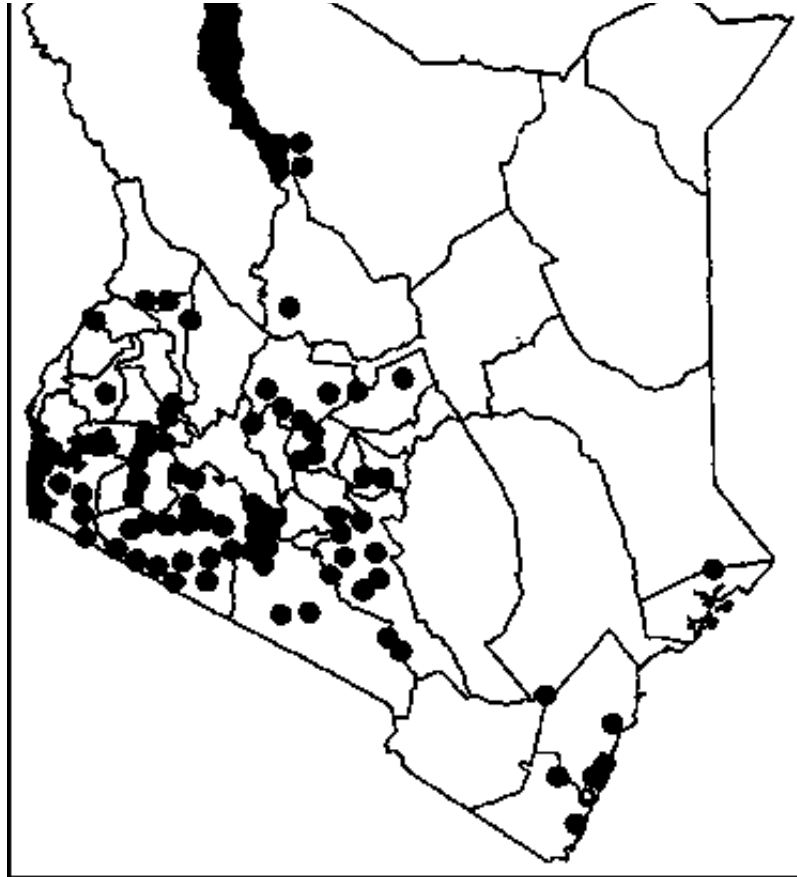


Figure



Figure





Figure

Sesamum calycinum Welw.

Pedaliaceae

var. *angustifolium* (Oliv.) Ihlenf. and Siedenst.

Boni: sisin, kedura **Chonyi:** mrenda **Giriama:** mrenda
Kamba: luta **Luhya (Bukusu):** lukhanukhanu **Luhya
(Tachoni):** olkenu kenu **Luo:** onyulo, anyulo, olukenu, kenu
Maa: oldelemet **Swahili:** mfuta mwitu

Description: A usually erect herb, rarely straggling, sparingly branched, to 1.3 m, occasionally higher. Stems angled, finely hairy. **LEAVES:** Narrow, long. **FLOWERS:** Funnel-shaped, pink to reddish purple, hairy, longer lip pale inside with purple lines.

Ecology: Nigeria south to Namibia and Mozambique. In Kenya occurs in abandoned cultivated land, grassland, roadsides, 0-3,000 m. Common in light clay and sandy soils. Zones II-V.

Uses: FOOD: Used as a vegetable (+++) (Luhya, Luo, Teso) which has a mucilaginous texture and a slight odour. It is normally cooked with *Corchorus* (Luo: *apoth*, Luhya: *murenda*). A useful oil may be obtained from the seeds.

MEDICINAL: Oil used as medicine for ringworm (Uganda, Busoga). Leaves ground and applied to the scalp for baldness (Boni). Leaves rubbed in water give a mucilage used for eye troubles and infant diarrhoea. Mucilage is used to treat burns and wounds. Crushed leaves are rubbed in the hair when washing it to give it a glossy look. Used in the treatment of stomach-ache (Kamba).

COMMERCIAL: Leaves sold in Siaya.

Management: Propagated by seeds sown randomly (Siaya) or in lines. Seedlings are thinned to a spacing of about 20 cm as they grow. Coppices well.

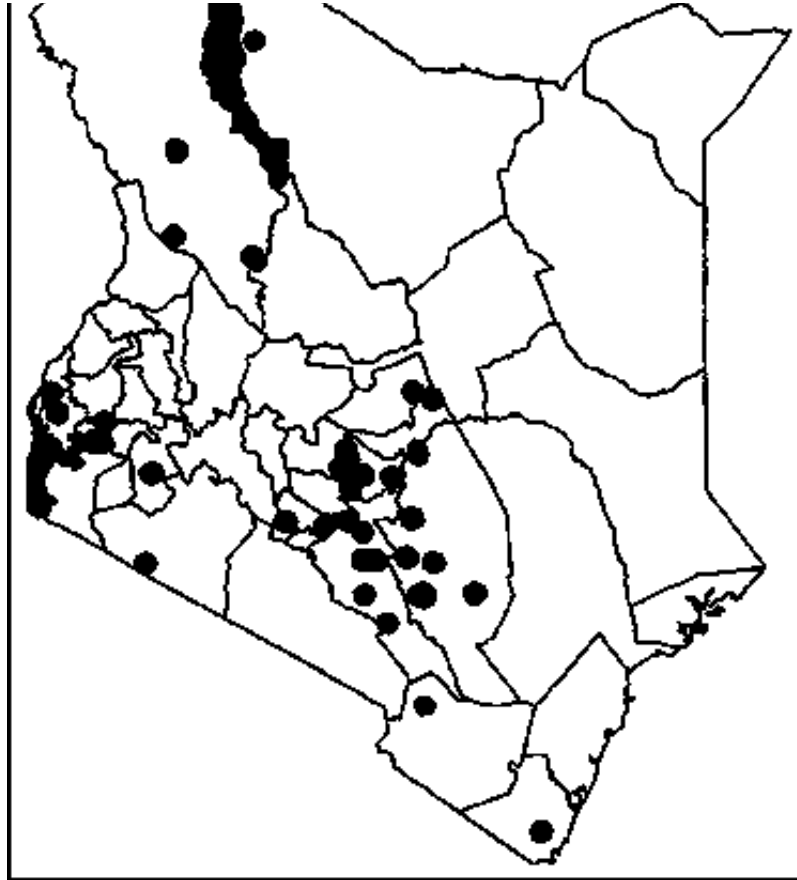
Status: Locally common.

Remarks: May be used as an ornamental.



Figure





Figure

Sesamum orientale L.

Pedaliaceae

syn: *Sesamum indicum* L.

English: sesame, baniseed, sesamum **Swahili:** mfuta, ufuta, uvuta, simsim **Chonyi:** ufuha **Digo:** ufunha **Giriama:** ufuha **Luo:** nyim **Luhya (Maragoli):** tsinuni **Luhya (Tachoni):** chikhanu **Kambe:** ufuha **Sanya:** sisino **Somali:** salalmac **Teso:** ikanyum

Description: An erect annual plant up to 2 m, more often 1.0-1.5 m. **LEAVES:** Lobed (lower) or lanceolate (upper). **FLOWERS:** Purple to white. **FRUIT:** A capsule to 4.5 cm long which dehisces releasing cream, brown to black seeds depending on variety.

Ecology: Widely cultivated in the tropics, especially in Asia. Grown on a small scale in the Coast, Western and Nyanza Provinces. Wild populations found in southern Turkana, West Pokot and northern Kenya in open grassland, bushed grassland, roadsides and disturbed areas, 0-1,500 m. Wild populations common at about 1,000 m. Often found on loam soils. Rainfall: 400-1,200 mm. Zones: III-VI.

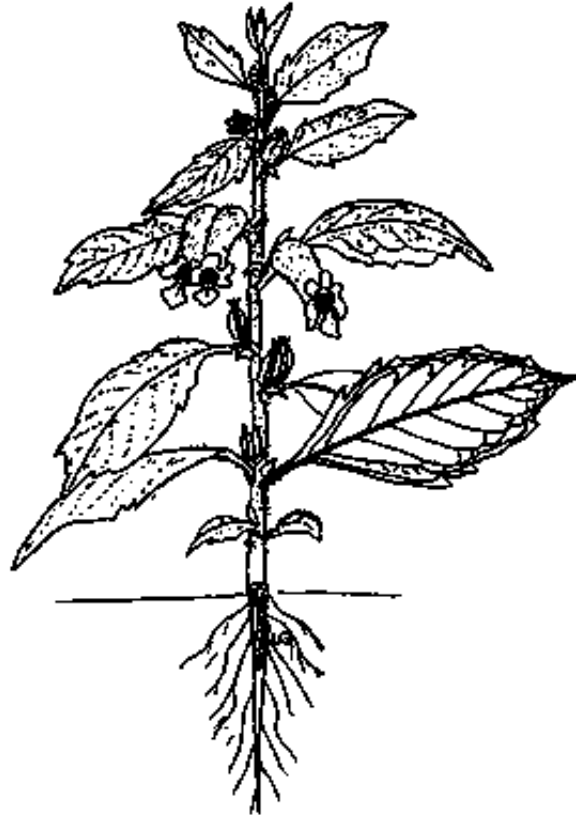
Uses: FOOD: Simsim is grown for its oil-rich seeds. Seeds are baked into a cake or fried and rolled into balls; commonly seen in markets in western parts of Kenya. Sweet seeds are often fried with those of the Bambarra groundnut (Luhya) and served to visitors on special occasions. Cooking oil is also extracted from the seeds. Leaves eaten as a vegetable (Digo). Seeds mixed with grain flour and used in baking cakes (Duruma). Seeds often sprinkled on bread and cakes. Among the Mijikenda, seeds are fried then pounded in a mortar to a thick soft oily paste. This is served as the *mboga* with *ugali*.

COMMERCIAL: Seed cakes and sweet balls sold in major markets, especially in western Kenya; also seen in supermarkets. Oil is of great commercial value. Bread and cakes sprinkled with simsim are common.

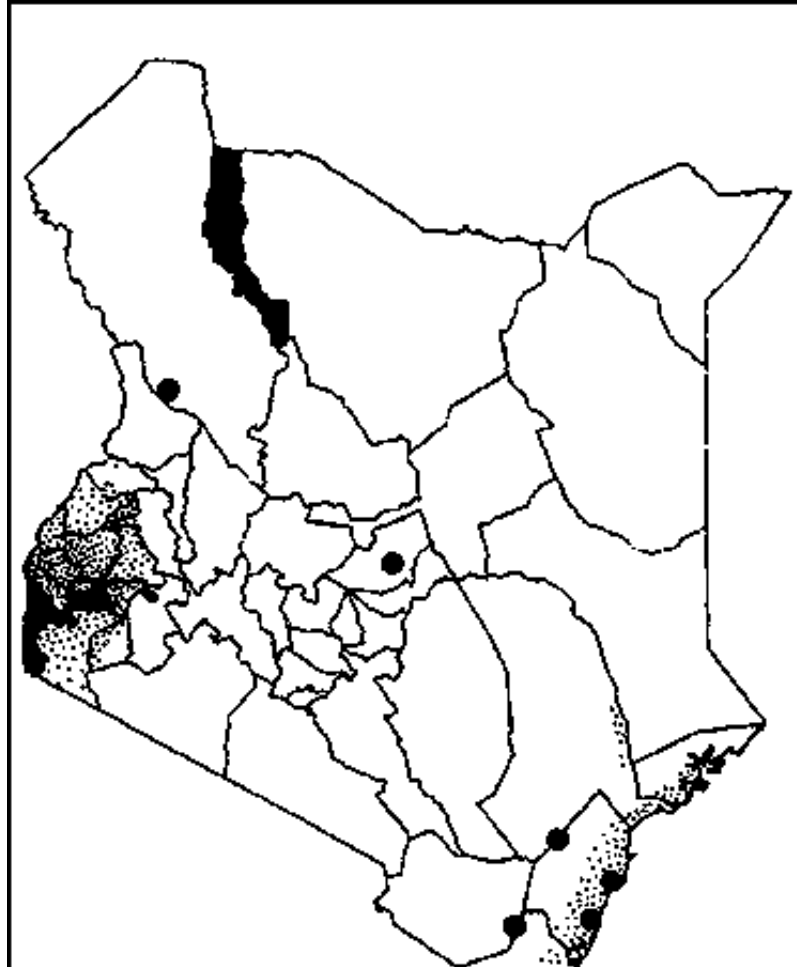
Management: Sesame may be sown in lines or by broadcasting. Seeds are small and usually mixed with loose soil for more even sowing. It may be intercropped with other crops such as maize. As soon as the lower capsules start to dry (lower ones mature earlier), the plant may be cut or uprooted and dried for about a week, normally while suspended upside down. They are then threshed to release the seeds which fall on a sheet spread below, a mat (*mkeka*) or a large shallow doum-palm basket (*tuguu*). Seeds are then winnowed before storing. In small gardens, individual capsules may be picked as they mature.

Remarks: Sesame is a traditional food for the Luhya, Luo and

coastal peoples. In Kenya most of the sesame produced is consumed in the areas where it is grown and in larger towns by the same communities that grow them. Thus, there is a need for promotion of the crop among the other communities.



Figure





Figure

Solanum nigrum L.

Solanaceae

Chonyi: mnavu-tsaka, mnavu, mnavu-jangaa **Embu:** managu
English: black nightshade, wonderberry **Giriama:** mnavu,
 mnavu-jangaa (black fruits), mnavu-tsatsa, mnavu-mahomba
Ilchamus: olmomoi, Imomoi, Imomo **Kamba:** kitulu **Kambe:**
 mnavu-tsaka, mnavu **Keiyo:** suchot, kisuchot **Kikuyu:**
 managu, inagu, nagu (fruit) **Kipsigis:** isoiyot **Kisii:** rinagu
Luhya (Bukusu): namasaka, esufwa **Luhya (Maragoli):**
 litsusa **Luhya (Tachoni):** yisufwa, yimboka, namasaka,
 imboka **Luhya (Tiriki):** lisutsa **Luo:** osuga **Maa:** ormomoi
Marakwet: ksoiyek, isoiyo, kisoyo **Mbeere:** managu, inagu

(singular) **Meru:** managu **Okiek:** soyot **Pokot:** ksoya
Rendille: gengalat **Samburu:** Imomoi, lekuruu **Sanya:** mnavu
Swahili: mnavu, mnavu **Taita:** ndunda **Tugen:** kisuchot,
kisuchon **Turkana:** esuja, abune, lokitoemenyan

Description: An erect herbaceous plant to 1 m or more. Stems ridged, soft, occasionally with soft, miniature prickles. **LEAVES:** With long petioles. Blade up to 15 cm long, usually 5-10 cm long, elliptic, entire or undulate. **FLOWERS:** Small, white, borne on a branched inflorescence. **FRUITS:** Green, turning orange, red or yellow at maturity (in *S. villosum*) or shiny purplish black at maturity (in other species). Seeds small, almost round, flattened, pale yellow.

Ecology: Most of Africa, tropics and subtropics of the world. Widely distributed in Kenya. Commonly found as a weed in cultivated fields, in weedy plant communities, under trees, along fences and shaded areas near buildings, 0-2,600 m.

Rainfall: More than 500 mm. Soils vary. Zones I-VI.

Uses: FOOD: Leaves widely used as a vegetable in Kenya (+++). Normally cooked with amaranth (Pokot, Luo), meat or *Cleome gynandra*. Leaves are picked, boiled and may or may not be fried. As the vegetable is bitter, some prefer not to use salt. Among the Mijikenda the vegetable is mixed with less bitter vegetables such as amaranth (*mchicha*), cowpeas and *Vernonia cinerea* (*kibudzi*). Normally eaten with *ugali*. The ripe orange fruits are edible. The black fruits of the highland forms are bitter and may be poisonous. The green berries may contain poisonous solanum alkaloids and should not be eaten. The densely hairy form is hardly used as food.

MEDICINAL: Unripe fruits applied to aching teeth (Makueni) and squeezed on baby's gums to ease pain during teething (Kajiado, Kitui). Leaves used for stomach-ache (Machakos). Leaves and fruits pounded and the extract used for tonsillitis

(Machakos). Roots boiled in milk and given to children as tonic (Maasai).

OTHER: Fodder for cattle and goats. Eaten and spread by birds.

COMMERCIAL: The vegetable is common in Nairobi markets and in many other market centres, especially in Coast, Nyanza, Rift Valley and Western Provinces. The demand in Nairobi is high.

CULTURE/BELIEFS: Some Mijikenda communities regard it as taboo to add salt, believing the plant will stop growing in cropland as a result.

Season: Leaves best during and just after the rains. Fruits normally available in June-August and in January-February.

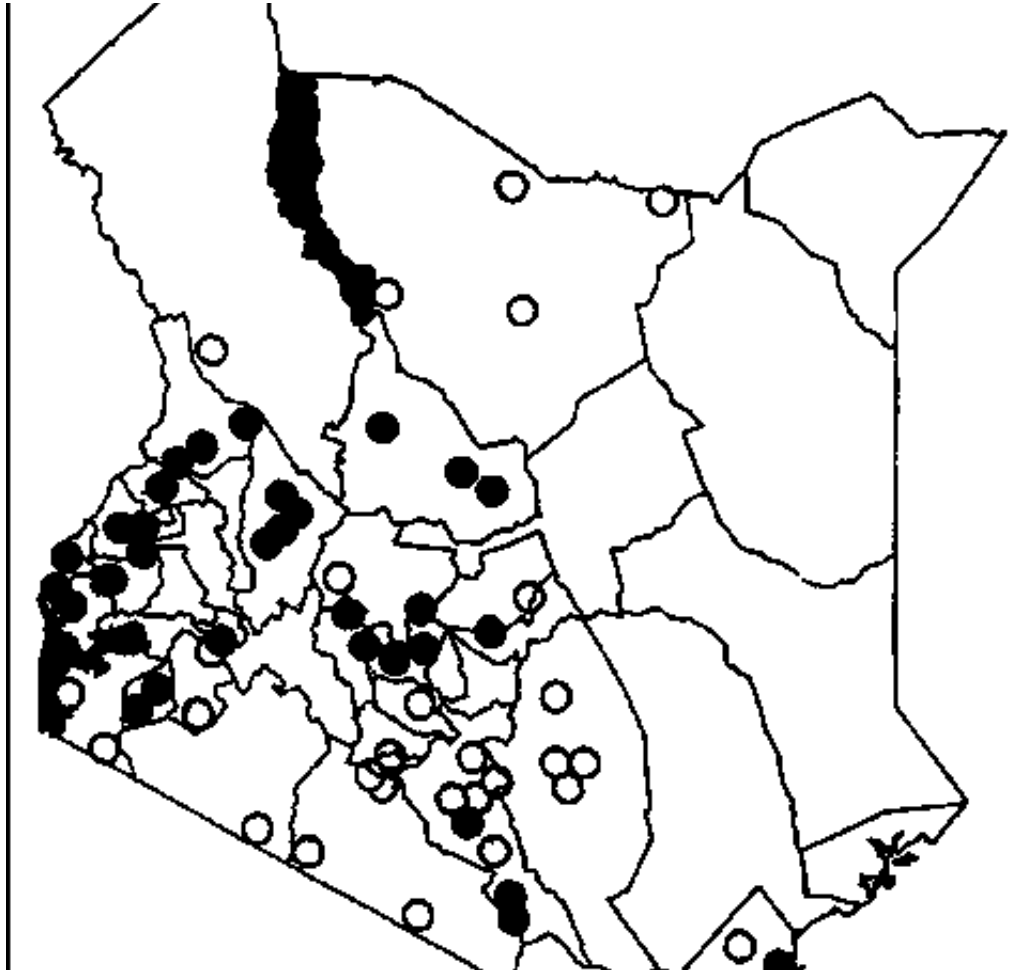


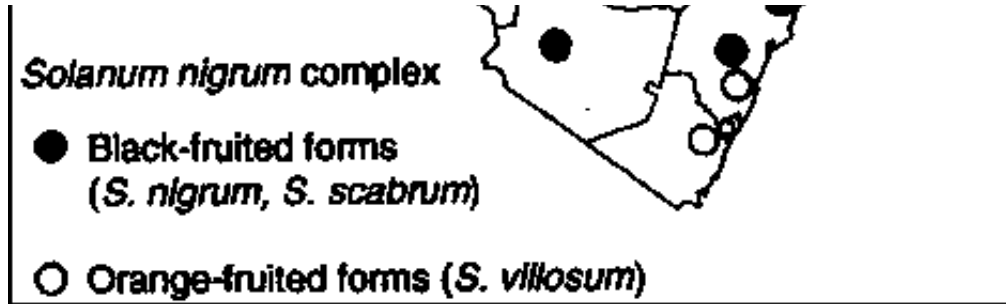
Solanum nigrum



Solanum villosum







Figure

Management: Propagated by seeds or cuttings. The Giriama propagate the coastal form by shoot cuttings. The seeds may be obtained by bursting the ripe fruits and drying them in the sun. The germination rate is normally poor.

Remarks: Polyploidy in the genus *Solanum* is common. What is referred to as *Solanum nigrum* in this book may well be a complex of species and their various forms which can be termed the *Solanum nigrum* complex. In recent years,

following extensive research on the genus *Solanum*, and more specifically on the section to which it belongs, the trend has been to split the complex into a number of species easily distinguished by such features as the colour of the ripe fruit, fruit size, leaf shape and stem morphology.

In Kenya at least five species can be recognized. Each of these has a distinct distribution, habitat and altitude range.

Solanum nigrum L. This type has shiny black fruits and leaves with a somewhat wavy margin. In Kenya it is commonest in high-altitude areas above 2,000 m with a humid climate.

Solanum villosum Miller (English: red-fruited nightshade). The type has yellow to orange fruits up to 1 cm across. Seeds are usually visible through the fruit wall. It is commonest in the middle and low altitudes, including the coastal zone. It is the more common species in warm, sub-humid to dry areas in

agro-climatic Zones III-VI. The ripe fruits are edible.

Solanum americanum Miller (English: huckleberry) is a small species with relatively smaller fruits, usually less than 9 mm across. Fruits are purple-black when ripe. The coastal type with dark green leaves and small purple-black fruits is most likely this species. It is often found in cropland, planted or growing naturally.

Solanum scabrum Miller. This is a type with relatively large fruits (up to 2 cm across) which turn shiny purple-black on ripening. It is occasionally grown by farmers in Western and Nyanza Provinces and in the highland part of central Rift Valley. Ripe fruits are edible.

A hairy form with regular notches on the leaf margin and black berries common around Nairobi is probably *S. physalifolium*. This form is not used for food.

While there is little doubt that some of these forms are indeed distinct species, the debate over the correct taxonomic classification of most of them is far from over with some authors preferring to lump most of the above species, and others not found in Kenya, under one species - *Solanum nigrum*.

In recent years, several other species in the genus *Solanum* have been seen in cultivation.

- *Solanum aethiopicum* L. (English: bitter tomato, mock plant (depending on the type)) is mainly cultivated in West Africa. It has shallowly lobed leaves and sub-globose or ellipsoid orange-red fruits to 6 cm long.
- *Solanum macrocarpon* L. (English: African eggplant, Swahili: *ngogwe*) found in Uganda, Tanzania and West

Africa, has large shallowly lobed leaves and large cream-yellow to orange or purple fruits, to 5 cm across. Leaves and fruits are used as a vegetable at the coast and in Uganda and West Africa.

Also in this tomato family are several species in the genus *Physalis*.

- *Physalis peruviana* L. (English: Cape gooseberry, Kamba: *ngavu*, Maa: *olnasi*, Kikuyu: *nathi*, Luo: *nyakonglo*, *nyatonglo*, *otonglo*, Somali: *tabaako*). The *Physalis* spp. grown in Kenya are all native to tropical America. *P. peruviana* is cultivated and also naturalized in many parts of the world as well as Kenya. This has edible fruits which are very popular with children. Fruits are 1.5-2.5 cm across, yellow when ripe and enclosed in an inflated papery calyx. It is occasionally sold in Nairobi markets and in western

Kenya.

- *Physalis minima* has smaller fruits. It is common in western parts of Kenya. Fruits are eaten, while the leaves are used as a vegetable (Luo, Luhya).



Physalis peruviana



Physalis minima

Sorghum bicolor (L.) Moench

Gramineae (Poaceae)

Borana: misinga **Chonyi:** muhama **Embu:** muvia **English:** sorghum. Guinea corn **Giriama:** muhama **Kamba:** muvya **Kambe:** mhama **Keiyo:** moosong', moosongik **Kikuyu:** muhia **Kisii:** amaemba **Luhya (Isukha):** mavele **Luhya (Kisa):** amabere **Luhya (Marachi):** mabere, mavere **Luhya (Maragoli):** mabere, mavere **Luhya (Bukusu):** liemba, kamaemba (plural) **Luhya (Tachoni):** amabele, kamaemba **Luhya (Samia):** amabele **Luo:** bel **Marakwet:** mosong (plural), mosiyon (singular) **Meru:** muya **Nandi:** mosongik **Pokot:** musyoon, musuu (plural) **Sanya:** misinga, msinga **Somali:** gidami **Swahili:** mtama **Teso:** imomwa **Tharaka:** munya **Turkana:** ng'imomwa

Description: A strong annual or perennial grass cultivated for its grain. Culms (stems) usually 1-2 m high, often with prop roots at the lowest nodes. **LEAVES:** Leaf-blade broader than in pearl millet. **FLOWERS:** Inflorescence a large terminal branched panicle which may be compact or loosely held.

FRUITS: Grain of various colours ranging from white to red and dark brown. Many varieties are known, some only found and maintained locally by individual communities and deeply integrated into their culture. The Ng'ikebootok of southern Turkana, for example, keep up to 15 types, probably representing races, all with distinct vernacular names.

Ecology: Cultivated in most areas of Kenya, particularly in Nyanza and Western Provinces, usually between 0 and 2,400 m.

Uses: FOOD: A traditional grain crop of most communities in Kenya. The grain is ground into flour and used for making porridge and *ugali*. Used a great deal by the Luo, Turkana, Tharaka, Taveta, Tugen, Marakwet, Elgeyo, Teso, Luhya, Kisii, Kamba, Kikuyu, Embu and Mijikenda (Giriama, Digo, Duruma, Rabai, Ribe, Kambe, Jibana, Chonyi, Kauma) groups. Among the Luo, Teso and Luhya, the grain may be mixed with dried

cassava and ground into flour. Flour may often be mixed with maize or finger-millet flour. The brown husks of sorghum, *chung'bel*, are used for making tea (Luo). The flour is used for making traditional beer (Teso, Luo). Fresh grain of some sweet cultivars is eaten. Bitter cultivars are preferred where bird attack is a problem. The stems of some cultivars are sweet and chewed like sugarcane. These are often sold in markets in southern Africa, especially in south-western Zimbabwe.

CULTURAL/BELIEFS: The Ng'ikebootok of southern Turkana believe sorghum came to their land by way of elephant dung.

COMMERCIAL: The grain and flour are sold all over the country.

Management: Propagated through seed. Takes 3-4 months to reach maturity. Quicker maturing varieties now available. In some cultivars, the crop may be left to give a second or even a

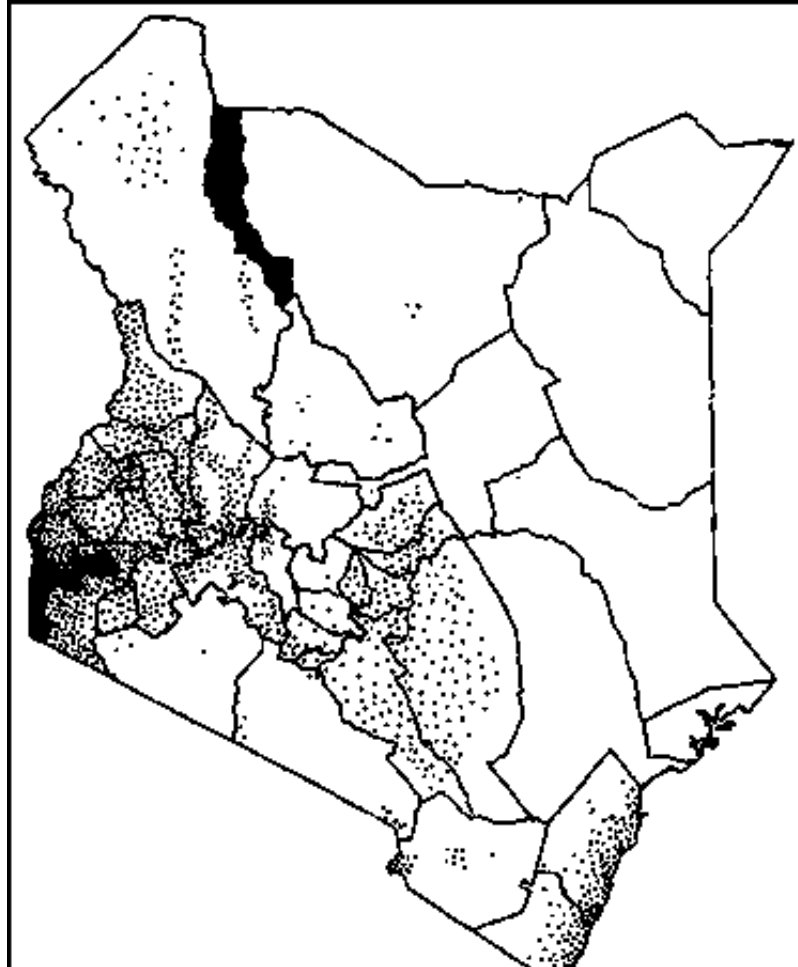
third harvest by cutting off mature stems. The second crop may be as good as the first (Turkana) or better, but the third is always much less. Diseases are a limiting factor in later harvests.

Season: Mature crop in February-March in Machakos, Kitui, Embu, Mbeere, Tharaka, Meru, in June-July in Kitui, Mwingi, Tharaka (second harvest from same crop) and in July-September in Turkana (with up to three harvests).





