PROTEACEAE

Flowers in elongated spikes without an involucre ..... (1) Faurea

Flowers in heads surrounded by an involucre of large imbricate bracts ..... (2) Protea

(1) FAUREA

1. Leaves glabrous, lanceolate to oblong-lanceolate; lateral nerves not very prominent ..... 2.

   Leaves pubescent or puberulous, ovate-elliptic to broadly elliptic-lanceolate; lateral nerves very prominent ..... F. speciosa

2. Leaves 2-3½ in. long ..... F. arborea

   Leaves 4½-7 in. long ..... F. saligna

FAUREA ARBOREA Engl. Eggeling 2932.

Shrub or small tree. Young branchlets densely clothed with short grey hairs. Leaves oblong-lanceolate, ⅔-1 in. broad, apex acute, base narrow-cuneate; petiole up to ¼ in. long. Flower-spikes terminal, 4-6 in. long; petaloid-calyx silvery-tomentose, about ½ in. long.

Karamoja (Mt. Moroto and Mt. Debasien). In scrub or forest, 8-9,500 ft.

Perhaps only a small-leaved form of F. saligna Harv.

FAUREA SALIGNA Harv. Eggeling 1360.

Tree to 60 ft. Branchlets minutely adpressed-pubescent when young. Bark rough, dark brown to almost black. Leaves leathery, lanceolate, often slightly curved, 1-1¼ in. broad, mucronate, apex acute to acuminate, base narrow-cuneate; petiole up to ¾ in. long. Flower-spikes terminal, about 4 in. long; petaloid-calyx pubescent, reddish, ⅓-½ in. long. Seeds surrounded by conspicuous tufts of white hairs. Wood yellow-red to red-brown, beautifully flecked and mottled by the large silver medullary rays, hard, brittle, difficult to saw and plane, easy to nail, turning and polishing well, durable, resistant to termites. It is recommended for furniture, decorative panelling, etc., and is said to be suitable for hubs and felloes; it is a good charcoal wood. Weight 45 lb. per cu.ft. air dry.

Kigezi (Mt. Muhavura); Toro (Ruwenzori); Bugishu (Elgon). In mountain forest, 7-10,000 ft.

FAUREA SPECIOSA Welw. Eggeling 628,807,2773.

Shrub or tree to 35 ft. Bark grey, deeply fissured. Leaves 4-6 in. long, 1¼-2½ in. broad, apex acute, base narrow-cuneate; petiole up to ½ in. long. Flower-spikes 4-6 in. long, in the axils of the uppermost leaves; petaloid-calyx yellow-green to orange, slightly curved before opening, ½-1 in. long, softly silvery-tomentose. Wood mottled, hard, durable, resistant to termites, furnishing a useful hut-building pole.

Ankole; West Nile; Chua (Imatong Mts.); Karamoja (Mt. Debasien). On rocky hillsides, 4,500-6,000 ft.

(2) PROTEA

1. Leaves broadly lanceolate-elliptic ..... P.madiensis

   Leaves oblong to lanceolate or oblanceolate 2.

2. Leaves oblong to oblanceolate, up to 3½ in. long; lowermost (outer) bracts of the involucre ciliate on the margin, otherwise glabrous; uppermost (inner) bracts rusty pilose ..... P.kilimandscharica

   Leaves lanceolate to oblong-lanceolate, 4-6 in. long; bracts silky ..... 3.

3. Leaves glabrous ..... P.abyssinica

   Leaves silky to sparingly pilose ..... P.melliodora

PROTEA ABYSSINICA Willd. Eggeling 2758, 2775.

Shrub or tree to 15 ft. Branchlets pilose when young. Leaves lanceolate to narrowly oblong-lanceolate, 4-6 in. long, about ¾ in. broad, apex obtuse, base slightly tapered. Flower-heads up to 4 in. diam.; largest bracts about 1½ in. long; perianth white, ⅘ in. long, densely hairy; stamens and styles pinkish-white.

Karamoja (Mt. Debasien). 5,500-10,000 ft.

P.abyssinica var. brevifolia Engl. from Butumbi, Kigezi is probably the plant which we call P.melliodora Engl. & Gilg. It is described as having softly pilose leaves, shorter than those of the type.

PROTEA KILIMANDSCHARICA Engl. Mrs. Tothill 2414.

Shrub or tree to 15 ft. in mountain savannah. Branchlets glabrous. Leaves glabrous, up to 1 in. broad. Flower-heads about 2 in. diam.; largest bracts up to 2½ in. long; perianth up to 2½ in. long, silky towards the apex.

Bugishu (Elgon). 8-12,500 ft.

PROTEA MADIENSIS Oliv. (Photo. 39.). Eggeling 815.

Shrub or tree usually 5-10 ft. high, sometimes attaining 20 ft. Branchlets smooth. Bark red-brown to orange-brown. Leaves 4-8 in. long, up to 3 in. broad, obtuse at the apex, tapered to the base, finely adpressed hairy or glabrous. Flower-heads up to 4 in. diam.; bracts glabrescent, the upper ones reddish, up to 3 in. long, the lower ones green; perianth white, up to 2 in. long, glabrous at the apex, usually villous at the base; stamens pinkish-white.

Masaka; Ankole; Kigezi; Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Teso.

A common savannah shrub in mountain savannah from 5,000 to 7,000 ft.; at lower elevations it is much rarer and usually confined to rocky hillsides.

PROTEA MELLIODORA Engl.& Gilg. Liebenberg 437.

Shrub or small tree. Young branchlets densely silky tomentose. Leaves lanceolate to oblong-lanceolate, 3-5 in. long, 1-1½ in. broad, densely silky when young, less densely silky when mature. Flower-heads up to 3 in. diam.; bracts densely and shortly silky outside, the largest ones about 1½ in. long; perianth 1-1½ in. long, densely silky or villous.

Kigezi.

RHAMNACEAE

1. Branchlets armed ..... 2.
   Branchlets unarmed ..... 3.

2. Leaves opposite or sub-opposite, penninerved (5) Scutia
   Leaves alternate, 3-5-nerved from the base ....(6) Ziziphus

3. Leaves opposite; stipules interpetiolar .....(2) Lasiodiscus
   Leaves alternate, or if sub-opposite ~~than~~ then stipules extra-petiolar ..... 4.

4. Leaves 3-5-nerved from the base ..... (6) Ziziphus
   Leaves penninerved ..... 5.

5. Fruit 1-celled ..... (3) Maesopsis
   Fruit 2-celled ..... (1) Berchemia
   Fruit 3-4-celled ..... (4) Rhamnus

(1) BERCHEMIA

BERCHEMIA DISCOLOR Hemsl. Eggeling 2961.

Glabrous shrub or tree to 20 ft. Leaves [illegible] entire or obscurely crenate, shining above, dull and glaucous below, penninerved, broadly ovate-elliptic to lanceolate, 1-2½ in. long, apex obtuse to acute, base sometimes slightly unequal-sided; stipules early deciduous. Cymes axillary, sessile or shortly pedunculate; [illegible] flowers greenish; pedicels 1/12-¼ in. long; ovary immersed in the disk. Drupe yellow, fleshy, edible, oblong, ½-⅓ in. long, 1/12-¼ in. diam., containing 2 seeds. Wood resinous. Karamoja (Moroto River).

