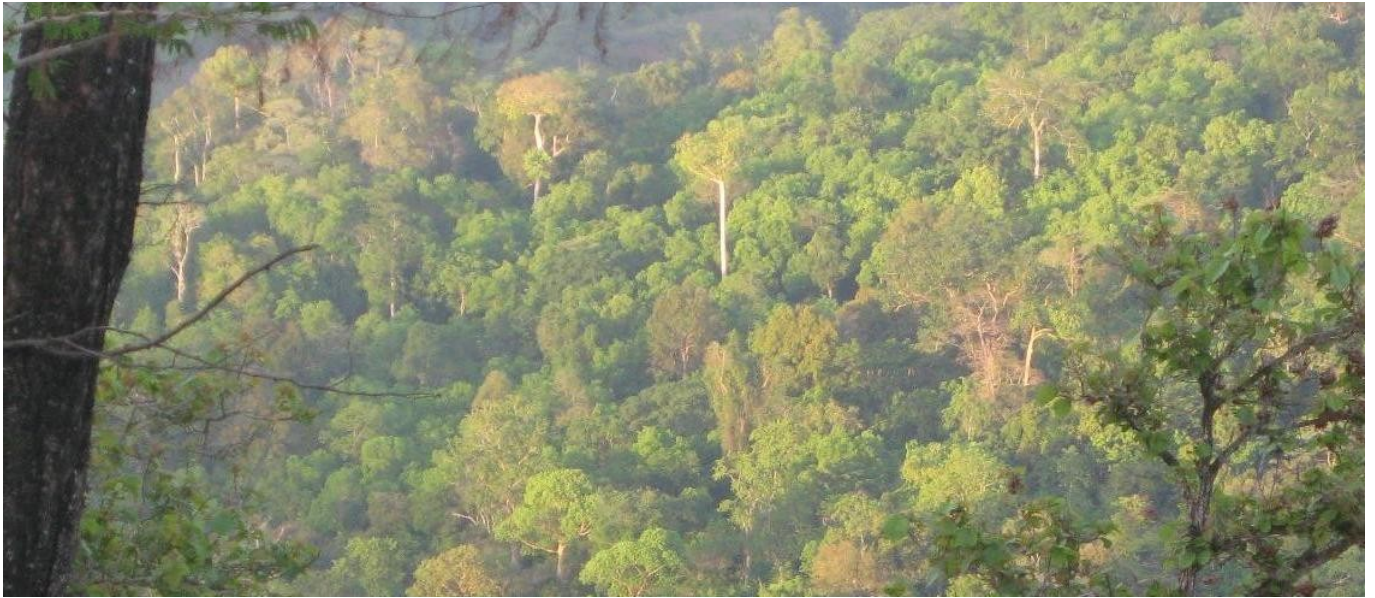


Near-endemic plant species of the Kimboza-Ruvu region



Alsodeiopsis schumannii (Engl.) Engl.

Icacinaceae

Status global: **Restricted (V)** Status local: **Present**

An evergreen shrub or small tree restricted to eastern upland Tanzania but found at many locations and it is present in Kimboza.

Striking identification features

- golden-brown hairs on young shoot
- leave's secondary veins prominent
- yellowish flowers, long peduncles
- orange fruit (2 cm), beaked at apex



Description

Stature: evergreen shrub or small tree.

Size: up to 12 m high.

Bark: first year shoots covered in golden-brown hairs.

Leaves: alternate, simple (5-12 x 1.5-5 cm), with 6-8 (-9) pairs of secondary veins prominent on both surfaces.

Flower: small flowers in lax inflorescences; peduncle very long (1.5-2.8 cm), yellowish petals (4-5 mm long).

Fruit: orange drupe (2.2 x 1.5 cm), beaked at apex on long pedicel (to 2 cm), endocarp woody (up to 1.5 x 1.0 cm), containing a single seed.

Seed:



Status and distribution: This species is endemic to eastern Tanzania and restricted to the Usambara, Uluguru and North Udzungwa Mts. It is present in Kimboza. It has been assessed as Vulnerable.

Habitat requirements: It is confined to mountain forests, usually between 900 and 2000 m. No information is available for Kimboza.

Phenology: Evergreen.

Reproduction:

Uses in East Africa: A fruit with a sweet and juicy pulp, that is much liked by children.

Locals uses: None are known.

Sources and further information

Botanical description: Lucas (1968)

Herbarium specimens:

Rodgers *et al.* 2637 (MO), 1983-10

Lucas, G.L. (1968) Icacinaceae. In Polhill, R.M. (Ed.) Flora of Tropical East Africa. Crown Agents for Overseas Governments & Administrations, London.



Asteranthe asterias (S. Moore) Engl. & Diels

Annonaceae

Status global: **Restricted (NT)** Status local: **Locally common**

Shrub or small tree of restricted distribution that is dominant in Kimboza on limestone outcrops close to the mission.

Striking identification features

- large showy flowers with petals joined at base
- fruit: velvety monocarp



Description

Stature: shrub or small tree.

Size: to 4(-8) m tall.

Bark: surface finely striped, grey-brown to blackish; twigs with lenticels, velvety hairy.

Leaves: alternate, simple (usually 6-10 cm long), pinnately veined.

Flower: 1-2 showy flowers together with petals (joined at base) up to 5 cm long. White, with red-purple and yellow near the centre.

Fruit: velvety monocarps (2-4 x 0.8-1 cm), slightly constricted between the seeds, 3-10-seeded.

Seed: yellow-brown (7-8 x 4-5 mm).



Status and distribution: Restricted to parts of Tanzania. The specimen collected from Ruvu Forest by Troll 4768 (B, holo.!) was described as *A. trollii* Diels but is thought to be a subspecies of *A. asterias* (Verdcourt 1971). Species assessed as near threatened.

Habitat requirements: In Kimboza it is dominant in the shrub layer near Budongo Mission on crystalline limestone outcrops. Canopy dominated by *Milicia excelsa*, *Bombax rhodognaphalon* and *Terminalia sambesiaca*. Altitudinal range: 375-660 m.

Phenology: In April old flowers and immature fruits recorded. Evergreen.

Reproduction: It has been suggested that the flowers are beetle pollinated. African civet (*Civettictis civetta*) may disperse the seeds.

Uses in East Africa: Stems are used as building poles. In Kenya the aromatic bark and leaves are used for flavouring food.

Locals uses: None are known.

Sources and further information

Botanical description: Verdcourt (1971)

Herbarium specimens for Kimboza:

Mwasumbi 12342

Bidgood *et al.* 1242 (K, NHT) 1988-04-21

Dagallier & Mbago 52 (K, DSM, MPU, P, W), 2019-11-19, fr

Herbarium specimens for Ruvu:

Troll 4768 (B, holo.!)

Verdcourt, B. (1971) Annonaceae. In Milne-Redhead, E. & Polhill, R.M. (Eds) Flora of Tropical East Africa, pp. 1-131. Crown Agents for Oversea Governments and Administrations, London.



Brillantaisia stenopteris Sidwell

Acanthaceae

Status global: **Endangered (E)** Status local: **Endangered**

Showy herb restricted to 8 forests of the Morogoro region, including Kimboza.

Striking identification features

- tall erect herb
- large showy purple flowers



Description

Stature: erect herb.

Size: to 2 m tall.

Bark: -

Leaves: opposite, simple (25-140 x 40-220 mm).

Flower: few large purple flowers on an inflorescence that may become vegetative at the apex.

Fruit: Capsule not known.

Seed: -



Status and distribution: Collected from 8 Eastern Arc lowland forest reserves including Kimboza. No population data exist and the species has been assessed as Endangered. First collected in 1933 and described as a separate species in 1998.

Habitat requirements: Not known, but the occurrence of fire and the spread of *Cedrela odorata* are perceived as major threat to the survival of the species at Kimboza.

Phenology: Flowering observed in July.

Reproduction: -

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Sidwell (1998), Vollesen (2008)

Herbarium specimens:

Rodgers *et al.* 2532 (DSM), 1983-07, fl

Sidwell, K. (1998) A revision of *Brillantaisia* (Acanthaceae). Bull. nat. Hist. Mus. Lond. (Bot.) 28, 67-113.

Luke, W.R.Q., Bangirinama, F., Beentje, H.J., Darbyshire, I., Gereau, R., Kabuye, C., Kalema, J., Kelbessa, E., Kindeketa, W., Minani, V., Mwangoka, M. & Ndangalasi, H. (2015)

Brillantaisia stenopteris. The IUCN Red List of Threatened Species 2015: e.T48154033A48154505.

<http://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T48154033A48154505.en>

Vollesen, K. (2008) *Brillantaisia*. In Beentje, H.J. & Ghazanfar, S.A. (Eds) Flora of Tropical East Africa. Acanthaceae (Part 1), pp. 153-162. Royal Botanic Gardens, Kew.