Figure





Figure

Remarks: Sorghum is a crop that has been cultivated since ancient times and hence a great number of cultivars exist. Local people not only distinguish the various forms using morphological characters (like plant height, stem colour and thickness, size and shape of the ear, colour and shape of grain) but also others such as taste and hardness of the grain. Like many other traditional grain foods, sorghum has declined in importance compared to maize among many communities. It is, however, still a staple food among the Luo, Teso and agricultural Turkana.

Sorghum is believed to have originated in north-eastern Africa. Its diversity among the communities in southern Sudan and bordering communities in Kenya and Ethiopia is of great

interest. Many varieties become extinct each year due to disuse or introduction of more competitive varieties. Sorghum's close wild relative, *S. arundinaceum* (Kamba: *mukombi, imila*, Turkana: *etiriwae*) is commonly seen in association with it. It is common in the Kibwezi area and in Laikipia. De Wet and Harlan (1971) combined all spontaneously occurring taxa into *S. bicolor* ssp. *arundinaceum* (Desv.) de Wet and Harlan and all cultivated taxa into *S. bicolor* ssp. *bicolor*. Harlan (1971) considered that sorghum was domesticated in the savannah somewhere between Chad and the Sudan where ssp. *arundinaceum* is abundant and still harvested as a cereal in times of scarcity.







Sorghum arundinaceum

Sorindeia madagascariensis DC.

Anacardiaceae

syn: *S. obtusifoliolata* Engl.

Digo: mkunguma **Duruma:** msanzanza **Malakote:** mwebebe
Pokomo: nyambembe **Swahili:** mtunguma, mkunguma
Taita: mkunguruli **Taveta:** mundaraha

Description: An evergreen tree to 20 m or more. **BARK:** Flaking. **LEAVES:** With alternate leaflets which have an asymmetrical base. **FLOWERS:** Yellow, in long, loose panicles. **FRUIT:** 1.0-2.5 cm long, in clusters, oval and fleshy, green, ripening to a yellow colour.

Ecology: Kenya, Tanzania, Malawi, Mascarene Islands. In Kenya in riverine vegetation, especially along the lower Tana River, coastal forests, areas with high groundwater, usually on sand or loam, 0-1500 m. Zones I-VI (riverine).

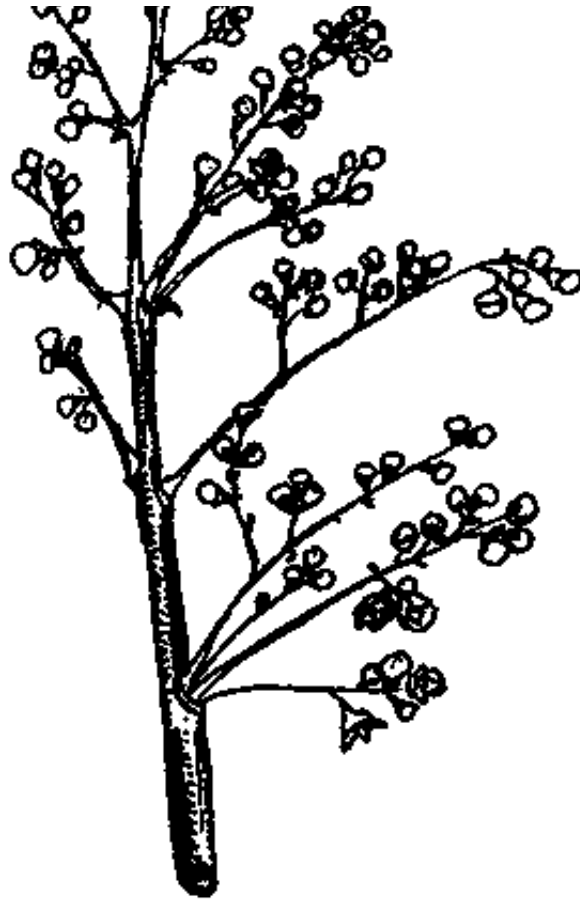
Uses: FOOD: The fleshy ripe fruit is edible. It has a pleasant flavour. Rated as one of the best indigenous fruits by the Pokomo and Malakote.

OTHER: Fuelwood.

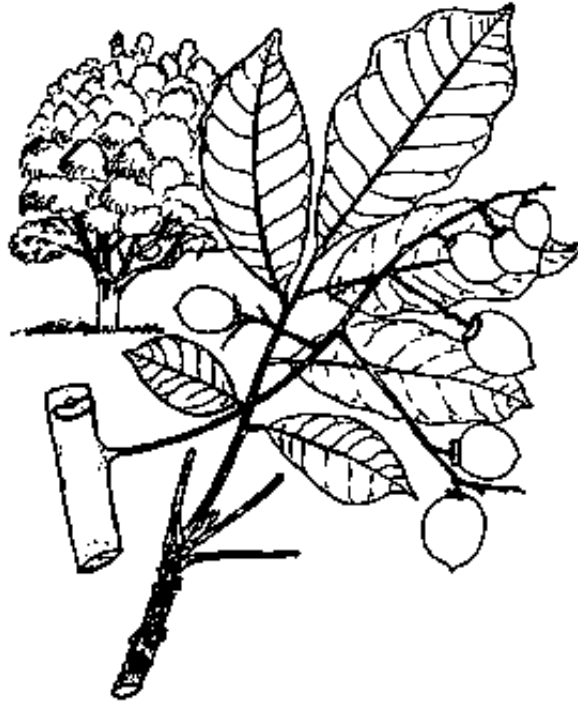
Status: Locally common.

Remarks: The only member in its genus found in Kenya. Like many of the members of this family, the species is dioecious.

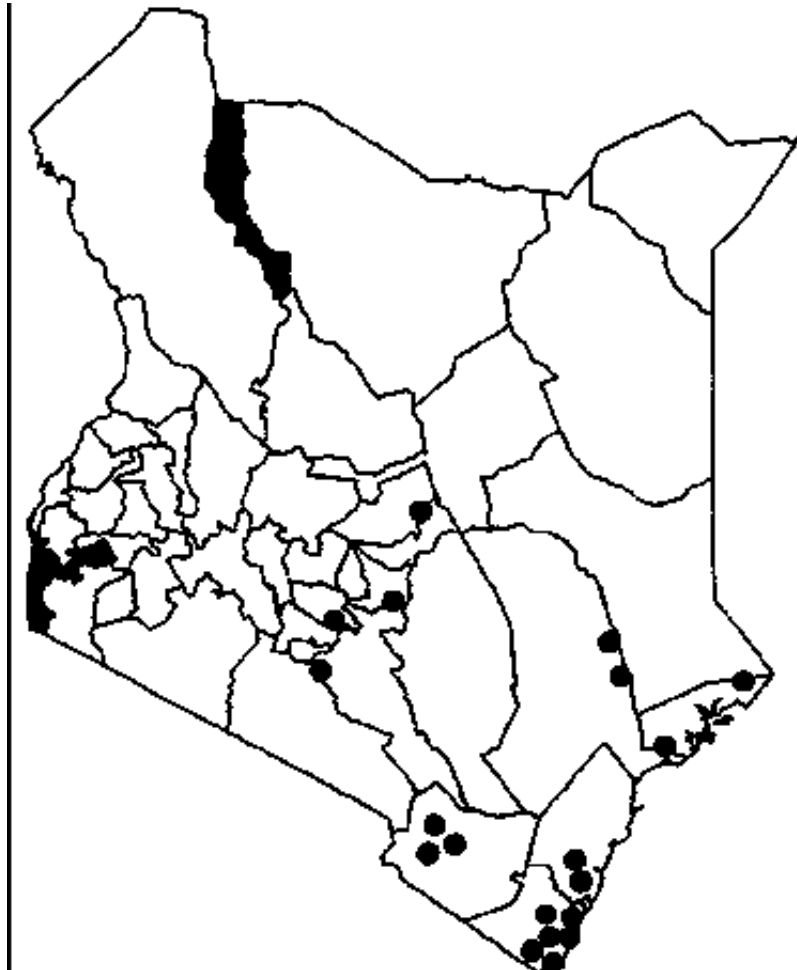




Figure



Figure



Figure

Stathmostelma propinquum (N. E. Br) Schltr.

Asclepiadaceae

Maa: oltiakule, entiakule, entiakuleti, olekole loosirkon, olkikwakei

Description: A short herb to 15 cm high with low spreading branches. Stem arising from a tuberous rootstock. Tubers cream, ovoid but tapering towards the bottom, up to 15 cm long by 6 cm at the widest part, juicy. Tubers and the plant generally exude a milky latex when bruised. **LEAVES:** Opposite, very narrow, long, slightly hairy. **FRUIT:** Long, tapering towards the tip, light green with dark green lines of projections directed towards the tip.

Ecology: Found in Kenya, e.g. at Isinya (Kajiado), Kaputei plains, Loita plains in open grassland and common in black-cotton soil, especially that which is mixed with sand. Occurs at 0-2,400 m, but more common at 1,500-1,800 m. Zones IV-V.

Uses: The juicy tubers are peeled and eaten raw (Maasai). They have a very bland taste but are much liked by pastoralists for quenching thirst.

Season: Tubers: Perennial but shoots seen during the rainy season.

Status: Occasional. Survival of the species is threatened by human pressure on grasslands.

Remarks: A related and probably more common species is *S. pedunculatum* (Decne.) K. Schum. which has branches with a more ascending habit, a taller shoot and broader leaves. The

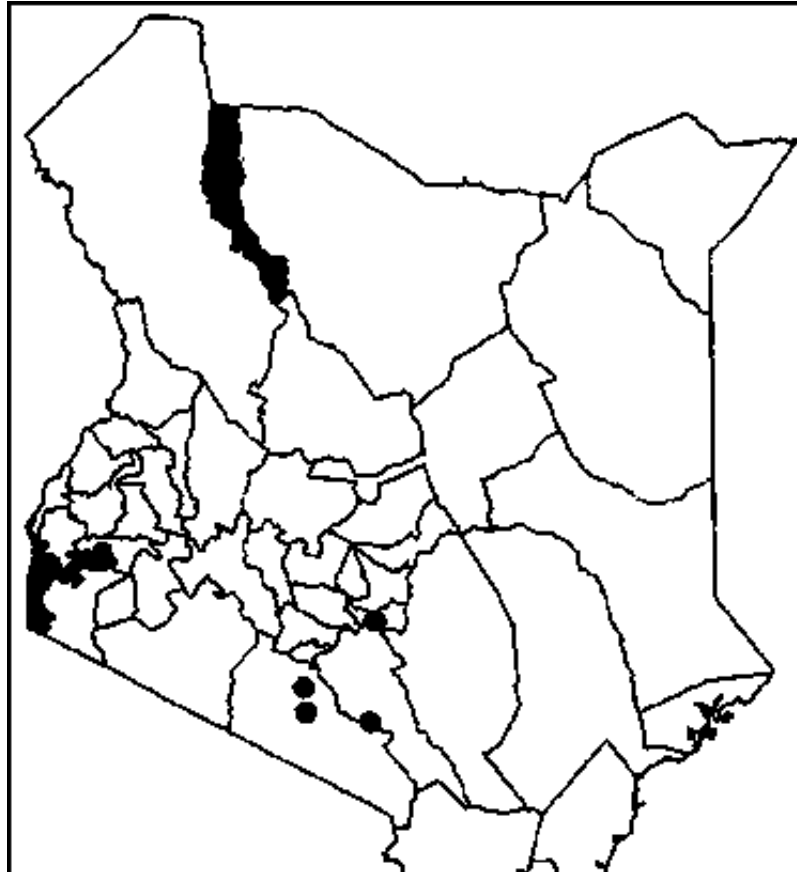
tuber is said to be edible too. Altitude 0-2,400 m. The taxonomy of these species needs further work.



Figure



Figure





Figure

Strychnos henningsii Gilg

Loganiaceae

Borana: karaa, karrah **Giriama:** mbathe **Kamba:** muteta
Kikuyu: muteta **Kipsigis:** maset **Maa:** entuyesi, oltipilikwa
Mbeere: mutambi **Meru:** muchimbi **Pokot:** chapkamkam
Samburu: nchipilikwa **Somali:** hadesa

Description: Much-branched shrub or small tree usually 3-6 m. **LEAVES:** Glossy, opposite with 3 prominent veins, ovate or elliptic with a short petiole. **FLOWERS:** Cream to yellowish pink in groups in leaf axis. **FRUIT:** To 2 cm long, round to

ellipsoid, green ripening to red.

Ecology: Widely distributed in Kenya in dry *Podocarpus* and *Olea* forests, hillsides, riverine vegetation, thickets and *Combretum* bushland, 0-2,300 m. Zones III-V.

Uses: FOOD: Roots, stems and stem bark commonly boiled in soup for fitness and painful joints or general body pains (Kikuyu, Maasai, Kamba) (+++). Fruits used for flavouring beer (Mbeere). Pieces of stem or root are boiled for about 45 minutes, sieved and the bitter decoction mixed with boiled bone soup (preferably cattle bones). The root extract is more bitter than that obtained from stems and hence only a little is added to the soup. Salt, milk, cream or meat may be added to improve the taste. The resulting mixture of soup and *muteta* is stirred vigorously using a traditional stirrer. The roots may be used up to four times before their bitterness fades and potency wanes.

MEDICINAL: A decoction from roots and leaves is drunk in soup or honey to treat malaria and rheumatism (Pokot). Bark is boiled in a little water and used for backache.

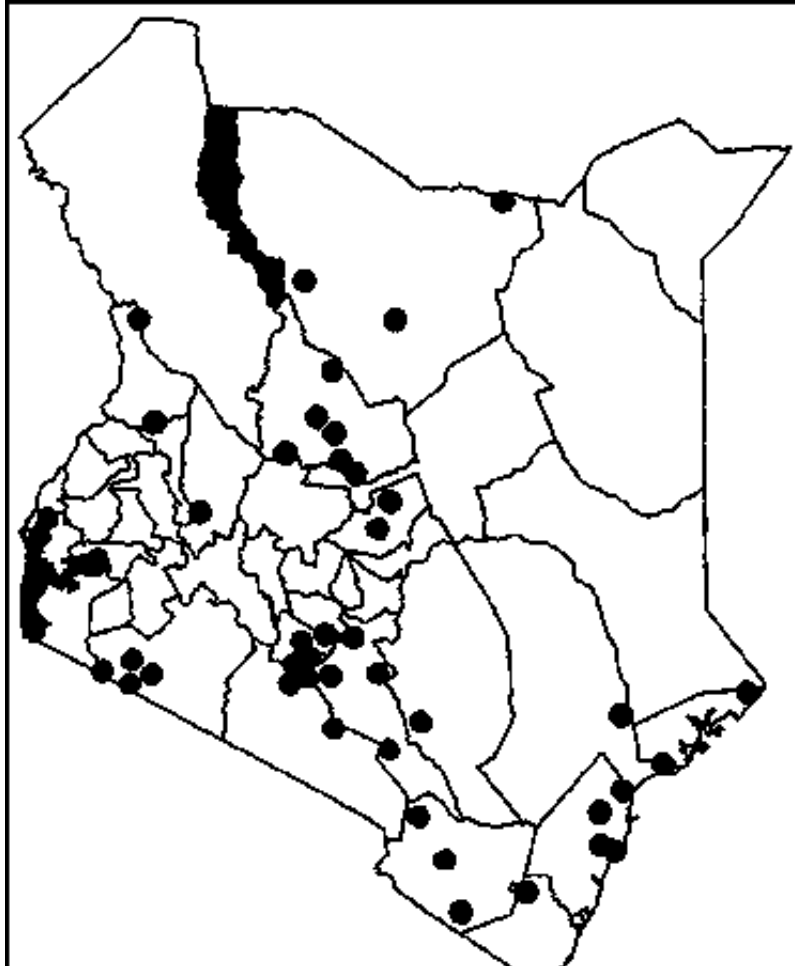
OTHER: Wood used for tool handles (Kikuyu) and building huts (Maasai).

COMMERCIAL: Bundles of stems and roots sold (Kitui, Machakos, Nairobi). Soup sold in some major hotels, especially in Nairobi.

Remarks: The plant may be harmful if wrongly prepared. Care should be taken while collecting it in the wild as it can easily be confused with *Acokanthera* spp. used to prepare arrow poison.



Figure





Figure

Strychnos madagascariensis Poir.

Loganiaceae

Boni: mangura, mangula **Chonyi:** mkwakwa **Digo:** muhonga, musikiro **Giriama:** mujaje, mkwakwa **Kamba:** kikolakolania (Kathonzweni) **Kambe:** mkwakwa **Sanya:** horocha, mangula **Swahili:** mtonga, kikwakwa

Description: Much-branched shrub or small tree to 6 m high. **BARK:** Pale grey. **LEAVES:** Broadly elliptic, glossy green, opposite, shortly stalked or stalkless. **FLOWERS:** Small, greenish white. **FRUITS:** Round, large, to 8 cm across, green with a hard cover, turning orange-yellow on ripening. Seeds tetrahedral, not as many as in *S. spinosa*.

Ecology: Kenya, Tanzania south to Mozambique and South Africa. In Kenya, found at the coast and inland to Makueni District in coastal bushland, rocky hillsides and thickets, 0-700 m. Mainly in coastal sands. Zones II-IV.

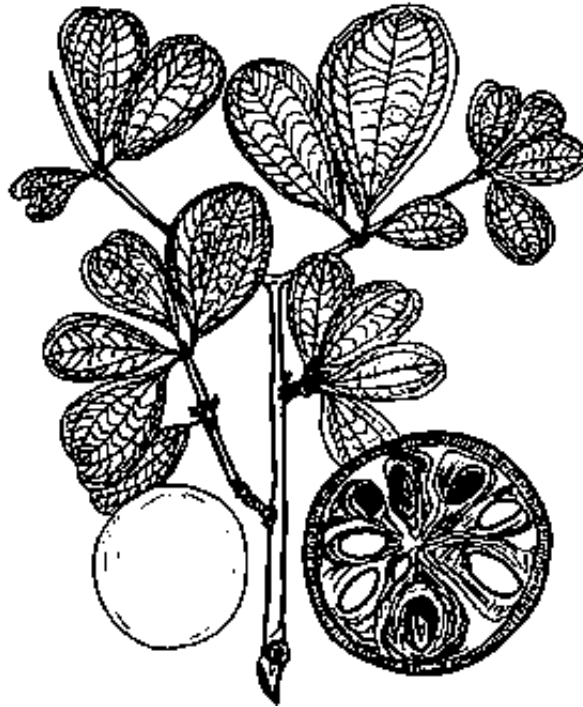
Uses: FOOD: The ripe orange fruit is eaten and the pulp-covered seeds are sucked. Pulp may also be dissolved in water and made into a juice which has a sweet-acid taste. Seeds are discarded.

Management: Propagated by seeds which germinate easily.

Remarks: A related species, *S. innocua* Del., usually with smaller fruits 4-7 cm in diameter, has been reported in West Pokot District. The deep yellow ripe fruit is edible. Although rare in Kenya, the species is found nearby in Uganda and in West Africa east to Ethiopia and south to Angola, Zimbabwe and Mozambique.

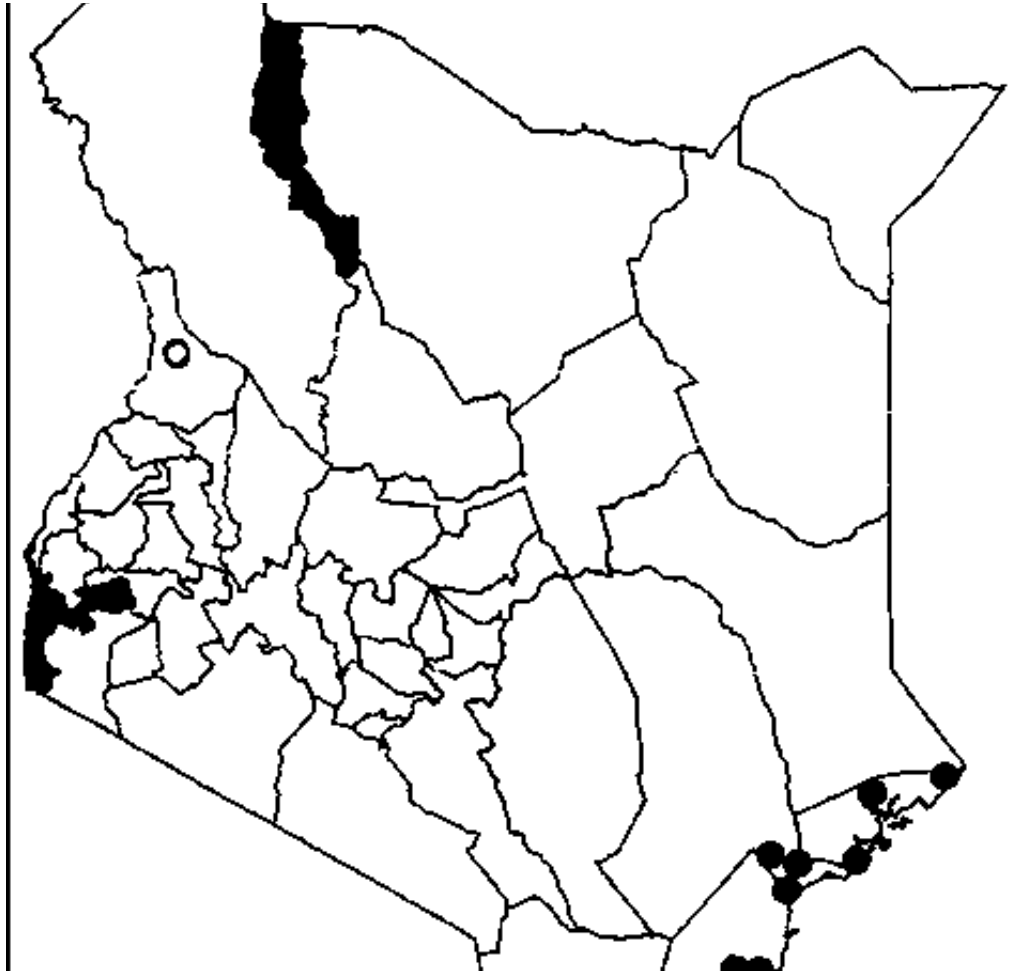


Strychnos innocua



Figure







Figure

Strychnos spinosa Lam.

Loganiaceae

Bajun: myae **Boni:** mangura, mangula **Chonyi:** mujaje Digo: muhonga, mursapungu **English:** Kaffir orange, KwaZulu Natal orange **Giriana:** mujaje **Kamba:** kyae (Kitui), kimee (Makueni), mae (fruits) **Kambe:** mujaje **Luo:** akwalakwala-lyech **Mbeere:** mwange, mwange-wa-ndue, mubage **Pokomo:** bungo **Pokot:** kukugho **Sanya:** mangula **Swahili:** mtonga, kikwakwa **Teso:** eturukurut, ekwalakwalat

Description: Much-branched shrub or small tree to 5 m high. Branches may or may not be armed with short, straight or slightly curved spines. **BARK:** Pale grey. **LEAVES:** Glossy green, opposite. **FLOWERS:** Small, inconspicuous, borne in groups. **FRUITS:** Round, large to 8 cm across, green with a hard rind, turning yellow on ripening. Seeds numerous, embedded in a creamish brown pulp.

Ecology: Found in the coastal zone and in some inland areas, e.g. in Mbeere, Wikililye (Kitui), Chepareria (West Pokot) and Baringo in bushland and wooded grassland, 0-1,800 m. Soils: Mainly sandy, occasionally well-drained clay soils. Zones II-IV.

Uses: FOOD: The large ripe yellow fruits are edible (++) . They have a sweet-acid taste. The pulp-covered seeds are sucked and discarded. Ripe fruits can be made into juice. Unripe fruits are poisonous.

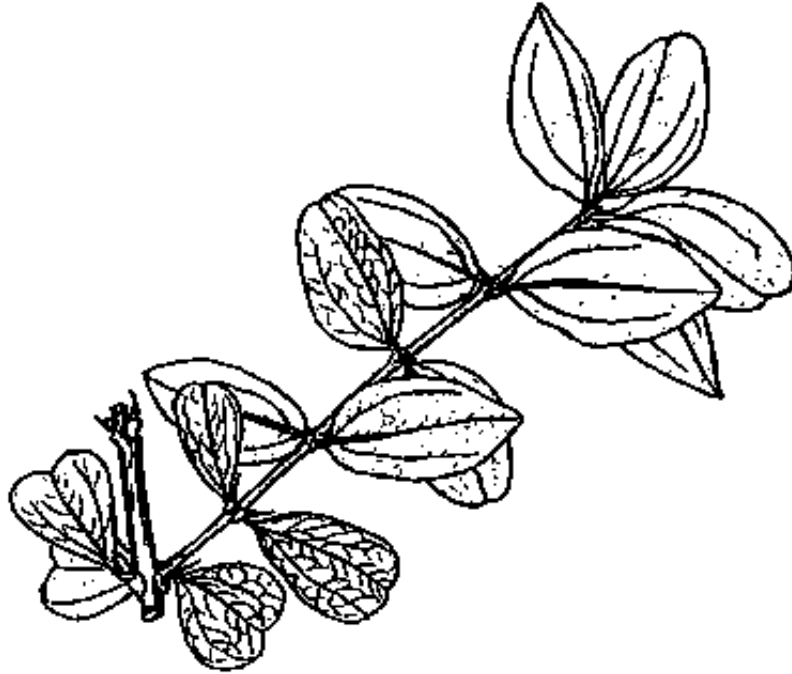
OTHER: Fuelwood (++), shade (++).

Season: Fruits in August in Kitui and Kwale and in January-February in Lamu and Kilifi.

Management: Germinates easily from seeds.

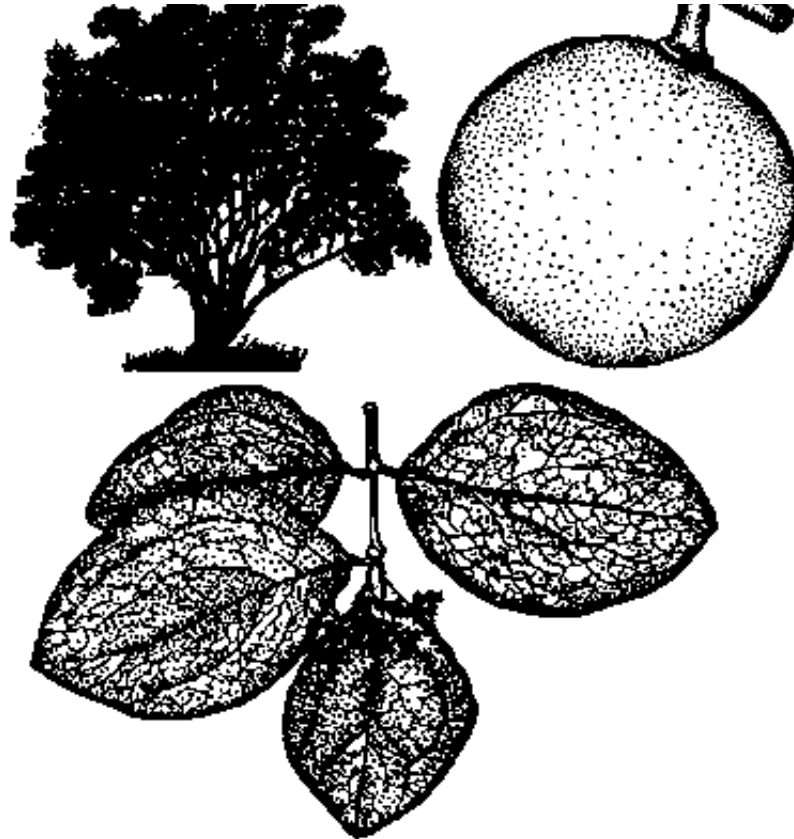
Status: Occasional.

Remarks: Roots, leaves, unripe fruit and seeds are said to be toxic. Only the pulp of the ripe fruit should be eaten. Distinguished from *S. madagascariensis* by its leaves which are less leathery and with less prominent veins.

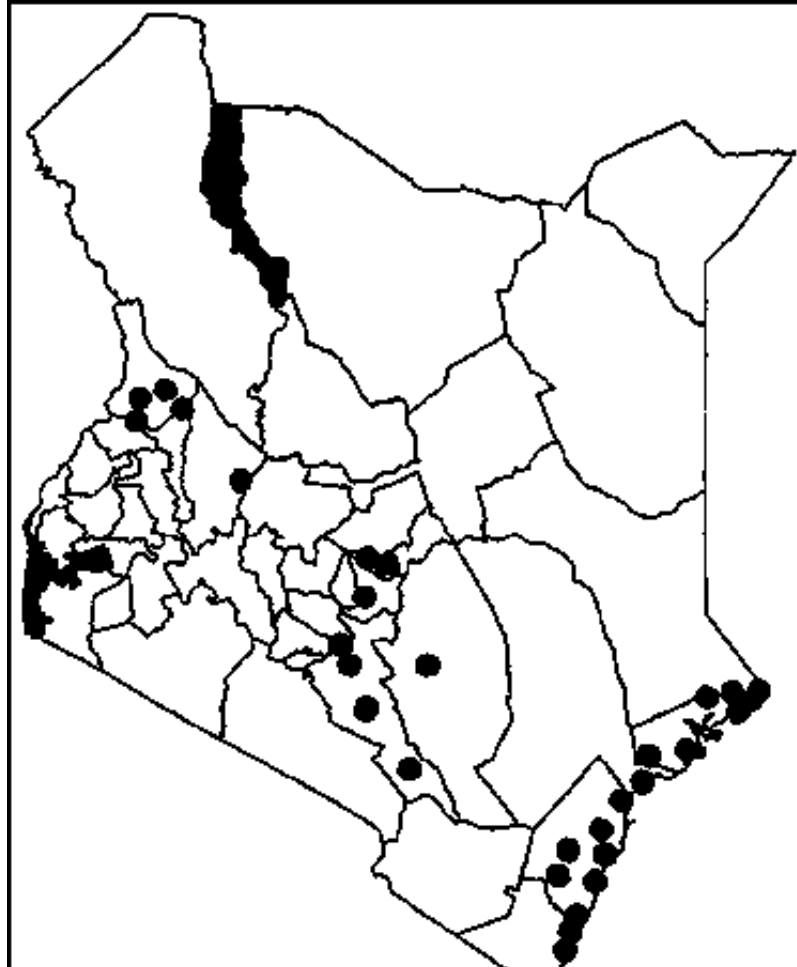


Figure





Figure





Figure

Syzygium cordatum Krauss

Myrtaceae

Digo: muziahi, mzihae **Kamba:** muvuena, kivueni **Kikuyu:** muriru, mukoe, ngoe (fruit), muieri, karumaa **Kipsigis:** lemeyet **Luhya (Bukusu):** kumusemwa (tree), kumusitole **Luhya (Maragoli):** musiooma **Luhya (Tachoni):** omusemwa (tree), obusemwa (fruit) **Maa:** oloiragai **Marakwet:** reper, reperwo (plural) **Mbeere:** muriru, mukui **Pokot:** reperwa, reperwo **Samburu:** lairakai, lamulii, leperei **Swahili:** msambarau, mzuari, myamayyu **Taita:** musu

Description: An evergreen riverine tree with a rather narrow crown to 15 m or more. Usually 5-8 m. Branches often drying

at tips. **BARK:** Dark grey almost black, reticulate, flaking.