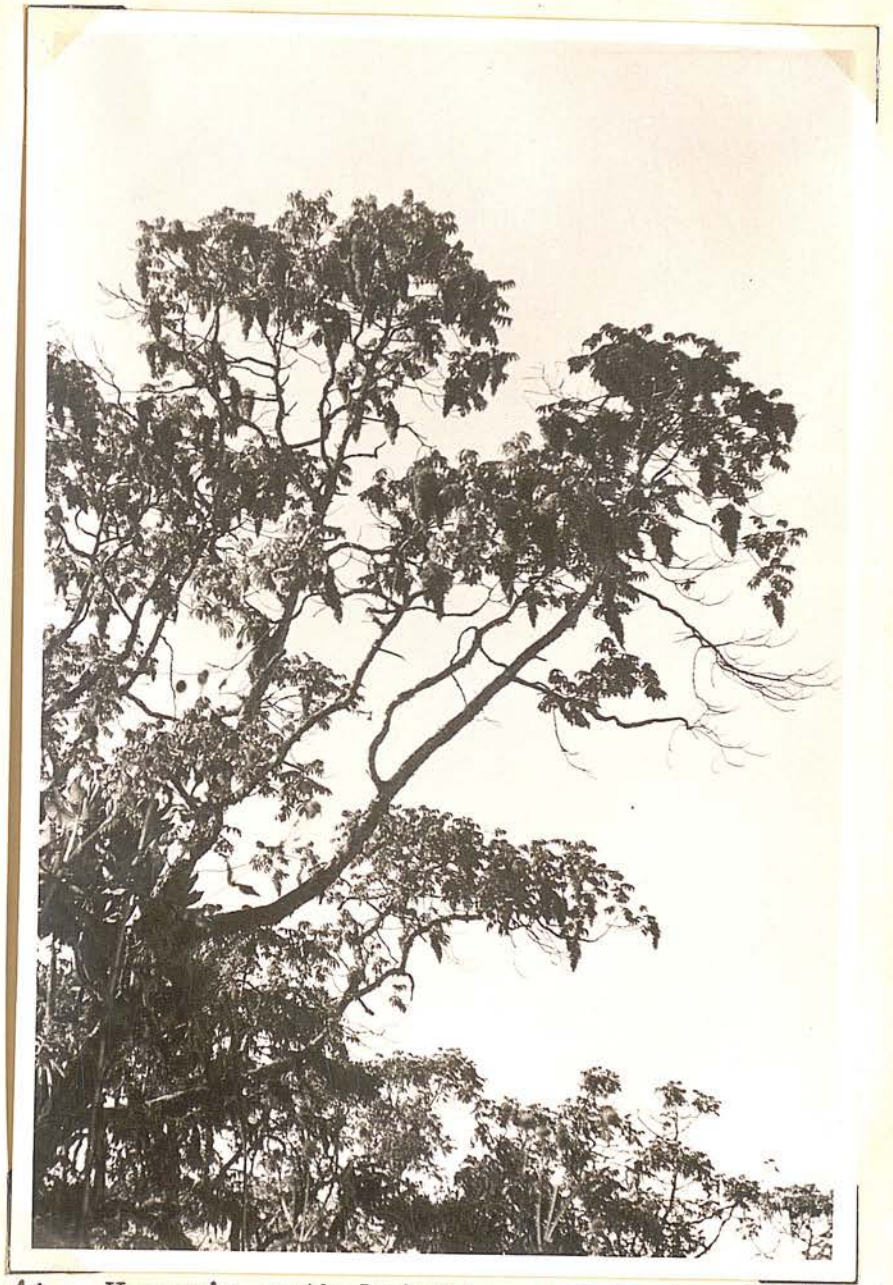
(2) LASIODISCUS

LASIODISCUS MILDBRAEDII Engl. Eggeling 1598.

Munyamaija (Lunyoro).

Forest shrub or tree to 30 ft. Leaves crenulate, penninerved, oblanceolate-elliptic to elliptic, usually 3½-7½ in. long and 1-3 in. broad, apex obtuse to obtusely acuminate, base unequal-sided; petiole up to ¼ in. long; stipules deciduous. Cymes axillary, usually

Phot.40. Maesopsis eminii Engl. Habit photo of an immature tree.



Phot.41. Hagenia anthelmintica J.F.Gmel. Part of a tree showing male inflorescences.

with two main branches; peduncles up to 1½ in. long; flowers numerous, densely brown-tomentose; pedicels usually about ¼ in. long. Fruits velvety-brown.

Mengo; Masaka; Bunyoro. A very common understorey tree in the Budongo Forest, usually associated with Cynometra.

The wood is used for spear shafts.

(3) MAESOPSIS

MAESOPSIS EMINII Engl. (Photo. 40.) Eggeling 108.

Synonym. M.berchemoides A.Chev.

Musizi (Luganda); Muhongera (Lunyoro): MUSIZI.

Fast-growing deciduous tree usually 50-90 ft. high, sometimes attaining 140 ft. Bole shortly and bluntly buttressed, straight, cylindrical, free from branches for 30-70 ft. Bark thick, pale grey to almost white, deeply fissured. Slash pale red merging to yellow-white. Crown rounded when mature, usually flattened in young trees where the leading shoot is generally at a lower level than the surrounding branches. Leaves glossy, remotely toothed, lanceolate to broadly oblong-lanceolate, 3-6 in. long, 1-2 in. broad, apex gradually acuminate, base rounded; petiole about ⅓ in. long; stipules subulate. Flowers small, green, in rusty-pubescent axillary cymes ¾-1½ in. long; calyx valvate, 5-lobed; petals 5, enveloping the stamens. Drupe yellow, turning black on falling, oblong, about 1 in. long. Sapwood nearly white, sharply defined, up to 3 in. wide; heartwood bright yellow-green when freshly cut, turning pale brown on exposure, scentless and tasteless when seasoned, fairly soft but firm, medium and even in texture, the interlocking grain producing a well-marked stripe or ribbon on quarter-sawn surface, about equal in weight to red deal and superior to it in strength, working readily with tools, finishing to a smooth lustrous surface, nailing and staining well, requiring careful preparation and filling before varnishing or painting. The timber is not resistant to termites and under moist conditions is readily decayed by fungus; it responds readily to preservative treatment. Weight about 30 lb. per cu.ft. air dry.

Mengo; Entebbe; Masaka; Ankole; Mubende; Busoga. Chiefly in

secondary scrub and on the edge of forest. The tree is a coloniser of proximal grasslands, regenerating in the Acanthus fringe. As it is unable to regenerate in dense shade, it is only found as a relict in high-forest proper.

The timber is one of the most useful light hardwoods in Central Africa and can profitably be employed in place of imported red deal (Pinus sylvestris). It is very suitable for joinery and general indoor construction except where a high-quality paint finish is required.

Although the tree has been planted on a small scale by Native Administrations throughout the Protectorate, little is yet known regarding its exact sylvicultural requirements, and attempts to establish large plantations have so far met with little success.

The tree is sometimes planted as a shade for coffee, and is a useful avenue tree. It might usefully be tried as a nurse for Muvule (Chlorophora).

Hornbills and chimpanzees are very fond of the fruit, the former being important agents in the spread of the species.

(4) RHAMNUS

RHAMNUS PRINOIDES L'Hérit. Eggeling 1113, 2457, 2901.

Shrub or tree usually less than 15 ft. high, occasionally attaining 25 ft.; sometimes sub-scandent. Branchlets pubescent when young, glabrous when mature. Bark grey-brown, lenticellate. Leaves serrate, dark green, shining and prominently reticulate above, lanceolate-oblong to elliptic, up to 4 in. long and 1½ in. broad (usually 1-2 in. long and ½-¾ in. broad), apex acutely acuminate, base obtusely rounded to cuneate; petiole up to ½ in. long; stipules small, caducous or persistent. Flowers 2-10-together in the leaf-axils, greenish-yellow, 5-merous; pedicels up to ¾ in. long. Berries red, shiny, globular, up to ¼ in. long.

Kigezi (Virunga Mts.); Karamoja (Mt.Moroto); Bugishu (Elgon); Busoga. In scrub or forest, chiefly between 6,500 and 8,500 ft. but descending as low as 3,900 ft. and ascending as high as 10,000 ft.

Fig.53. Ziziphus mauritiana Lam. a. and b. Branchlets bearing young flowers, snowing size of leaf in (a.) medium-dry Savannah and (b.) in arid Savannah. c. Leaf from sterile shoot of medium-dry savannah tree d. Fruits. e. Flower x 2. All natural size.

(5) SCUTIA

SCUTIA MYRTINA (Burm.) Kurz — Eggeling 698, 2818.