Buxus cordata (Radcl.-Sm.) Friis

Buxaceae

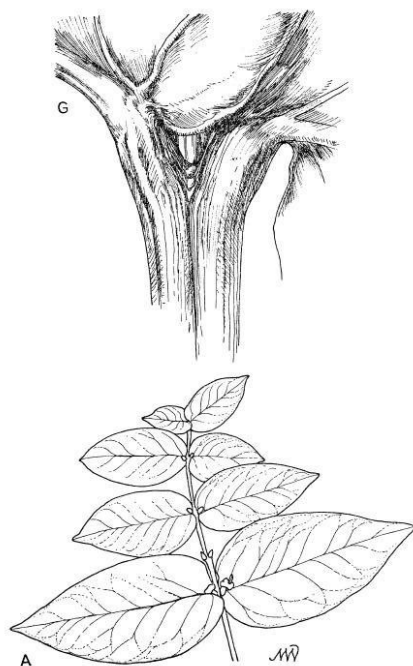
- *Notobuxus cordata* Radcl.-Sm.

Status global: **Endangered** Status local: **Endangered**

Shrub collected only once from Kimboza in the swampy forest and was also gathered once in the lowland East Usambaras a century ago.

Striking identification features

- opposite leaves with very short petiole



A twig, G node showing base of leaf.

Description

Stature: shrub.

Size: 1 m tall.

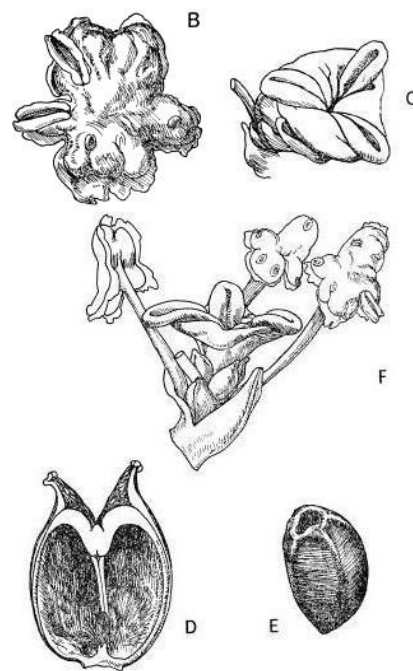
Bark: branches green, angular.

Leaves: opposite, simple with petiole just 2 mm long.

Flower: separate male and female flowers on small inflorescences.

Fruit:

Seed:



B old male flower from which 4 anthers have fallen, C female flower, D fruit-valve, E seed, F inflorescence

Status and distribution: Only two collections of this tree have ever been made. First collected in the lowland East usambaras in 1918 and only described in 1981. A specimen was collected from Kimboza in 1983. Thus, this species is rare and Endangered.

Habitat requirements: In Kimboza forest it was found on dolomitic marble traversed by permanent streams (alt. 300-350 m); dominant trees: *Parkia filicoidea*, *Khaya nyasica*, *Milicia excelsa*, *Elaeis guineensis*, *Rhodognaphalon*, *Drypetes*, *Aningeria*, *Sterculia appendiculata*; lianes: *Saba florida*, *Hippocratea*, *Rhoicissus*.

Phenology: The only Kimboza gathering indicate it fruits in July.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Radcliffe-Smith (1981)

Herbarium specimens:

Rodgers *et al.* 2505 (DSM, K), 1983-07

Radcliffe-Smith, A. (1981) A remarkable new species of *Notobuxus* (Buxaceae) from Tanzania. *Kew Bull.* 36, 39-41.

Radcliffe-Smith, A. (1985) A further note on *Notobuxus cordata* (Buxaceae). *Kew Bull.* 40, 88.

Diospyros amaniensis Gürke

Ebenaceae

Status global: **Restricted (VU)** Status local: **Present**

It is usually a small tree that is found in Kenya and Tanzania at a few locations, and is present in Kimboza in damp areas.

Striking identification features

- small roundish fruit covered by brown/black hairs
- sweetly scented white flowers



Description

Stature: evergreen small tree with slender branchlets.

Size: up to 20 m tall.

Bark: brown/black.

Leaves: simple and alternate with varying sizes (9-28 x 3-11 cm).

Flower: the sweetly scented white flowers are either axillary or cauliflorous.

Fruit: often clustered, globose (1.5 cm diameter) and covered in brown/black hairs. Contains 8 seeds.

Seed:

Note: in lowland forests the species is less than 5 m tall with axillary flowers whereas on higher ground it is a tall tree with cauliflorous flowers.



Status and distribution: Reported from Kenya and Tanzania from lower montane sites. Present in Kimboza. Assessed in 1998 as Vulnerable.

Habitat requirements: Groundwater, lowland and montane forest. Range generally 250-500 m asl. In Kimboza it is reported to be found in moist forest in damp hollows and associated with *Pandanus rabaiensis*.

Phenology:

Reproduction:

Uses in East Africa: The wood of this shade-tree is used for firewood, building poles and wooden spoons. The bark yields red dye and is used as medicine for snake bites.

Locals uses: None are known.

Sources and further information

Botanical description: Lovett *et al.* (2006), White (1988)

Herbarium specimens:

Pocs *et al.* 6466 (EA,K)

Rodgers *et al.* 2635, 1983-07

Lovett, J.C., Ruffo, C.K., Gereau, R.E., Taplin, J., Sørensen, L. & Lovett, J. (2006) Field guide to the moist forest trees of Tanzania. CELP, Frontier-Tanzania and CEPF.

White, F. (1988) The taxonomy, ecology and chorology of African Ebenaceae II. The non-Guineo-Congolian species of *Diospyros* (excluding sect. *Royena*). Bull. Jard. Bot. Nat. Belg. 58, 325-448.

Dorstenia alata Engl.

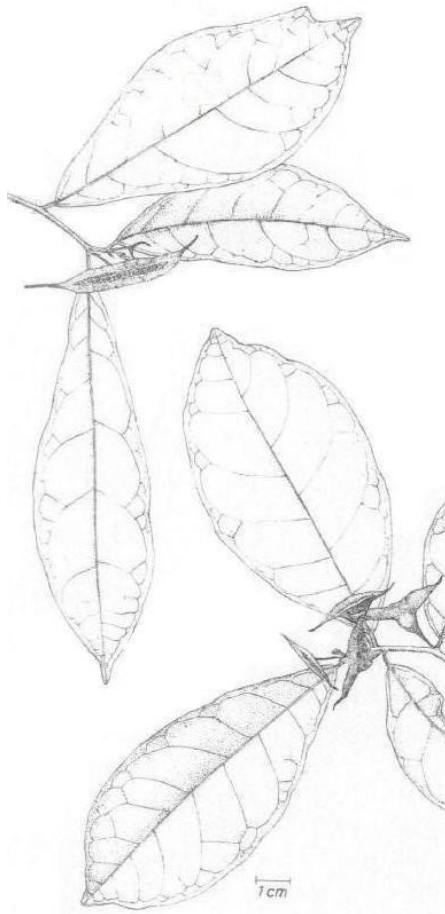
Malvaceae

- *Dorstenia scaphigera* Bureau var. *alata* (Engl.) de Wolf

Status global: **Restricted** Status local: **Present**

A shrub mainly restricted to Kenya and Tanzania that is present in Kimboza.

Striking identification features
- striking inflorescences: long and flattened with two terminal appendages



Description

Stature: shrub with branched woody stems.

Size: up to 2 m tall.

Bark: young stems hairy.

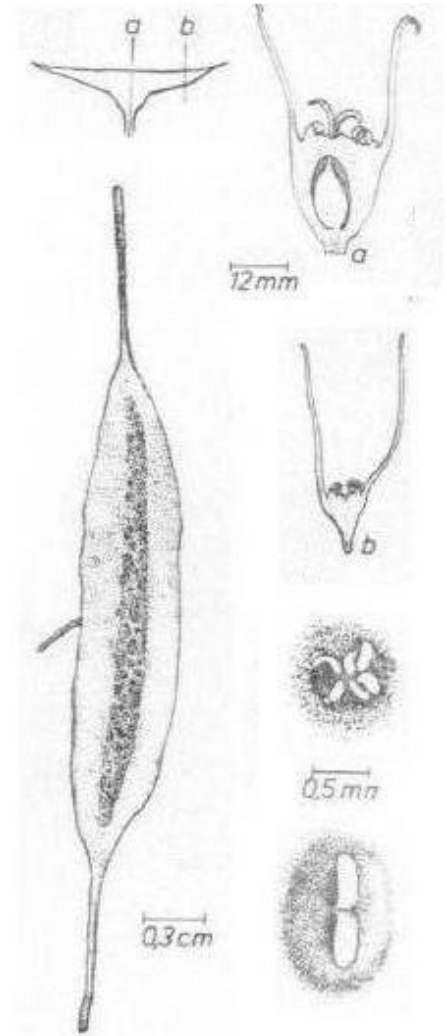
Leaves: simple and variable in size (5-17 x 2-8 cm).

Flower: long and flattened solitary inflorescence ending in two terminal appendages (to 3 cm long) with many small male and female flowers.

Fruit:

Seed: ca. 6 mm long x 5 mm wide.

Right: striking inflorescence including cross sections. Staminate and pistillate flowers.



Status and distribution: The species is known from several locations in Kenya and Tanzania, and just one place in the Congo Basin. It has been collected from Kimboza.

Habitat requirements: It occurs in the undergrowth (secondary) or riverine forest, often on limestone from sea-level to 1300 m. No information is available for Kimboza.