LEAVES: Cordate (base heart-shaped), shiny, opposite.

FLOWERS: Cream. **FRUIT:** Up to 2 cm, oval, purple-black, fleshy when ripe.

Ecology: East and southern Africa. In Kenya, e.g. at Chepareria (West Pokot), Saiwa Swamp (Trans Nzoia), Thika road and in swamps in Amboseli National Park, in riverine vegetation along permanent rocky streams or in swampy areas, 100-2,500 m. Zones I-IV.

Uses: FOOD: Fruits edible (++) . The pulp (and thin fruit skin) is eaten away from the seed which is then discarded. Fruit may be made into a drink.

MEDICINAL: Bark is soaked in water and the liquid drunk when cold to stop abdominal pains.

OTHER: Fuelwood; wood used for construction, beehives (Pokot), watering troughs, *alio* (Pokot). Goat fodder and, importantly, as bee forage. Ripe fruits eaten by birds.

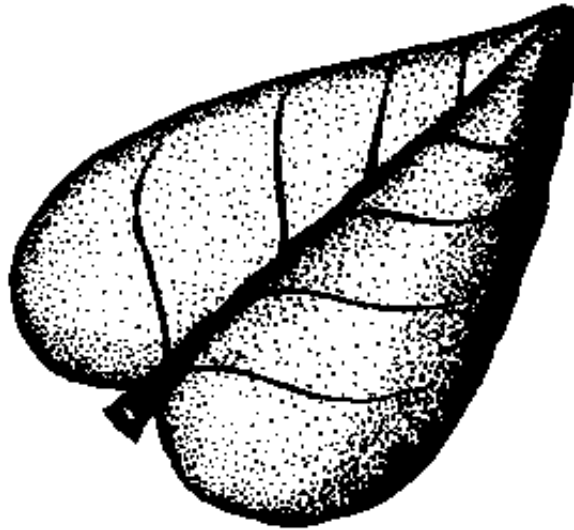
Season: Fruits in April-May in West Pokot.

Management: Easily grown from seeds. Seeds do not store.

Status: May be very common locally.

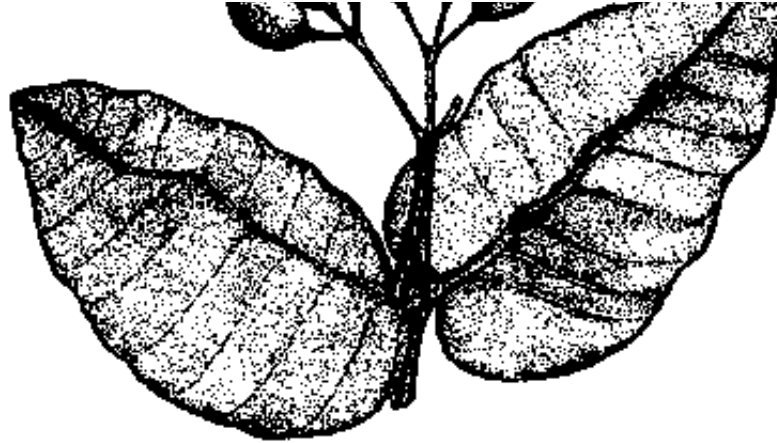
Remarks: The species is related to the well-known *S. cumini* (L.) Skeels (English: jambolan, Java plum, Swahili: *mzambarao*, *zambarao* (fruits), Kamba: *kisambalau*, *kithambalau*, Luo: *jamna*) a native of South Asia and widely cultivated for its fruits. In Kenya, found especially in towns. Occasionally naturalized in some areas. It is also related to *S. aromaticum* (L.) Merr. & L. M. Perry (syn. *Eugenia caryophyllus*) (English: cloves, Swahili: *mkarafuu*) native of

Indonesia but much grown in Zanzibar for its dried flower buds which are used as a spice.



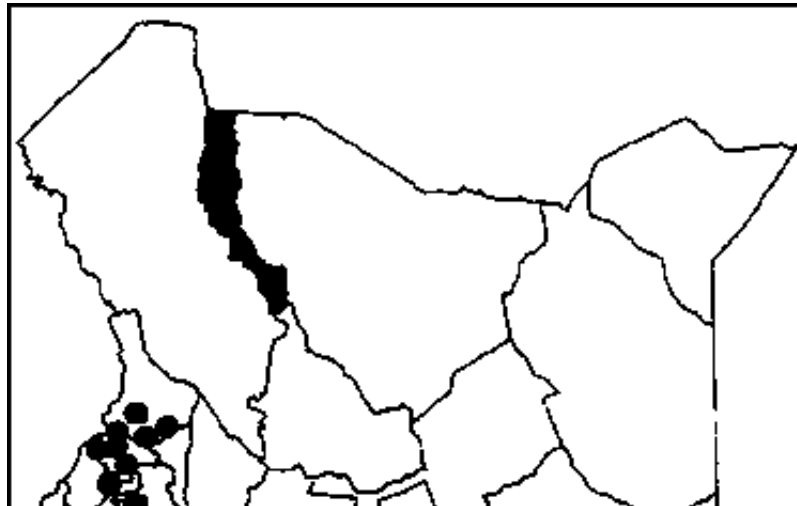
Figure

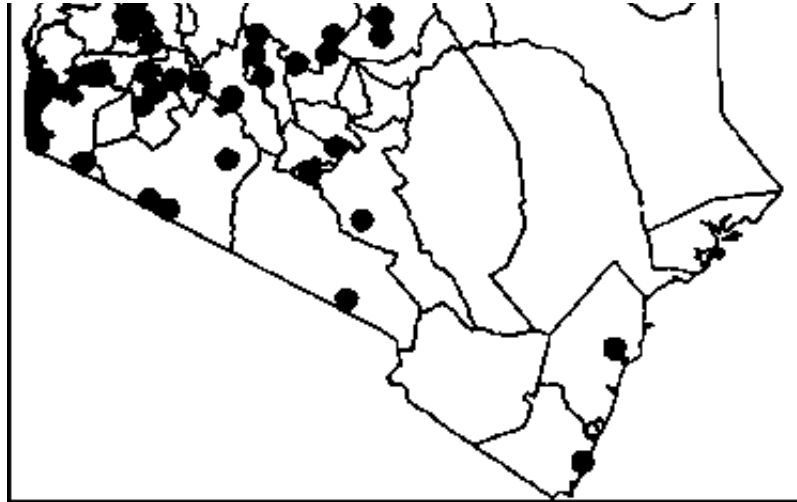






Figure





Figure

Syzygium guineense (Willd.) DC.

Myrtaceae

Borana: kada **Digo:** muziyahe, mugiaki, muziahi **English:** waterberry, water pear **Kamba:** muvuena, muvueni **Kikuyu:**

mukoe **Kipsigis:** lemecwhet, lamaiyat **Luhya (Bukusu):** kamatekesi, kumutekesi (plural), kumusemwa, busemwa (fruit), kumusitole, busitole **Luhya (Tachoni):** omutekesi amatekesi (fruit), omusitoleobustole (fruit), obusemwa, omusitole **Maa:** oleragai (Narok), oleragi, olairagai **Marakwet:** lemaiyua **Mbeere:** mukui, muriru **Nandi:** limaiyua, lamayuet **Pokot:** lamaiwa, lamaiyua **Sabaot:** lemaiyua **Samburu:** lairakai, lamulii, leperei **Swahili:** mzuari, mzambarau **Taita:** musu, mkongo **Taveta:** mase **Tugen:** lomoiiwo, lamaek (fruit)

Description: Tree with a rather narrow crown to 15 m high. **BARK:** Pale brown or dark grey. **LEAVES:** Elliptic. **FLOWERS:** White, scented. **FRUITS:** Round or ellipsoid to 2.5 cm long, glossy purple-black when ripe.

Ecology: Found in eastern and southern Africa. Widespread in Kenya. Found in Muthaiga, Kikuyu escarpment, Kakamega

Forest, Mt Kulal, Nguruman, Kibwezi, Chogoria, Tambach, Churo, Kitale, Nyeri and Kwale in high-altitude forest and riverine forests, 0-2,500 m. Zones I-II.

Uses: FOOD: Fruit edible (+++). The pulp (and the fruit skin) are sucked and the seed discarded. The fruit is sweet. Elsewhere made into a drink.

OTHER: Wood used as timber, hard, durable, easy to work. Beehives (Pokot). Watering troughs (Pokot). The bark is a source of a black dye. Flowers are good bee forage. Ripe fruits eaten by birds.

Season: Flowers in November in Kiambu. Fruits in March in Embu.

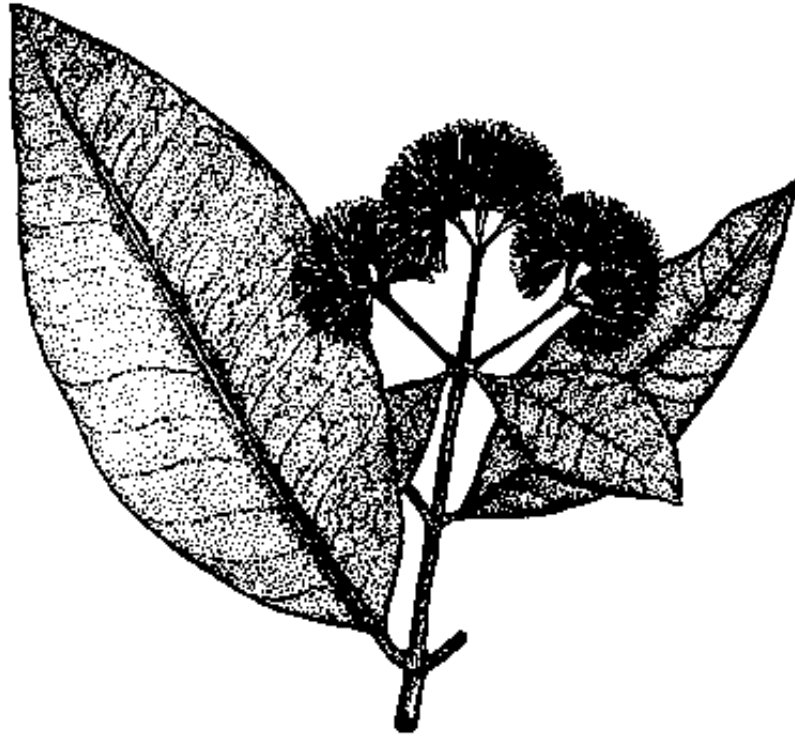
Management: Propagated by seeds. Seeds do not store.

Remarks: A very variable species with several subspecies,

two of which occur in Kenya:

- *ssp. guineense* (with blunt leaf apex) common near streams and in bushland at low to medium altitudes, and
- *ssp. afromontanum* F. White (leaf apex narrow) usually found in high-altitude forests.

Several other subspecies are found in southern Africa.



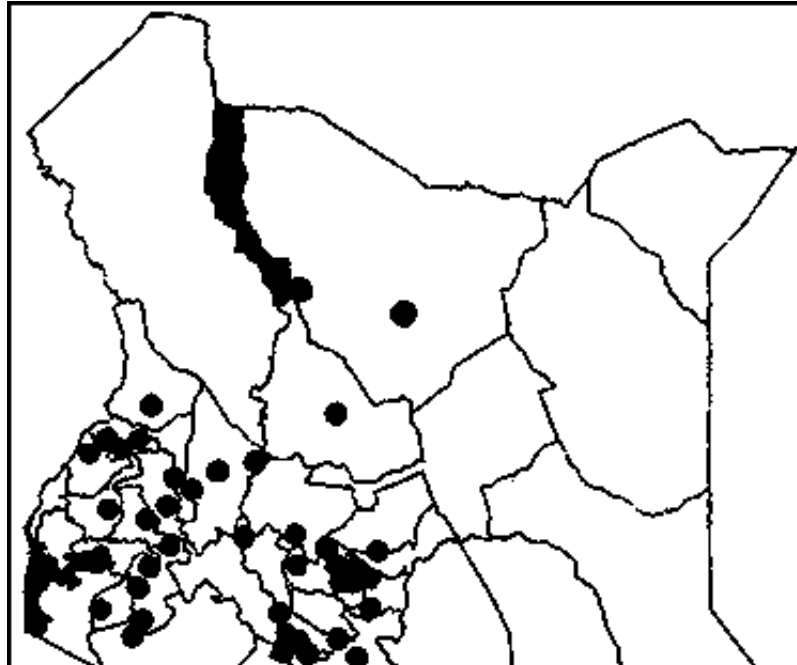
Figure







Figure





Figure

Tamarindus indica L.

Caesalpiniaceae (Fabaceae)

Bajun: ukwaju **Boni:** mukai **Borana:** roka, roqa **Digo:** mkwaju **Embu:** muthithi **English:** tamarind **Kamba:** kithumula, kikwasu (south-eastern Makeni), nthumula (fruit), nzumula (fruit), ngwasu (fruit) **Luhya (Bukusu):** kumukhuwa, kumukhubwe **Luo:** ochwa, chwaa (Ugenya),

ochwaa (Alego) **Maa:** oloisijoi **Malakote:** morhoqa **Marakwet:** aron, oron **Mbeere:** muthithi **Meru:** muthithi **Orma:** roqa **Pokot:** oron, aron **Samburu:** rogei **Sanya:** roka **Somali:** hamar, rahkai (Tana River), roge **Swahili:** mkwaju, msisi, ukwaju (fruit) **Teso:** epeduru **Tharaka:** muthithi **Turkana:** epeduru

Description: An evergreen tree with a low spreading crown often attaining a huge size. **BARK:** Dark brown, coarsely fissured longitudinally. **LEAVES:** Buds and young leaves red. **FLOWERS:** Orange-yellow. **FRUIT:** A sausage-shaped pod to 10 cm or more. Young fruits greenish brown turning rusty brown at maturity. Dry fruit coat brittle. Pulp reddish brown. Seeds dark red.

Ecology: Widespread in the tropics in South East Asia, India and Africa. Found in most low parts of Kenya, 0-1,600 m; usually 0-1,300 m. Very common in the drier parts of Coast

Province and along rivers and streams in the dry northern and southern parts of the country. In the more humid semi-arid areas, the plant is not restricted to riverine environments. Commonly seen in light clay (especially red), loam, sandy and alluvial soils as well as rocky areas. Rainfall: 250-1,200 mm. Zones IV-VII.

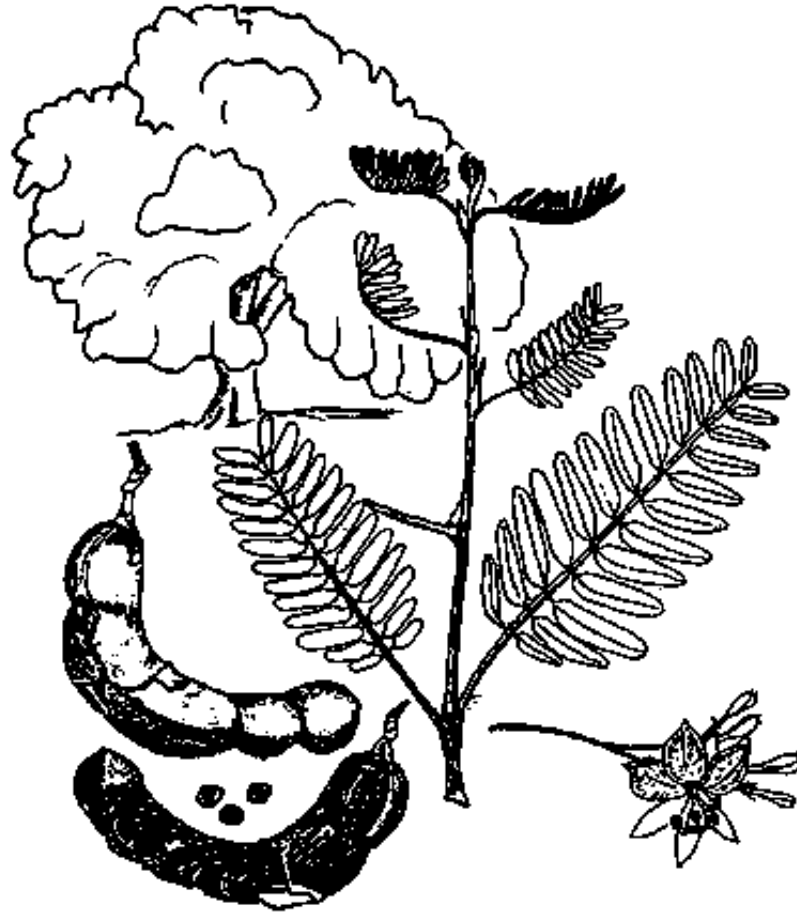
Uses: FOOD: The fruit pulp, which is eaten raw, has a strong acid taste. The pulp is dissolved in water and the resulting solution used for preparing porridge. The solution may also be added to stews (*mboga*), as a flavouring for various foods such as tea (Digo) and rice (Coast) or with dried termites (Turkana); young leaves are chewed like *Catha edulis* (*khat*, *miraa*, Maasai, Luo-Migori) or cooked as a vegetable (Boni). Seeds are fried and eaten. Fruit pulp is used in beer preparation (Turkana). The tree bears large quantities of fruit which, after the coats are removed, are tied in bundles and stored in sacks for up to 2 years. In some countries the pulp is

used in the preparation of jams, juice and sweets.

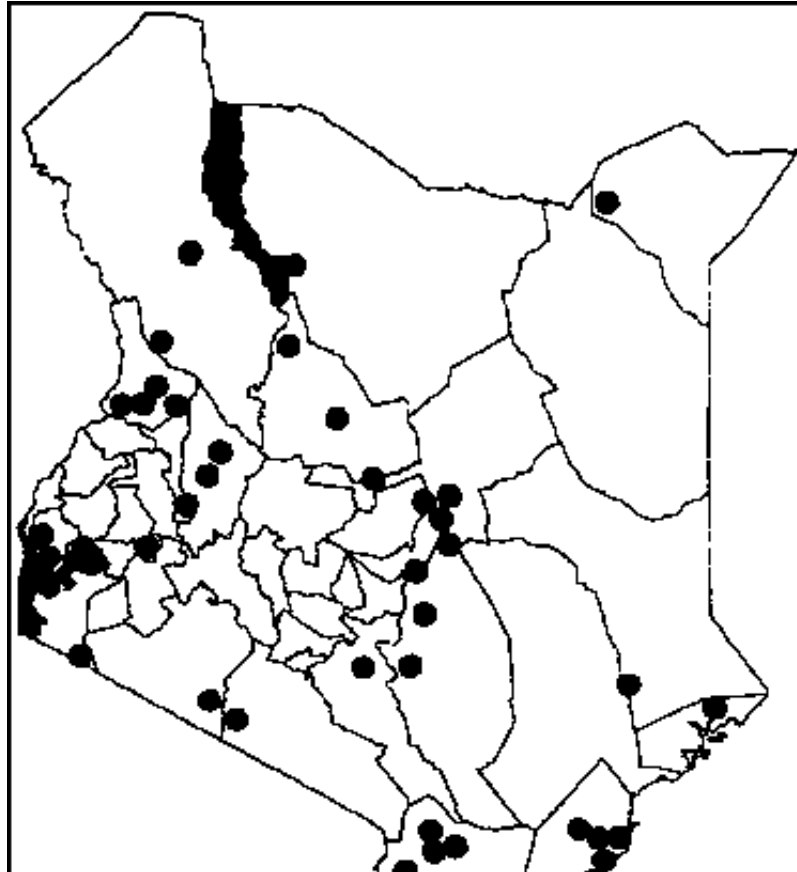
MEDICINAL: Leaves are pounded in a mortar or boiled, then sieved and the solution drunk or applied to the body for measles or chickenpox (Kamba). Leaves and fruits are widely used as a laxative. Infusion made from dried pounded leaves is taken for stomach-ache (Siaya); boiled bark (and roots from other plants) is used for the treatment of gonorrhoea (Tharaka). Leaf extract is applied to inflamed eyes (Giriama).

OTHER: Fuelwood, charcoal (+++). In Kenya's arid north the plant is fodder for camels and goats (++). The tree is ideal for shade in hot areas. The wood is hard, used in building, in construction of dhows and making furniture, yokes and tool handles. It is made into stools or headrests, *ekichelong* (Turkana), pestles, mortars (Somali-Mandera), and boats at the coast. Branches and smaller roots are flexible and are made into walking sticks (Mbeere, coastal people), or branches

woven into seats (Kitui). The bark of young stems is a source of fibre. The leaves make good mulch. Soil under the tree is said to be very fertile and is often used as "forest soil" in tree nurseries. Among coastal communities the acid pulp was used to clean copper. Branches said to be excellent for water purification (Tana River).



Figure





Figure

CULTURAL/BELIEFS: The tree is never planted as it is believed the person may die as soon as it starts bearing fruit (Luo, Siaya). It is believed that a person will die without eating its fruit (Kamba, Mbiuni) if he attempts to grow it (probably because it is such a slow-growing tree). Sprouting of young leaves is an indication of the approach of the rainy season (Kitui).

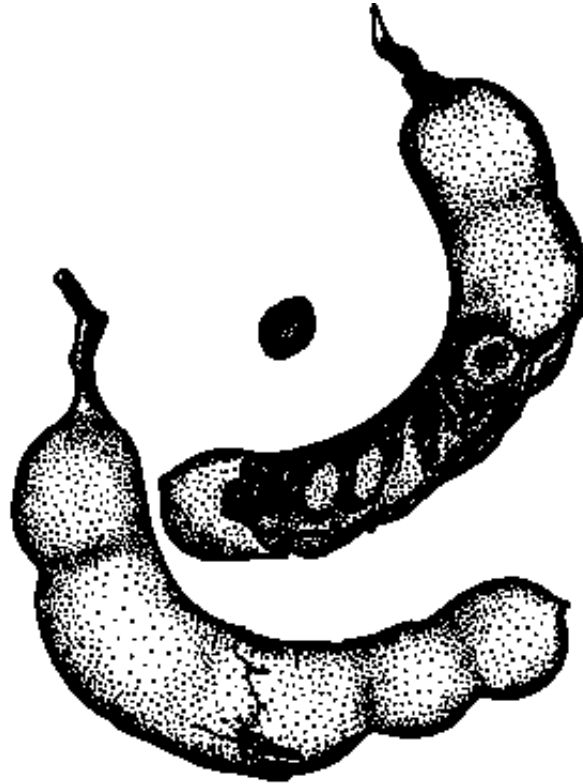
COMMERCIAL: One of the most commonly sold indigenous fruits. Fruits sold in Siaya, Lodwar, West Pokot, Baringo, Kitui and coastal towns. Tamarind pulp is sold in large shops in Nairobi and in coastal towns.

Season: Fruits in July-August in Kitui.

Management: Germinates easily from seeds without any pre-treatment. This species is light-demanding and should be planted in an open area. Seeds germinate after 2-3 weeks. Growth rate is quite high at first. If not well stored (especially with the pulp intact), seeds may be damaged by weevils which bore through the fruit wall and the pulp. Coppices well.

Status: May be locally common.

Remarks: Besides being a good shade tree, this species may also be grown as an ornamental.



Figure

Thylachium thomasii Gilg

Capparidaceae (Capparaceae)

Borana: gadu **Chonyi:** muizu-wa-arisa, mutunguru **Giriama:** mutunguru, muizu-wa-arisa **Kamba:** kitungulu **Kambe:** muizu-wa-arisa, mutunguru **Malakote:** kukube **Orma:** dika **Somali:** ohia (Tana River) **Swahili:** muizu wa kirisa **Taita:** mtunguru

Description: A shrub or small tree to 5 m high with a dense, usually rounded, crown. **BARK:** Grey, rough. **LEAVES:** Broadly ovate, dark green, almost round, surface rough. **FLOWERS:** White (due to long white stamens). **FRUITS:** Ridged, oval, usually short to 2.5 cm, occasionally up to 5 cm, usually borne on long curved stalks.

Ecology: Found in southern Somalia and Kenya in the coastal

region and adjoining areas. Common in Tsavo East National Park. Usually near seasonal water depressions, bushland, mainly in sandy and red clay loam, 0-1,300 m. Zones IV-VI.

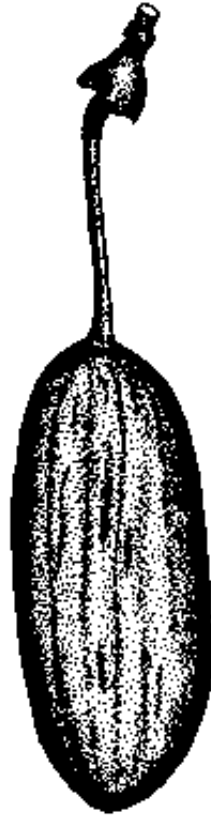
Uses: FOOD: The tuberous root is used as a famine food. The roots are grated on the hard bark of a *mkulu* tree (*Diospyros* sp.) and the resultant meal boiled for 3 hours or more. The liquid is sugary and is used for making tea or drunk as it is (Giriama, Duruma). Ripe fruits edible, called *maizu*, meaning banana (Giriama) (++)).

OTHER: Peeled roots and branches are excellent flocculants (Tana River).

Status: May be locally common.

Remarks: Roots of this species may be poisonous if prepared in the wrong way. The right knowledge for its preparation is

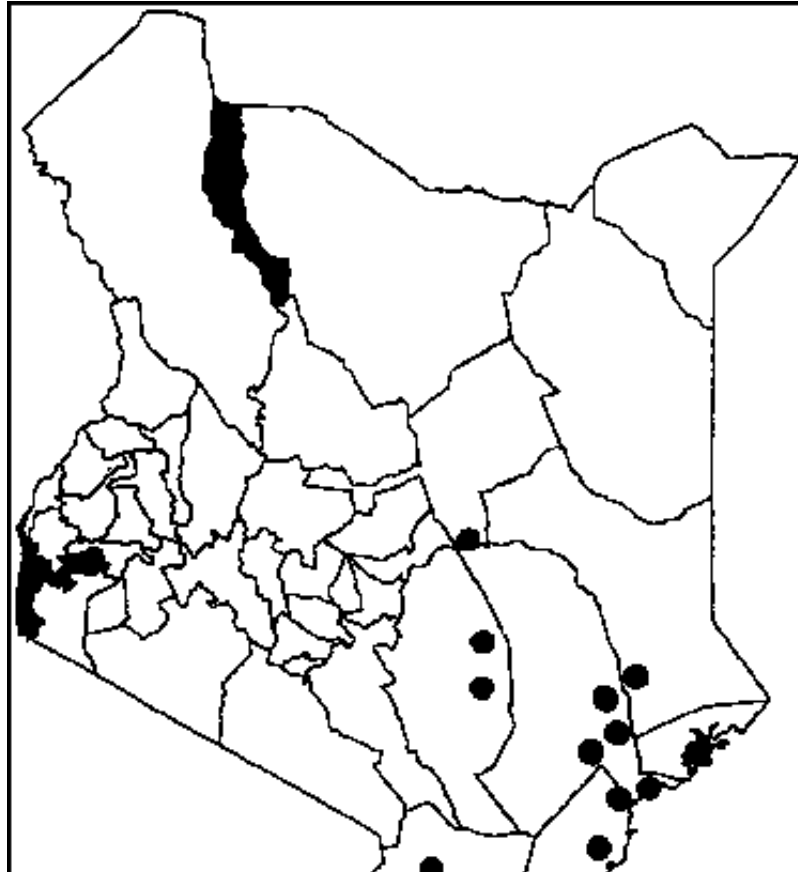
necessary.



Figure



Figure





Figure

Tylosema fassoglense (Schweinf.) Torre and Hillc.

Caesalpinaceae (Fabaceae)

syn: *Bauhinia fassoglensis* Schweinf.

Kamba: ivole **Luhya:** wanga, imbasa **Luhya (Bukusu):** kumuchayu, kamachayu (fruit), chingayu **Luhya (Tachoni):** chingaayu **Luhya (Maragoli):** imbasa **Luo:** ombasa **Maa:** esinkarua **Somali:** bassac **Samburu:** dalamboi

Description: An extensive climber originating from a huge, usually globose, tuber up to 1 m across. **LEAVES:** Large, 2-

lobed. **FLOWERS:** Yellow to pink. **FRUIT:** A flattened pod.

Ecology: East Africa and the Shaba Province of the Democratic Republic of Congo (Zaire). Common in dry hot country, e.g. in Mtito Andei and Siaya, especially dry *Acacia* or scattered-tree bushland. Prefers sandy and deep loam or coastal soils. Zones IV-VI. Also in *Adansonia*, *Commiphora* bushland on almost flat land with loose red clay-loam soil.

Uses: FOOD: The dry fruit are split and seeds roasted (Luo, Kamba). They are then cracked open and the inner part eaten. Fresh seeds are eaten raw. Dry seeds may also be roasted in oil like groundnuts and they pop (Luo, Aki-e of Tanzania); young pods may be eaten raw. There are reports that ground dry seeds are used as a coffee substitute.