Synonym. S.commersonii Brongn.

Mugasha (Lunyankole).

Thorny shrub or tree to 15 ft. in savannah, usually scandent and attaining 30 ft. on forest edges. Branchlets opposite or alternate; prickles recurved, grey with brown tips, usually about $\frac{1}{4}$ in. long. Leaves very variable in shape and size, shiny above, entire or weakly crenate, oblong to ovate- or lanceolate-elliptic, $1\frac{1}{4}$-$2\frac{1}{2}$ in. broad, apex usually rounded and mucronate but sometimes acute, base rounded; petiole grooved above, up to $\frac{1}{2}$ in. long. Flowers small, sessile or subsessile, white or yellow or yellow-green, crowded in stalked axillary clusters; sepals 5; petals 5; stamens 5; ovary 2-celled, with 1 ovule in each cell; peduncle up to $\frac{1}{4}$ in. long. Fruit $\frac{1}{4}$-$\frac{1}{2}$ in. diam., edible.

Mengo; Entebbe; Sesse; Masaka; Ankole; Toro; Teso; Karamoja; Bugishu; Busoga. Extending to 8,500 ft.

We include here Bagshawe 1162 and 303 originally determined as S.indica Brongn. and S.indica var. oblongifolia Engl. respectively.

(6) ZIZIPHUS

1. Branchlets unarmed (main limbs sometimes spinose) .... Z.pubescens

   Branchlets armed .... 2.

2. Leaves glabrous below or pubescent only on the nerves .... Z.mucronata

   Leaves softly tomentose all over the lower surface .... Z.mauritiana

ZIZIPHUS MAURITIANA Lam. (Fig.53). Eggeling 771,828,1749,2362,2573.

Synonyms. Ziziphus jujuba Hochst.; Z.abyssinicus Hochst.; Z.jujuba var. abyssinicus Hochst.; Z.orthacantha C.DC.

La[illegible] (Lugwara); Okodokodwoyi, Esilang (Luteso); Lango, Olango (Acholi): JUJUBE TREE.

Wickedly armed savannah shrub or tree, sometimes erect and attaining 25 ft. in height, more frequently scrambling and forming

impenetrable thickets. Twigs, lower leaf-surfaces and inflorescences densely white- to ochrey-tomentose. Bark grey-brown, fissured and scaly. Slash pink. Spines paired, brown, one straight and directed forwards and up to ¾ in. long, the other shorter and sharply recurved. Leaves very variable in size and shape, dark green and glabrous above, serrulate, elliptic to ovate- or elliptic-suborbicular, usually ¾-3 in. long and ½-2 in. broad, apex usually obtuse (sometimes mucronate), base usually unequal-sided; petiole up to ¼ in. long. Cymes longer than the petioles, sub-sessile to shortly pedunculate, 10-30-flowered; flowers yellow-white, fragrant; sepals tomentose outside; ovary 2-celled. Fruit smooth, shiny, spherical, red-brown, the size of a cherry (½-¾ in. diam.), with a sweet but rather dry pulp surrounding the large stone. Sapwood white; heartwood red-brown, hard, easy to saw, planing without picking up, taking a good polish.
Mengo (Bulemezi); West Nile; Madi; Gulu; Chua; Lango; Teso; Karamoja; Budama; Busoga. A very variable species attaining its greatest size in medium-dry savannah, where the leaves are larger and the spines less numerous than in the case of thicket-forming plants on arid sites.

The wood is said to resist termites, poles of this species being used for hut-building in Budama. The plant is sometimes planted as a live hedge in Chua and the spiny branches are used to form defensive enclosures for stock. The bark yields a cinnamon-coloured dye.

The fruits, which vary greatly in size and flavour, are not utilised as food in Uganda but in the Far East they are preserved in syrup and are sometimes dried and preserved like dates. The pulp macerated in water gives a refreshing beverage. Cakes, said to resemble gingerbread, are made from the dried and fermented pulp in the Sudan, and it has been suggested by Mungo Park that these were the food of the Lotus-Eaters of Pliny.

We include here Eggeling 828 originally determined as Z.sp. ? Z.spina-christi Willd.

ZIZIPHUS MUCRONATA Willd. Eggeling 627, 2980.

Muyumbu (Lunyankole): BUFFALO THORN.

Spiny tree or shrub to 30 ft.; it is frequently straggling or sub-scandent. Branchlets zig-zag, brown or dark brown. Twigs, petioles and inflorescence rusty-puberulous to almost glabrous. Stipular spines stout, similar to those of Z.mauritiana. Leaves thin, pale green, crenate-serrate, broadly ovate to ovate-cordate, usually 2-3½ in. long and 1½-2½ in. broad, apex usually broadly acuminate, base unequal-sided; petiole up to ½ in. long. Cymes axillary, sessile or subsessile, very small (shorter than the petiole), 10-20-flowered; flowers yellow-green; sepals glabrous outside, or very nearly so; ovary 2-celled. Fruit spherical, smooth, dark red-brown, ½-¾ in. diam., rather acrid and bitter, scarcely edible. Wood tough. Ankole; Karamoja (West Suk). Usually in stream-side thickets.

ZIZIPHUS PUBESCENS Oliv. Eggeling 1589, 1815.

Mukakwa (Lugungu).

Tree to 50 ft. or more. Bole dark grey, fissured, sometimes armed with sharp blackish spines up to 2 in. long. Branchlets grey or grey-brown, rusty pubescent when young, prominently lenticellate, zig-zag with very short internodes but not prominently so. Leaves crenulate, glabrous above, puberulous to pubescent below (especially on the nerves), elliptic, 1-2½ in. long, ½-1 in. broad, 3-nerved from the obtuse unequal-sided base, apex acute to acuminate; petiole less than ¼ in. long. Cymes axillary, sessile or sub-sessile, exceeding the petiole; flowers yellow-green, ~~usually~~ precocious or appearing with the leaves; calyx pubescent. Fruits ellipsoid, ¼ in. diam., edible.

Bunyoro (Bugungu); West Nile (Rumogi); Gulu; Teso. On the banks of rivers in savannah. Superficially the tree has a resemblance to Celtis integrifolia.

RHIZOPHORACEAE

CASSIPOUREA

1. Leaves glabrous or almost so ..... 2.

   Leaves hairy on the underside ..... 3.

2. Leaves entire or obscurely crenate, oblong to lanceolate-oblong, 3-5 in. long ..... C.ugandensis

   Leaves crenate-dentate, elliptic, 1¼-2½ in. long ..... C.elliottii

3. Leaves obovate to oblanceolate-elliptic ..... C.ruwenzoriensis

   Leaves narrowly oblong to narrowly lanceolate-oblong or oblanceolate-oblong ..... C.sp. nov.?

CASSIPOUREA ELLIOTTII (Engl.) Alston Eggeling 2727.

PILLAR WOOD.

Understorey tree 30-60 ft. high in mountain forest. Bole cylindrical (the tree takes its common name from the pillar-like nature of the stem), rarely exceeding 3 ft. in girth at breast height. Bark smooth, with well-marked horizontal lines of lenticels. Slash orange. Leaves coriaceous, prominently reticulate, up to 1¼ in. broad, apex obtuse; petiole glabrous, up to ¼ in. long. Flowers small, yellow-green, usually 3-together in the axils of the leaves; ovary glabrous or nearly so. Wood pale greyish-yellow, often banded with grey or grey-brown, straight-grained, fine and even in texture, medium hard, very strong and elastic, durable, not entirely resistant to termites, easy to saw, planing readily to a smooth finish, mortising and recessing without chipping, moulding and bending well, easy to nail, holding the nails without splitting. Weight 46 lb. per cu. ft. air dry.

Karamoja. Common in the Debasien forests; 6-9,000 ft.

The timber is suited for constructional work requiring great strength, elasticity and a high modulus of rupture and is especially recommended for the bolster beams of railway trucks; it has been used with success for telegraph cross-arms. As a building pole for temporary buildings it is said to have no equal.