Phenology: Recorded as flowering in September.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Hijman (1980)

Herbarium specimens:

Mwasumbi & Harris (DSM) 2686 (EA, K),

Hijman, M.E.E. (1980) Frutescent species of the genus *Dorstenia* L. (Moraceae) in the Paleotropics. Bull. Jard. bot. Nat. Belg. 50, 331-357.

Garcinia semsei Verdc.

Clusiaceae

Mbogole, (Mtonga mweusi) (also refer to two other *Garcinia* species)

Status global: **Restricted** Status local: **Common**

An Eastern Arc endemic tree that is 4th commonest tree species in Kimboza Forest.

Striking identification features

- yellow latex
- large simple leaves

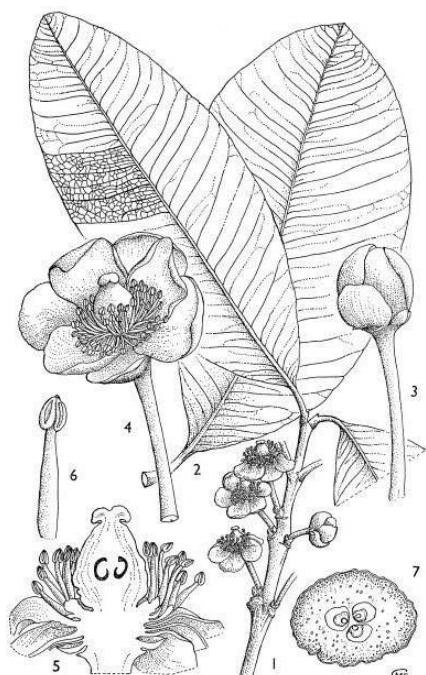


FIG. 2. *Garcinia semsei* Verdc. 1, flowering branchlet, $\times 2/3$; 2, leaf, $\times 2/3$; 3, bud, $\times 2$; 4, flower, $\times 2$; 5, flower, longitudinal section, $\times 4$; 6, stamen, $\times 5$; 7, ovary, transverse section, $\times 4$. All from Semari 1400.

Description

Stature: medium size tree with a straight bole.

Size: to about 20 m high.

Bark: grey/ brown. Slash: yellow latex.

Leaves: simple and opposite (19-25 x 7-16 cm).

Flower: pale yellow. Ramiflorous. Dioecious/hermaphrodite.

Fruit: large warted globose fruit (5 x 4 cm).

Seed:

Status and distribution: Eastern Arc endemic with records from Kimboza and the Nguru Mts. At Kimboza it was one of the most frequent and the 4th commonest species in a survey carried out in 1983.

Habitat requirements: Lowland, submontane and montane forests. At Kimboza it is particularly common on the western slopes leading to the River Ruvu where large rock outcrops occur.

Phenology: Recorded as flowering in November in the Nguru Mts.

Reproduction:

Uses in East Africa: Fruits are edible. The wood is used for firewood, building poles, tool handles and spoons. Bark sap yields a yellow dye.

Locals uses: None are known.

Sources and further information

Botanical description: Verdcourt (1976), Bamps *et al.* (1978)

Herbarium specimens:

Mwasumbi 12344

Semsei 1400 (K, EA) 1955-11 type from Nguru Mts.

Verdcourt, B. (1976) Two New Taxa of Guttiferae from East Africa. *Kew Bull.* 31, 259-262.

Bamps, P., Robson, N. & Verdcourt, B. (1978) Guttiferae. Flora of Tropical East Africa. Crown Agents for Overseas Governments and Administrations.

Rodgers, W.A., Hall, J.B., Mwasumbi, L.B., Griffiths, C.J. & Vollesen, K. (1983) The conservation values and status of Kimboza Forest Reserve, Tanzania. University of Dar es Salaam.

***Illigera madagascariensis* H. Perr.**

Hernandiaceae

-

Status global: **Restricted** Status local: **Present**

A climber found in Madagascar and in Africa where it is restricted to Tanzania. It occurs in Kimboza in thickets on rock outcrops.

Striking identification features

- liana
- 3-foliolate leaves
- greenish white flowers



Description

Stature: liana.

Size: to 6 m.

Bark: older stems brown and glabrous, young stems dark brown and hairy at the nodes.

Leaves: 3-foliolate with petiole 3-11 cm long; leaflets elliptic to ovate (4.5-9.5 x 2.5-6 cm) with a distinct pointed apex and 3-5 lateral nerves on each side.

Flower: inflorescence with 15-20 greenish white flowers (about 2 cm across).

Fruit: Fruit-body (0.8-1.3 cm x 7-8 mm), (2-)3-4-winged; wings broadly rounded, the larger pair (3.5-4 x 3 cm), the smaller (1.3-2.5 x 0.5-1.2 cm).

Seed: ovoid (6.5 x 5.5 mm).



Status and distribution: Native to East Africa (restricted to Tanzania) and Madagascar. It is present in Kimboza but has been collected just twice.

Habitat requirements: One specimen was collected "in rocky thicket near the rest house".

Phenology: Reported in Morogoro region as in flowers in February and March and fruits in April.

Reproduction: Insect pollinated.

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Verdcourt (1985)

Herbarium specimens:

Semsei 2671 (EA, K), 1957-04-15

Pocs 6188J

Verdcourt, B. (1967) Tropical African plants: XXVIII. Kew Bull. 21, 241-261.

Verdcourt, B. (1985) Hernandiaceae. In Polhill, R.M. (Ed.) Flora of Tropical East Africa. A.A. Balkema, Rotterdam.

Mkumbulu

Status global: **Restricted and Vulnerable** Status local: **Present**

Large forest tree endemic to Tanzania and reported as present in Kimboza, but its status and abundance require further investigations.

Striking identification features

- pinnate leaves with 2-4 pairs of leaflets
- large, flat, woody pods



Description

Stature: tall evergreen tree with a cylindrical trunk (up to 1.2-1.5 m in diameter) and small buttresses.

Size: 30-46 m tall.

Bark: bark smooth or nearly so, grey to greyish-black.

Leaves: pinnate leaves (4-14.5 cm long) with 2-4 pairs of leaflets (5-18 x 3-9.5 cm).

Flower: white hermaphrodite flowers on terminal, rounded, much branched, and dense inflorescences.

Fruit: large, brown, flat, woody pods (15-31 x 5.5-9.3 cm) that are obliquely nerved. They burst loudly in sunshine when mature. Persistent fallen pods are found under the tree.

Seed:



Status and distribution: The species is restricted to Tanzania and its status in Kimboza needs to be ascertained.

Habitat requirements: Lowland, submontane and montane forest (480-1680 m) and may become dominant in places. No information available for Kimboza.

Note: There is an issue with both the nature of the species and its abundance. The voucher specimen consists only of leaves and a pod-fragment, thus better material is required to confirm the identification. The specimen label states that the species is abundant whereas the report of the 1983 field survey only mentions this voucher specimen and the species does not appear in any of the quantitative data and is certainly not one of the 46 commonest species listed. Fieldwork is required to determine its status.

Phenology: Fruit collected in July.

Reproduction:

Uses in East Africa: A shade tree.

The hard wood is susceptible to termites and wood borers and used for firewood, tool handles, and charcoal, but is of limited value for timber. The pods can be used for shoe soles.

Locals uses: None are known.



Sources and further information

Botanical description: Brenan (1967), Lovett *et al.* (2006)

Herbarium specimens:

Semsei 846 (EA, K), 1952-07

Brenan, J.P.M. (1967) Leguminosae (Part 2), Subfamily Caesalpinioideae. In Milne-Redhead, E. & Polhill, R.M. (Eds) Flora of Tropical East Africa. Crown Agents for Overseas Governments & Administrations, London.

Lovett, J.C., Ruffo, C.K., Gereau, R.E., Taplin, J., Sorensen, L. & Lovett, J. (2006) Field guide to the moist forest trees of Tanzania. CELP, Frontier-Tanzania and CEPF.

Rodgers, W.A., Hall, J.B., Mwasumbi, L.B., Griffiths, C.J. & Vollesen, K. (1983) The conservation values and status of Kimboza Forest Reserve, Tanzania. University of Dar es Salaam.

Isolona cauliflora Verdc.

Annonaceae

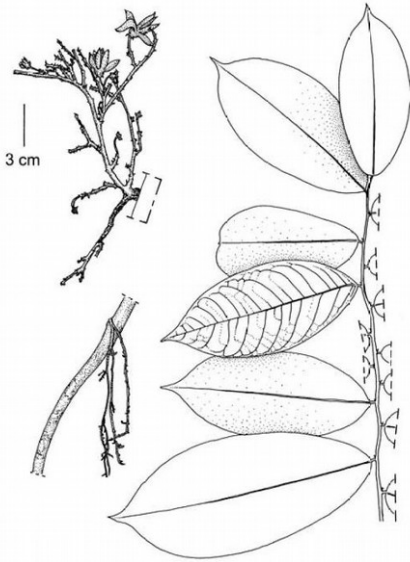
-

Status global: **Endangered (EN)** Status local: **Present**

Small tree restricted to 5 locations in coastal East Africa and occurs in Kimboza with striking inflorescences.

Striking identification features

- long inflorescences reaching up to 2 m long and often lying on the forest floor
- flowers light or dark red



Description

Stature: small tree.