MEDICINAL: The tuber is an important source of medicine for a variety of diseases and is often infused in tea (Siaya).

Tubers used for backache (Samburu).

OTHER: Fruits used to smooth pots (Luo); narrow stems used as rope (Maasai, Kipsigis). An important plant for cattle and goat fodder.

COMMERCIAL: Pieces of tuber often sold as medicine (Siaya).

Remarks: Tubers dry leaving a gaping hole in the ground. Another plant of the same family used as a nut is *Cordeauxia edulis* Hemsley (English: Yeheb nut, Somali: *gild* (plant), *yeheb* (*yihib*) (fruit)), an evergreen shrub usually 1-2 m high. Grown in Kenya on an experimental basis at Galana Ranch (Kilifi) and Mwakiki Seed Farm near Voi (Taita). Also grown on a few private farms in Coast Province such as Rukingo Ranch (Taita). Native of the Ogaden region of Ethiopia south to the Indian Ocean coast of Somalia. Introduced to Kenya in the 1950s. Prefers sandy and deep loam coastal soils. Zones IV-VI.



Cordeauxia edulis

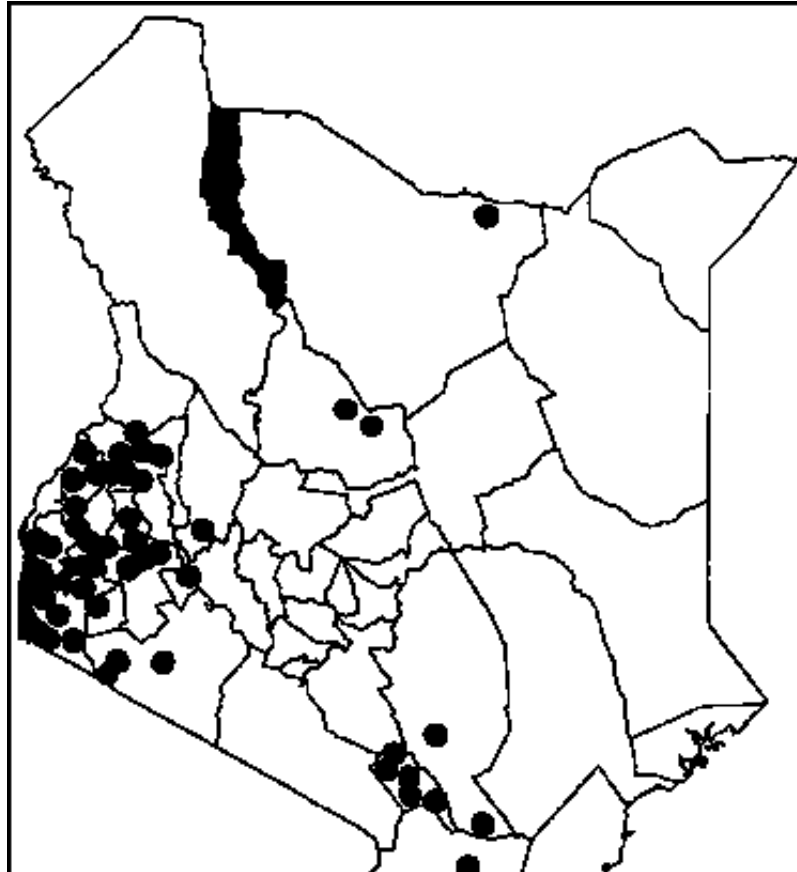
Uses: Seed is edible when raw, boiled or roasted and is appreciated a great deal by pastoralists. An important dry-season fodder plant and a source of fuelwood.

Commercial: Seeds occasionally sold in Somalia. In Kenya, the total number of plants being cultivated is only a few

hundred at the moment.



Figure





Figure

Urtica massaica Mildbr.

Urticaceae

Embu: hatha **English:** stinging nettle **Keiyo:** siwot **Kikuyu:** thabai (Kiambu), hatha (Nyeri) **Kipsigis:** siwot **Maa:** entamejoi, entameijoi, intameiyo (plural) **Marakwet:** kimeley **Mbeere:** mucururi **Meru:** thaa, thatha **Pokot:** meleyi **Tugen:** siwon

Description: An erect perennial herb up to 2 m high covered all over with stinging hairs about 2 mm long. Stems are angled, arising from a rhizome creeping below the soil surface.

LEAVES: Large, opposite, heart-shaped with a serrated margin and a pointed tip. **FLOWERS:** Dioecious, small and green, borne in long spike-like inflorescences arising from the leaf axils. **FRUITS:** Small, green and flattened. **FRUITS:** Seeds compressed, resembling those of tomato.

Ecology: East Africa, Rwanda, Burundi and eastern parts of the Democratic Republic of Congo (Zaire). Found in most of Kenya's highlands in humid and semi-humid forest clearings, forest edges, stream banks and glades as well as moist bushland, 1,500-3,250 m. It is also common near human dwellings, especially in cattle enclosures and cleared areas near gardens. Prefers deep red clay, especially loose soils with plenty of organic matter. Zones II-III.

Uses: FOOD: Leaves are used as a vegetable (++) (Sabaot, Pokot, Kikuyu, Marakwet, Kipsigis, Keiyo). The leaves are fried and eaten along with *ugali* and other foods or mashed with

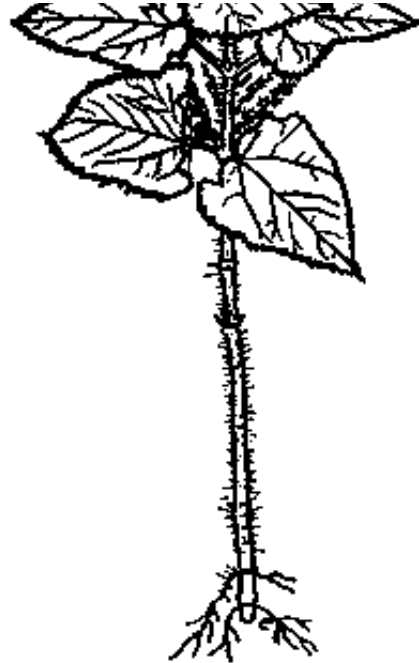
potatoes, maize and pulses. The latter practice is common with the Kikuyu of Central Province. The leaves are harvested using a stick and protection such as polythene bags. After boiling, the stings lose their potency. Leaves are mainly used in Mount Elgon, Kericho, Nyandarua, Nyeri and West Pokot, but their use has declined a great deal in recent years due to the difficulties posed by the hairs. A famine food only (Keiyo).

Management: Propagated by seeds and rhizomes. *Urtica massaica* invades surrounding areas through its extensive rhizomes as well as seeds. New colonies are established through the seeds which are small and easily transported in mud during the rainy season. Expansion of the plant should be checked by thinning as it may easily invade land meant for other purposes. Mature plants should be cut back for new tender leaves to sprout. In the absence of gloves one should wear a thick polythene bag or, better still, several, while harvesting nettles (the hairs can easily pierce through a

polythene bag!). The Pokot normally use a stick to break off the tender tips. These are then picked up and put in a basket.

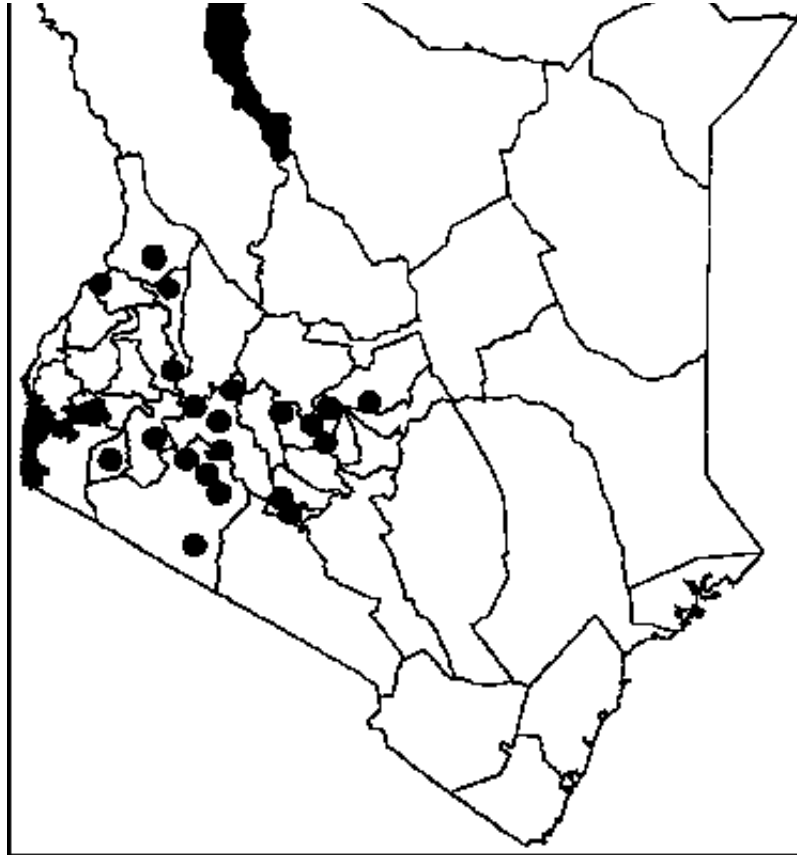
Remarks: *Urtica* spp. are used as vegetables in many parts of the world. Skin contact with the hairs causes an intense burning sensation which may take from a few minutes to several hours to subside, depending on the intensity of contact and the individual. The irritating principle has been shown in a related nettle (*U. urens* L.) to contain acetylcholine and histamine.





Figure





Figure

Uvaria acuminata Oliv.

Annonaceae

Boni: Tomur, tumorr **Digo:** mumbweni, mudzala **Duruma:** mdzala **Giriama:** mlori, mulori, vilolro, ri (fruit) **Kamba:** mukukuma, ngukuma (fruit), **Sanya:** shiyole **Somali:** cirmaan booy **Swahili:** mwaacha, mgweni, mganda-simba

Description: A shrub or liana to 5 m high. **LEAVES:** Usually hairy underneath, bases rounded or heart-shaped, apices narrow. **FLOWERS:** Yellow, borne singly or in pairs. **FRUIT:** Divided into several warted greenish brown round or ovoid carpels, yellow when ripe. Usually one-seeded, occasionally with up to 4 seeds each.

Ecology: Found in Kenya, Tanzania, Mozambique and Madagascar. In Kenya, mainly in the coastal region, e.g. at

Kiunga (Lamu) in coastal bushland, 0-1,400 m. Sandy soils, especially red sand.

Uses: FOOD: Ripe fruit eaten raw (++) (Kamba, Taita, Mijikenda). Edible portion rather small. Fruits sweet but not as sweet as those of *U. scheffleri*.

MEDICINAL: A decoction of the roots is taken as a remedy for dysentery (Digo).

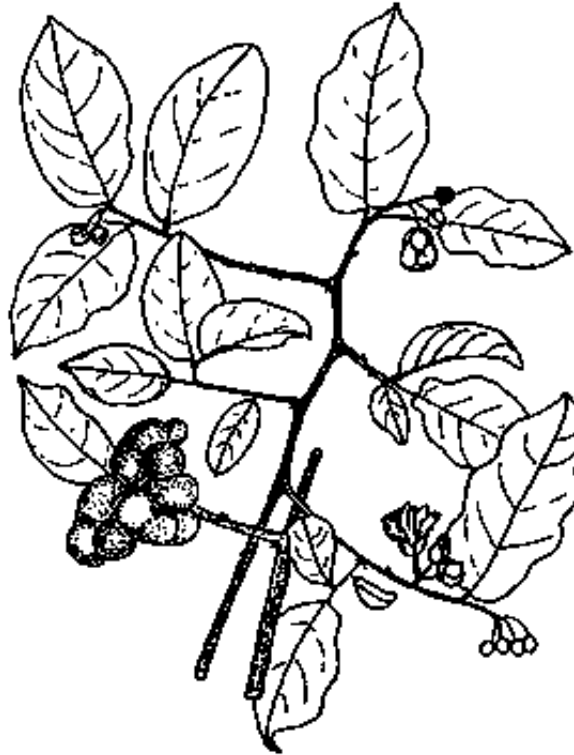
Season: Flowers in December-January. Fruits in May-June at the coast, in July in Kitui.

Status: Locally common at the coast.

Remarks: Several other *Uvaria* species have edible fruit.

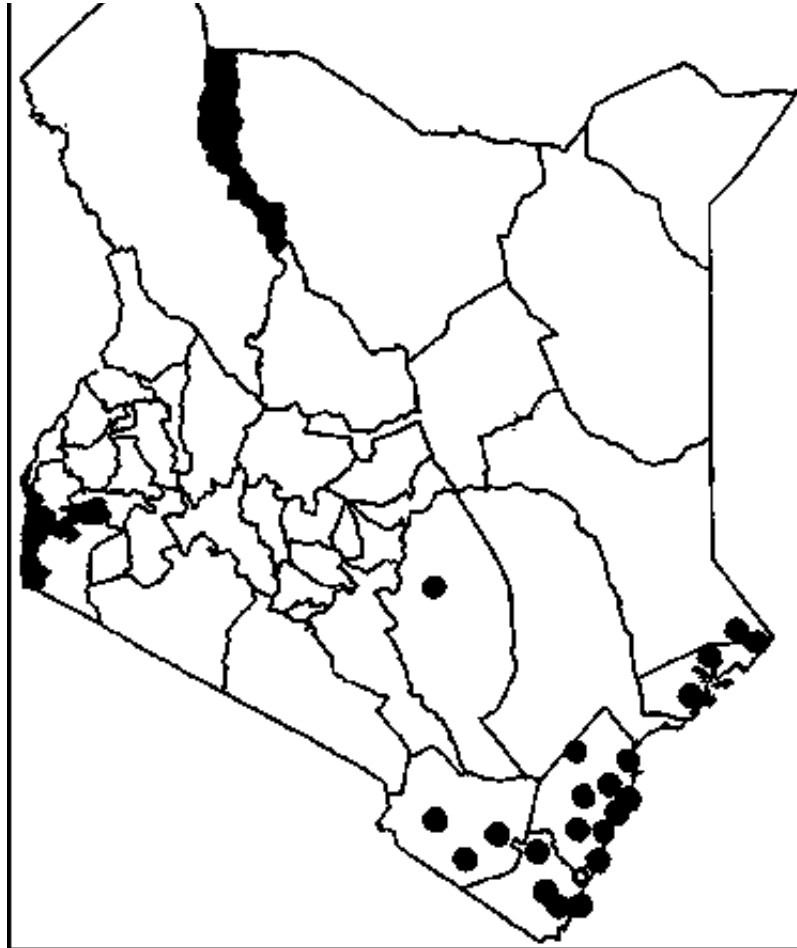
Other examples are:

- *U. kirkii* Oliv., a coastal species (from Kenya to Mozambique) with oblong fruit carpels.
- *U. lucida* Benth. ssp. *lucida* (Swahili: *mganda-simba*, Boni: *halas*, Giriama: *mudzaladowe*) has fruit with rusty brown carpels constricted between the seeds. It is found in Marafa, Arabuko-Sokoke (Kilifi), Lamu, Thika, Mbololo (Taita), Kwale, 0-1,800 m, south to Zambia and Malawi. Fruits sweet (+++). *U. lucida* ssp. *virens* (N. E. Br.) Verdc. occurs south of the Zambezi River in southern Africa.



Figure





Figure

Uvaria scheffleri Diels.

Annonaceae

Chonyi: mudzaladowe **Giriama:** mazaladowe, mudzaladowe, mzaladowe **Kamba:** mukukuma, kilali **Kambe:** mudzaladowe
Keiyo: tamangesyat (singular), tamanges, tamangesig
Marakwet: malkach, tamalak (plural), malkatwa, tomolokwo (singular) **Pokot:** tamuketwo, tomekekwo, tamrenwo, mikisia, molkech **Somali:** mareer booy

Description: A scrambling shrub or liane to 5 m or more with long shoots, rarely standing on its own. Stems long, narrow with short branches at right angles, young shoots extending out of the main bush. **LEAVES:** Long, narrow and glossy.

FLOWERS: Borne singly, bud dull green or brown, golden yellow to cream or yellow. **FRUIT:** Divided into finger-like carpels, each to 5 cm long, green, ripening to bright yellow to orange-red. Seeds shiny brown, usually compressed on one side.

Ecology: Found only in Kenya and northern Tanzania. In Kenya, e.g. in Karura Forest, Kibwezi, Namanga, Sigor, Ong'ata Rongai, Thui Hill (Makueni), Kitui hills, Kerio Valley on rocky hillsides, bushland, thickets and forest edges where it is usually found climbing on other plants. Soils various, ranging from red clay to rocky.

Uses: FOOD: Ripe fruits edible, sweet with an appealing acid taste (+++). The seeds, which are enclosed in pulp, are sucked clean then discarded. The soft outer skin may also be eaten. Occasionally a few of the seeds may be attacked by insect larvae (Kibwezi).

MEDICINAL: A medicinal plant (Kamba).

OTHER: Narrow stems flexible, used for weaving round structures like grain stores. Stem used for smoking milk gourds (Kamba).

Season: Fruit all year round, more in August-September (Nairobi, Makueni, Kajiado) and less in February-March.

Management: Propagated by seeds. May be planted near fences and hedges to give support.

Status: Occasional, locally common in some areas.

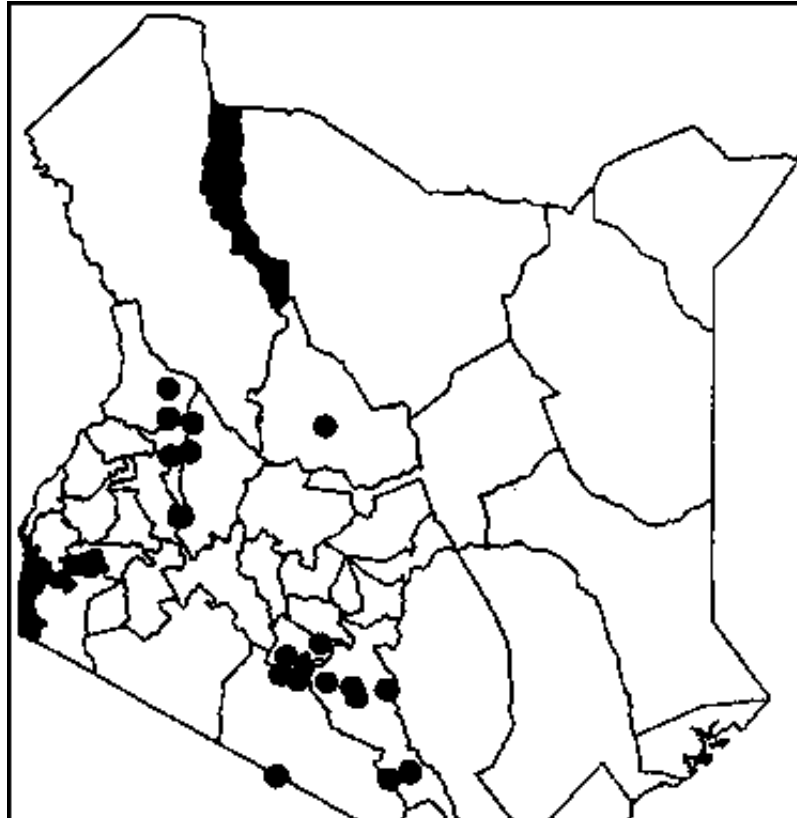
Remarks: May be planted as an ornamental.



Figure



Figure





Figure

Vangueria apiculata K. Schum.

Rubiaceae

Borana: buruuri **Digo:** movuma **Kamba:** mukomoa **Kikuyu:** mubiru **Kipsigis:** kimolwet **Kisii:** omokomoni, enkomoni (fruit), chinkomoni (fruits) **Kuria:** ikikumuni, igikomani **Luhya:** shimanyamunyi, shikomoli Maa: olgumi, ilgum (plural), engumieker **Pokot:** toperpirwo, taparper, toprepirwo **Samburu:** Ikoromosyei, Ikoromosyeoi **Turkana:** emaler

Description: Shrub or small tree to 6 m, often with drooping

or horizontally spreading leafy branches. Stems dark grey.

LEAVES: Opposite, narrow, pointed. **FLOWERS:** Yellowish green. **FRUITS:** Nearly globose, slightly compressed, 2-3 cm long, green, turning yellowish brown on ripening.

Ecology: Found from Ethiopia and the Sudan south to Mozambique, Malawi and Zimbabwe. In Kenya, e.g. at Chepareria (West Pokot), Loima Hills (Turkana), Homa Bay and Kisii in evergreen forest, riverine and wetland forests, bushland, thickets, rocky outcrops, 900-2,500 m. Zones II-IV.

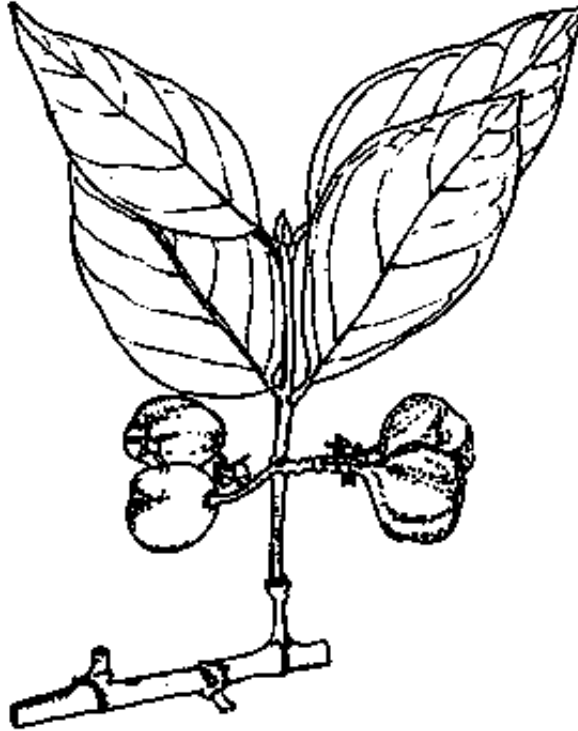
Uses: FOOD: Fruit pulp is eaten (++). Fruits smaller than in *V. infausta* but produced in very large numbers.

OTHER: Stems are used for building small structures (Pokot). Shade plant.

Season: Fruits in July-August in West Pokot.

Management: Easily grown from seeds.

Status: Occasional.

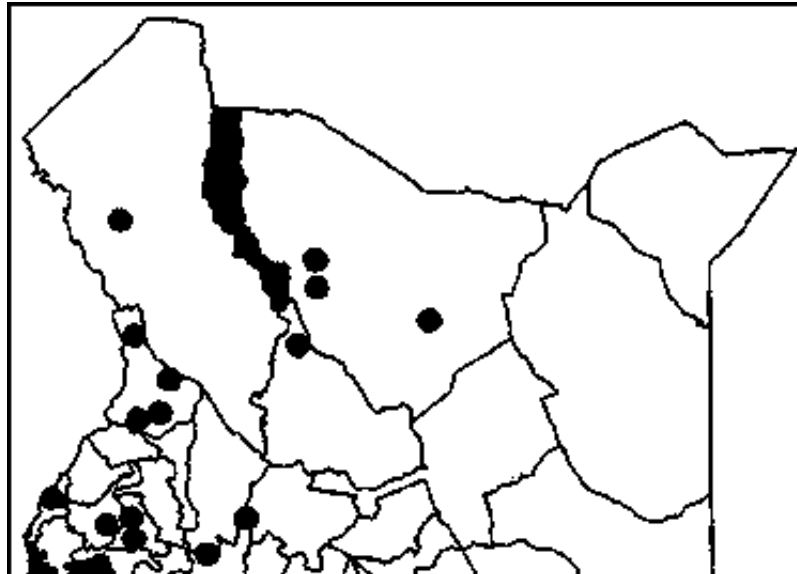


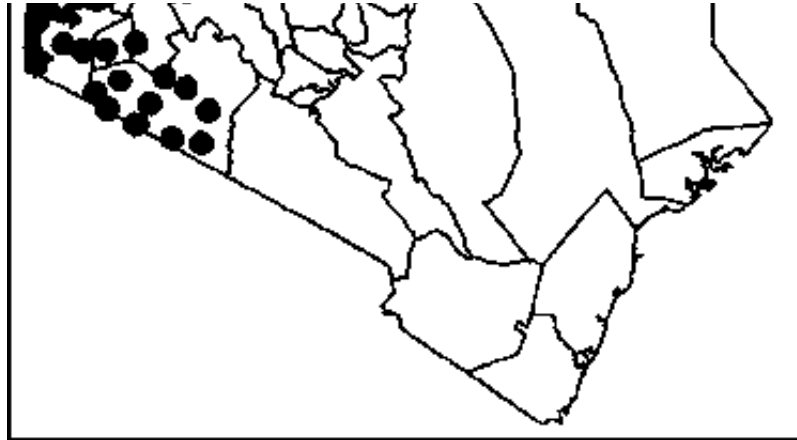
Figure





Figure





Figure

***Vangueria infausta* Burch. ssp. *rotundata* (Robyns)
Verdc.**

Rubiaceae

syn: *V. rotundata* Robyns, *V. tomentosa*, Hochst., *V. campanulata sensu* Dale & Greenway 1961

Digo: mviru **English:** false medlar **Giriama:** mviru, muviru
Kamba: mukomoa, muteleli **Keiyo:** kimolwet **Kipsigis:**
kimolwet, komolik **Kisii:** omokomoni **Luhya (Bukusu):**
kumukhomoli **Luhya (Maragoli):** mukhomoli, kumukhomoli,
mughomoli **Luhya:** shikomoli **Luo:** anyuka (Homa Bay),
omuya, apindi (Siaya) **Maa:** olgumi, olgum (plural), engumi-
etari (Loita) **Mbeere:** mbiruiru, mukomora **Meru:** mubiru
Nandi: kimolwet **Pokot:** komolwo **Samburu:** Ikoromosyoi,
Ikoromosien **Swahili:** mviru **Taita:** mboghombogho **Tugen:**
kimolik **Turkana:** emaler

Description: A deciduous, usually multi-stemmed bushy
shrub or, less often, a small tree rarely exceeding 5 m. **BARK:**
Smooth and grey. **LEAVES:** Opposite, large, dark green (light
green beneath), soft and covered with minute hairs, especially
on the veins. Minute growths on the surface often present.
FLOWERS: Up to 5 mm long, green or greenish white, borne
on a branched inflorescence. **FRUITS:** Up to 4.5 cm across,

shiny dark green, spherical or nearly so and with a circular scar at the tip left by drying floral parts. Ripe fruits greenish brown and soft. Dry fruit brown, grooved like a pumpkin.

Ecology: Widespread in Kenya and also found in Tanzania and Uganda. In Kenya, e.g. on the south-eastern slopes of Mt Elgon and in Kibwezi, Machakos and Nairobi in a wide range of habitats. Bushland, especially along streams, dry forests, fringing forest, woodland, grassland with scattered trees, rocky bushland, 10-2,450 m. Does well in open as well as partially shaded areas, especially under acacias. Prefers well-drained soils, especially sandy, rocky and light clay, but can occasionally be found in places that are briefly waterlogged during the rainy season.

Uses: FOOD: The ripe fruits are much relished. The tough brown elastic skin of the ripe fruit encloses a brown edible mealy pulp and about four seeds. This pulp is sucked and the

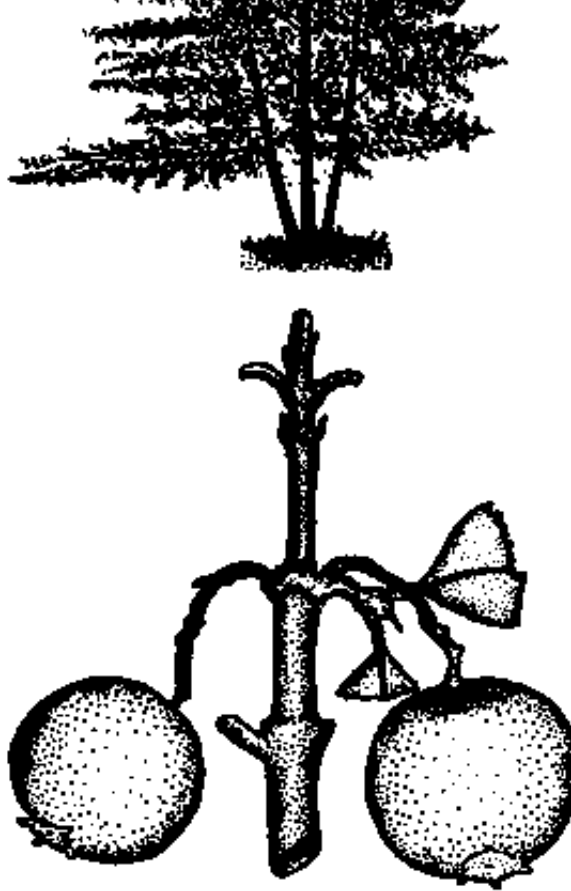
skin and seeds discarded. Pulp used to be added to milk or water to make a kind of porridge given to children (Maasai). Mature unripe fruits may be picked and kept to ripen. Dry fruits may be stored for over a year without much loss of the sweet-acid taste. Soaking fruits overnight softens them once more. The tough outer skin offers good protection.

OTHER: Shade, fuelwood, stirrers, poles (centre pole for huts) (Kamba). Stems are tough and used as handles for hoes and small implements, and for building temporary structures. Fruits were used by children to make tops (Makueni). The large dark green leaves give the plant an attractive appearance and hence its use as an ornamental. A major disadvantage is that it sheds its leaves at times of acute water stress. Leaves are occasionally browsed by animals but are not a favourite.