CASSIPOUREA RUWENZORIENSIS (Engl.) Alston Eggeling 3171, 3303.

Understorey tree to 40 ft. with the habit of Celtis soyauxii. Branchlets yellow-tomentose. Leaves crenate-serrate, 2-5 in. long, up to 2 in. broad, abruptly acuminate at the apex, cuneate to the base, glabrous above except the lower part of the midrib, hairy on the nerves below and on the margin; petiole hairy, up to $\frac{1}{3}$ in. long. Flowers fragrant, greenish-white with orange centres, borne in dense clusters in the axils of the leaves in great profusion; ovary densely covered with long yellow-brown hairs; pedicels short.

Mengo; Masaka; Ankole; Kigezi. A very common understorey tree in the Impenetrable Forest, Kigezi.

CASSIPOUREA UGANDENSIS (Stapf) Alston Dawe 499.

Synonym. Dactylopetalum ugandense Stapf

Understorey tree to 70 ft. or more. Bark pale grey. Leaves coriaceous, 2-5 in. long, $1\frac{1}{4}$-$1\frac{3}{4}$ in. broad, subacute at the apex, broadly cuneate at the base; midrib prominent above; petiole orange, $\frac{1}{3}$ in. long. Flowers subsessile, clustered at the nodes. Wood dirty white, medium open in grain, hard to saw and giving off an offensive smell, planing easily though the grain rips out a little, turning fairly well; it will not take nails, being fissile. Weight 44 lb. per cu.ft. air dry.

Masaka; Toro.

CASSIPOUREA SP. NOV. ? Eggeling 3250, 3263.

Understorey tree to 80 ft. Leaves crenate-serrate, 3-5 in. long, $\frac{3}{4}$-$1\frac{1}{4}$ in. broad, glabrous above, sparingly hairy below, apex long-acuminate, base cuneate; petiole puberulous, up to $\frac{1}{3}$ in. long. Flowers greenish with numerous white stamens, in stalked clusters in the axils of the leaves; pedicels up to $\frac{1}{5}$ in. long; ovary densely silky-pubescent.

Kigezi. A common understorey tree in the Impenetrable Forest.

ROSACEAE

1. Leaves pinnate ..... (1) Hagenia
   Leaves simple ..... 2.

2. Style basal; flowers irregular, the stamens all on one side of the flower ..... (2) Parinari
   Style terminal; flowers regular ..... (3) Prunus

(1) HAGENIA

HAGENIA ANTHELMINTICA J.F.Gmel. (Photo. 41). Kabeling 13-8.

Synonyms. H.abyssinica Willd.; Brayera anthelmintica Kunth.

Omujasi (Luchiga).

Tree to 50 ft. in mountain forest. Crown rounded or umbrella-shaped. Bark red-brown, flaking raggedly. Branchlets densely villous with golden hairs, annulate from the scars of the sheathing stipulate leaf-bases, the rings at first hirsute with long ascending hairs. Leaves imparipinnate, tufted; stipules 1-4 in. long, reddish when young, adnate to the petiole throughout their length and forming two linear wings, villous on the lower face, pubescent to glabrous above; rhachis densely villous, usually with small leafy lobes inserted between the leaflets. Leaflets usually 11 or 13, obtusely serrate, opposite or subopposite, sessile or subsessile, oblong-lanceolate, 3-6 in. long, ¾-1¾ in. broad, acuminate at the apex, obliquely rounded to subcordate at the base, glabrescent above, silvery villous to pubescent below. Panicles pendant, 1-2 ft. long, the pistillate inflorescence shorter and bulkier than the plum-like staminal panicle; flowers polygamo-dioecious, reddish (female flowers) to orange-buff (male flowers); sepals 8 or 10 in two series; petals 0, 4 or 5; stamens 8-10 or more. Wood dark red to red-brown, medium-soft, coarse grained, not durable and subject to attack by borer but of handsome appearance and meriting trial for furniture, cabinet-making, etc. Weight 37-40 lb. per cu.ft. air dry.

Kigezi; Toro; Chua; Karamoja; Bugishu. A common tree of mountain forest, 8-10,000 ft., often associated with Arundinaria bamboo.

Fig.54. Parinari curatellaefolia Planch. a. Inflorescence. b. Young fruits c. Fruit. Parinari excelsa Sabine d. Leaf. All natural size.

The inflorescence possesses valuable anthelmintic properties.

(2) PARINARI

Leaves oblong-elliptic, rounded at the apex .... P.curatellaefolia

Leaves elliptic to ovate-elliptic, acuminate at the apex ..... P.excelsa

PARINARI CURATELLAEFOLIA Planch. (Fig.54). Eggeling 633, 870, 1486.

Synonym. Parinarium curatellaefolium Planch.

Munazi (Luganda of Buddu); Angili (Lugwara, Kakwa, Madi).

Savannah shrub or tree to 40 ft. Bark dark brown to almost black with small prominent corky scales up to 1 inch square. Slash dull red. Leaves closely reticulate, pale green above, grey-tomentose beneath, up to 4 in. long and 2½ in. broad, rounded to slightly cuneate at the base; petiole with 2 glands near the middle; lateral nerves 14-20 pairs. Panicles lax, open, many-flowered; flowers small, silky-tomentose; calyx 5-lobed, grey-green; petals 5, pinkish-white; stamens 10, some with pink anthers. Fruit ovoid, 1-1½ in. long, shining pale red-brown, covered with small grey lenticels. Wood pale brown to yellow-red, hard, difficult to saw and plane. Weight 48 lb. per cu.ft. air dry.

Masaka; Ankole; West Nile; Madi.

The sweet mealy pulp surrounding the seeds is edible and so are the fruit-kernels; both are used as a food in West Nile and Madi.

PARINARI EXCELSA Sabine Eggeling 1516,3100,3222,3652.

Synonyms. P.holstii Engl.; Parinarium excelsum Sabine; P.holstii Engl.

Mushimba (Luchiga); Mubura (Lunyankole); Ebura (Lutoro); Munazi (Luganda of Buddu): GREY PLUM.

Evergreen forest tree to 150 ft. Crown thick, rounded, dark-green, with patches of yellow where the young leaves are unfolding. Viewed from below the foliage is buff-brown. Buttresses short and rounded, similar to those of Chlorophora. Bark pale grey-brown, usually slightly scaly or fissured, sometimes smooth. Slash meat red. Leaves (Fig.54) softly and shortly buff- tomentose below, 2-5 in.

long, ¾-1½ in. broad, cuneate at the base; petiole with 2 glands near the middle; lateral nerves 20-30 pairs. Panicles terminal, leafy, buff-tomentose; flowers grey-white to pink. Fruit lenticellate, rough-skinned, obliquely-ellipsoid, about 1½ in. long; it has a soft edible yellow flesh with a peculiar flavour not unlike that of avocado pear. Sapwood yellow-white, said to have a honey-like or beeswax-like smell when freshly cut; heartwood yellow-brown, darkening to red-brown on exposure, hard, open-grained, strong, said to be very durable though the live tree is sometimes attacked by borer, tough, difficult to saw, tending to pick up under the plane, resistant to nails, turning badly; weight 51-56 lbs. per cu.ft. air dry. Masaka; Ankole; Kigezi; Toro; Bunyoro; West Nile. The dominant tree in the Kalinzu forest in Ankole and a common species in the forests of Kigezi and Toro; it is rare in Masaka, Bunyoro and West Nile.

Owing to its hardness, the timber is but little utilised by natives and little is known concerning its properties. It appears well-suited for all types of constructional work exposed to weather and could be used for bridge-building, wagon-frames and purposes requiring resistance to wear and tear. The wood can stand exposure to damp and is durable in contact with the ground; it may prove valuable for use in mines.

(3) PYGEUM

PYGEUM AFRICANUM Hook.f. Eggeling 1136,1459,2402,3086, 3264.