Size: to 8 m high and trunk DBH up to 10 cm.

Bark: smooth, grey to brown.

Leaves: alternate, simple (12-23 x 5-9 cm).

Flower: long multi-flowered inflorescences from the trunk, reaching 2 m long and lying on the forest floor. Flowers light or dark red.

Fruit: sometimes buried in forest soil, ribbed, light to dark red or brown at maturity (20-45 mm across).

Seed: light brown (10-15 x 5-7 mm) packed in white pulp.



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Status and distribution: Occurs in 5 locations in north-east Tanzania, including Kimboza, and south-eastern Kenya and has an Area of Occupancy under 500 km², and has been assessed as Endangered.

Habitat requirements: Found in lowland rain forests, along rivers and streams, and on rocky soils. 20-500 m asl.

Phenology: Flowers and fruits collected in November, and flowers probably collected in July.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Couvreur (2008, 2009)

Herbarium specimens:

Couvreur 70 (DSM,MO,NHT,WAG) 2006-11-25

Couvreur 87 (DSM,MO,WAG) 2006-11-26

Dagallier & Mbago 42 (DSM,MPU,W), 2019-11-19, v

Dagallier & Mbago 44

(K,DSM,MPU,P,W), 2019-11-19, fl

Rodgers 2627 (K) 1983-10

Rodgers 2672 (K) 1983-10

Couvreur, T.L.P. (2008) Revealing the secrets of African Annonaceae: Systematics, evolution and biogeography of the syncarpous genera *Isolona* and *Monodora*. D. Phil. Thesis, Wageningen University.

Couvreur, T.L.P. (2009) Monograph of the syncarpous African genera *Isolona* and *Monodora* (Annonaceae). Systematic Botany Monographs 87, 1-150.

Ixora tanzaniensis Bridson

Rubiaceae

Status global: **Restricted** Status local: **Present**

A small shrub restricted to a few sites of eastern Central Tanzania and is present in Kimboza in swamp forest along streamlets.

Striking identification features

- white/pink flowers with long corolla tube (2.5-3.4 cm long)
- fruit: round, red drupe (8-9 mm wide)

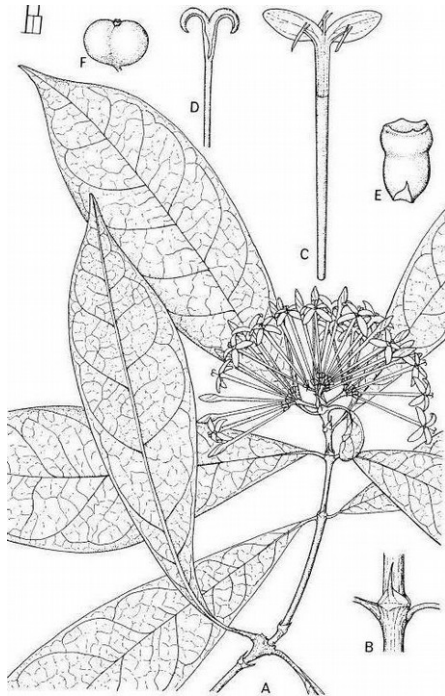


FIG. 1. *Ixora tanzaniensis*. A habit $\times \frac{1}{2}$; B stipule $\times 2$; C corolla with section removed $\times 2$; D stigma $\times 6$; E calyx $\times 8$; F fruit $\times 2$. A-E from Cribb, Grey-Wilson & Mwasumbi 11213, F from Vollesen in MRC 9645. Drawn by author.

Description

Stature: small shrub.

Size: 0.3-1 m tall.

Bark: greyish.

Leaves: opposite, simple (10-23 x 4-8.5 cm).

Flower: white/pink flowers with long corolla tube (2.5-3.4 cm long, ± 1.5 mm wide at top), in terminal inflorescences (to 2 cm long), lobes 7-8 mm long x 3 mm wide.

Fruit: round, red drupe (8-9 mm wide).

Seed: pale rusty brown (5.5 mm in diameter).



Status and distribution: This species is restricted to a few sites in eastern Central Tanzania and has been collected three times in Kimboza.

Habitat requirements: In Tanzania it is found in forests between 250 and 750 m asl. In Kimboza it is described as occurring in lowland rain forest, along streamlets, altitude: 220-300 m.

Phenology: In Tanzania flowers recorded in Jan., Feb. and May, fruits in Feb., May, July and Sept.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Bridson (1980)

Herbarium specimens:

Harris & Mwasumbi DSM 2681 (EA)

Rodgers *et al.* 2517, 1983-07

Pócs & Hall 8653, 1986-04-23

Bridson, D.M. (1980) Studies in *Ixora* and *Pavetta* (Rubiaceae subfam. Cinchonoideae) for Part 2 of 'Flora of tropical East Africa: Rubiaceae'. Kew Bull. 35, 823-828.

Justicia lukei Vollesen

Acanthaceae

Status global: **Vulnerable** Status local: **Present**

Woody erect herb found in some of the Easter Arc forests. In Kimboza probably restricted to the lower parts near the Ruvu River.

Striking identification features

- slender woody stems
- large simple leaves to 25 cm



Description

Stature: woody herb.

Size: to 1.2 m tall.

Bark: -

Leaves: large simple leaves to 25 cm.

Flower: dirty cream.

Fruit: .

Seed:

Status and distribution: This species is endemic to the Eastern Arc Mountains. It is mainly found in the East Usambara Mountains and extends south to the Dunduma and Kimboza forests. In Kimboza it is found from the River Ruvu to areas of Karstic Marble, but no population estimate is available. It is known from 16 collections from 13 localities, collected between 1915 and 2004. First collected at Kimboza in 2001 and described in 2010.

Habitat requirements: Not known

Phenology: Flowering recorded in August.

Reproduction: -

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Vollesen (2010)

Herbarium specimens:

Luke *et al.* 7645 (EA, K, NHT)

Vollesen, K. (2010) *Justicia*. In Beentje, H.J. (Ed.) Flora of Tropical East Africa: Acanthaceae (Part 2), pp. 495-601. Royal Botanic Gardens, Kew.
Luke, W.R.Q., Bangirinama, F., Beentje, H.J., Darbyshire, I., Gereau, R., Kabuye, C., Kalema, J., Kelbessa, E., Kindeketa, W., Malombe, I., Minani, V., Mwangoka, M. & Ndangalasi, H. (2015) *Justicia lukei*. The IUCN Red List of Threatened Species 2015: e.T48153934A48154869. <http://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T48153934A48154869.en>

Kabuyea hostifolia (Engl.) Brummitt

Tecophilaceae

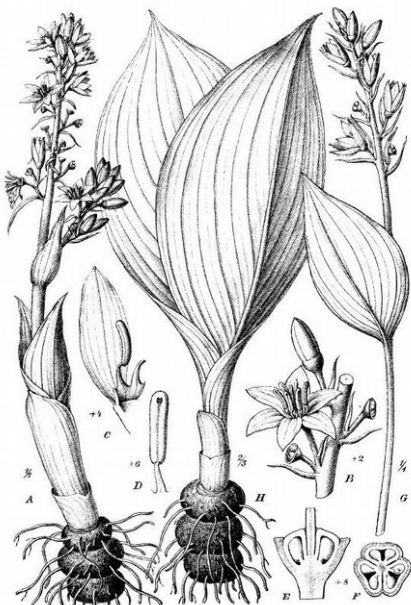
- *Cynastrum hostifolium* Engl.

Status global: **Restricted (Ic)** Status local: **Common**

Conspicuous forest floor herb restricted to forests of eastern Tanzania and northern Mozambique. Locally common in and around Kimboza.

Striking identification features

- ground plant with few large leaves
- erect inflorescence with many white showy flowers
- underground tuber



Description

Stature: erect perennial herb with an underground tuber.

Size: up to 60 cm tall.

Bark:

Leaves: 4 leaves and an inflorescence emerge from the corm.

Flower: ascending inflorescence (15-35 cm long) bearing conspicuous white flowers with yellow filaments.

Fruit: 1-2-lobed capsule maturing to dark-brown,

Seed: spherical (4.5-6 mm in diameter).



Status and distribution: It is restricted to forests of eastern Tanzania and northern Mozambique, but has often been collected from many sites. It is locally common and conspicuous in parts of Kimboza and surrounding area.

Habitat requirements: It is found in shady damp places in riverine forest or woodland. Observed in similar conditions in Kimboza forest where it dominates the ground flora in patches, and particularly so where fire has spread through the undergrowth.

Phenology: Recorded as flowering in December in 2017, 2019 and 2021.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.



Sources and further information

Botanical description: Carter (1966), Brummitt *et al.* (1998)

Herbarium specimens:

Rodgers *et al.* 2526, 1983-07

Kayombo 5336 (MO), 2006-03-20

Brummitt, R.K., Banks, H., Johnson, M.A., Docherty, K.A., Jones, K., Chase, M.W. & Rudall, P.J. (1998) Taxonomy of Cyanastroideae (Tecophilaceae): a multidisciplinary approach. *Kew Bull.* 53, 769-803.

Carter, S. (1966) Tecophilaceae. In Hubbard, C.E. & Milne-Redhead, C.E. (Eds) *Flora of Tropical East Africa*. Crown Agents, London.