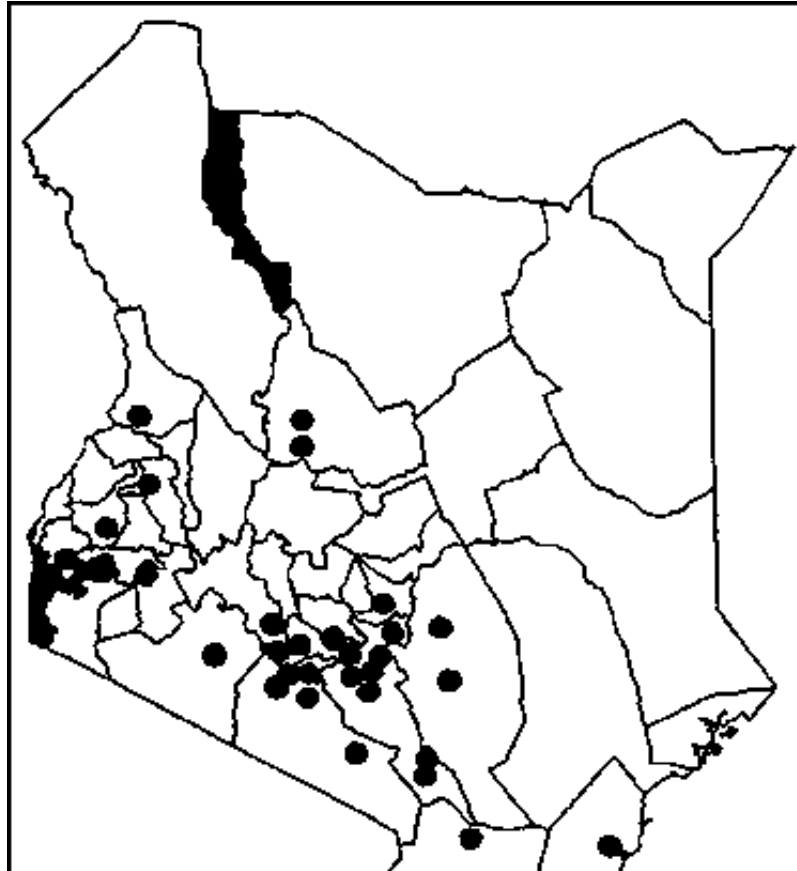
Management: Naturally propagated through seeds and root

suckers. Seeds germinate in about 3-4 weeks. Scarification of the hard seed coat may enhance the germination rate. The plant may also be propagated through cuttings but the success rate is low. If planted near the home, it will act as a shade and ornamental tree as well as providing a source of fruit, and the leaf litter improves the condition of the soil. *Vangueria infausta* is quick growing-healthy plants may fruit in about three years. Mature *Vangueria* plants should be pruned occasionally. Preferably, one or two branches should be maintained. In cropland this is necessary to avoid over-shading crops.





Figure





Figure

Season: Flowers are normally produced just before or during the rainy season in October-December and April-June. Generally fruits are ready in April-May (Nairobi, Kajiado, Machakos, Makueni, Kiambu, Embu) and August-October (West Pokot, Samburu, Elgeyo Marakwet, Trans Nzoia, Baringo). Local variations in climate may affect the seasonality of this species.

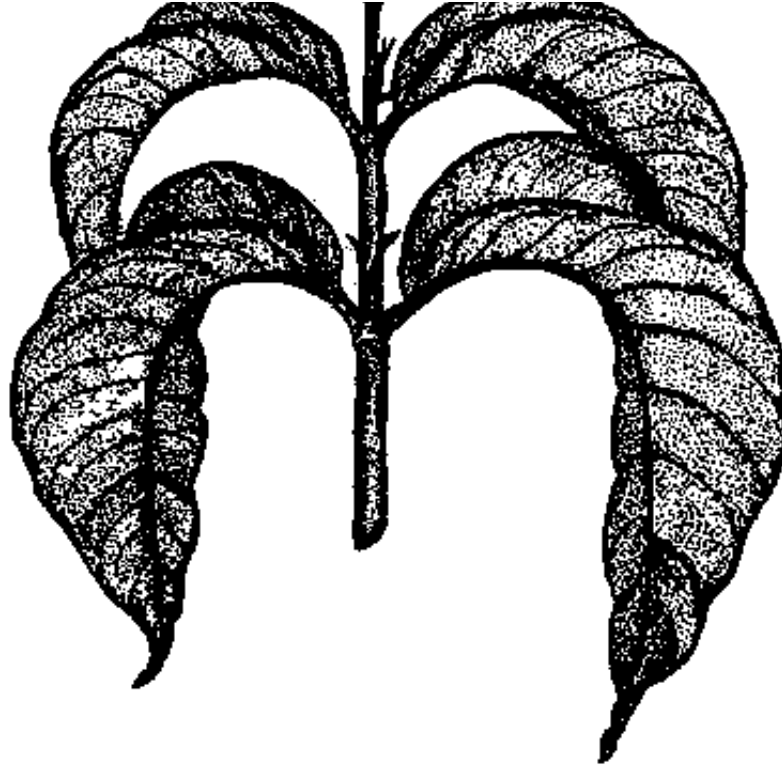
Status: Locally common.

Remarks: *ssp. infausta* is found in Rwanda, Tanzania and south to South Africa.



Figure





Figure

Vangueria madagascariensis Gmel.

Rubiaceae

syn: *V. acutiloba* Robyns, *V. edulis* Lam., *V. floribunda* Robyns

Borana: buriri (Moyale) **Okiek:** muluet **Kamba:** kikomoa
Kikuyu: mubiru, mbiru (fruit) **Kipsigis:** komolik, kimolwet
Kisii: omokomoni, enkomoni (fruit), chinkomoni fruits) **Luhya**
(Maragoli): mukhomoli **Luo:** anyuka, apindi **Maa:** olgumi
Marakwet: komol (plural), komolwo (singular) **Mbeere:**
mubiru **Meru:** mubiru **Pokot:** komolwo **Rendille:** irigormosso
Samburu: Ikormosiyoi, Ikoromosien **Swahili:** mviru **Taveta:**
mdaria **Tugen:** komolik

Description: A deciduous, usually multi-stemmed shrub or, less often, a small tree rarely exceeding 6 m. **BARK:** Smooth, grey to dark grey. **LEAVES:** Opposite, large, dark green, more

or less without hairs, with conspicuous greenish white veins.

FLOWERS: To 8 mm long, green or greenish white borne on a branched inflorescence. **FRUITS:** Shiny dark green, round or narrowed to one end and up to 4.5 cm across. Ripe fruits are greenish brown, soft. The dry fruit is grooved like a pumpkin.

Ecology: Distributed from Nigeria to Ethiopia and south to South Africa. Also cultivated in India, northern Australia and Trinidad.

In Kenya, e.g. at Kikuyu Escarpment, Keekerok (Maasai Mara), Mwala (Machakos), Churo (Baringo) and in Kapseret Forest (Uasin Gishu) in riverine bushland, bushland, evergreen forest, bushed grassland, sometimes on rocky outcrops and termite mounds, 0-2,400 m. Soils: Rocky, sandy, red clay or sandy clay. Zones: II-V.

Uses: FOOD: Fruit sweet and delicious with a slight acid taste

(+++). Fruit skin is tough. It is removed and the pulp-covered seeds sucked. Seeds are discarded.

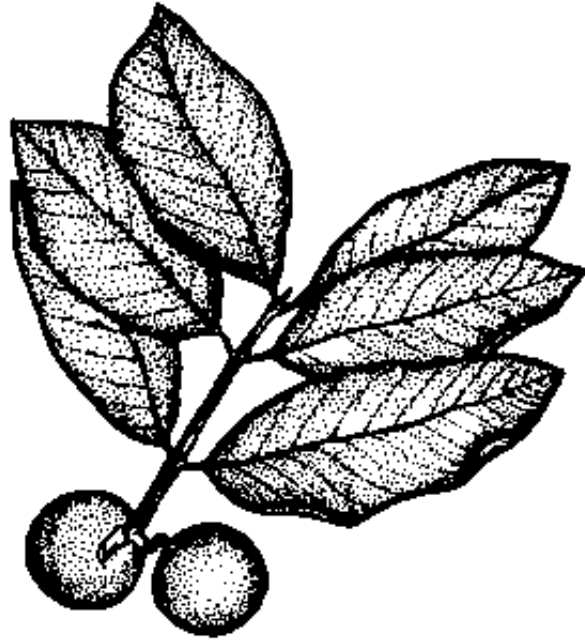
OTHER: Used for shade, handles for hoes, fuelwood, stirrers, poles (centre pole for huts) (Kamba). Fruit eaten by elephants.

Season: Rowers in October-November in Marsabit and Kiambu, in March-April in Isiolo, Taita, Kiambu, Narok, Machakos, Kajiado, and in September in Marsabit. Fruits in April-May in Kitui, Kiambu and Narok, and in August-September in Baringo, Kiambu, West Pokot.

Management: Propagated by seeds.

Status: May be locally common.

Remarks: A useful tree in agroforestry.



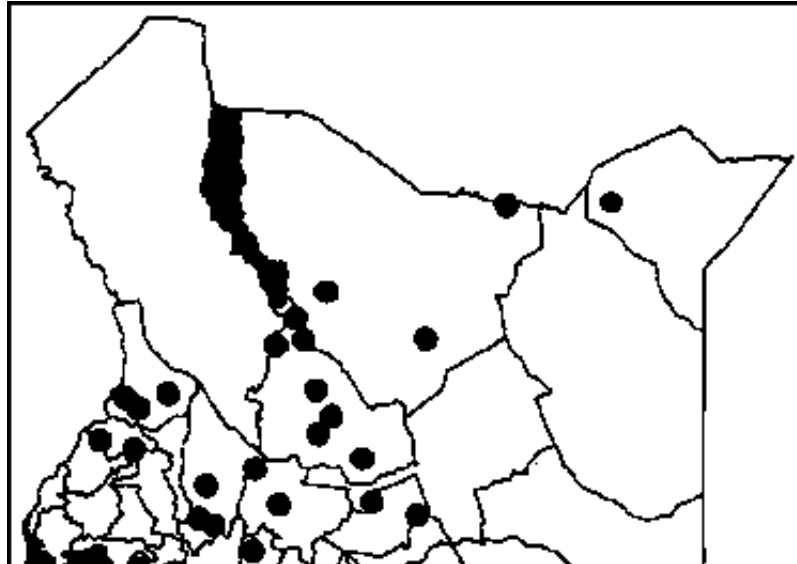
Figure

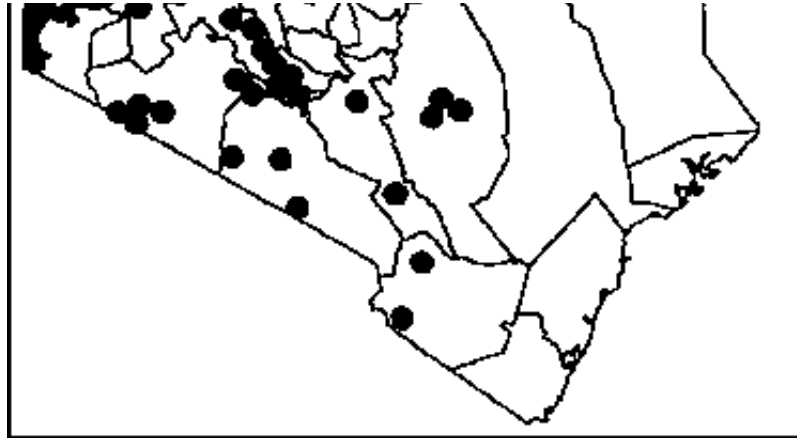






Figure





Figure

Vangueria volkensii K. Schum. var. volkensii

Rubiaceae

syn: *V. linearisepala* K. Schum.

Okiek: muluet, maldai, **Keiyo:** komoluet **Kamba:** mukomoa,

kikomoa **Kikuyu:** mubiru, mubiru-ng'ombe **Kipsigis:** kimolwet, kimolwet-ne-mingin **Maa:** olgumi **Marakwet:** komohro, tabirirwo, tabirir (plural) **Mbeere:** mukomboiru (Nthawa), mubiruiaru (Mavuria, Embu) **Meru:** muiuru **Pokot:** tapirpirwa **Samburu:** ngururusia, ngururusi, Igumi, Imludai (Mathew's Range) **Taveta:** mdaria

Description: A tree to 6 m high, often with arching branches at maturity. **LEAVES:** Velvety hairy. **FLOWERS:** Pale greenish yellow, often with hairs on throat of corolla tube. **FRUIT:** Round, up to 3 cm in diameter, green turning brown on drying.

Ecology: Found in Ethiopia, Sudan, Kenya, Rwanda and the Democratic Republic of Congo (Zaire). In Kenya, e.g. at Mathew's Range, Londiani, Iveti Hills, Moyale, Aberdare National Park, Karura Forest, Kibwezi Forest, Nyeri, Elgon National Park, Bura (Taita), Kapenguria and Kapsabet. Occurs

at evergreen forest margins, particularly with *Juniperus* and *Podocarpus*, riverine forests and thickets, wet valleys, rocky bushland, often in rocky places and on termite mounds, 900-2,500 m. Zones II-IV.

Uses: FOOD: Fruit eaten (++) . It is sweet with an acid taste.

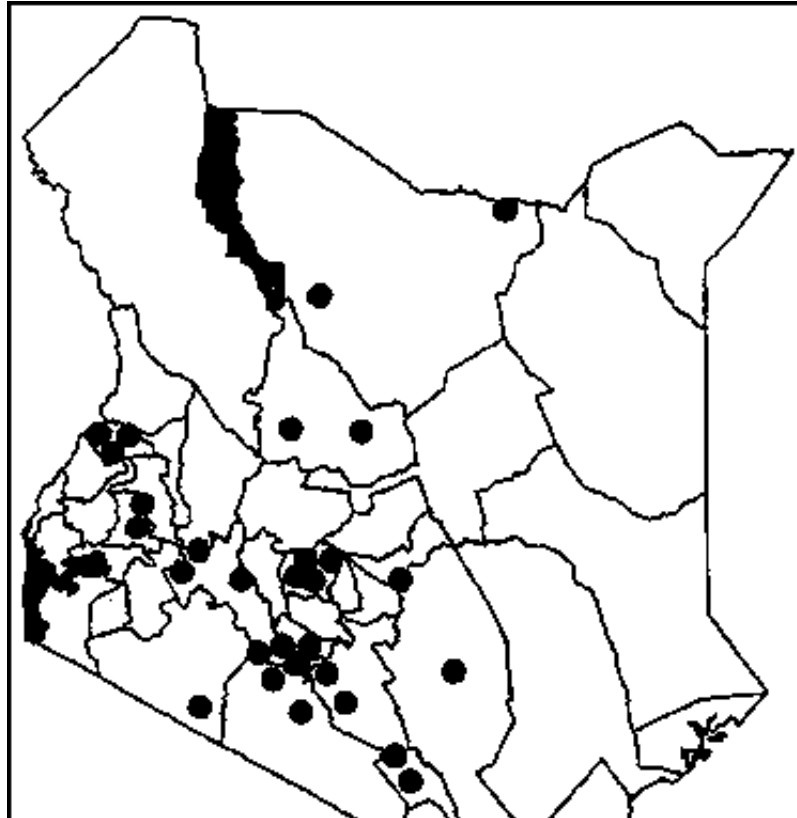
OTHER: Wood hard, used for constructing small structures (Mbeere, Kikuyu). Goat fodder. Season: Flowers in March-April in Kericho, Nakuru, Nyeri, Trans-Nzoia, Machakos. Fruits in August-September in Machakos and Taita, in October in Kakamega and in December in Laikipia.

Management: Propagated by seed.





Figure





Figure

Vatovaea pseudolablab (Harms) J. B. Gillett

Papilionaceae (Fabaceae)

syn: Vigna pseudolablab Harms, *Vatovaea biloba* Chiov.

Borana: gaabbe, gabbe **Daasanach:** gele **Gabra:** gabe, gaabbe **Kamba:** kilukyo **Maa:** olkalei, orkalei **Marakwet:** kobwo **Pokot:** kelowo, kela (plural) **Rendille:** henadi, hinaadi, kahabele (tuber) **Samburu:** Inanyo, nanyoi, njasi **Turkana:** egilae, eglae, emare (pods)

Description: A deciduous climbing leguminous plant often found covering shrubs in dry country. Stems greenish purple. Roots long, some horizontal, swollen in some parts, juicy and fibrous. **LEAVES:** With three leaflets. **FLOWERS:** Purple to blue and green. **FRUIT:** A softly hairy, slightly curved pod with up to 6 seeds, these usually greyish black when dry.

Ecology: Found in Kenya, Uganda, Tanzania, Sudan, Ethiopia and Somalia. Found in northern Kenya and Kajiado District along dry watercourses in dry bushland in loose red soil or sandy clay, 450-1,400 m. Zones V-VII. Also recorded at Mile-46, Olorgesailie, Nginyang' and Kaputir.

Uses: FOOD: The juicy fibrous tubers with a sugary taste are peeled and eaten raw both as food and a source of water (+++) (Turkana, Pokot, Samburu, Rendille, Gabra, Maasai). They may also be roasted, peeled and eaten (Turkana, Pokot) or boiled (Turkana) and the fibrous residue discarded. Seeds

eaten raw (Turkana, Pokot, Samburu) or when cooked (Kamba, Turkana, Pokot). Immature pods, flowers and leaves cooked and eaten as a vegetable (Pokot, Turkana). Leaves alone are cooked as a vegetable (++) (Maasai, Mile-46; Samburu; Kamba, Kitui). Flour may be made from the roots (Turkana). This is done by peeling the tubers, chopping them up, drying and grinding them. The flour is normally mixed with sorghum flour and used to prepare stiff porridge (*atap*). It is normally stored and used during lean periods (Turkana).

OTHER: Root fibres used for making ropes (Maasai, Rendille, Turkana) or for making hats and fly whisks (Maasai, Mile-46). Roots used to clean the mouth (Rendille, Maasai). Cattle, camel and goat fodder (++).

Season: Flowers just before and during the rainy season, March-April, October-November. Fruits in April-May, November-December in Baringo and Kajiado. In leaf during

the rainy season.

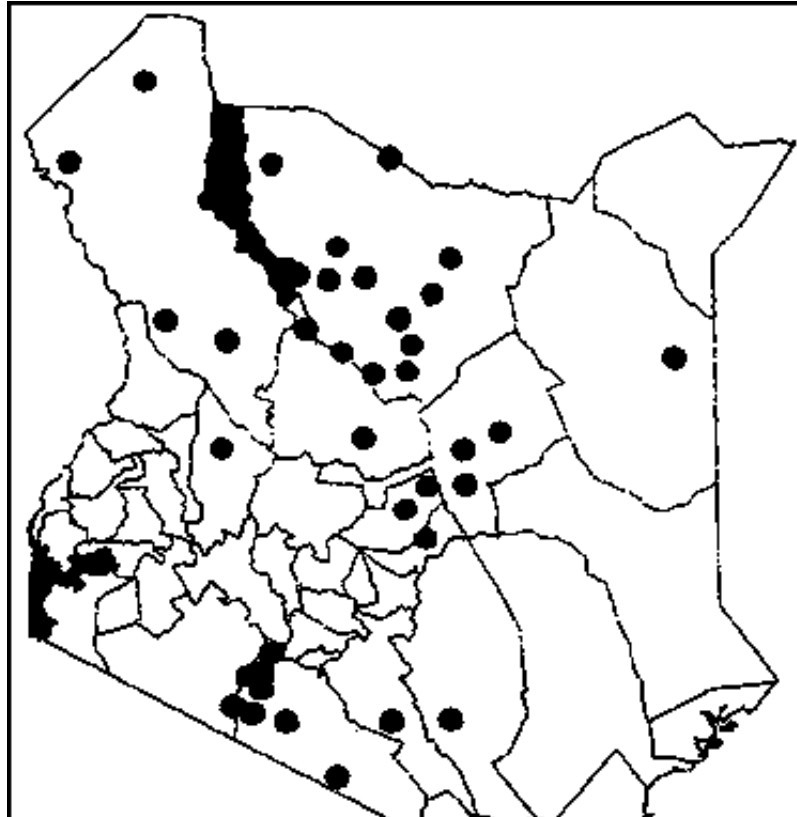
Status: Occasional, rarely common.



Figure



Figure





Figure

Vernonia cinerea Less.

Compositae (Asteraceae)

Chonyi: chibuzi **Digo:** chikuse **Duruma:** kifuka, lufia
Giriana: kibudzi, budzi **Kambe:** chibudzi **Maa:** eleleshwa-
 ekop **Pokot:** chesuwarian **Sanya:** n'dufulukwa **Swahili:** kifuka

Description: Erect, branched or unbranched herb up to 1.5 m high, usually 30-100 cm. Stem with longitudinal lines, hairy.

LEAVES: Broadly ovate, slightly hairy, margin wavy or toothed, base flat, narrowed or rounded. **FLOWERS:** Purple or

white, borne on a terminal branched inflorescence.

Ecology: Widely distributed in Kenya, especially in the wetter areas, in grassland, roadsides, disturbed areas and cultivated land as a weed, often under trees. Commonest in hot low areas, 0-1,700 m.

Uses: FOOD: Leaves used as a vegetable (Giriama, Duruma and other Mijikenda groups). This vegetable is cooked with other vegetables as by itself it has an unpleasant odour. Common combinations are *Launaea cornuta* (*mchungu*, *mutsungu*), amaranths and cowpea leaves.

Season: April-August, October-December (coast).

Management: Easily grown from seed.

Status: May be locally very common.

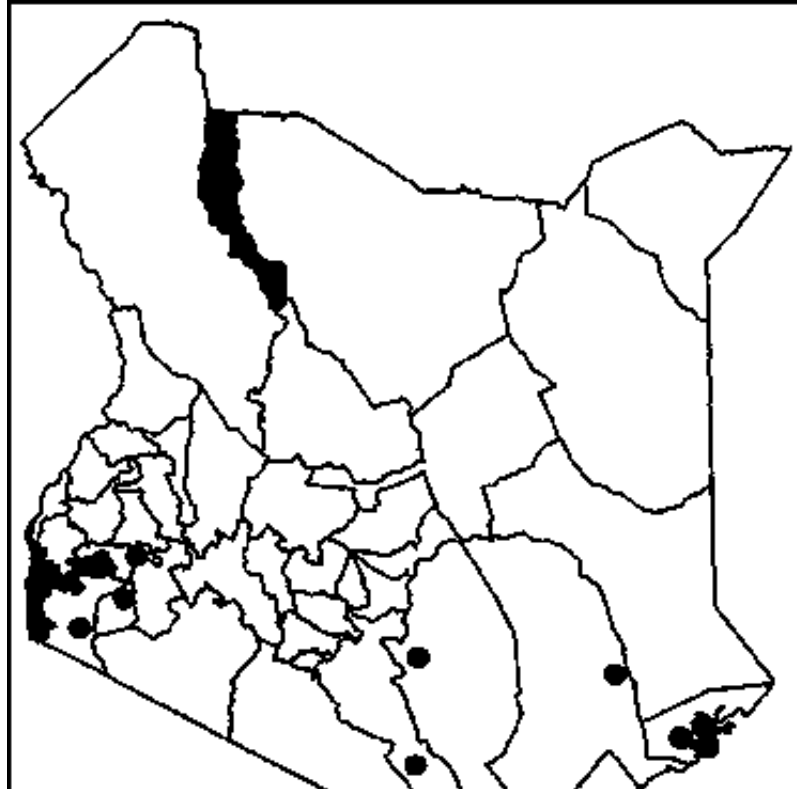
Remarks: An important vegetable for the Mijikenda. *Vernonia amygdalina* Del. (Luo: *olusia*) is common in western Kenya and is also used as a vegetable there. A number of other common weedy species in the family are used as vegetables. Examples include the exotic weeds:

- *Bidens pilosa* L. (English: *blackjack*, Meru (Chuka): *mung'ei*, Kikuyu: *mucege*, *muhehenje*, Kamba: *musee*, *munzee*, *munganga*, Maa: *oloreperep*) is used as a vegetable by the Pokot and Giriama and in West Africa.
- *Galinsoga parviflora* Cav. is an introduced weed from Central and South America used as a vegetable by the Pokot (English: *chickweed*, *Kew weed*). Also used in other parts of Africa and in South East Asia. These are weeds of cultivated and disturbed ground.





Figure





Figure

***Vigna friesiorum* Harms var. *angustifolia* Verdc.**

Papilionaceae (Fabaceae)

Maa: olgisoyiai, orgesoyae

Description: A small erect much-branched herb, usually about 20-30 cm high, arising from a narrow tuber. Tubers 15-25 cm long, 2 cm at the widest part and reddish brown on the surface. Stems weak. **LEAVES:** With long petioles. Leaflets narrow and long, linear to elliptic, slightly hairy, without lobes.

Ecology: Only known from Kenya, Uganda and Tanzania. In Kenya found, e.g. on Kaputei plains, Kajiado and Turkana in grassland, bushed grassland or *Combretum* woodland, 400-1,700 m. Usually on red clay. Zones V-VI.

Uses: FOOD: The root tuber is peeled and chewed. It is much liked by the Maasai, young and old alike (Kajiado). Roots are fibrous but juicy and sugary.

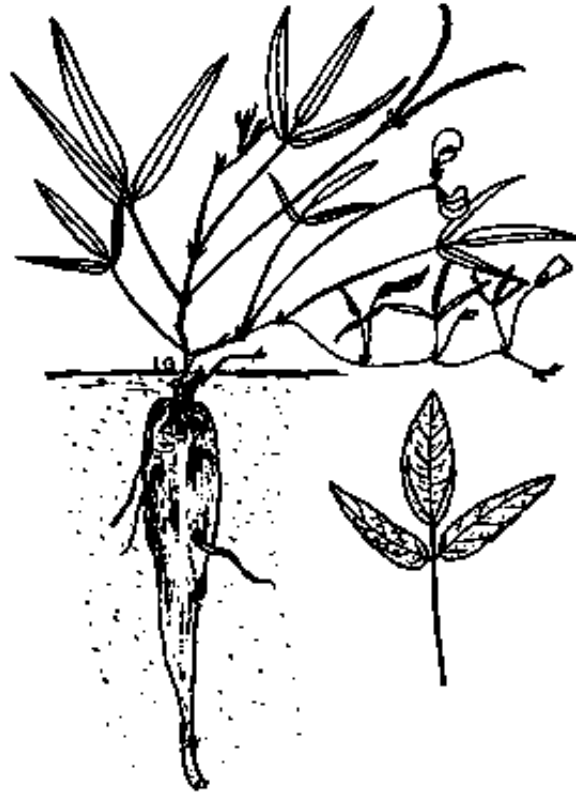
Management: Propagated by seeds.

Remarks:

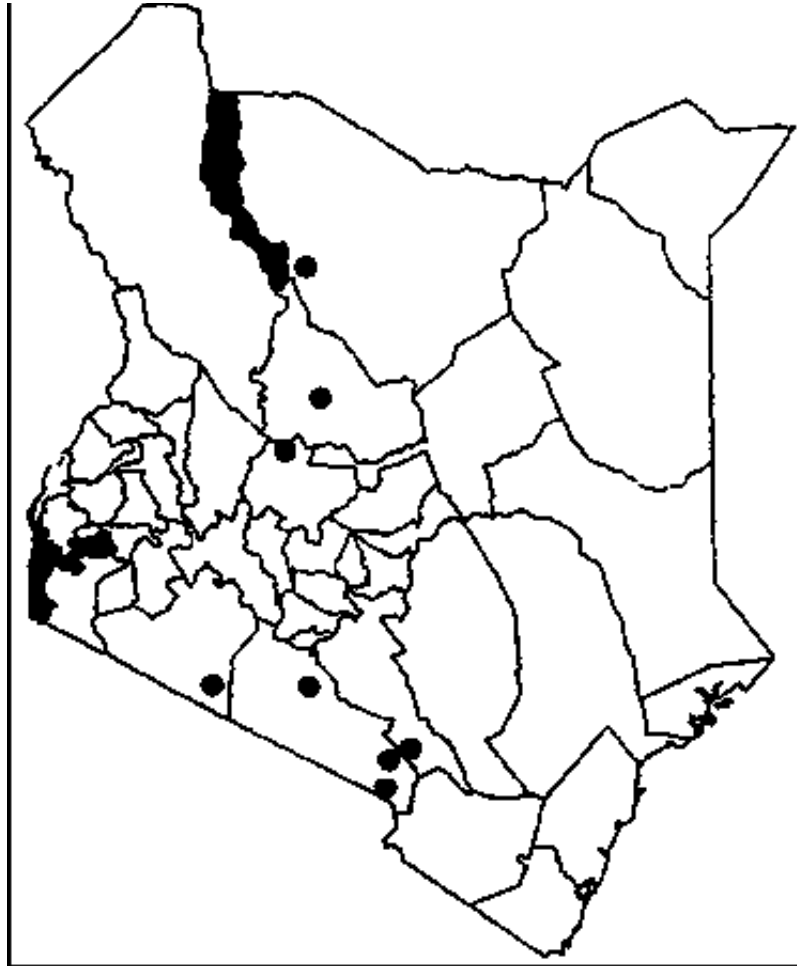
- *var. ulugurensis* (Harms) Verdc. with round to elliptic leaves is found in Kenya, Uganda, Tanzania, Rwanda and the Democratic Republic of Congo (Zaire).
- *var. friesiorum* with decumbent stems and short oblong to broadly elliptic leaves is found in Kenya and

Tanzania.

Another commonly used tuber in the genus *Vigna* is *V. frutescens* A. Rich. (Maa: *orng'oting'ot*, Gabra: *c'iimp'a*, Samburu: *ngabitoo*), a creeping or climbing plant commonly found in low hot areas in Kenya and most of Africa. The fibrous tuber is much larger than that of *V. friesiorum* and the leaflets are ovate to rhomboid and may be entire or 3-lobed.



Figure



Figure

Vigna membranacea A. Rich.

Papilionaceae (Fabaceae)

syn: *V. caesia* Chiov.

Borana: chame **Kamba:** ithookwe **Pokot:** kelowo-kelowo, chesuwanja **Samburu:** labebegi, Itebebiti **Swahili:** kikunde warimu, kekunde mbola

Description: An extensive climbing cowpea-like plant.

LEAVES: With 3 leaflets, each leaflet usually with side lobes.

FLOWERS: Blue, tinged purple. **FRUIT:** A narrow pod.