Ntasesa (Luganda); Ngwabuzito, Gyabazito (Luganda, Buddu dialect); Ngote (Lunyoro, Toro dialect); Mugote (Lunyoro, Ankole dialect); Omumba (Lunyoro, dialect of the Bakiga): RED STINKWOOD.

Forest tree to 120 ft., ~~somewhat resembling the Bird Cherry, Prunus avium when young.~~ Bark dark brown, scaling raggedly. Leaves crenate, glabrous, elliptic to oblong, 2-6 in. long, 1-2½ in. broad, apex shortly acuminate, base rounded to shortly cuneate; petiole reddish, up to ¾ in. long. Flowers small, creamy-white, fragrant, in simple racemes shorter than the leaves arising from the lower parts of the branchlets; petals woolly on the margin; pedicels spreading, up to 1/5 in. long. Fruit dry, red, glabrous, depressed-globose, up to ½ in. diam., bearing the short persistent

style. Sapwood pale pink; heartwood pale red, darkening to rich dark red on exposure, strong, durable, hard, fairly straight and even in grain, planing and sawing exceptionally well, moulding and turning well, splitting if nailed near edges, polishing highly without filling, staining readily; weight about 48 lbs. per cu.ft. air dry. A useful timber for bridge decking, heavy constructional work and sleepers; also suitable for strong furniture, window and door frames, etc. Mengo; Entebbe; Masaka; Ankole; Kigezi; Toro; Bunyoro; Chua; Karamoja; Bugishu. Chiefly on the edge of forest, attaining its greatest size in the moist mountain forests of the Western Province.

In Kenya, where it is known as Mueri, the timber was formerly in great demand for wagon-building. Nowadays it is chiefly used for building work where a strong tough wood is required. The Kenya and Uganda Railways use large quantities for bolsters, buffer-beams, station barrows, hubs, felloes, and hamali carts.

It is a difficult wood to season as it warps and splits badly.

Round poles of a size suitable for hut-building are not very durable as the sapwood is quickly attacked by insects.

RUBIACEAE *

* Note. I have not keyed Morelia senegalensis A. Rich. In West Africa this is sometimes a tree up to 30ft. or more. In Uganda it has only been recorded as a shrub.

1. Ovules 2 or more in each ovary-cell ..... 2.
   Ovules solitary in each ovary-cell ..... 18.

2. Fruit a capsule; seeds winged ..... 3.
   Fruit a berry or indehiscent; seeds not winged 6.

3. Flowers in globose heads (Tribe NAUCLEAE) .... 4.
   Flowers never in globose heads (Tribe CINCHONEAE) 5.

4. Calyx-tubes confluent; corolla imbricate; fruit a fleshy capsule ..... (19) Sarcocephalus
   Calyx-tubes not confluent; corolla valvate; fruit a capsule ..... (14) Mitragyna

5. Corolla-lobes valvate; flowers in a simple or slightly branched spike-like raceme; some of the bracts enlarged and more or less petaloid ..... (12) Hymenodictyon
   Corolla-lobes contorted; flowers numerous in dense terminal corymbs; none of the bracts enlarged ..... (6) Crossopteryx

6. Inflorescence elongated, spike-like (Tribe HAMELIEAE) ..... (2) Bertiera
   Inflorescence corymbose or flowers solitary (Tribe GARDENIEAE) ..... 7.

7. Anthers transversely locellate ..... (7) Dictyandra
   Anthers not locellate ..... 8.

8. Ovary 1-celled, with parietal placentas ..... (9) Gardenia
   Ovary 2- or more-celled, with axile placentas 9.

9. Style cleft at the apex ..... 10.
   Style entire at the apex or at most dentate or branches connivent ..... 11.

10. Ovules attached to thick fleshy placentas and more or less sunk in them ..... (21) Tricalysia
    Ovules attached to thin placentas, not sunk in them ..... (8) Galiniera

11. Flowers solitary or few together ..... (18) Randia
    Flowers numerous ..... 12.

12. Inflorescence ~~a loose~~ terminal ~~corymb~~ ..... (20) Tarenna

Inflorescence ~~an~~ axillary ~~cyme~~ ..... (16) Oxyanthus

13. Ovule pendulous from near the top of the ovary-cell ..... 14.

Ovule erect from near the base or peltately attached towards the middle of the ovary-cell ..... 17.

14. Corolla-lobes valvate (Tribe VANGUERIEAE).... 15.

Corolla-lobes contorted (Tribe ALBERTEAE).... 21.

15. Inflorescence cymose-racemose; calyx lobed; style shortly exserted ..... (22) Vangueria

Inflorescence umbellate or cymose-corymbose; calyx truncate or minutely denticulate; style often long-exserted ..... 16.

16. Style bifid, at least at the tip ..... (5) Craterispermum

Style subentire, calyptriform ..... (3) Canthium

17. Corolla-lobes contorted (Tribe IXOREAE) ..... 18.

Corolla-lobes valvate ..... 19.

18. Bracteoles connate into a cupular epicalyx .. (4) Coffea

Bracteoles not connate into an epicalyx ..... (17) Pavetta

19. Calyx-tubes confluent; fruits more or less united into a mass (Tribe MORINDEAE).....(15) Morinda

Calyx-tubes not confluent; fruits not united into a mass (Tribe PSYCHOTRIEAE)..... 20.

20. Flowers axillary, fasciculate ..... (13) Lasianthus

Flowers terminal, paniculate or capitate .....(10) Grumilea

21. Style short, with two long stigmas ..... (1) Belonophora

Style long with two short stigmas or with a single stigma ..... (11) Heinsenia

(1) BELONOPHORA

BELONOPHORA GLOMERATA M.B.Moss Eggeling 1613, 1791.

Understorey shrub or tree to 40 ft. Leaves elliptic to obovate-elliptic, 5-9 in. long, 1½-3 in. broad, apex caudate-acuminate, base cuneate; stipules triangular to subulate, ½-⅔ in. long. Flowers

sessile, white, fragrant, ½-¾ in. long, in clusters of 3-10, usually from the axils of fallen leaves.

Entebbe; Bunyoro; Madi.

(2) BERTIERA

BERTIERA RACEMOSA (G.Don) K.Schum. Eggeling 474.

Understorey shrub or tree to 25 ft. Branchlets 4-sided. Leaves oblong-elliptic, usually 8-10 in. long and 3-5 in. broad, apex acutely acuminate, base narrowly rounded; stipules ovate-triangular, acute, up to 1 in. long. Inflorescence a spike-like panicle of subsimple drooping racemes; flowers tubular, whitish, about ¾ in. long; calyx pubescent towards the base with scattered hairs; corolla densely silver-pubescent. Berry globose or ellipsoid, ¼-½ in. diam., crowned with the persistent ~~persistent~~ calyx-limb.

Mengo; Entebbe; Sesse; Masaka.

I include here Uganda Forest Dept. 96 originally determined as B.montana Hiern .

(3) CANTHIUM

1. Inflorescence a sessile fascicle ..... 2.
   Inflorescence a pedunculate cyme ..... 3.

2. Corolla acute in bud; calyx-lobes broadly ovate ..... C.euryoides
   Corolla rounded in bud; calyx subtruncate or undulately lobed ..... C.schimperianum

3. Flowers 4-merous ..... 4.
   Flowers 5-merous ..... 5.

4. Midrib and lateral nerves (and sometimes the whole surface of the leaf) red below..... C.rubrocostatum
   Midrib and lateral nerves not red below..... C.vulgare

5. Leafy shoots with only one pair of leaves... C.lactescens
   Leafy shoots with more than one pair of leaves ..... C.crassum

RUBIACEAE (232)

CANTHIUM CRASSUM Hiern Eggeling 1696.

Savannah shrub or tree to 15 ft. Bark very thick, fire-resistant, sometimes pale in colour, sometimes almost black. Leaves glabrous above, glabrous to shortly tomentellous below, up to 6 in. long and 2½ in. broad, apex usually obtuse to rounded (sometimes almost acuminate), base cuneate; stipules persistent, acuminate, lanceolate, ¼-½ in. long; petiole ½-¾ in. long. The lower surface of the leaf is very much paler than the upper surface and is markedly reticulate. Flowers greenish-white. Fruit yellow-green, up to 1½ in. diam.
Chua; Teso.