Kraussia speciosa Bullock

Rubiaceae

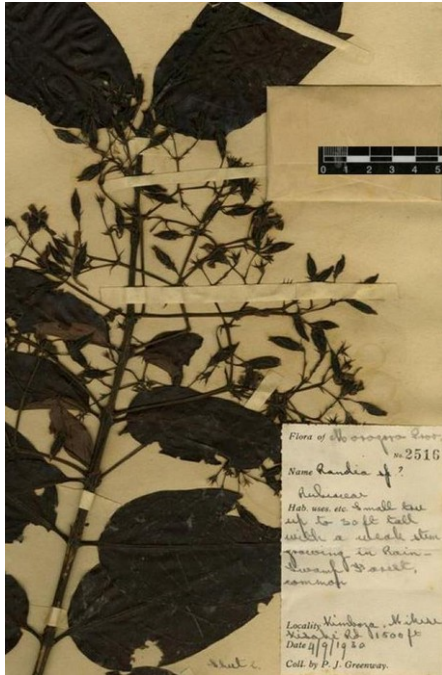
-

Status global: **Restricted** Status local: **Locally common**

A shrub or small tree restricted to SE Kenya and coastal Tanzania. It was common in Kimboza in swamp forest when first collected.

Striking identification features

- large stalked inflorescences
- white to yellow flowers with tube
- fruit: a round berry, with persistent calyx (<1 cm across)



Description

Stature: shrub or small tree.

Size: 3-6 m tall.

Bark: smooth.

Leaves: opposite, simple (8-18 x 3-7 cm).

Flower: white to yellow, in large stalked axillary inflorescences (panicles 5-10 cm long), with corolla tube (4.5-7 mm long), and lobes 7-8 (13) mm across.

Fruit: a berry, with persistent calyx, round or 2-lobed (8-9 mm across), 4-6 per fruit.

Seed:



Status and distribution: This species is restricted to SE Kenya and coastal Tanzania. It is locally common in Kimboza but has only been collected twice since it was discovered in 1930 and it was not recorded in the 1983 inventory.

Habitat requirements: Found in forests, 10-900 m. Greenway, who collected the type specimen in 1930, described it as occurring commonly in swamp forest.

Phenology: Flowered in September 1930.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Bullock (1931), Verdcourt (1976), Beentje (1994)

Herbarium specimens:

Greenway 2516 (EA), 1930-09-04, fl

Mwasumbi 12330, 1988-04

Amri EA026 (DSM), 2002

Beentje, H. (1994) Kenya Trees, shrubs and lianas. National Museum of Kenya, Nairobi.

Bullock, A.A. (1931) The genus *Kraussia*. Bull. Misc. Inform. 1931, 254-257.

Verdcourt, B. (1976) Rubiaceae. In Polhill, R.M. (Ed.) Flora of Tropical East Africa. Crown Agents for Oversea Governments and Administrations, London.

Mwila mondoStatus global: **Restricted** Status local: **Fairly common**

This pioneer small tree is the only species of the genus and is relatively common in Kimboza but is considered as Vulnerable.

Striking identification features

- single large green-yellow flower, scented
- clusters of rounded monocarps on long stalks

**Description***Stature:* small branched tree.*Size:* 10-15 m tall.*Bark:* Grey/brown and smooth*Leaves:* simple and entire, alternate.*Flower:* solitary in axils, green-yellow turning red, scented.*Fruit:* clusters of rounded monocarps on long stipes (1.2- 1.8 cm in diameter).*Seed:*

Status and distribution: It occurs in the coastal forests in Tanzania and southern Kenya, extending inland to the Eastern Arc Mts. It is relatively common in parts of Kimboza. This species is the sole representative of the genus and has been assessed as Vulnerable.

Habitat requirements: It is a pioneer species and thus common in disturbed dry lowland forest. It also occurs in disturbed sub-thicket woodland. In 1983 it was found in a third of the inventoried plots and restricted to or around the swampy forest and near the Ruvu river.

Phenology:

Reproduction:

Uses in East Africa: The light wood is used for firewood, building poles, wooden spoons and tool handles.

Locals uses: None are known.

Sources and further information

Botanical description: Lovett *et al.* (2006)

Herbarium specimens:

Lovett, J.C., Ruffo, C.K., Gereau, R.E., Taplin, J., Sørensen, L. & Lovett, J. (2006) Field guide to the moist forest trees of Tanzania. CELP, Frontier-Tanzania and CEPF.

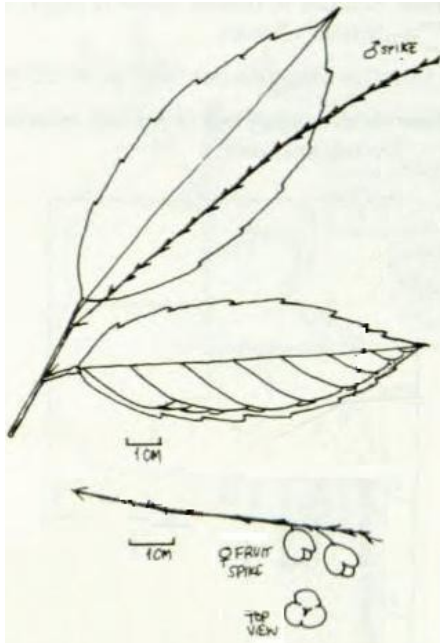
Rodgers, W.A., Hall, J.B., Mwasumbi, L.B., Griffiths, C.J. & Vollesen, K. (1983) The conservation values and status of Kimboza Forest Reserve, Tanzania. University of Dar es Salaam.

Status global: **Restricted** Status local: **Present**

A shrub or small tree known from only four sites on limestone in coastal East Africa and is present in Kimboza.

Striking identification features

- small flowers on long spikes
- alternate, entire but toothed leaves
- small fruit with 3 lobes



Description

Stature: shrub or small tree.

Size: 2-7 m tall.

Bark:

Leaves: alternate, toothed (6-15 x 2-8cm).

Flower: monoecious or dioecious, whitish flowers, the males in long spikes (to 20 cm long) and females in short spikes (3-5cm long).

Fruit: 3-lobed (6-10 x 10-12mm).

Seed: about 5 mm, dark reddish-brown.



Status and distribution: It occurs in coastal areas of Kenya (1 location) and Tanzania (3 locations including one in Zanzibar). It is present in Kimboza but likely to be uncommon or rare.

Habitat requirements: A coastal species in dry forest on limestone, 1-100 m. No information is available but must occur in the limestone areas only.

Phenology:

Reproduction: Single sex flowers but the species is monoecious or dioecious.

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

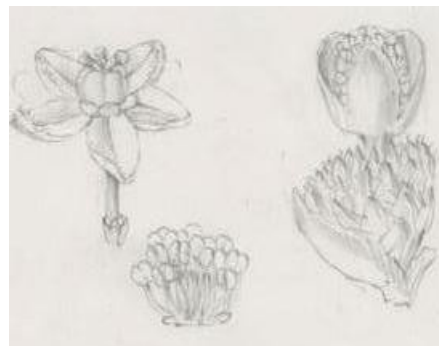
Botanical description: Beentje (1994)

Herbarium specimens:

Semsei 823 (MO), 1952-07

Kayombo 5345 (MO), 2006-03-20

Beentje, H. (1994) Kenya Trees, shrubs and lianas. National Museum of Kenya, Nairobi.



Mimusops riparia Engl.

Sapotaceae

Mduru

Status global: **Restricted** Status local: **Present**

A tree with a restricted distribution in East Africa that has been assessed as Vulnerable to extinction. It is present in Kimboza.

Striking identification features

- grooved trunk
- yellow or orange, large roundish berry (to 3.5 cm)



Description

Stature: tree with grooved trunk and a spreading crown.

Size: to 12-20 m high.

Bark: grey.

Leaves: simple (6-13 x 4-8 cm), glabrous.

Flower: cream (to 20 mm long), 1-3 per axil.

Fruit: yellow or orange, roundish to 3.5cm across, with 1-5 seeds.

Seed: up to 1.9 cm long.



Status and distribution: Occurs in SE Kenya (only 2 locations) and at a few locations in eastern Tanzania, including Kimboza. The species has been assessed as Vulnerable.

Habitat requirements: Riverine, 100-900 m. No information is available for Kimboza.

Phenology:

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Beentje (1994)

Herbarium specimens:

Mwasumbi 12490, 1988-04

Beentje, H. (1994) Kenya Trees, shrubs and lianas. National Museum of Kenya, Nairobi.