Ecology: Grows in Kenya, Uganda, Tanzania, Somalia, Ethiopia, the Democratic Republic of Congo (Zaire) and Sudan.

In Kenya, e.g. at Mtito Andei, Kitui and Taita, climbing on other plants at the edges of cultivated land, bushland, riverine bushland and roadside bushes. Usually on red, sandy clay. Zones IV-VII.

Uses: FOOD: Leaves used as a vegetable. Normally fried and eaten with *ugali*. Said to taste like cowpea leaves (Kitui and Mwingi). Also boiled and mashed with maize and beans.

Season: During rains, i.e. March-May and November-January (Kitui, Makueni, Samburu, Baringo).

Management: Propagated by seed.

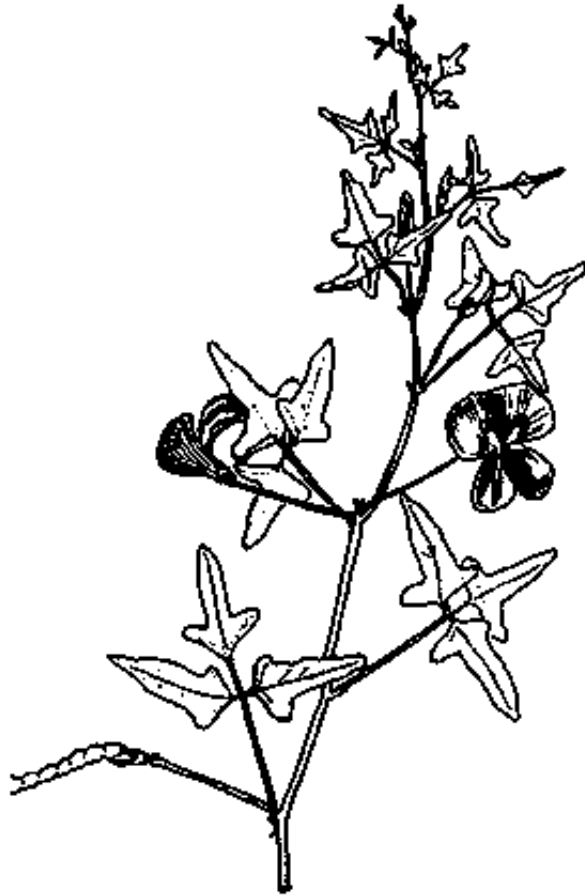
Remarks: Four subspecies are recognized in Kenya:

- *ssp. caesia* (Chiov.) Verdc. syn: *V. caesia* Chiov.

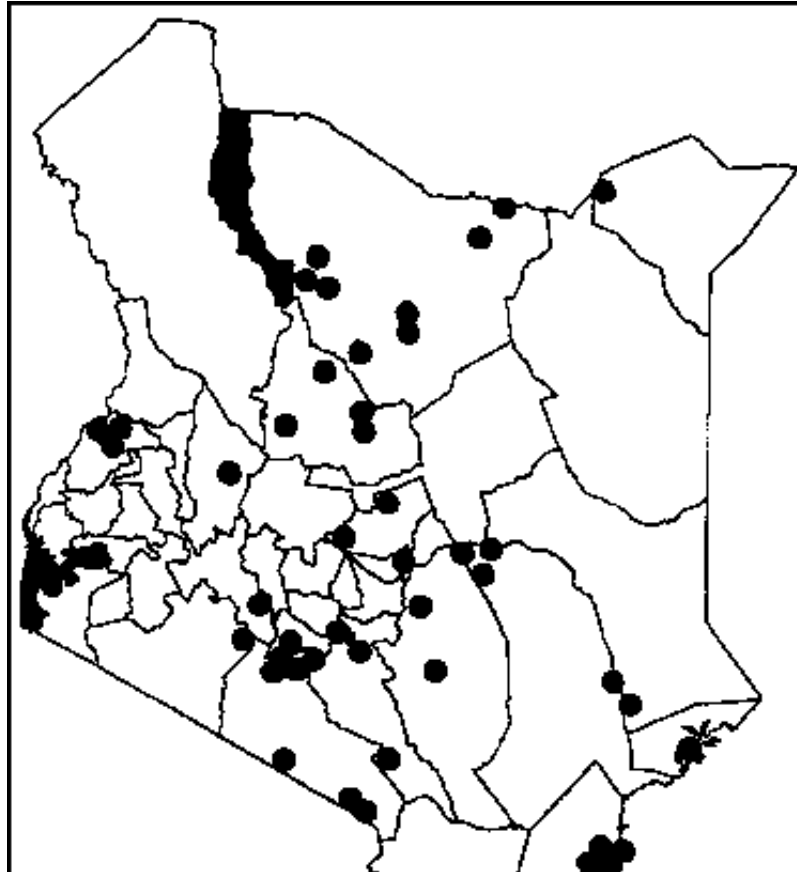
Distribution: South-eastern and coastal Kenya such as Mtito Andei, Sabaki River, Taita, Kitui. Tanzania,

Somalia, Ethiopia.

- *ssp. macrodon* (Robyns & Boutique) Verdc. Distribution: Coastal, central and south-eastern Kenya. Reported in Karura Forest, Kiambu. Uganda, Tanzania and the Democratic Republic of Congo (Zaire).
- *ssp. membranacea*. Distribution: Central parts of Kenya westwards. Reported from north-eastern Mt Elgon, Endebess, Samburu. Uganda, Tanzania, Sudan, Ethiopia.
- *ssp. hapalantha* (Harms) Verdc. Distribution: Likoni (Mombasa), Arabuko-Sokoke Forest.



Figure





Figure

***Vigna subterranea* (L.) Verdc.**

Papilionaceae (Fabaceae)

syn: *Voandzeia subterranea* (L.) Thouars; *Glycine subterranea* L.

Chonyi: tendegwa, nzugu mawe **English:** Bambarra groundnut, Madagascar groundnut, earthnut, baffin pea, Bambarra bean **Giriama:** dzugu mawe **Kambe:** tendegwa **Kisii:** chinchugu **Luhya (Bukusu):** chimbande **Luhya (Isukha):** tsimbande **Luhya (Kisa):** tsimbande **Luhya (Maragoli):** tsimbande **Luhya (Tiriki):** simbande, zimbande

Luhya (Wanga): tsimbande **Luhya (Tachoni):** chimbande (plural), yimbandu (singular) **Luo:** bande, mbande **Sanya:** njugu mawe **Swahili:** njugu mawe

Description: A dense annual herb to 40 cm. Stems creeping, short, much branched, rather hairy and usually rooting at the nodes. **LEAVES:** 3-foliolate, held erect by a long petiole.

FLOWERS: Inflorescence borne on the leaf axils with only a few (1-3) small yellow flowers whose short, hairy peduncles bend downwards and into the soil, thus the fruits (pods) develop underground. **FRUITS:** Pods short, to 2.5 cm, oblong to obovoid with a recurved style base. Seeds usually 1, occasionally 2 per pod, smooth, rounded to sub-globose, cream, red, brown or black and up to 1.5 cm (commonly 1.0-1.3 cm) long.

Ecology: Cultivated in most of Africa from Senegal east to Chad and Uganda, south to South Africa. Grown in the

western parts of Kenya and to a lesser extent in Coast Province. Also grown in Asia, Australia and tropical America. A traditional crop of many central and southern African groups. Can be grown in hot low country. It is found in well-drained deep to moderately deep, reddish to brown, sandy clay loam to clay soils, 0-1,550 m. At the coast, however, it is found in well-drained deep fine to very fine sandy to sandy loamy soils ranging in colour from yellow brown to reddish brown. Zones: II-IV. Will produce a crop in relatively poor soils.

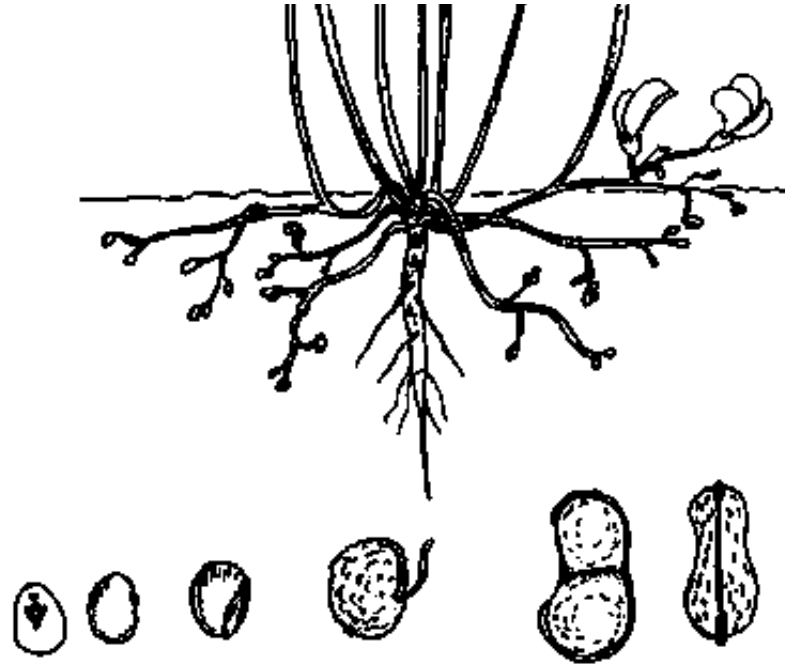
Uses: FOOD: Seeds are cooked with maize (occasionally after overnight soaking) or alone, mashed, fried and used as stew. Eating a lot leads to stomach discomfort. Requires careful preparation as it may be rather bitter. Among the Mijikenda, dry seeds are pounded in a mortar to remove the seed coat, winnowed and boiled. They are then pounded and *tui* (coconut juice) added. The mixture is boiled until the coconut juice is ready, stirred with a wooden stirrer (*lufudzo*) until

homogenous and of smooth consistency. It is then served with rice or *ugali*. Fresh seeds are prepared in the same way.

Pods are harvested before they dry, washed and boiled, salt added and eaten as a snack. These are said to be very tasty (Luhya).

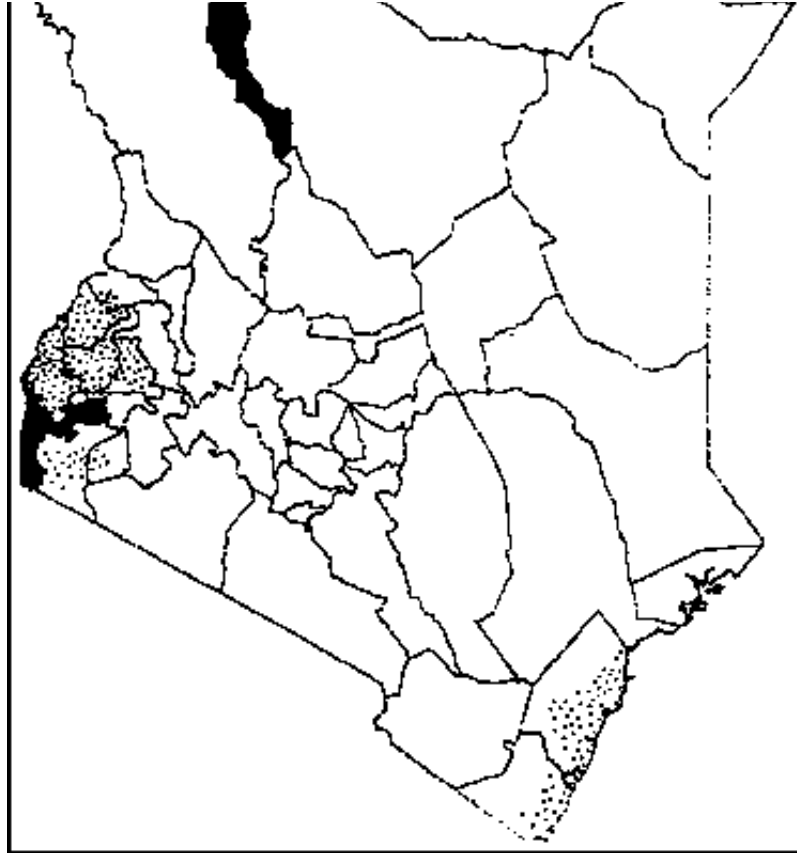
Dry seeds are roasted, salt or brine added, and mixed with peanuts so that the ratio of Bambarra nut is low.





Figure





Figure

The seeds are pounded to remove the outer coat or ground and the resultant meal boiled, stirred vigorously, then simmered to a stew (*borohowa*, Giriama). The stew may be added to traditionally prepared leafy vegetables, especially cowpea (*Vigna unguiculata*). It is then cooked a little and served. The stew can also be served with *ugali* or potatoes (Luhya). The Bambarra nut may also be boiled with maize and beans and eaten as a snack, especially with tea (Luhya), fried (like groundnuts), usually with sesame seeds, or boiled, then mixed with boiled sweet potatoes and mashed. This dish is preferred for children. Cooked during ceremonies like weddings, or for very important persons (Luhya).

It is used in the same way as kidney beans to prepare *nyoyo* (a mixture of beans and maize boiled together), or boiled alone. This is then eaten with tea, porridge (Luo) or alone. Bambarra nuts are dried, ground using a *pong* (grinding stone) or pounded in a *pany* (mortar), then cooked like green grams

to a sauce known as *ogira*. This is eaten with other foods (Luo).

OTHER: Leaves are fodder.

COMMERCIAL: The pulse is sold in Nairobi markets. Also sold in other urban centres especially in Nyanza and Western Provinces, such as Kakamega, Bungoma and Kisumu.

Management: The seeds are planted in rows or randomly. The crop takes about 4 months to mature when the leaves become brown. It can be intercropped with maize, sorghum or millet. Intercropping may affect the yield adversely. Harvesting is usually by uprooting or digging out the entire plant and picking individual pods. The pods are pressed by hand, or more often sun-dried, threshed and stored. Traditionally the seeds used to be left in the pods and were only shelled when they were needed for cooking. These pods

would then be stored in a pot (Luhya).

Remarks: This is a traditional crop of the Luhya and many other communities in Africa. Its cultivation has declined over the years partly due to the labour entailed, especially during harvesting, and partly due to exhaustion of soils. The plant is native to Central and West Africa.

Two varieties are distinguished: var. *subterranea* is the cultivated one. The wild variety, var. *spontanea* (Harms) Hepper, with smaller seeds, is reported in north-eastern Nigeria and northern Cameroon. The name Bambarra seems to have been derived from a community in Mali.

The groundnut or peanut, *Arachis hypogea* (Swahili: *njugu karanga*, Giriama: *nzugu nyasa*, *nzugu karanga*, Chonyi: *dzugu*, *nyasa*, Kambe: *nzugu kalanga*, Luo: *dzugu*, *njugu*) also has pods that develop underground. It is native to South

America but a traditional crop of coastal, Nyanza and western people of Kenya.

Vigna unguiculata (L.) Walp.

Papilionaceae (Fabaceae)

syn: *V. sinensis* (L.) Hassk.

Chonyi: tsafe, kunde **Digo:** chani, kunde **Embu:** nthoroko
English: cowpea **Giriama:** tsafe **Kamba:** nthooko (Makueni, Machakos) nzooko (Kitui, Mwingi), kilusya **Kambe:** kunde, tsafe **Kikuyu:** thoroko, mathoroko (leaves) **Kipsigis:** kunde
Kisii: egesale **Luhya (Bukusu):** sikhubi, sikhuvbi **Luhya (Isukha):** likhuvi **Luhya (Marachi):** likhubi, likhuvi **Luhya (Maragoli):** likhuvi **Luhya (Tachoni):** esikhubi, sikhubi
Luhya (Samia): ekhubi **Luo:** bo, alot-bo **Maa:** soroko
Marakwet: kunde **Meru:** nthoroko **Nandi:** kunde **Sanya:**

amos, kunde **Swahili:** kunde **Tharaka:** mathoroko, nthoroko
Turkana: emaret, ekunde, ekundi

Description: An erect, trailing or climbing herb. **LEAVES:** With 3 leaflets. Leaflets to 10 cm long or more, ovate, rhomboid or lanceolate, entire or lobed at the base.

FLOWERS: Various colours; pale green to light blue or purple, borne on axillary inflorescences composed of a long stalk, usually held vertically and with several flowers towards the tip. **FRUITS:** Pods to 15 cm long, straight, usually hanging.

Ecology: Cultivated all over Kenya as a vegetable and pulse, mainly 0-1,500 m. Also grows in the wild. Growth is poor at higher altitudes. Requires hot, moderately wet conditions. Prefers loam, sandy and other well-drained soils. Zones III-VI.

Uses: FOOD: Leaves and seeds widely used as a food (+++). Some communities grow cowpeas mainly as a vegetable

(Luhya). Young leaves are often cooked with potash. The vegetable may be cooked alone or with other types, mainly *Corchorus olitorius* and *C. trilocularis*. The leaves are cooked with *Corchorus* spp. leaves, milk and butter added and served to breast-feeding mothers (Luo). Leaves are normally eaten with *ugali* or mashed with maize and potatoes or other pulses (Kikuyu). The seeds may be cooked with sorghum (Luo) or maize (*nyoyo*, Luo, *isyo*, Kamba, *githeri*, Kikuyu) or boiled, fried and made into a stew which is eaten with *ugali* or other foods. Seeds may also be boiled and eaten alone (*afwoka*, Luo) or mashed and butter added (*mukenye*, Luo). Seeds are not traditionally used by some Luhya communities but are harvested for next season's planting. Cowpea leaves may be dried and stored for several months. Cowpea is a major leafy vegetable among the Mijikenda, often mixed with leaves of sweet potato (*mabwe*), cocoyam (*maburu*), pumpkin and *Corchorus olitorius* (*vombo*).

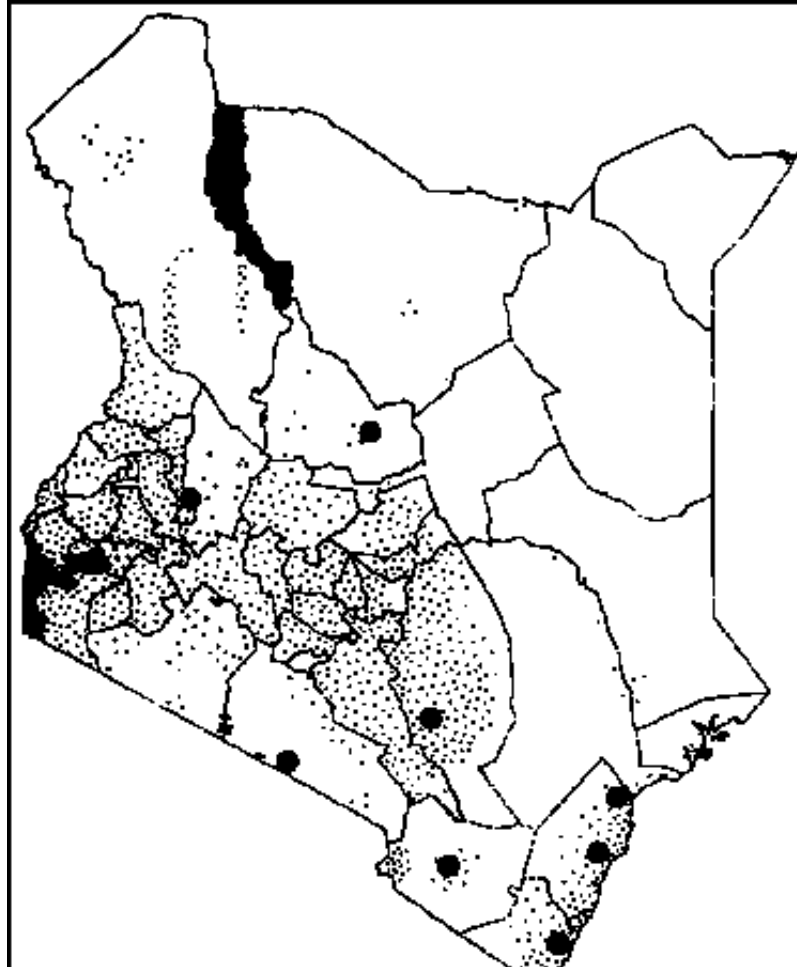
OTHER: Good animal fodder. Roots reputedly very poisonous.

COMMERCIAL: Both the peas and leaves are sold all over the country. Young plants 3-4 weeks old are uprooted, tied in bundles and sold in markets.

Remarks: As with most cultivated crops, this is a very variable species. Several cultivars are grown that differ in seed colour, pod shape and length, habit (some creeping, others erect) and leaf shape and size. Fast maturing, usually erect cultivars are grown for seeds. The creeping, deeply rooted types are drought resistant and are preferred for their leaves (Kamba, Tharaka, Mbeere, Meru). Wild forms of this species are widely distributed in Kenya. The dark grey seeds of some cultivars and wild forms are impossible to cook satisfactorily (*mbitia*, Kamba).



Figure





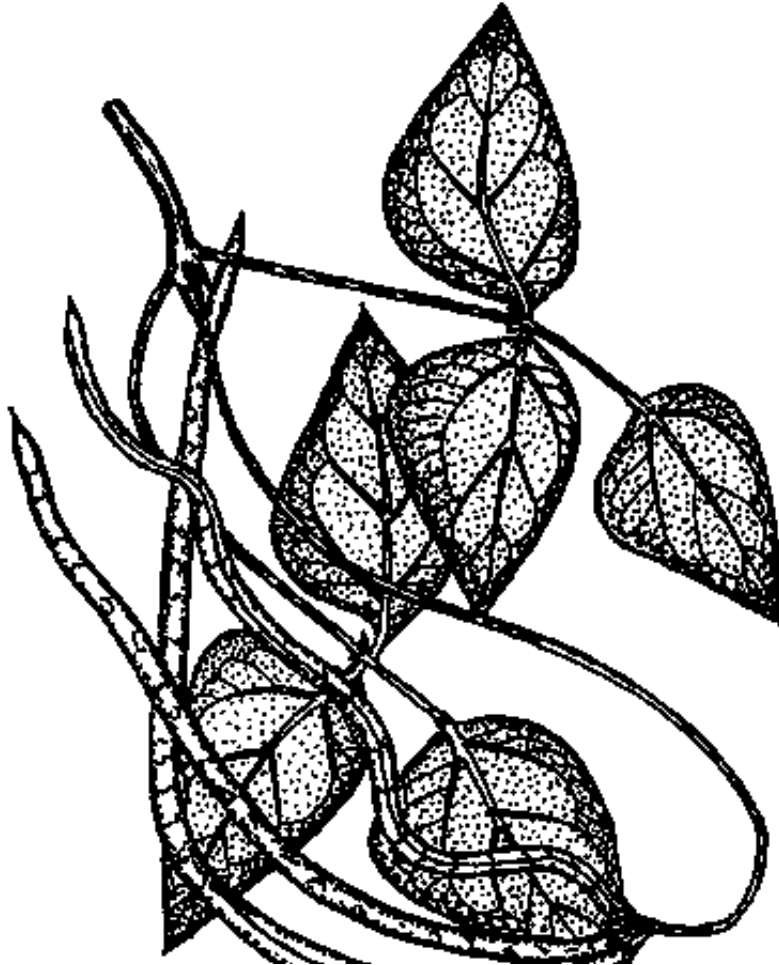
Figure

Verdcourt, in the *Flora of East Africa*, recognizes five subspecies in Kenya:

- *ssp. dekindtiana* (Harms) Verdc.: pods dark, to 10 cm long. Wild or cultivated.
- *ssp. unguiculata*: pods 20-30 cm long. The cultivated cowpea.
- *ssp. cylindrica* (L.) Eselt.: pods to 13 cm long. Cultivated or wild.
- *ssp. mensensis* (Schweinf.) Verdc.: pods to 13 cm long. A wild form.
- *ssp. sesquipedalis* (L.) Verdc.



Figure





Figure

Vitex doniana Sweet

Verbenaceae

Chonyi: fudu (fruit) **English:** black plum **Kambe:** fudu (fruit)
Kikuyu: muhuru **Kipsigis:** muekelwet **Kisii:** mutahuru **Luhya**
(Bukusu): kumufutu, bufutu (fruit), chifutu (fruits) **Luhya:**
 omufutu, muholu, omufutu **Luhya** (Tachoni): chifutu (fruits)
 omufutu, yifutu (fruit) **Luo:** ojuelo, oyuelo, juelu **Mbeere:**
 muburu **Pokot:** tirkirwo **Sabaot:** bulgelwa, pulgelwet
Swahili: mfudu **Teso:** ewelo, ekarukei

Description: A deciduous tree, usually 4-8 m high, occasionally up to 15 m, with a dense rounded crown. **BARK:**

Light grey with numerous vertical fissures. Branchlets not hairy. **LEAVES:** Long stalked, with 5-7 leaflets. Leaflets usually widest towards the tip, more or less hairless.

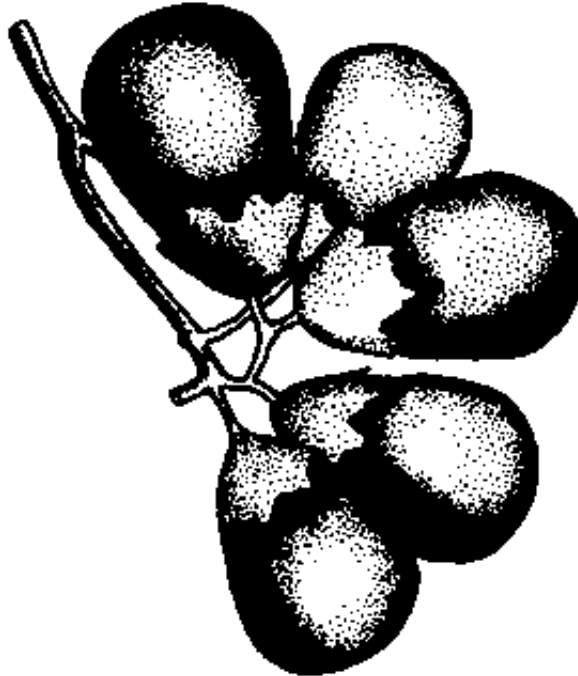
FLOWERS: Numerous, white, tinged purple, usually borne in short, stout axillary cymes on a long stalk. Calyx and pedicels densely hairy. **FRUIT:** Ellipsoid to oblong, up to 2.5 cm long, clasped by a calyx cup, green turning black on ripening.

Ecology: Found in eastern, southern and West Africa and Comoro Islands. In Kenya e.g. on the south coast, Loima Hills, West Pokot, Migori, Kakamega and Homa Bay in wooded grassland, forest edges, 0-1,950 m. More common on light soils.

Uses: FOOD: The ripe black fruit pulp is eaten raw (+++) (Sabaot, Luhya, Luo, Kuria). It has a sweet taste. Fruit cooked during famine (Sabaot).

OTHER: Wood reasonably durable and used as poles in house building and as a source of timber.

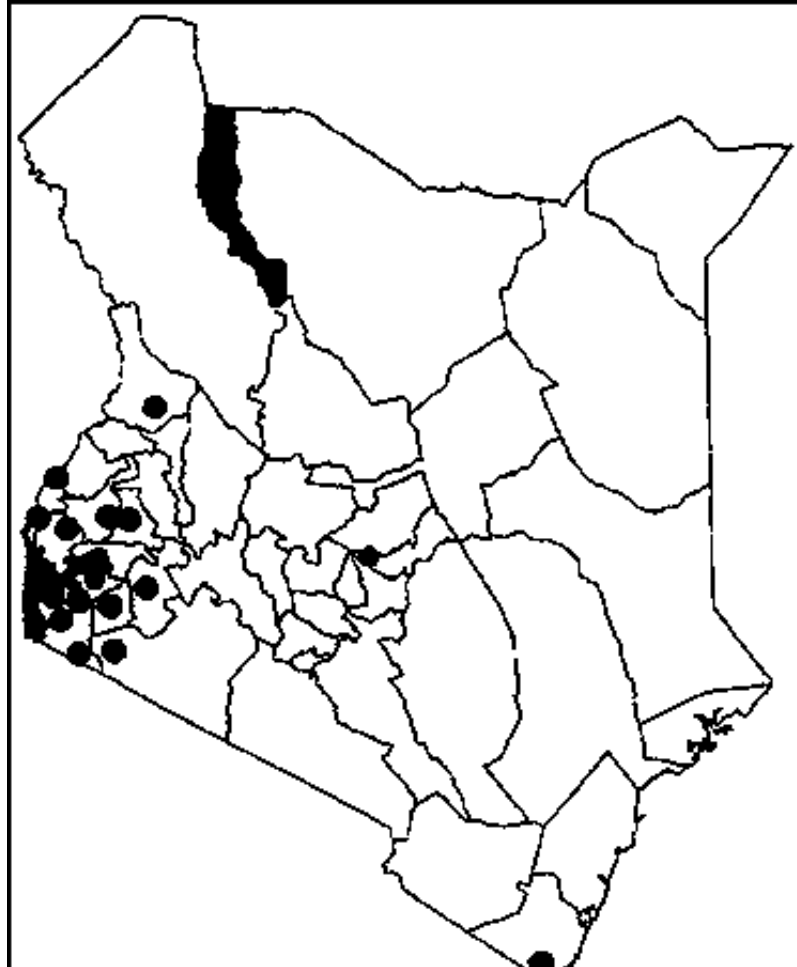
Status: Occasional. Common in Uganda.



Figure



Figure





Figure

Vitex ferruginea Schum. & Thonn.

Verbenaceae

Boni: mkalashote, mogalishat **Chonyi:** fudu (fruit), mfudu-madzi **Giriama:** mfudu-madzi **Kambe:** fudu (fruit), mfudu-madzi (plant) **Somali:** marfis **Swahili:** mfudu

Description: Deciduous shrub or tree, usually 3-8 m high, occasionally up to 10 m. **BARK:** Light grey, smooth. Branchlets rusty hairy. **LEAVES:** With 3-7 leaflets. Leaflets elliptic or widened towards the tip, usually hairless above and velvety rusty hairy to hairless beneath. **FLOWERS:** Numerous, white, pale blue or violet, borne in dense axillary cymes on a long stalk. **FRUIT:** Nearly round, up to 3.5 cm in

diameter, green, turning brownish black on ripening. Seed hard, with 4 grooves.