CANTHIUM EURYOIDES Bullock ex Hutch. & Dalz. Brasnett 114.

Spreading bush or tree to 30 ft. Bark pale grey-brown. Leaves glabrous, glossy above, ovate-elliptic to ovate-lanceolate, 2-3 in. long, ¾-1¾ in. broad, apex gradually acuminate, base cuneate; petiole short. Flowers densely clustered, usually only about two per cluster maturing. Fruit obliquely oblong, ⅓-½ in. long.
Ankole; Karamoja.

Closely related to C.schimperianum A.Rich.

CANTHIUM LACTESCENS Hiern Eggeling 626.

Synonym C.lactescens var. grandifolium S.Moore

Shrub or small tree in ravines and gullies on rocky hillsides. Leaves dark green, fleshy, glabrous, oblong-elliptic to ovate or suborbicular, 4 to 6 in. long, 2½-4½ in. broad, apex triangular-subacute, base cuneate to cordate; stipules persistent, leathery, subacute, triangular, ¼-½ in. long; petiole ½-¾ in. long. Flowers creamy.
Ankole.

CANTHIUM RUBROCOSTATUM Robyns Eggeling 3011.

Understorey tree to 30 ft. Bark pale grey. Leaves glabrous, ovate to oblong-elliptic, 2½-5 in. long, 1-2½ in. broad, apex acuminate, base acute to broadly rounded; stipules

subulate, up to ¾ in. long; petiole ¼-⅓ in. long. Flowers small, white, fragrant. Fruit ¼ in. diam.

West Nile.

CANTHIUM SCHIMPERIANUM A.Rich. Eggeling 2191.

Shrub or tree. Bark granular, rough, dark grey. Leaves very glossy on the upper surface, ovate to ovate-lanceolate, 1½-2¼ in. long, ¾-1¼ in. broad, apex obtuse, base acute; stipules ovate to lanceolate-subulate, up to 1/5 in. long; petiole less than ¼ in. long. Flowers white, fragrant, numerous; pedicels up to ½ in. long. Fruit ¼ in. long. Wood white, hard, easy to work, regarded in Kenya as almost as useful as that of Brachylaena.

Toro (in forest near the mouth of the Mpanga River); Bunyoro (in scrub on the Lake Albert flats).

In Kenya this species sometimes attains a diamete of 2 ft. but in Uganda it is always small(usually shrubby).

CANTHIUM VULGARE (K.Schum.) Bullock Eggeling 191,540,723,3136.

Synonyms. C.golungense Hiern; C.golungense var. parviflorum S.Moore

Shrub or tree to 35 ft. in secondary scrub and on forest-edges. Leaves glossy above, ovate to oblong-ovate, 2½-4½ in. long, 1¼-2 in. broad, apex acuminate, base acute to rounded; stipules subulate, broad-based, less than ¼ in. long; petiole up to ½ in. long. Flowers creamy-white, fragrant. Fruit green, ¼ in. diam.

Mengo; Entebbe; Sesse; Masaka; Ankole; Toro; Bunyoro; Teso.

(4) COFFEA[x]

x Coffea eugenioides S.Moore ('Nandi' coffee) and Coffea spathicalyx K.Schum. are not included. They are never larger than shrubs.

Corolla 5-lobed; leaves long-acuminate, elliptic, usually 8-10 in. long and 2½-4 in. broad..... C.canephora

RUBIACEAE (232)

Corolla 6-9-lobed; leaves shortly and obtusely acuminate, broadly obovate-elliptic, usually 13-16 in. long and 6-8 in. broad ..... C.excelsa

COFFEA CANEPHORA Pierre Eggeling 1242,1456,1604,3117.

Synonym. C.robusta Linden

Mwanyi (Lunyoro): WILD ROBUSTA COFFEE.

Heavily foliaged understorey shrub or tree usually 6-12 ft. high, exceptionally attaining a height of 25 ft. with a girth of 12-15 in. at breast height. Branches down-curved. Leaves 6-12 in. long, 2-6 in. broad, rounded to cuneate at the base. Flowers white, very fragrant, ¾ in. long, numerous in each leaf-axil, with leafy bracts scattered among them; corolla-tube almost as long as the lobes. Berry red, up to ½ in. long.

Mengo; Entebbe; Sesse; Masaka; Toro; Bunyoro; Madi; Busoga.

The commonly cultivated C.robusta is a form of the above. It was discovered wild in the Congo Basin by Laurent in 1898.

(Straight on)

COFFEA EXCELSA A.Chev. Eggeling 1250.

SHARI COFFEE.

Understorey shrub or tree 15-25 ft. high, with girth of 18-24 in. at breast height. Leaves cuneate at the base. Flowers white, sweet-scented, 1-1½ in. long, few in each leaf axil, without interspersed leafy bracts. Berry red, ½-¾ in. long.

Toro (Bwamba); Madi (Zoka Forest).

A rare species in Uganda, found in Oil-Palm (Elaeis) forest in Bwamba and as an understorey to Khaya in the Zoka forest in E.Madi.

We include here Hazel 154 originally determined as C.liberica Hiern .

(5) CRATERISPERMUM

CRATERISPERMUM LAURINUM Benth. Eggeling 110, 1527, 3198.

Glabrous understorey shrub or tree to 20 ft. Leaves closely reticulate, coriaceous, yellow-green when dry, oblong-obovate, 3-6 in. long, 1-2 in. broad, apex shortly and obtusely pointed, base cuneate; petiole about ½ in. long. Flowers waxy-white, tubular, ¼ in. long, in stalked axillary clusters; calyx cupular, truncate; lobes and throat of corolla pubescent inside; anthers well exserted from the corolla-tube on long filaments; peduncle stout, up to ¼ in. long. Fruit shortly stalked, up to ¼ in. diam., blue-black when ripe.

Entebbe; Sesse; Masaka; Ankole; West Nile. The commonest understorey tree in the Kalinzu forest, Ankole.

In Ankole the plant is used to make live fences owing to its resistance to fire and the ease of cultivatation.

We include here Maitland 194 and Bagshawe 146, both originally determined as C.brachynematum Hiern; also Bagshawe 616 originally determined as C.schweinfurthii Hiern .

(6) CROSSOPTERYX

CROSSOPTERYX FEBRIFUGA Benth. Eggeling 755,1505,1861,1949.

Synonym. C.kotschyana Fenzl

Elecherai (Luteso).

Savannah tree to 30 ft. with rounded crown and pendulous pubescent branches which hang down almost to the ground. Bark pale grey to pale brown, covered with small grey crumbly scales. Slash salmon-pink. Leaves mostly pubescent below, elliptic to suborbicular, 2½-4½ in. long, 1½-2½ in. broad, apex rounded to shortly acuminate, base broadly cuneate to rounded; stipules small. Flowers sickly fragrant, creamy white, tinged with pink on the corolla-tube, 5-merous, very numerous in rather dense corymbose panicles which droop under their own weight; bracts small, linear; calyx very small; corolla tubular, tomentose, about 1/3 in. long; stamens shortly exserted; style long-exserted, stigma ellipsoid. Fruit a subglobose blackish capsule ¼-1/3 in. diam., splitting into two sections across the two black seeds; seeds thin and flat, surrounded by a narrow jagged wing. The two halves of the capsule are very persistent and remain on the tree for a long time after the seed has been shed. Wood pale brown to pinkish, of very fine texture, hard, very durable, sawing and planing to a smooth finish, seasoning well, taking a good polish; it is not unlike pearwood. Weight 57 lb. per cu.ft. air dry.

West Nile; Madi; Gulu; Teso.

(7) DICTYANDRA

DICTYANDRA ARBORESCENS Welw. ex Benth. & Hook.f. Eggeling 535.