Ophrypetalum odoratum Diels

Annonaceae

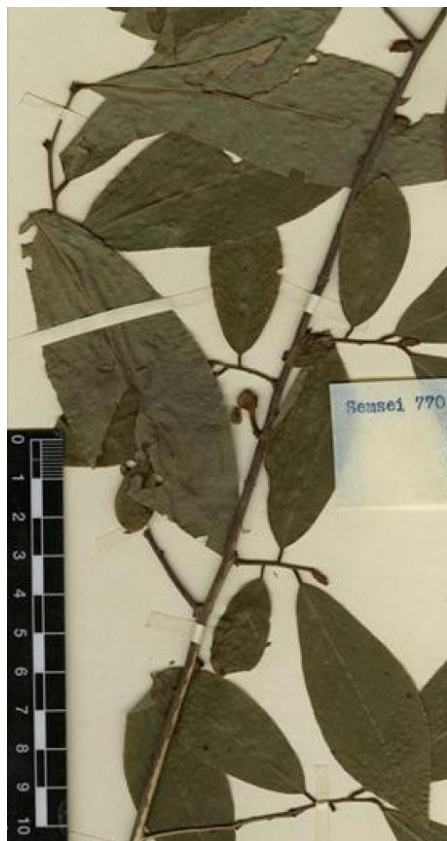
subsp. *longipedicellatum* Verdc. - **Mwana**

Status global: **Endangered?** (V) Status local: **Endangered?**

Recorded from a few locations in Kenya and Tanzania. Locally common at Kimboza in swampy areas and at the western forest edge.

Striking identification features

- flower buds look like grass spikelet
- showy pale yellow/brown flowers
- fruits composed of 8-15 monocarps on branches



Description

Stature: a medium-size tree.

Size: to 9 m tall.

Bark: grey somewhat fissured bark.

Leaves: variable, 2-12 cm long, 1.2-5.5 cm broad.

Flowers: up to 2.5 cm in diameter with pedicels 0.3-2.2 cm long. Petals are pale yellow or brownish. Flower buds look like grass spikelets.

Fruits: 8-15 monocarps (5-6.8 x 1.8-2.2 cm) irregularly longitudinally 3-ribbed on branches. 5-seeded.

Seed: brown, $\pm 2.5 \times 1.4 \times 0.8$ cm.

Status and distribution:

Ophrypetalum odoratum has been found at a few locations in Kenya and Tanzania. The type specimen of subsp. *longipedicellatum* was collected from Kimboza and occurs at one other location 40 km to the East of Morogoro. Species assessed as Vulnerable.

Habitat requirements: The Kimboza type specimen was collected in "swamp-forest" and said to be very common.

Phenology: At Kimboza recorded as flowering (young flowers) in July.

Reproduction: No information.

Uses in East Africa: Used for hut building.

Locals uses: None are known.

Sources and further information

Botanical description: Verdcourt (1960), Verdcourt (1971)

Herbarium specimens:

Sensei 770 (K, EA), 1952-07, type Festo, Luke & Kayombo 2258 (MO, NHT), 2006-03-21

Dagallier & Mbago 53

(K,DSM,MPU,P,W), 2019-11-19, v

Verdcourt, B. (1960) Notes from the East African Herbarium: XI. Kew Bull. 14, 345-352.

Verdcourt, B. (1971) Annonaceae. In Milne-Redhead, E. & Polhill, R.M. (Eds) Flora of Tropical East Africa. Crown Agents for Oversea Governments and Administrations, London

***Pouteria pseudo-racemosa* (J.H. Hemsl.) L. Gaut.**

Sapotaceae

Kigwe, Mlembelembe - *Aningeria pseudo-racemosa* J.H. Hemsl.

Status global: **Restricted (V)** Status local: **Fairly common**

Large forest tree restricted to 3 Tanzanian locations. In Kimboza it was heavily exploited to the 1970s but is still relatively common.

Striking identification features
- short axillary flowers-bearing shoots



Description

Stature: large canopy tree.

Size: to about 20 m high.

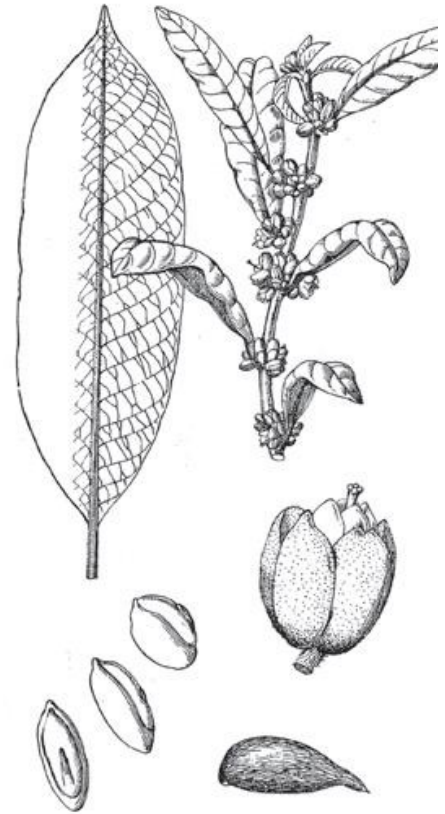
Bark: smooth greyish or greyish-brown bark.

Leaves: alternate, simple (8-17 x 4-7.6 cm).

Flower: short axillary flower-bearing shoots. Small greenish yellow flowers.

Fruit: unknown, other East African *Pouteria* species have hard, green, narrow fruits (to 4 cm long) with a beak, and inside is one shiny brown seed (to 3 cm long).

Seed: -



Right: the drawing depicts the common East African *Pouteria adolfi-friedericii*, including its fruit and seed.

Status and distribution: It has a restricted distribution and is only found in three localities in Tanzania. In Kimboza it was the 8th commonest tree species in the early 1980s despite being heavily exploited up to the 1970s. Species assessed in 1998 as Vulnerable.

Habitat requirements: A moist lowland forest tree. No information available for Kimboza.

Phenology: Recorded as flowering in July.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known, but was a sought after timber.

Sources and further information

Botanical description: Hemsley (1956), Hemsley (1958)

Herbarium specimens:

Semsei 740, 1952-07

Rodgers *et al.* 2575 (DSM), 1983-07

Hemsley, J.H. (1956) Notes on African Sapotaceae: III. Kew Bull. 15, 277-291.

Hemsley, J.H. (1968) Sapotaceae. In Milne-Redhead, E. & Polhill, R.M. (Eds). Flora of Tropical East Africa. Crown Agents for Oversea Governments and Administrations, London.

Rytigynia binata (K. Schum.) Robyns

Rubiaceae

Status global: **Restricted (VU)** Status local: **Present**

A coastal forest endemic shrub or small tree that is restricted to a few sites in eastern Tanzania. It is present in Kimboza near the mission.

Striking identification features

- 2(-3)-flowered inflorescence with long peduncle and pedicels
- small flower buds (2-3 mm)
- round fruit (1cm) with 1-3 pyrenes



Description

Stature: shrub or small tree.

Size: 2-6 m tall.

Bark: stems glabrous, grey when old, sometimes with reddish brown epidermis which peels showing dark red-purple bark.

Leaves: opposite, simple (5-14 x 2-6 cm), drying olive-green, glabrous but for hairy domatia on the lamina; stipules forming a sheath (1-2.5 mm long), densely hairy within.

Flower: 2(-3)-flowered inflorescence often \pm 5 mm above the node, long peduncle (1-2.5 cm) and pedicels (0.5-1.8 cm); flower buds small (2-3 mm); corolla green, yellow-green or cream-yellow.

Fruit: roundish (8-10 mm) with 1-3 pyrenes, the fruiting pedicels to 2.3 cm long.

Seed:



Status and distribution: It is only known from the T6 and T8 regions of Tanzania and has been assessed as Vulnerable. It is present in Kimboza.

Habitat requirements: Found in *Brachystegia microphylla* thicket; deciduous coastal bushland on sand, thicket on stony ridge, and dry forest, 115-700 m. In Kimboza it was collected from the area near the Kibongo Mission that has many rock outcrops.

Phenology: Young fruits collected in April 1988.

Reproduction:

Uses in East Africa: Stems are used as fuel wood.

Locals uses: None are known.



Sources and further information

Botanical description: Verdcourt (1976)

Herbarium specimens:

Mwasumbi *et al.* 12351 (k,dsm,MO), 1983-03-29

Bidgood *et al.* 1245 (k,dsm,BR,WAG), 1988-04-21 fr

Verdcourt, B. (1976) Rubiaceae. In Polhill, R.M. (Ed.) Flora of Tropical East Africa. Crown Agents for Oversea Governments and Administrations, London.

Rytigynia eickii (K. Schum. & K. Krause) Bullock

Rubiaceae

Status global: **Restricted (VU)** Status local: **Present?**

An upland shrub only found in some areas of Kenya and Tanzania. It is thought to be present in Kimboza, but this awaits confirmation..

Striking identification features

- 2-flowered inflorescences
- fruits in pairs, roundish (1-1.5 cm), containing 1-2 pyrenes



Description

Stature: shrub or small tree.

Size: 1.5-5 m tall.

Bark: glabrous stems with pale shiny epidermis peeling to reddish grey beneath.

Leaves: simple (4-14.5 x 1.7-6.8 cm), opposite, stipules joined to form 1.5-3 mm. long sheath, hairy inside, deciduous.

Flower: 2-flowered inflorescences, peduncle 4-5 mm long; pedicels 2-4 mm, petals pale greenish yellow, funnel-shaped tube (3 mm).

Fruit: in pairs, roundish (1-1.5 cm), containing 1-2 pyrenes, pedicels up to 1.5 cm long and peduncle to 7 mm.

Seed: pyrene (1 cm long, 7-8 mm wide, 5-6.5 mm thick).



Status and distribution: Only known from Kenya (K7) and Tanzania (T3 T6). Said to be present in Kimboza, but the ID of the herbarium specimen requires verification.