Ecology: Grows in Kenya and south to South Africa. In Kenya, occurs in coastal bushland and dry forests and *Brachystegia* woodland. Usually found in deep coastal sandy soils.

Uses: FOOD: Fruit eaten raw (+). Pulp not as dry as in *V. doniana*, hence the Mijikenda name for it. Fruit is sweet.

OTHER: Wood tough, used to make toy knives used by small boys.

Season: December-January (Kilifi).

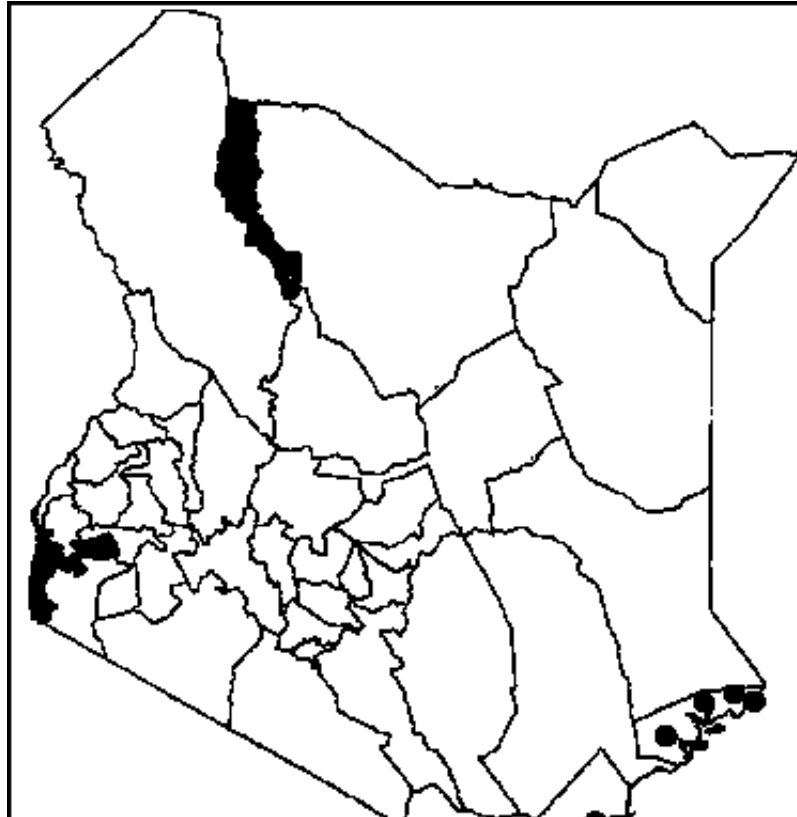
Status: Occasional.

Remarks: *ssp. amboniensis* (Guerke) Verdc. is referred to

here. *Ssp. ferruginea* is found in Uganda, north-western Tanzania, west to Angola and Guinea.



Figure





Figure

Vitex mombassae Vatke

Verbenaceae

Boni: mkalijote **Chonyi:** fudu (fruit), mfudukoma, mfudu

Digo: mfudukoma, fudumadzi **Giriama:** mfududu, mfudukoma, mfudu **Kambe:** mfudu, mfudukoma, fudu (fruits)

Pokomo: mfudu **Swahili** mfundumaji, mvumba, mbwanga, mfudu, mgege

Description: A tree, usually 3-6 m high. Shoots more slender than in *V. payos*. **BARK:** Grey, fissured or corrugated. Younger

stems rusty, softly hairy. **LEAVES:** With 5 leaflets, occasionally 3. Leaflets elliptic, hairy above, rusty, softly hairy beneath, usually not stalked, rarely all stalked. **FLOWERS:** Pale blue to light purple. **FRUITS:** Round, to 3 cm across, clasped by a calyx cup, green, turning purplish black on ripening.

Ecology: Grows in Kenya, Tanzania and the Democratic Republic of Congo (Zaire), south to South Africa. Found in Kenya in Shimba Hills, Gazi and elsewhere in the coastal region, in coastal bushland, wooded grassland, 0-450 m. Mainly in sandy soils.

Uses: FOOD: Fruit edible (+), sweet (Giriama, Duruma, Digo).

OTHER: Fuelwood, shade.

Season: December-January (Kilifi).

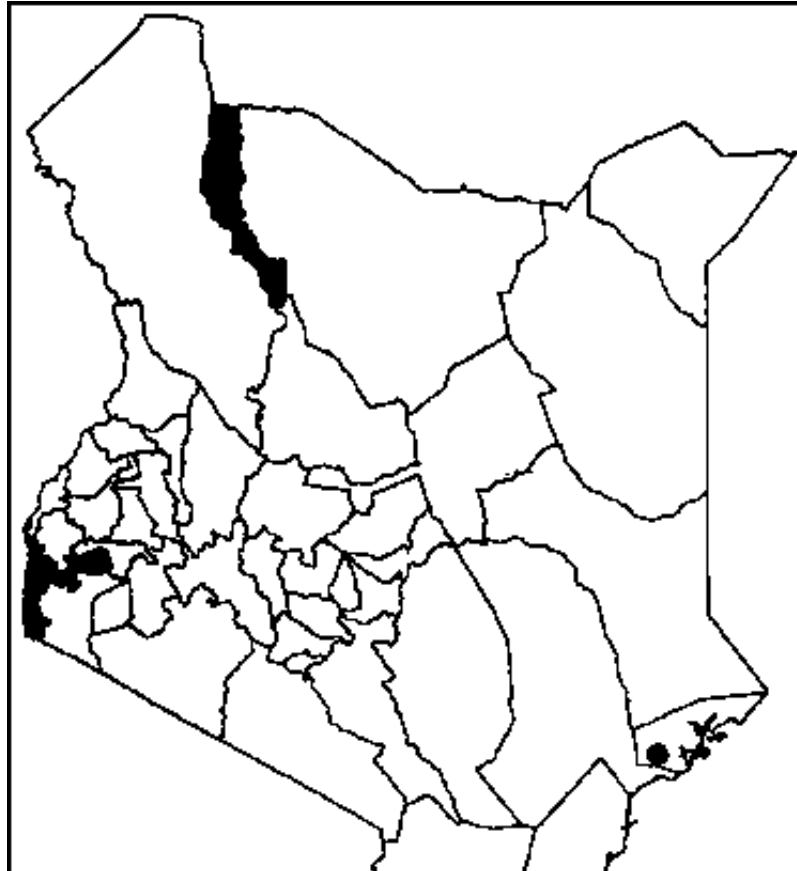
Status: Occasional.



Figure



Figure





Figure

Vitex payos (Lour.) Merr.

Verbenaceae

Chonyi: fudu (fruit), mfudu unga **Embu:** muburu, mburu (fruits) **English:** black plum **Giriama:** mfudu **Kamba:** kimuu, muu (fruit) **Kambe:** fudu (fruit), mfudu unga **Mbeere:** muburu **Swahili:** mfudu

Description: Deciduous tree to 8 m high with a low rounded crown. Bark grey-brown, deeply fissured. Younger stems with a rusty, woolly bark. Leaves with 5 leaflets, occasionally 3. Leaflets often without a stalk but the larger leaflets sometimes

with a winged stalk, obovate to elliptic, roughly hairy above, softly hairy beneath. Young leaflets are densely hairy, especially beneath. Flowers white, blue or mauve. Fruits shortly cylindrical, clasped by a calyx cup, green, dotted with lenticels, turning brownish black to black on ripening. Seed hard, grooved.

Ecology: Found in Kenya, Tanzania, Zimbabwe, Mozambique and Malawi. In Kenya it grows, e.g. in Kitui, Embu, Machakos, Kilifi and Kwale in hot, low and semi-arid lands, 0-1,600 m. In the more arid zones found near rock outcrops. Often in sandy soils, less often red and rocky ones. Rainfall: 650-850 mm.

Uses: FOOD: The ripe fruit has a black pulp which is mealy, sweet and edible (+++). Ripening accelerated by covering mature green fruits in ash (Kamba).

OTHER: Wooden spoons (Kitui). Fuelwood. Dry stems very

hard. Straight trunks used for poles.

COMMERCIAL: Fruits sold in Kitui, Mutomo, Mbeere (Ishiara).

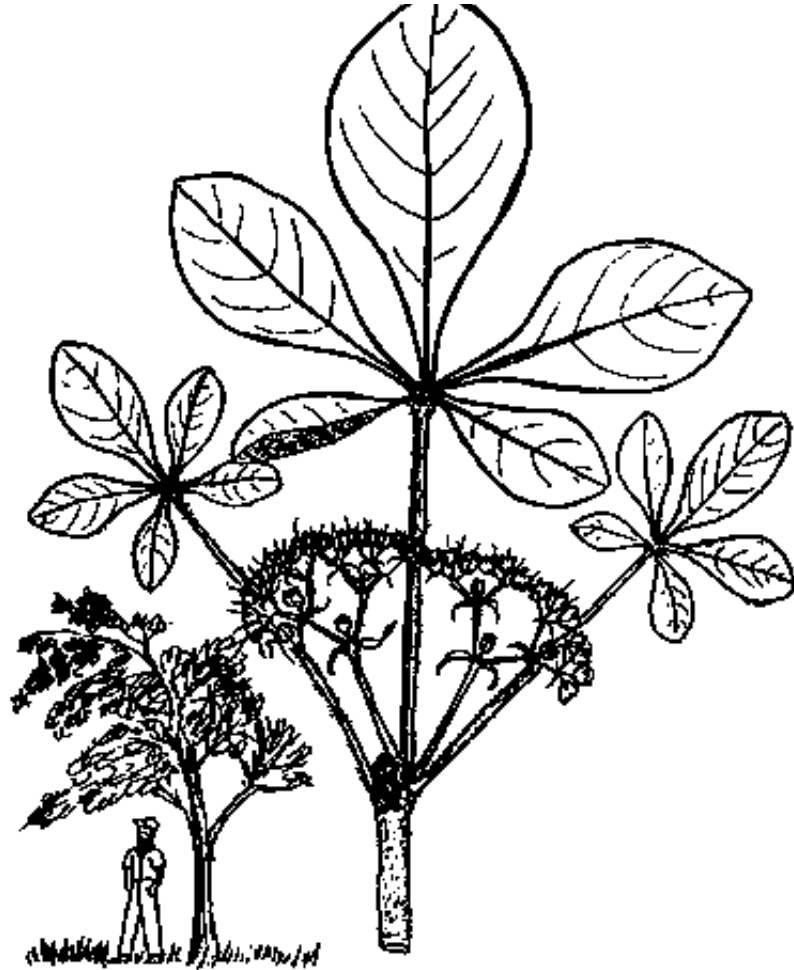
Season: Flowers in November-December in Machakos, Makueni and Embu, in March and September-October in Kwale and Kilifi. Fruits in April-June in Kitui, Makueni and Embu. The tree may produce profusely.

Status: Occasional, but may be common locally.

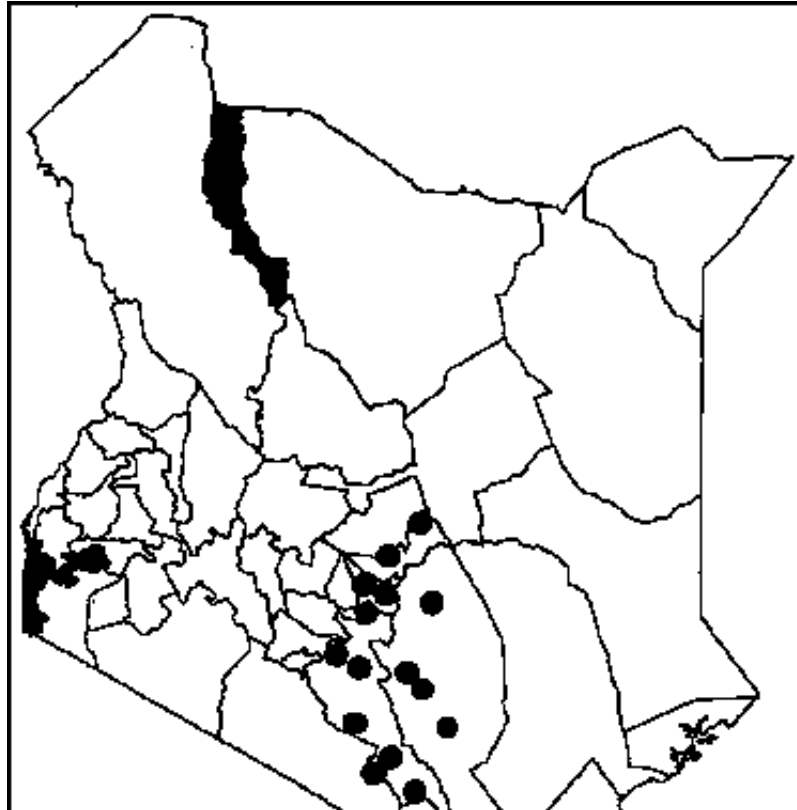


Figure





Figure





Figure

Ximenia americana L

Olacaceae

syn: *X. caffra* Sonder

Bajun: mchunda-kula **Borana:** uda, odda, dabobes **Chonyi:** mtundukula **Digo:** mtundakula **English:** wild plum, tallow nut, false sandalwood **Giriama:** mtundukula **Ilchamus:** lamai, lama **Kamba:** mutula **Kambe:** mtundukula **Kikuyu:** mutura **Luhya (Bukusu):** kumutuli-kumubukusu, chinduli-chimbukusu (fruit) **Luo:** olemo (red fruit), olimbochok (yellow

fruit) **Maa:** olamai, engamai (plural), ilama (plural) **Malakote:** huda-hudo **Marakwet:** kunyat (singular), kunyotwo (plural) **Mbeere:** mutuura **Meru:** muroroma, ndoroma (fruit) **Orma:** huda-hudo **Pokot:** kinyotwo, kunyat (plural), **Sabaot:** mutoywo, uluteywa **Samburu:** lamai **Sanya:** hudahuda **Somali:** murcud, mandurcet **Swahili:** mtundukula, mtundakula, mpingi **Taita:** mtundukula, ndundukula (fruit), tagashiko **Teso:** olimu, elamai **Tharaka:** muroroma **Turkana:** elamai

Description: Spreading or, less often, a scrambling spiny shrub or small tree up to 6 m, commonly less than 4 m. Branches normally arching down, often armed with straight spines. **BARK:** Fissured, scaly, greyish brown. **LEAVES:** Ovate or oblong, mainly borne in clusters on short shoots, occasionally softly hairy. **FLOWERS:** Small, greenish white, fragrant, normally borne on short shoots. **FRUITS:** Up to 3 cm long, oval, shiny, light green, turning yellow, orange or red-on

ripening. Seed smooth, hard coated, yellowish brown to brown.

Ecology: Widespread in tropical Africa, Asia and America. Widely distributed in Kenya, e.g. at Madunguni (Kilifi), Kisamis (Kajiado), Nginyang (Baringo) and Kaputir (southern Turkana). A plant of diverse habitats, dry hilly areas, bushland, especially on hilly places, coastal bushland, 0-2,000 m. Soils: red clay, red sandy coastal soils, rocky areas. Zones III-V.

Uses: FOOD: The juicy fruit pulp is eaten raw (+++). The thin outer skin is removed and the fruit sucked until the seeds are clean. The pulp is sweet but tart. The seed is discarded. Dried root bark is used in tea for good health (Maasai).

MEDICINAL: The seeds contain up to 60% oil which is extracted and used to heal cracking feet (Pokot, Turkana).

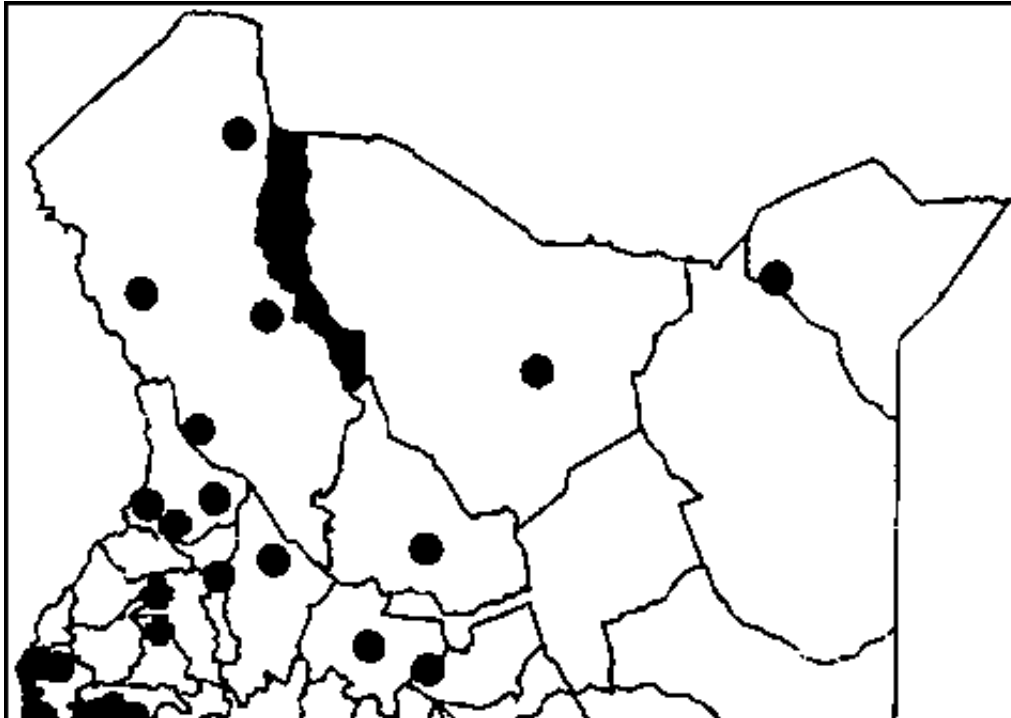
Seed oil is obtained by roasting the seeds in a pan and used for skin and tanning leather skirts and blankets (Pokot, Turkana). The roots are a component of a medicine used to treat syphilis and hookworm. Leaf decoction used to treat measles (Kitui). Unripe (and ripe) fruits used for tonsillitis (Kamba), mouth sores (Pokot, Nginyang). Root bark and leaf extract used as a treatment for a number of diseases (Kamba). Leaf infusion used for stomach-ache (Kamba). Roots mixed with those of *ochol* (*Euclea divinorum*), *roko* (*Zanthoxylum chalybeum*) (Somali: *gora*) and *ochuoga* (*Carissa edulis*) in a drink and also in a steam bath used for *baha* (a type of fever like that of malaria) (Luo). A concoction of the roots (together with those of *Grewia villosa* (*muvu*) and *Croton dichogamus* (*muthinia*)) is given to women after childbirth (Kamba). Pounded root extract is given to children with diarrhoea. Seed oil applied on lip sores in goats.

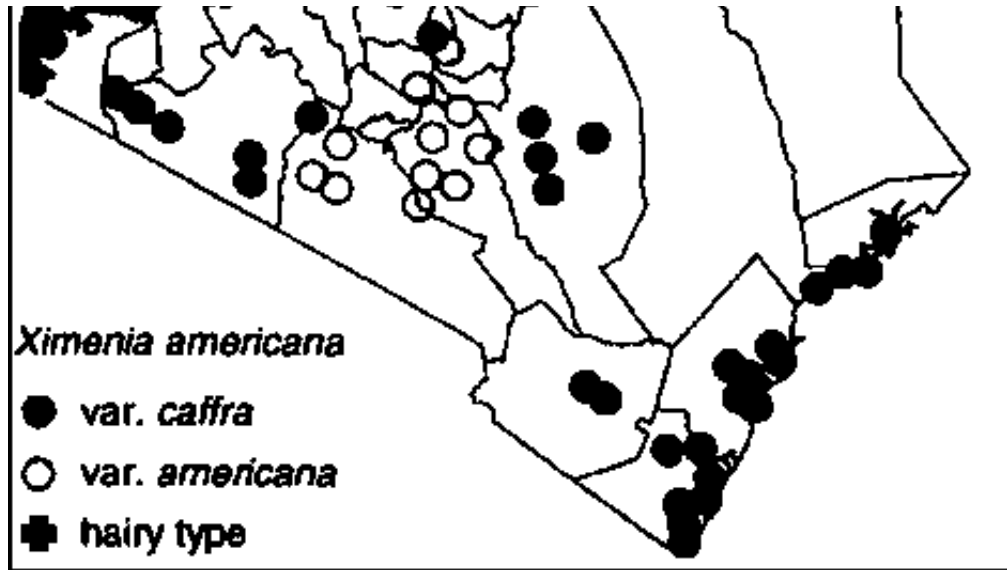






Figure





Figure

OTHER: The oil-rich seeds were once piled on sticks of *Acalypha racemosa* (*mukulw'a*) and burned as candles (Kitui). Bark and root a source of dye. Shade (+). Wood of good quality, very hard. Made into poles and rafters (Tharaka).

Fuelwood (++). Charcoal (++). Seed oil smeared on wood and metal and the inside of honey drums as a preservative. Also used for tanning leather (Tharaka). Fodder (++) for livestock.

COMMERCIAL: At one time sold at some market centres in Machakos District. Sold in north Baringo (Nginyang) and West Pokot.

Season: Flowers in August in West Pokot. Fruits in February-March in Baringo and Kilifi, January and May in Kitui.

Remarks: The species is very variable. Plants in Machakos and Kajiado may attain tree size and the leaves are abnormally hairy. The Siaya, coast and southern Turkana forms have dark green leaves and tend to be more scrambly in habit. Two varieties are recognized in Kenya:

- var. *caffra* (Sender) Engl. is the commonest, found

from 0 to 2,000 m.

- var. *americana* is found in the region of Kitale and Kapenguria at 1,700-1800 m.

There is, however, a need for further taxonomic work, especially on the Machakos, Kajiado and yellow-fruited forms in relation to the varieties described above.



Figure

Zanthoxylum chalybeum Engl. var. chalybeum

Rutaceae

syn: *Fagara chalybea* (Engl.) Engl.

Borana: gadda, gda **Chonyi:** mdungu **Digo:** mdungu, mudhungu **English:** knobwood **Gabra:** gaddaa **Giriama:** mdungu **Giriama:** mdungu **Ilchamus:** loisuki, lousuk, lousukui **Kamba:** mukenea, mukanu (Kitui) **Kambe:** mdungu **Luoi** roko **Maa:** oloisuki, oloisugi **Mbeere:** mugucwa, mukenenga, muruguci **Pokot:** songow'o, songouwa, songoou (plural) **Samburu:** loisugi, loisuki **Sanya:** gadhayu **Swahili:** mjafari **Teso:** eusuk **Tugen:** kokian, kokiin (plural) **Turkana:** eusugu

Description: Spiny shrub or tree to 10 m with a light narrow crown, occasionally (in old trees) spreading with dangling

branches. **BARK:** Dark grey with scaling woody, conical or ridge-like protrusions, slash yellow, with a strong smell. Young branches wickedly armed with strongly rooted spines directed backwards and arranged spirally on stem. **LEAVES:** Aromatic, midrib often with little spines, entire or serrated. **FLOWERS:** Small, yellow. **FRUITS:** Strongly aromatic, grey, 5-8 mm across, pitted, cover splitting into two to expose a blue-black seed.

Ecology: Grows from Ethiopia and Somalia south to Zambia and Zimbabwe. Widely distributed in Kenya, e.g. in Madunguni (Kilifi), Waita (Mwingi), Mile-46 (Kajiado), Nginyang (Baringo), and Chepareria (West Pokot) on dry rocky hillsides, bushed grassland, wooded grassland and bushland, 0-1,800 m. Soils: Coastal sands, well-drained red clay soils, often sloping. Zones IV-V.

Uses: FOOD: The strongly aromatic leaves (Kamba, Giriama,

Luo) and fruits (Maasai, Turkana, Pokot, Gabra) are used for flavouring tea (+++). Bark used for making tea (Pokot, Tharaka, Mbeere) or flavouring soup (Kamba).

FOOD/MEDICINAL: Tea made from fruits (Maasai, Pokot, Turkana), leaves (Kamba, Maasai) or a bark or root decoction (Maasai, Kamba, Tugen) is used as a cure for coughs, colds, chest pain and respiratory diseases such as asthma (Kamba), sore throat and TB. Fruits have a hot taste and are chewed by women for good breath and for fever (Pokot). A fruit infusion is used as a tonic for children (Tugen).

MEDICINAL: Leaves boiled in soup (Tharaka) are used for malaria. Bark or root decoction used for malaria and fever. Smoke from burning bark is inhaled to stop fainting or headache (Pokot). Bark infusion (mixed with bark of *Terminalia brownii*) is applied to sores and wounds (Tharaka). Bark used for chest pain (Kamba). Infusion of leaves used for

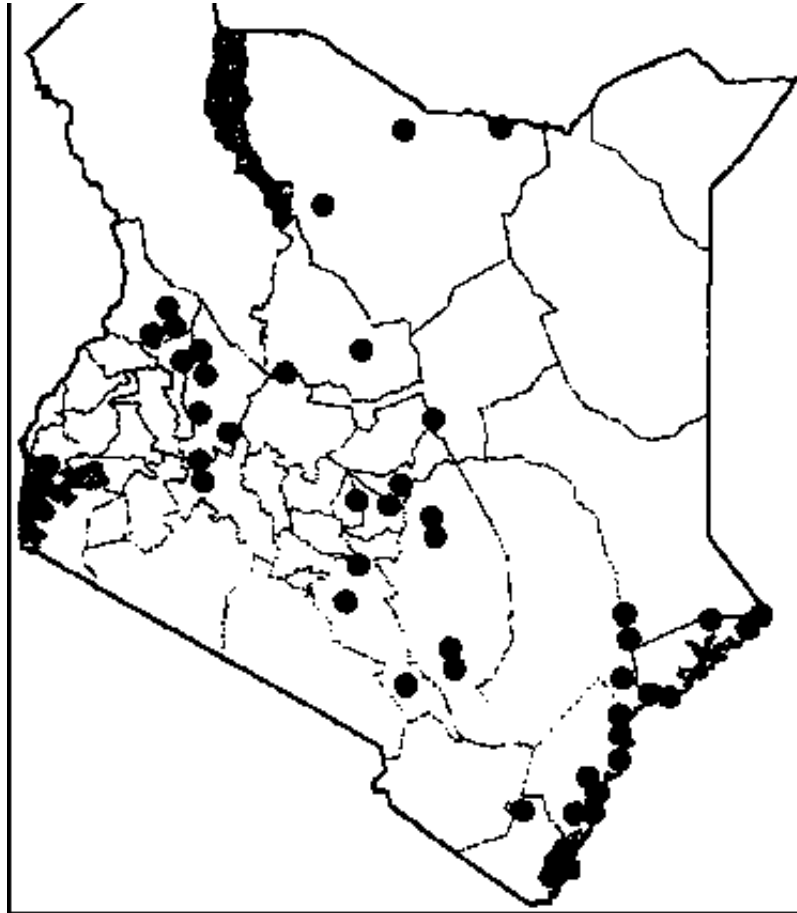
coughs in camels and cattle. Dry-fruit infusion used for sick camels or for the goat disease *chepcherim* or boiled with bark for *plokai* (rinderpest) in cattle. Cold extract of bark used for diarrhoea in camels and for general goat diseases. Fruit infusion used for anaplasmosis (Samburu).





Figure





Figure

OTHER: The young leaves, animal fat and soda ash used to be made into soap (Mbeere). Woody protrusions are broken off and may be carved into stoppers for gourds and tops for children (Mbeere). The base may be made smooth and when words are inscribed on it act as "rubber stamps" (Kamba). The protrusions may also be burned by blacksmiths to soften metal (Tharaka). The plant is used for lighting fires (Pokot). Branches are used for smoking milk gourds and as toothbrushes (Mbeere). Good fuelwood (++).

The black seeds were used as beads for decorating traditional dresses (Tharaka). Trunk said to be termite-resistant and used as posts for construction (Tharaka, Mbeere). Camel and goat fodder. Dry leaves eaten by goats.

CULTURAL/BELIEFS: Long ago used for administering

blessings during ceremonies (Mbeere).

COMMERCIAL: Fruits sold throughout the year in many market centres in northern Kenya (Nginyang, Kapenguria, Chepararia, Lodwar), especially among the Pokot and Turkana. Bark is sold as medicine throughout the country.

Season: Fruits in July-August in West Pokot and in March in northern Baringo (Nginyang).

Management: Propagated by seed or root suckers. But the success rate with seed is poor because they are normally destroyed by pests long before maturity. The plant seems to propagate itself naturally by root suckers. Coppices easily.

Status: May be locally common. Generally rare in many parts due to over-exploitation for medicinal purposes.

Remarks: A related species, *Z. usambarensis* (Engl.) Kokwaro

(syn. *Fagara usambarensis* Engl.) (Kikuyu: *muheheti* (Nyeri), *mugucwa*, Maa: *oloisugi*) has similar uses to *Z. chalybeum*. A tree, usually 5-8 m high, with a spreading crown and drooping branches. Bark deeply fissured. Leaves are usually smaller and less scented than those of *Z. chalybeum*. Flowers cream, fruits paired, red and resembling those of *Z. chalybeum* in shape and size. More common in highlands, especially in dry forest or bushed grassland, Narok, Kiambu, Kericho, Samburu. Altitude: 1,400-2,500 m. Common at about 2,000 m. Twigs used as toothbrushes but have a hot taste. There are several related species in southern Africa. Season: Flowers in June and fruits in October in Narok.

Another genus with essential oils and used in flavouring tea is *Ocimum* (Labiatae (Laminaceae)). *Ocimum* species include:

- *O. gratissimum* L. (syn: *O. suave* Willd.) (Borana: *anchabbi*, Digo: *vumba manga*, Giriama: *vumba*)

manga, Kamba: *mukandu*, Kikuyu: *mugio*, Luo: *olulururuecha*, Maa: *olemoran*, Marakwet: *chesimia*, Samburu: *Imurran*, Taita: *mrumbawassi*, Turkana: *loguru*, *ichoke*).

- *O. kilimandscharicum* Guerke (Embu: *makori*, Kamba: *wenye*, Luo: *bwar*, Pokot: *supko*).
- *O. basilicum* L. (Kamba: *mutaa*).