Understorey shrub or tree to 30 ft. Leaves glossy dark green, clustered near the ends of the branches, slightly pubescent in the axils of the nerves below, obovate-elliptic, 5-8 in. long, 1½-3 in. broad, apex shortly acuminate, base cuneate; stipules broadly triangular, up to 1/3 in. long; petiole ½-1 in. long. Inflorescence a lax cyme; flowers white, fragrant, 1-1½ in. long; calyx-lobes broadly elliptic, about 1/3 in. long, having one margin thickened and recurved; corolla about 2½ times as long as the calyx, silky tomentose outside, the lobes overlapping to the left in bud; anthers transversely locellate; style hairy. Fruit a green guava-like berry about [illegible] in. long, crowned by the persistent leafy calyx; seeds black.

Mengo; Entebbe; Sesse; Masaka; Ankole; Bunyoro.

Madi; Gulu; Chua; Lango; Teso; Busoga.

(8) GALINIERA

GALINIERA COFFEOIDES Del. Eggeling 1120, 1212, 1302, 2437, 3203.

Shrub or tree to 30 ft., usually on the edge of forest. Bark pinkish grey. Crown thin, rounded, composed of several whorls of slender horizontal or down-curved branchlets. Leaves shiny above, pubescent on the nerves below, elliptic-oblong, 3-10 in. long, 1-3½ in. broad, apex shortly acuminate, base cuneate; petiole up to 1 in. long; stipules triangular, up to ⅓ in. long. Inflorescence an axillary corymbose cyme 1-2 in. long; flowers waxy, white tinged with pink, fragrant, ¼-⅓ in. long, resembling those of coffee. Berry red, ¼ in. diam.

Ankole; Kigezi; Toro; ~~Fere~~; Chua; Bugishu. In mountain forest 5-8,500 ft.

We include here three specimens (Forest Dept. 2; Maitland 948; Scott-Elliot 7704) originally determined as Rhabdostigma sp. .

(9) GARDENIA

1. Young shoots and outside of calyx-tube densely tomentose .... G. erubescens

   Young shoots and calyx-tube at most puberulous or viscid .... 2.

2. Corolla-tube much widened towards the top, 4-5 in. long; leaves 5-8 in. long .... G. imperialis

   Corolla-tube only slightly widened towards the top, 2-4 in. long; leaves 1½-5 in. long .... G. jovis-tonantis

GARDENIA ERUBESCENS Stapf & Hutch. Eggeling 1520, 1807.

Savannah shrub or tree to 20 ft., usually stunted and twisted in growth. Bark pale. Branchlets silky-tomentose. Leaves often pinkish when dry, glabrous, subsessile, broadly obovate, usually 2½-4 in. long and 1-2 in. broad, rounded at the apex, cuneate at the base. Flowers white, fragrant; calyx-lobes filiform, up to ½ in. long; corolla-tube 2-3 in. long, pubescent outside, lobes about 1 in. long. Fruit unribbed, spindle-shaped, 2-3 in. long, yellow, somewhat fleshy, edible but not very agreeable. Wood yellow, tough and hard like boxwood.

Fig.55. Gardenia jovis-tonantis (Welw.) Hiern a. Leaf and half-open flower. b. Fully expanded flower c. Flower-bud d. Young fruit. All natural size.

West Nile; Madi. Usually found accompanying G.jovis-tonantis. In addition to the distinctions indicated in the key, G.erubescens has usually 5-7 corolla-lobes whilst G.jovis-tonantis has usually 8-9.

GARDENIA IMPERIALIS R.Schum. Eggeling 1834.

Synonym. G.viscidissima C.Moore

Tree to 30 ft. on the margin of streams, lakes and swamps. Trunk grey, up to 2 ft. diam. at breast height. Branchlets stout. Young parts viscid. Leaves shining, obovate, 2½-5 in. broad, apex rounded to (rarely) shortly acuminate, base ballooned upwards on either side of the midrib. Flowers erect, very fragrant, up to 3 in. diam. across the top; calyx 8-lobed, up to ½ in. long; corolla-tube white inside, pink outside; corolla-lobes white within, pink and white flecked with deep red outside (the pink portion being the part exposed to the light when the flower is in bud); anthers 1-1½ in. long; stigma exserted, large, yellow, club-shaped. Fruit red-brown, ovoid to ellipsoid, 2-2½ in. long, up to 1¼ in. diam., crowned with the persistent calyx; seeds numerous, embedded in the fleshy pulp. Sap-wood yellow-white; heartwood dark black-brown, not black enough to be classed as an ebony.

Sesse; Masaka; West Nile.

GARDENIA JOVIS-TONANTIS (Welw.) Hiern (Fig. 55). Eggeling 317,692,849,1800.

Ekoryayi (Luteso); Odwong (Acholi; Lango).

Savannah shrub or tree to 15 ft., usually stunted and twisted. Bark pale, puberulous. Leaves obovate, up to 2½ in. broad, apex rounded to broadly acuminate, base cuneate. Flowers creamy-white, fragrant; calyx-lobes variable, sometimes small and filiform, sometimes large and almost spathulate; corolla-lobes 8-9 (rarely 7), 1-1½ in. long; corolla-tube glabrous, 2-3 in. long; ovary 9-merous. Fruit sub-woody, ellipsoid or spindle-shaped, sometimes curved, 2-4 in. long, up to about 1 in. diam. Wood pale red to yellow, very hard and compact, fine-grained like box (for which it can be used as a substitute), probably resistant to insect attack.

Entebbe (Gomba); Mengo (Bugerere); Masaka; Ankole; West Nile; Madi; Gulu; Chua; Lango; Teso; Busoga.

I include here Speke & Grant 763, Dawe 240 and Snowden 213 originally determined as G.lutea Fresen.; also Wilson 146 and Bagshawe 227 originally determined as G.thunbergia L.f.

The specific name derives from a native superstition in Angola and elsewhere that the plant is a protection against lightning.

(10) GRUMILEA

Leaves not pitted in the nerve-axils ---------- G. buchananii
Leaves pitted below in the nerve-axils ---------- G. megistosticta

GRUMILEA BUCHANANII K.Schum. Thomas 845.

Spreading understorey tree to 20 ft. in secondary scrub and on the edge of forest. Leaves dark green, oblong-elliptic, 5-8 in.long, 2-3 in.broad, apex shortly acuminate, base cuneate; petiole up to 1 in. long. Flowers white in terminal spreading paniculate cymes; petals reflexed. Berries red.
Sesse.

GRUMILEA MEGISTOSTICTA S.Moore Eggeling 1359.

Understorey tree to 40 ft. Branchlets nodose. Leaves dark green, with a row of deep pits in the axils of the lateral nerves, elliptic, 3-6 in. long, $1\frac{1}{4}$-$2\frac{1}{2}$ in.broad, apex acuminate, base cuneate to obtusely rounded; petiole up to 1 in. long. Flowers greenish-white, waxy, in terminal branched cymose panicles. Fruit brown.
Toro. A common tree of the Ruwenzori forests; 6,500-8,500 ft.

I include here the following -: Uganda Forest Dept. 3 originally determined as Psychotria sp. and later referred to Grumilea exserta K. Schum.; Eggeling 1359 determined as G.sp. near G.buchananii K. Schum.; Fishlock & Hancock 13 determined as G.succulenta (Schweinf.) Hiern; and Dawe 546 originally called Psychotria sp.near P.longevaginalis Schweinf. but later referred to Grumilea succulenta (Schweinf.) Harms.

(11) HEINSENIA

HEINSENIA DIERVILLOIDES K.Schum. Eggeling 3175.

Understorey tree to 30 ft. Leaves oblanceolate to oblanceolate-

Fig.56. Hymenodictyon floribundum (Hochst. ex Steud.) B.L. Robinson a. Flowering branch snowing leaves, flower-spike and bracts. b. Flower. c. Capsule. d. Valve of Capsule. e. Seed. All natural size.

elliptic, 3-6 in. long, ¾-1¾ in. broad, apex acuminate, base long-attenuate; midrib and lateral nerves impressed above, very prominent below. Flowers white, spotted in the throat with brown, in short axillary cymes.
Ankole (Kalinzu Forest).