Habitat requirements: Found in Open bushland in granite areas, submontane forest, 950-1830 m. Two collections have been made in the North Uluguru, including one at 1800 m. Thus, in view of Kimboza's much lower elevation this does suggest that Semsei's collection may have been mis-identified and needs to be looked at.

Phenology: Deciduous.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Beentje (1994), Verdcourt (1976)

Herbarium specimens:

Semsei 819 (k,e), 1952-07?

Beentje, H. (1994) Kenya Trees, shrubs and lianas. National Museum of Kenya, Nairobi.

Verdcourt, B. (1976) Rubiaceae. In Polhill, R.M. (Ed.) Flora of Tropical East Africa. Crown Agents for Oversea Governments and Administrations, London.

Sclerochiton tanzaniensis Vollesen

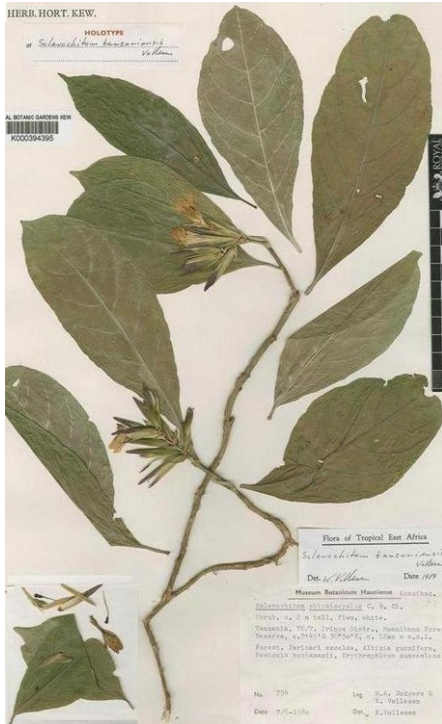
Acanthaceae

Status global: **Restricted** Status local: **Present**

This spindly erect shrub is restricted to a few sites in Tanzania and is present in Kimboza.

Striking identification features

- large white/greenish flowers (ca 4 cm) in terminal inflorescences
- opposite leaves of unequal size
- 4-seeded woody capsule (to 2 cm)



Description

Stature: spindly erect shrub (even as a small tree?).

Size: to 3 m tall.

Bark:

Leaves: opposite, simple of unequal size (to about 10-20 × 4-10 cm).

Flower: large flowers (to 4 cm long) in terminal inflorescences (6 cm long), white with red to purple guide lines, and straw-coloured to greenish sepals with purplish tips.

Fruit: 4-seeded capsule (17-21 mm long), woody, sessile.

Seed: 6-7 mm long, with large distinct scales.



Status and distribution: This species is restricted to parts of Tanzania, from Lindi to Kimboza via the Uzungwa.

Habitat requirements: Found in lowland rainforests, riverine forests, dry coastal forests and thickets; 200-950(-1200) m. At Kimboza in 1983 it was recorded in a plot close to the old campsite.

Phenology:

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Vollesen (1991), Vollesen (2008)

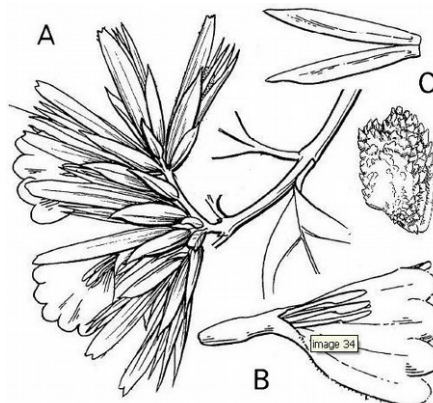
Herbarium specimens:

Semsei 794, 1952-07

Mwasumbi *et al.* 12433 (K), 1983-03-31

Rodgers, W.A., Hall, J.B., Mwasumbi, L.B., Griffiths, C.J. & Vollesen, K. (1983) The conservation values and status of Kimboza Forest Reserve, Tanzania. University of Dar es Salaam. Vollesen, K. (1991) A revision of the African genus *Sclerochiton* (Acanthaceae: Acantheae). Kew Bull. 46, 1-50.

Vollesen, K. (2008) Acanthaceae (part 1). In Beentje, H.J. & Ghazanfar, S.A. (Eds) Flora of tropical East Africa. Kew Publishing, Kew.



Left: A. twig with inflorescence, B. part of flower (corolla), C. open capsule and seed.

Synsepalum kaessneri (Engl.) T.D.Penn.

Sapotaceae

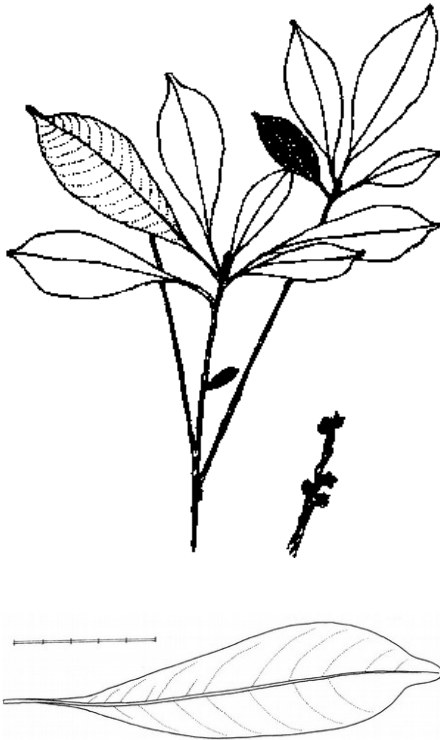
Afrosersalisia kaessneri (Engl.) J.H.Hemsl.

Status global: **Restricted** Status local: **Present**

An East African coastal shrub restricted to a few locations and collected once from Kimboza.

Striking identification features

- many small flowers on twigs
- fleshy red 1-seeded berry
- leaves aggregated at the tip of branchlets



Description

Stature: shrub with slender branchlets.

Size: 2-3? m high.

Bark:

Leaves: simple (10-17 x 3-5 cm) aggregated towards the tip of branchlets.

Flower: many small whitish-green borne on the twigs.

Fruit: solitary, a fleshy red 1-seeded berry with flower parts.

Seed: about 12 x 7 x 3 mm.

Note: The images (right) depict a closely related and very similar, newly described, species (*Synsepalum chimanimani*) from Mozambique.



Status and distribution: It occurs in coastal regions from SE Kenya to the Uluguru Mountains in Tanzania. It has been collected once from Kimboza and is presumably uncommon or rare.

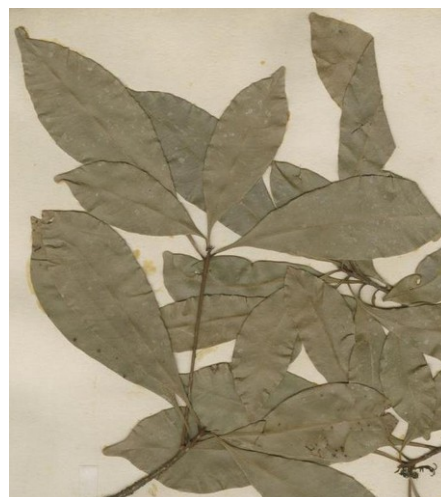
Habitat requirements: Moist evergreen and dry semi-deciduous forests. Altitude 300-1100 m. No information is available for Kimboza.

Phenology:

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.



Sources and further information

Botanical description: Rokni *et al.* (2019)

Herbarium specimens:

Rodgers *et al.* 2609 (K,D), 1983-07

Rokni, S., Wursten, B. & Darbyshire, I. (2019) *Synsepalum chimanimani* (Sapotaceae), a new species from the Chimanimani Mountains of Mozambique and Zimbabwe, with notes on the botanical importance of this area. *PhytoKeys* 133, 115-132.

left: type specimen Kaessner 398

Tricalysia pedicellata Robbrecht

Rubiaceae

-

Status global: **Restricted** Status local: **Present**

A small spindly shrub restricted to 3 areas in Tanzania. It is present in Kimboza in groundwater forest.

Striking identification features

- green, roundish fruit (8 mm in diam) on a long and slender pedicel (to 3 cm long)

-

Description

Stature: small spindly evergreen shrub.

Size: to 2 m tall.

Bark:

Leaves: simple (8-16 x 3-6.5 cm).

Flower: white in 3-several flowered inflorescences.

Fruit: green drupe, roundish (8 mm in diam) on a long and slender pedicel (to 3 cm long) which elongate during the fruiting stage, 1-2 seeds in each chamber.

Seed:



Status and distribution: Its distribution is restricted to 3 areas in Tanzania, including Kimboza.

Habitat requirements: Found between 300 and 700 m asl. In Kimboza it is found in groundwater forest on limestone (300 m asl) with *Afrosersalisia*, *Bequaertiodendron*, *Albizia* and *Pandanus*.

Phenology: Fruiting recorded in June 1983. Evergreen.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.

Sources and further information

Botanical description: Robbrecht (1979)

Herbarium specimens:

Bruce 1032 (BM, BR, K, P), 1935-04-11

Polhill & Lovett 4900 (K, BR), 1983-06-23, type, fr

Semsei 775 (FHO), 1952-07

Robbrecht E. (1979) The African genus *Tricalysia* A. Rich. (Rubiaceae-Coffeae). 1. A revision of the species of subgenus *Empogona*. Bull. Jard. bot. Nat. Belg. 49, 239–360.