All are used for flavouring tea. A few leaves are boiled in water and the infusion used to prepare tea. Branches of *O. basilicum* are also used as insect repellants. They are often used traditionally for sweeping the household to rid it of fleas and mites. It is also placed in grain stores to reduce weevil attack. *Ocimum* species are used a great deal in traditional medicine, especially for respiratory diseases, and in many African traditional ceremonies. Essential oils from these

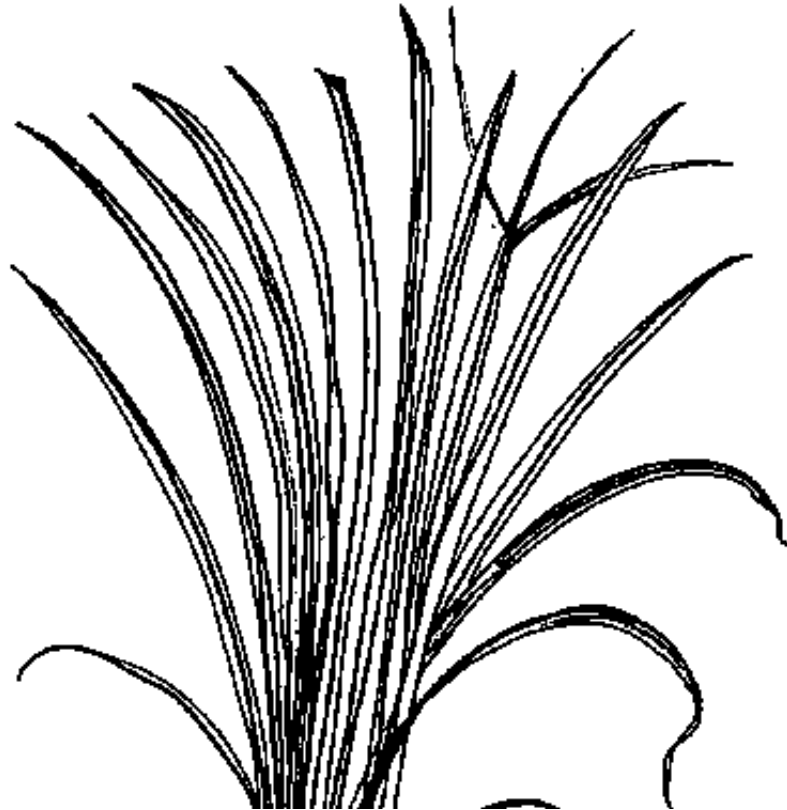
species are used in the perfume industry.

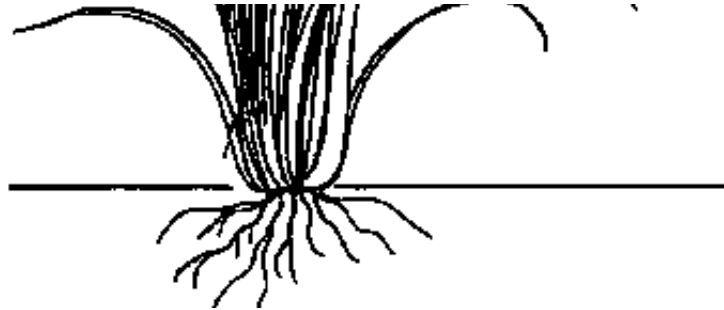
Another traditional beverage plant is *Cymbopogon citratus* (Nees) Stapf (Gramineae) (English: lemon grass, Kamba: *nyeki ya kyai*, Luo: *majand-lum*, Meru: *ndagarago*). This is a tufted grass with pale green leaves and a strong lemon scent. It is planted on terraces to stabilize the soil. Leaves are used for flavouring tea (Kamba, Kikuyu, Luo, Luhya, Giriama, Taita). The species is a native of southern India and is grown throughout the tropics as a flavouring and source of essential oil used in the perfume industry. Propagation is through the rootstock.





Zanthoxylum chalybeum





Cymbopogon citratus

Ziziphus abyssinica A. Rich.

Rhamnaceae

English: catch thorn **Gabra:** k'urk'uura **Kamba:** kiae (Machakos), kitolosuu (Kitui) **Mbeere:** mugagu **Pokot:** tirokwo, tirak (plural), tirekwo **Teso:** ekodokodoi **Turkana:** esilang'

Description: A spreading, often spiny, shrub or small tree

normally 3-6 m high. **BARK:** Greyish brown, finely fissured. Branches may or may not be armed with paired spines, one directed forward the other recurved. **LEAVES:** Thick, alternate, base asymmetrical, conspicuously 3-veined and rusty hairy beneath. **FLOWERS:** Buds rusty hairy. **FRUIT:** To 3 cm, green, turning yellow and finally glossy dark red or brown on ripening.

Ecology: Found from Senegal east to Ethiopia and south to Angola and Mozambique. Widespread in Kenya in wooded grassland, bushed grassland and along rivers. Soils: Well-drained soils (sandy, clayish sand). Zones IV-V.

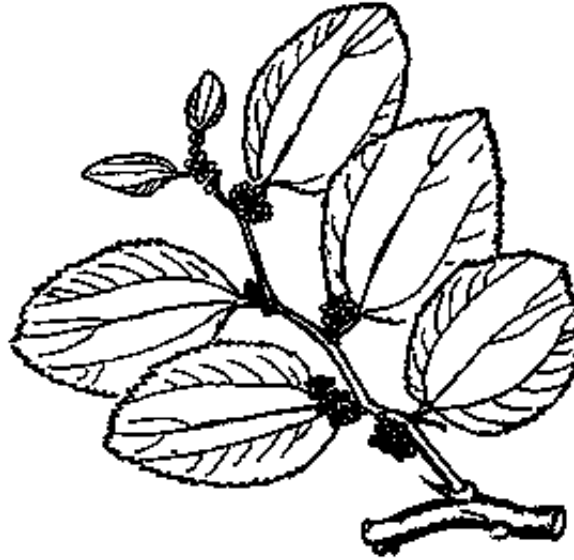
Uses: FOOD: The rather dry cream pulp and the outer skin are eaten (+). Pulp has a sweet slightly bitter taste. Edible portion rather small.

OTHER: Wood strong, durable, resistant to insect attack and

used for making pestles, yokes, poles and in construction. Good shade tree (++) . Fuelwood (++) . Camel and goat fodder(+).

Season: Fruits in June in Kitui, August-October in Kiambu, Machakos and Moyale, December-January in Kisumu and West Pokot. Flowers in January-February in Kiambu and Kitui, May-June in Meru and Turkana and in July in West Pokot and Narok.

Status: Occasional.



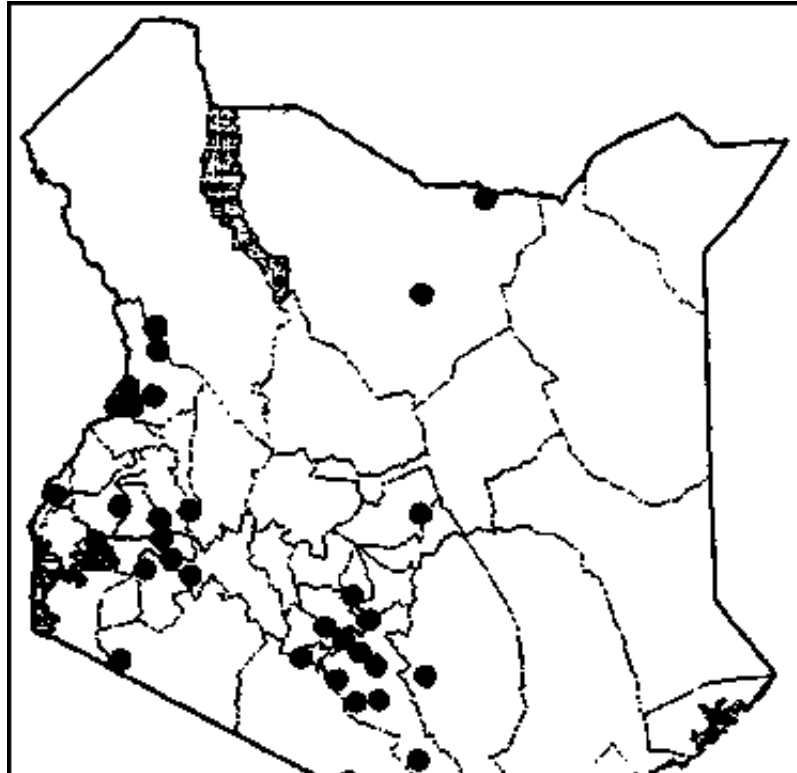
Figure

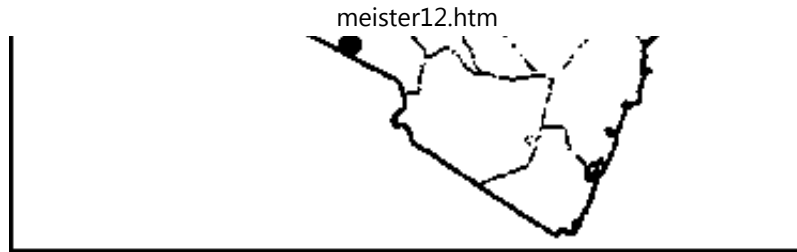






Figure





Figure

Ziziphus mauritiana Lam.

Rhamnaceae

Borana: quaqura, kurkuurah **Chonyi:** mukunazi, kunazi (fruit) **Daasanach:** gabite, gaba **English:** Indian plum, jujube, Chinese date **Giriama:** mukunazi **Ilchamus:** Imampaai, Imampaan **Kambe:** mukunazi, kunazi (fruit) **Maa:** oloilalei **Marakwet:** tilomwo, tilam (plural) **Pokot:** tlomwo, tilomwo, tilam (plural) **Rendille:** gab **Sabaot:** katagi **Samburu:** ilerendei, Iderendei **Sanya:** kunazi (fruit), mukunazi **Somali:**

gup, gob, qup **Swahili:** mkunazi, mukhalita **Teso:** esilang
Tugen: tilomwo **Turkana:** ekalale, ng'akalalio (fruits)

Description: A spiny shrub, thick bush or tree to about 9 m, often with multiple stems. Trunk to 45 cm in diameter. Branches drooping. **BARK:** Fissured, dark brown. Branchlets light grey to cream, zigzag in shape, armed with brown paired spines. **LEAVES:** Ovate, hairless above, usually softly hairy beneath, almost white or brown. **FLOWERS:** Cream, scented, clustered in leaf axils. **FRUITS:** 1.5-2.5 cm in diameter. Unripe fruits light green, turning cream, yellow to shiny reddish brown as they ripen. Seed a large stone surrounded by a dry cream pulp.

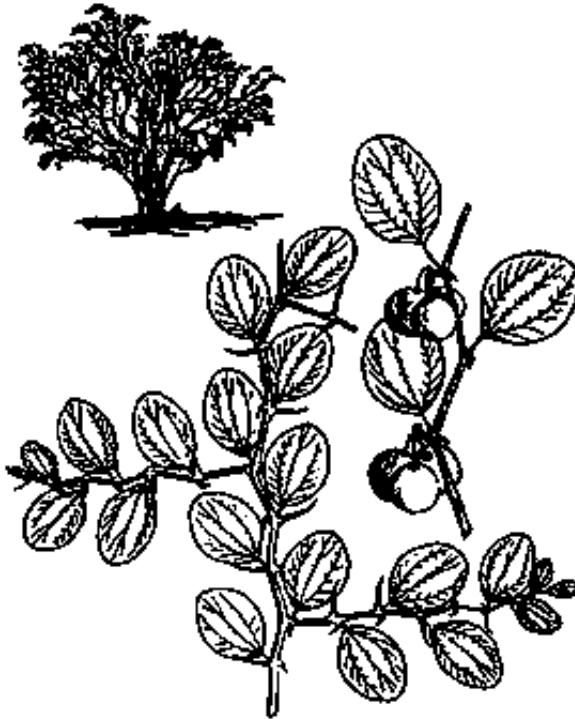
Ecology: Occurs from Ethiopia and Somalia to North Africa and west to Senegal, south to the Democratic Republic of Congo (Zaire) and Tanzania. Also in the Middle East, east to India and the Far East. Widely cultivated and often an escape

in tropical parts of the world. Introduced further south in Africa in Malawi, Zambia, Zimbabwe and Mozambique where it is cultivated for its fruit. Widespread in the coastal and northern arid and semi-arid areas of Kenya, in riverine vegetation in dry areas, flood plains, dry bushland, roadsides and disturbed areas, 0-1,600 m. Grows in open areas. Soils: Sandy to black cotton. Well-drained sandy loams and alluvial soils most favoured. Zones III-VII. In the more arid areas it is mainly found along river valleys where it may attain tree size.

Uses: FOOD: The fruit is a very important food in the arid zones (+++). It has a sweet dry cream pulp surrounding a large stone with two seeds. In most cases only the pulp is eaten, but among the Turkana and the Pokot large amounts of fruit may be gathered, dried, pounded in a mortar (*kono*, Pokot) and winnowed to remove particles of crushed seeds. The fine flour may be mixed with figs in honey and stored in large containers (*kosim*) to be used in times of food scarcity

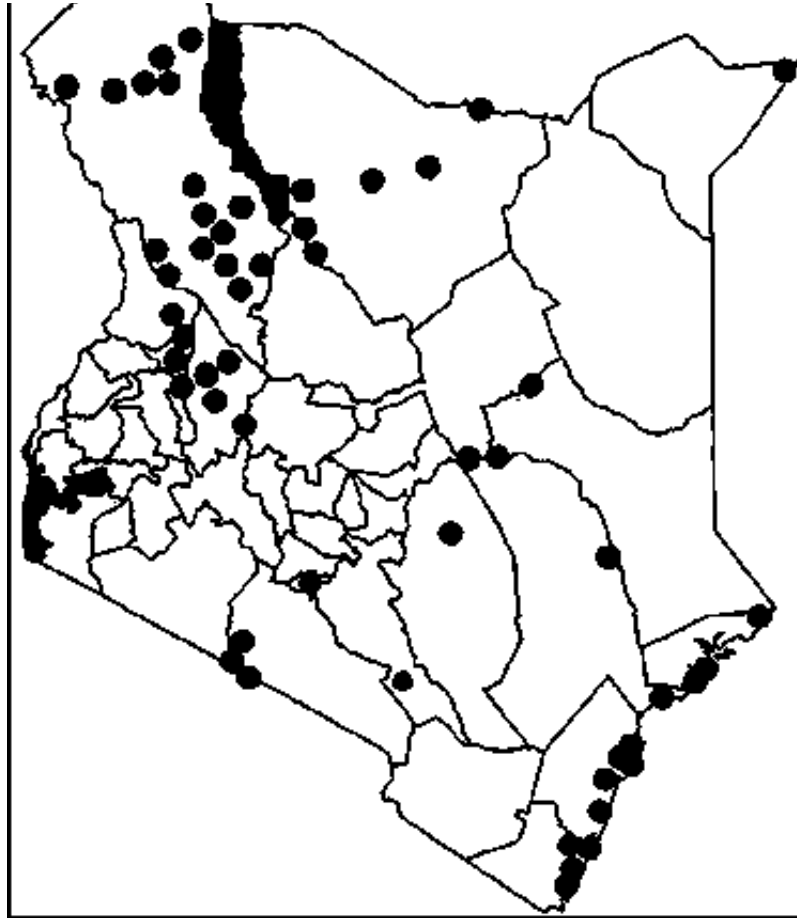
(Pokot).

MEDICINAL: Root decoction taken as an abortifacient. Root infusion used as a treatment for dysentery (Swahili), tuberculosis (Pokot) and indigestion (Marakwet). The root is dried, powdered and rubbed on an incision on the chest for the treatment of pneumonia. Root decoction taken as a prophylactic against elephantiasis believed to be caused by menstruating women (Swahili). Bark decoction or ground bark put in cold water and used for diarrhoea and stomachache (Pokot).



Figure





Figure

OTHER: An important camel and goat fodder plant. Dead and living fence. Wood, very hard, durable and used in building (Pokot, Turkana), making furniture, walking sticks, stools and stirrers. Said to be termite-resistant. The bark yields fibre and dye (Swahili). This tree is also used as a shade plant and as a windbreak. Due to its bushy nature, the plant is excellent in soil-erosion control, especially on river banks. Branches are cut to make beds and to form the supports of the portable Somali house (*gurgi*).

COMMERCIAL: Fruits sold in most big market centres in northern Kenya and in the coastal region, especially Malindi, Kilifi, Mombasa, Lodwar and Nginyang.

Season: Flowers in January in Garissa, May in Mandera,

Turkana and Marsabit, August in West Pokot, Turkana and Marsabit and November in Kwale. Fruits in September-October in Turkana, Marsabit and Lamu, and March-April in Kilifi and Mombasa.

Management: Normally propagated by seeds. Also root suckers and, reportedly, by cuttings. Seeds planted directly on site. Cracked ones germinate faster. A fast grower even in dry areas. The shape of the plant should be controlled to suit requirements. May turn into an impenetrable bush if uncontrolled.

Status: Common.

Remarks: A very versatile plant, quite at home from the arid zones in northern Kenya to the hot humid coastal regions. Cultivated as an ornamental in Nairobi and other town centres. The plant was probably introduced from northern

Africa to northern Kenya by migrating Nilotic or Cushitic communities.

Ziziphus mucronata Willd.

Rhamnaceae

Borana: kurquura **Chonyi:** mgugune., **Digo:** mugugune, mgorodo **English:** buffalo horn **Giriama:** mgugune **Ilchamus:** Iderendei, Iderende, limambai **Kamba:** muae, kitolosuu (Kitui) **Kambe:** mgugune., **Luo:** lang'o, lang'u **Maa:** oleylalei, olperetini **Marakwet:** torokwo, tarak (plural) **Mbeere:** mukunya-nthegere **Pokot:** tirokwo, tirekwo, tirak (plural) **Rendille:** gab **Samburu:** loilalei, Iderendei **Sanya:** mkukura **Somali:** hamur geb, hamur-gob **Swahili:** mkunazi **Tugen:** ninoiwa **Turkana:** esilang

Description: An extremely thorny shrub, rarely straggling, or

a tree, normally 4-8 m with rather straight branches, ascending at first then drooping. **BARK:** Dark grey, smooth or rough. Branchlets dark brown, zigzag, usually armed with paired dark red spines. **LEAVES:** Dark green, glossy, almost heart-shaped (cordate), broad towards the asymmetrical base, serrate, with 3 conspicuous veins from the base. **FLOWERS:** Yellow green. **FRUITS:** Up to 2.5 cm in diameter, green, turning glossy dark red on ripening.

Ecology: A widely distributed plant from Senegal east to Arabia and south to South Africa and Madagascar. In Kenya, in bushland and woodland, common along dry river courses. Soils varied. Mainly rocky areas in dry riverbeds on sandy or red clay. Zones III-V.

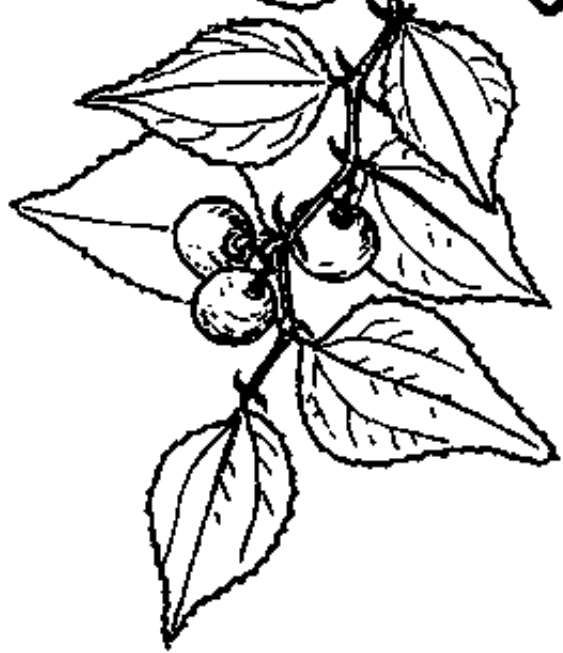
Uses: FOOD: The cream fruit pulp is eaten raw (++). Pulp dry with a sweet, rather bitter taste. The stones of the fruit have been used as a substitute for coffee in times of shortage,

especially during war-time emergencies (Riley and Brokensha 1988).

FOOD/MEDICINAL: Tea made from bark used to cure stomach complaints (Maasai, Pokot).

MEDICINAL: Cold bark infusion used for enlarged spleen (Pokot).

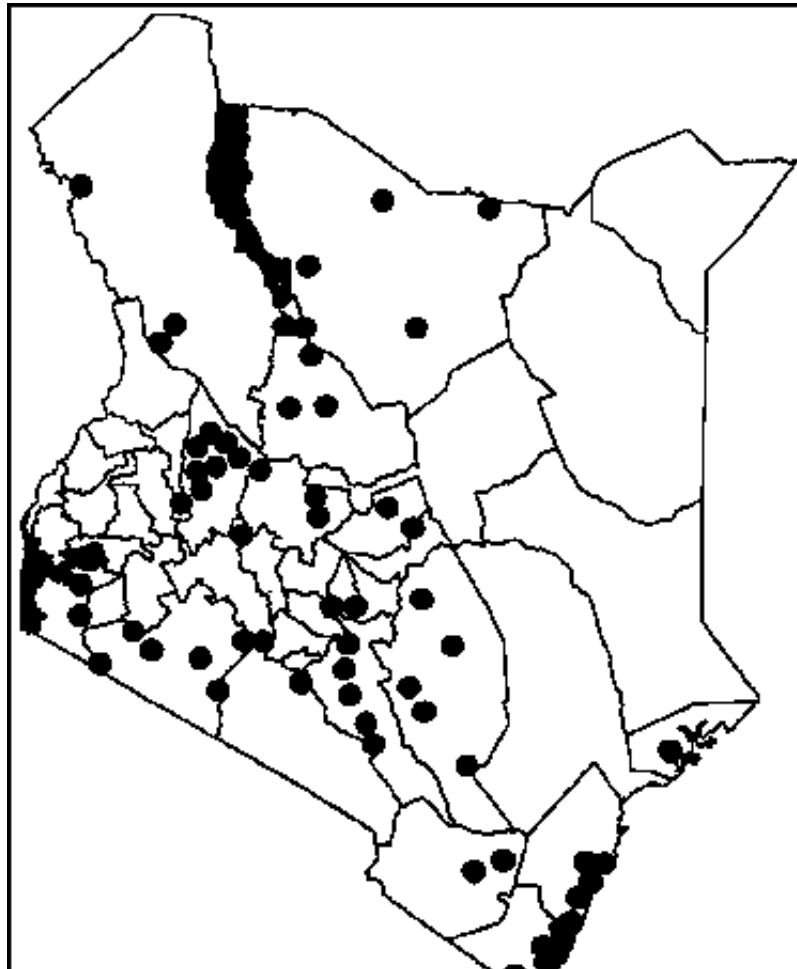




Figure



Figure





Figure

OTHER: Camel and goat fodder. Wood used for building (Pokot), wood carving (Kamba) and handles for hoes (Mbeere, Somali). Shade tree (++). Fence, hedge plant (+++). Fuelwood (++). Charcoal. Fruit easily attacked by insects.

Status: Common.

Termitomyces-mushrooms (edible fungi)

Kamba: ikunu, makunu (plural) **Kikuyu:** makunu **Kisii:** oboba, amandegere, amoba (plural) **Luhya (Bukusu):** bubwoba **Luhya (Marachi):** luoba **Luhya (Samia):** obwoba **Luhya (Tachoni):** obwaba, bumbo **Luo:** obuolo, obwolo **Maa:** osuyai **Mbeere:** ikunu **Meru:** makunu **Pokot:** kelyomough, oota, ooten (plural) **Swahili:** uyoga **Taita:** voga **Tharaka:**

ikunu **Turkana:** ebaale

Mushrooms belong to a group of plants without chlorophyll known as fungi. As these types of fungi are relatively large, they are referred to as Macrofungi. They originate from a mass (mycelium) of tiny branches which originally germinate from tiny spores distributed by wind and growing where the situations are favourable. The mycelium obtains food from the substrate, usually dead organic matter such as dead plant material and dung. The spores germinate when conditions become favourable especially during the rainy season. The fruiting body-the umbrella-like structure seen above ground (pileus) or cap- is borne by a stem-like structure, the stipe. The underside of the pileus bears gills which produce spores. There are many edible species of mushrooms classified into several genera, some, especially those bearing the "deathcup" can be very poisonous. The following are the commonest:

- Termitomyces are fungi found growing on or near termite mounds. These usually have no ring on the stipe. They have a large white cap up to 12 cm across depending on the species, a large stalk and a long "root". They are found on termite mounds where termites cultivate the spores deep in the mound in special "fungus gardens". The spores germinate when conditions become conducive, sending the fruiting body above the mound.

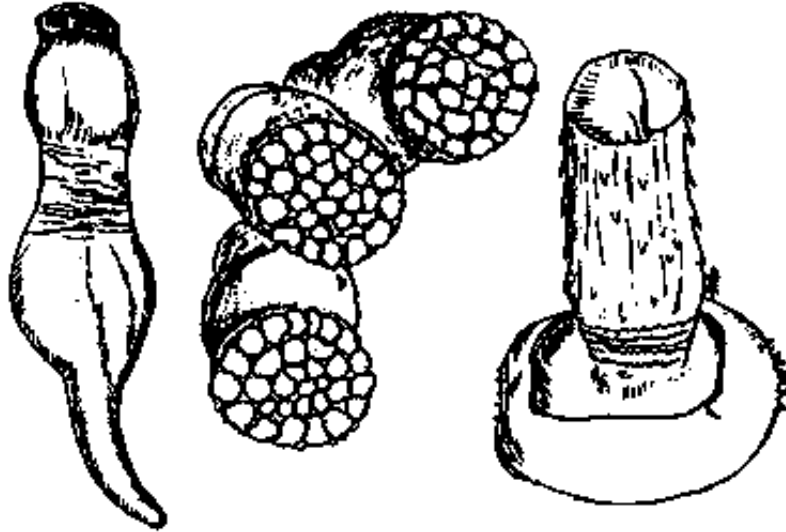
- *Agaricus* species have a pileus which is smooth, free gills, stipe with a ring (left when the cap breaks away), and brown spores. Some cultivated mushrooms belong to this genus. A common wild example is *A. campestris* (English: field mushrooms) which has a white cap hardly more than 4 cm across and pink gills and is found in grassland. The gills turn dark brown with age.

- *Amanita*'. some species of this genus are edible but others are deadly poisonous. *Amanita* spp. should thus be identified beyond reasonable doubt as many cases of mushroom poisoning are caused by members of this genus. The genus is distinguished by its green to yellowish-green cap, radial streaks, a ring (annulus) on the stalk and a cup at the stalk base. Several other genera with edible members exist in Kenya. More work, however, needs to be done on the classification of macrofungi in Kenya.

Distribution: Edible mushrooms are found all over the country.

Ecology: Depending on the species, they may be found on termite mounds, fallen logs, near and on houses and even on bare ground and roadsides.

Uses: Mushrooms are still used a great deal in stews by the Pokot, Turkana (Ng'ikebootok), Luo, Luhya and coastal peoples, especially the Giriama.



Figure

The Giriama recognize up to six edible types known as: *zhoga-*

utuwe, *zhoga-nyama*, *zhoga-muuyu* (on baobabs), *zhoga-mkulu* (on *Diospyros* sp.), *zhoga-mayonda* and *zhoga-kazonzo* (these names usually reflect the kind of substrate).

The Luo use up to five types known by the names *obuoch-oruka* (white, large, on termite mounds), *obuoch-omegere* (*omejre*) (small, found in groups, near houses, roadsides and along streams and which in day gone by were mixed with milk and blood) *obuoch-alando* (small, red-topped, several together on the ground), *obuoch-atieno* (with dull spotted top, often growing together with *obuoch-alando*), *obuoch-opumo* (*ofumo*) (brown, small, on termite mounds).

The Pokot eat at least five types of fungi. Examples are *oota*, the common *Termitomyces* found on termite mounds, and tree-trunk fungi called *embee* and *samandar*, usually found on fallen logs. Others are *sorkopi* and *ghum*.

Preparation: The pileus and the stipe are harvested and stewed with meat, alone or cooked with other vegetables (Turkana). They may be boiled or fried and often eaten with *ugali*. They may be dried and stored. The pokot may eat *samandar* cooked or raw. Among the Luo the mushrooms are dried, covered with dry banana stems, *okola rabolo* or *ondakla rabolo*. These are hung above the fireplace for preservation. Dry mushrooms are softened by soaking in water. Fresh or softened mushrooms are boiled for about 15 minutes, and fresh milk added. Sometimes soda ash, or more often solution extracted from ashes (*thutho*), is added to soften them further before eating. Fresh ones may also be mixed with other vegetables, especially cowpeas (*bo*), *apoth* (*Corchorus* spp.), and *muto* (*Crotalaria* spp.). By simulating the field conditions (temperature, humidity and substrate), some species may be grown indoors. **COMMERCIAL USE:** Termitomyces species sold in Siaya, Kisumu, West Pokot (Chepararia, Kapenguria). *Agaricus campestris* is a common mushroom in the market.

Season: Normally available early in the rainy season.

Propagation: Mushrooms grow from tiny spores. They require special conditions for growth and hence it is difficult for the ordinary farmer to grow them. Mushrooms in the field sprout fast, last for a day or two then start to rot, disintegrating as maggots infest them. They have to be picked as soon as they appear. Folk knowledge of mushrooms, such as the time of emergence of each species and suitable preparation methods, is enormous.

Remarks: The use of mushrooms as food has declined considerably over recent years. But they are nutritious, tasty, widely distributed and readily available during the rainy season so their use should be encouraged. While there are many edible ones in the wild, a good number are, however, poisonous and there is no general rule to determine which is which. However, any species with a "death cup", especially

just below the soil surface, should not be harvested.
Mushrooms showing colours such as green should also be avoided. Perhaps the safest way is to rely on the knowledge and experience of the local community.