Uvariodendron gorgonis Verdc.

Annonaceae

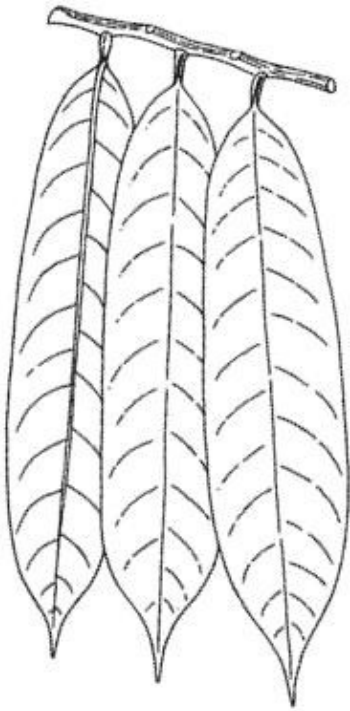
Mkenene

Status global: **Endangered (E)** Status local: **Probably uncommon**

East African coastal tree considered to be Endangered. Probably uncommon at Kimboza.

Striking identification features

- striking cauliflorous fruits
- aromatic leaves and bark
- fluted trunk



Description

Stature: medium-size tree.

Size: to 12 m and reported to have a fluted trunk.

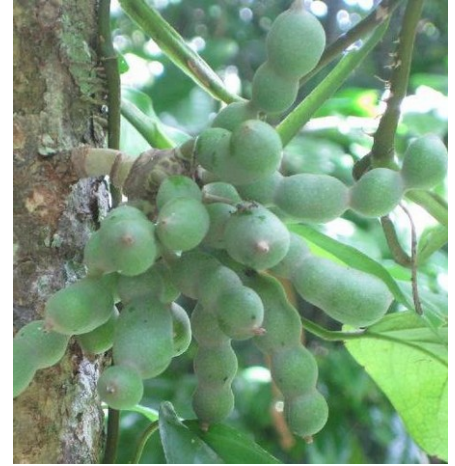
Bark: aromatic bark, spicy smell.

Leaves: large aromatic alternate leaves (8-41 x 3-12 cm), lemon scented.

Flowers: cream flowers, solitary or several in fascicles, on old wood.

Fruits: several green 3-10 seeded monocarps (4-8 cm long) on a short stalk protruding from the trunk.

Seed: yellow-brown, 8 x 7 x 5 cm.



© Pierre Binggeli

Right: Flower and fruits on tree trunk.



Source: Couvreur 69

Status and distribution: Occurs in coastal forests of Tanzania and Kenya. Only known from 8 small locations and threatened by habitat loss and degradation. Assessed in 2006 as Endangered.

Habitat requirements: Usually grows on limestone outcrops, but also found on igneous intrusions. At Kimboza one specimen was found near the forest edge.

Phenology: At Kimboza fruits observed in October and December. One tree fruited in December 2018.

Reproduction: No information.

Uses in East Africa: The light wood is used for building poles, firewood, tool handles, beds, bows and withies.

Locals uses: None are known.



Sources and further information

Botanical description: Verdcourt (1969)

Herbarium specimens:

Paulo 163 (K, EA), 1953-11, type

Semsei 773 (K, EA), 1952-07

Couvreur 69 (WAG), 2006-11-25, fr

Dagallier 47 (MPU), 2019-11-19, v

Dagallier 52 (MPU), 2019-11-19, v

Verdcourt, B. (1969) The genus *Uvariodendron* (Engl. & Diels) R. E. Fries (Annonaceae) in East Africa. Kew Bull. 23, 511-521.

Uvariodendron mbagoi Dagallier & Couvreur

Annonaceae

-

Status global: **Restricted (EN)** Status local: **Present**

A recently described shrub/small tree endemic to Tanzania and only found at only 7 locations, including Kimboza.

Striking identification features

- stiff greyish-green leaves
- crushed leaves and bark have a strong scent of lemon/orange
- 1-7 green-grey hairy monocarps



© Léo-Paul Dagallier

Description

Stature: shrub or small tree.

Size: 3-6 m tall, stem DBH 5-10 cm.

Bark:

Leaves: stiff greyish-green lamina (76-157 x 31-59 mm) with slightly revolute margins, 10-14 pairs secondary veins and the mid rib sunken above, raised below; petiole is short (3-6.5 mm long); crushed leaves and bark have a strong bergamot scent (between lemon and orange).

Flower: inflorescence borne on trunk or old branches with just 1-2 (3) hermaphrodite flowers, flower buds are globose (5-9 mm in diameter), open flowers have never been observed.

Fruit: 1-7 cylindrical, generally curved, green-grey hairy monocarps (2-5 x 1-1.2 cm), showing constrictions and longitudinally ridged, with 4-17 seeds per monocarp.

Seed: glabrous, 8-8.5 x 5.5.6 mm.



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Status and distribution: Endemic to Tanzania; only known in seven locations and from just 11 records. It has been assessed as endangered.

Habitat requirements: Found in closed evergreen forest dominated by *Scorodophloeus fischeri*, on coral rag soil. Altitude: 90-340 meters. Currently in Kimboza only recorded once from the slopes above the River Ruvu.

Phenology: Flower buds observed in November 2019.

Reproduction:

Uses in East Africa: The bark is used as a spice for meat meals and for tea.

Locals uses: None are known.



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Sources and further information

Botanical description: Dagallier *et al.* (2021)

Herbarium specimens:

Dagallier & Mbago 50 (DSM,K,P,MPU,WAG), 2019-11-15, fl

Dagallier, L.-P.M.J., Mbago, F.M., Luke, W.R.Q. & Couvreur, T.L.P. (2021) Three new species of *Uvariodendron* (Annonaceae) from coastal East Africa in Kenya and Tanzania. *PhytoKeys* 174, 107-126.

Zenkerella egregia Léonard

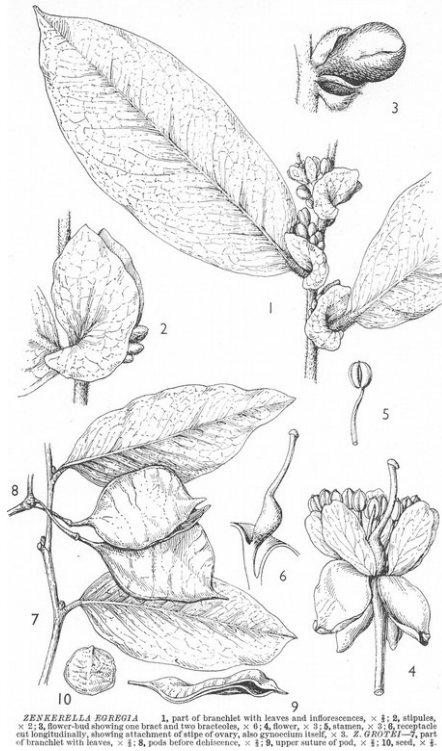
Fabaceae - Caesalpiinoideae

Status global: **Restricted (VU)** Status local: **Common in patches**

An East African tree with a restricted distribution that has been regularly collected from Kimboza and is common along streams.

Striking identification features

- large persistent stipules
- flat beaked pods with a single large seed
- hairy branchlets



Description

Stature: tree.

Size: 10-18 m high.

Bark: hairy branchlets.

Leaves: alternate leaves (11-25 x 4-9 cm), slightly asymmetric at base, with striking large stipules (1-3 x 0.5-2 cm).

Flower: flowers on short (1 cm long) inflorescences.

Fruit: a flattened beaked pod (ca 3 x 2 cm).

Seed: one large seed per pod.



Status and distribution: Restricted to the base of 3 mountain blocks of the Eastern Arc Mountains, i.e. Kimboza, the base of the East Usambaras and possibly also found in South Nguru. It is reasonably common in Kimboza in view of the number of collected specimens.

Habitat requirements: Found in lowland rain-forest, riverine and swamp forest, 270-400 m. Rodgers *et al.* (1983) stated that in Kimboza, close to meandering streams, the understorey is rich in *Z. egregia*. The species was found in one out of the 12 surveyed plots and represented 20% of the enumerated stems.

Phenology: Evergreen. Flowered in October in the East Usambaras.

Reproduction:

Uses in East Africa: None are known.

Locals uses: None are known.



Sources and further information

Botanical description: Léonard (1951)

Herbarium specimens:

Greenway 2520 (MO), 1930-9-4

Pocs 6486 (MO), 1971-11-18

Harris & Mwasumbi DSM2663 (dsm, MO), 1972-9-10

Mchuno BM2589 (MO), 1972-9-10

Mwasumbi 12400 (MO), 1983-3-30

Luke 773 (MO), 1987-11-4

Kayombo 5325 (MO), 2006-3-20

Léonard, J. (1951) Bull. Jard. Bot. État Bruxelles 21, 414.

Rodgers, W.A., Hall, J.B., Mwasumbi, L.B., Griffiths, C.J. & Vollesen, K. (1983) The conservation values and status of Kimboza Forest Reserve, Tanzania. University of Dar es Salaam, mimeograph.