(12) HYMENODICTYON

Leaves scabrid-pubescent, 1-2 in. long ---------- H. scabrum
Leaves not scabrid-pubescent, 3-7 in. long ------ H. floribundum

HYMENODICTYON FLORIBUNDUM (Hochst. ex Steud.) B.L. Robinson (Fig. 56). Eggeling 650,1767.

Synonym. H. kurria Hochst.

Deciduous savannah shrub or tree to 30 ft. on stony hillsides or rocky outcrops. Bark grey-black. Leaves green at first, turning scarlet before falling, puberulous on the veins below or quite glabrous, obovate, 1½-3½ in. broad, apex abruptly acuminate, base cuneate; petiole about 1 in. long. Inflorescence an unbranched spike-like raceme 3-9 in. long, with a pair of leafy long-stalked lanceolate bracts 2-3 in. long at the base of the flower-bearing portion; flowers red; calyx and ovary softly pubescent; corolla very narrow at the base, 1/5 in. long; style long-exserted. Fruit capsular narrowly ellipsoid, subobtuse at each end, about ½ in. long; seed with a triangular bilobed wing at one end.
Masaka; Ankole; Kigezi; Toro; Bugishu.

HYMENODICTYON SCABRUM Stapf Eggeling 845,1689.

Deciduous savannah shrub or tree on dry hillsides or rocky out-

(Straight on)

outcrops; it is usually less than 10 ft. in height but occasionally attains as much as 25 ft. Bark pale grey-brown. Young branches and petioles red. Leaves oblanceolate to obovate-lanceolate, ¾-1¼ in. broad, apex shortly acuminate, base attenuate; petiole less than ¼ in. long. Inflorescence branched, up to 3 in. long, the branches spike-like; flowers yellow-red. Capsule grey-brown, warted, ovoid-oblong, acute, ½-⅝ in. long, ⅓ in. diam.; seeds 6-7, elliptic, about ⅓ in. long including the wing.

Madi; Gulu; Chua.

(13) LASIANTHUS

*LASIANTHUS SP. NOV. Eggeling 3200, 3294.

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*Lasianthus seseënsis M.R.F.Taylor, the only other member of the genus occurring in Uganda, is a shrub 4-5 ft. high.

Understorey shrub or small tree. Leaves oblong-lanceolate, 6-8 in. long, 1¼-2 in. broad, apex long-acuminate, base unequal-cuneate; lateral nerves prominent, arched, 8-9 on each side of the midrib; stipules small, triangular, pilose outside; petiole up to ¼ in. long. Flowers white, crowded in small axillary clusters.

Ankole (Kalinzu Forest); Kigezi (Impenetrable Forest).

(14) MITRAGYNA

Calyx distinctly and deeply lobed ..... M.rubrostipulacea

Calyx more or less truncate at the apex ..... M.stipulosa

MITRAGYNA RUBROSTIPULACTA (K.Schum.) Hutch. Eggeling 1531, 3134, 3667, 3731.

Synonym. Adina rubrostipulata K.Schum.

Nzingu (Luganda); Musiku (Lunyankole).

Tree to 50 ft., in swamp forest. Bark grey, fairly smooth. Leaves smooth and shining, glabrous above, usually sparingly pubescent on the nerves below, broadly elliptic to suborbicular, 3½-11 in. long, 3-8 in. broad, (usually 4-6 in. long and 3-4 in. broad), apex very shortly and obtusely acuminate, base rounded to sub-cordate; stipules pale green to reddish, broadly elliptic to suborbicular, up to 3 in. long; petiole ½-2 in. long. Inflorescence cymose or subumbellate;

Fig.57. Mitragyna stipulosa (DC.) O.Ktze. a. Flowering branch x½. b. Flower, natural size c. Flower and bracts x 2.

flowers yellow-white, very fragrant (clover-scented), in dense long-pedunculate spherical heads about 1 in. diam., intermixed with numerous linear-spathulate bracteoles. Capsule about [illegible] in. long, crowned by the persistent calyx-tube. Wood pinkish brown (sapwood scarcely differentiated), fine and uniform in texture, straight-grained, scarcely figured. Weight about [illegible] lb. per cu.ft. air dry.

Masaka; Ankole; Toro; West Nile.

MITRAGYNA STIPULOSA (DC.) O. Kuntze. (Fig. 57). Eggeling 102, [illegible], [illegible].

Synonym. Mitragyna macrophylla (Perr. & Lepr.) Hiern

Muzingu (Luganda); Ki (Madi); Chul (Acholi); Muho (Lunyoro):

ABURA (Trade name).

Tree to 100 ft. in swamp forests. Crown rounded. Bark grey-brown. Buttresses small and blunt. Branches quadrangular. Leaves dark green, shiny, leathery, glabrous above, eventually glabrous below except for scattered hairs on the midrib and main nerves and tufts of hair in the axils of nerves and veins; broadly ovate-elliptic to broadly oblong or obovate, up to [illegible] in. long and [illegible] in. broad, apex rounded or occasionally obtuse, base broadly cuneate to shortly cordate, lateral nerves pinkish; stipules obovate-orbicular, up to [illegible] in. long; petiole [illegible] in. long. Inflorescence cymose or subumbellate; flowers yellow-white, in spherical heads [illegible]-1 in. diam., intermixed with numerous small stiff, spathulate pubescent bracteoles; common peduncle up to about [illegible] in. long, axillary and terminal, with a pair of leafy bracts at the apex. Capsule obovoid, about [illegible] in. long, dehiscing in a complex manner by 4 valves, leaving the disc supported on 4 fibrous ribs between the valves. Wood rather soft, uniform pale brown with a pink tinge (sapwood scarcely differentiated), of plain appearance, usually unfigured, moderately straight-grained, moderately fine and very even in texture, easy to saw and plane, finishing smoothly to a dull surface, nailing well, seasoning satisfactorily and quickly in the kiln, very durable in water and also under cover (flooring boards laid in Freetown, Sierra Leone, over 100 years ago are still to be seen), reputed to be less so out of doors, not immune to borer attack. The timber is particularly suited for mouldings, giving clean smooth surfaces and sharp unbroken

edges. Weight about 40 lb. per cu.ft. air dry.

Entebbe; Bunyoro; Madi; Gulu.

A timber of value for local use, although not available in large sizes. It is recommended for general carpentry and joinery, cabinet work, plywood, battery and accumulator boxes (because of its resistance to corrosion by acid), and turnery. It is marketed in Europe under the trade name Ibura.

(15) MORINDA

MORINDA LUCIDA Benth. Dagelling 72(a), 72(b), 1636.

Morinda sp.nr.M.citrifolia L. (Dagelling 3816) from the Kashoya Forest, Ankole, is apparently only a weak shrub.

Mubajansai (Luganda).

Tree to 40 ft., chiefly in secondary scrub and on the margins of forest. Bark smooth, grey. Slash yellow-white. Branchlets slender, pendulous. Leaves dark green, glossy, glabrous, broadly elliptic to broadly ovate, 5-7 in. long, 1½-3½ in. broad, apex more or less acuminate, base rounded to broadly cuneate; stipules foliaceous, up to ½ in. diam., soon falling off; petiole about ½ in. long. Flowers white, fragrant, up to 1 in. long, clustered in heads; common peduncles 1-3 in. long, slender, axillary, usually 3 together. Fruit a deeply lobulate syncarpium, ½-¾ in. diam., black when ripe. Sapwood yellow-brown; heartwood bright yellow when freshly cut darkening to brown, moderately coarse and open-grained, fairly hard, of medium weight, easy to work with tools, finishing well, said to resist termites and damp (used for hut-building in West Africa), giving a good charcoal.

Mengo; Entebbe; Sesse; Toro; Bunyoro; Busoga.

The root-wood yields a yellow dye. The timber is recommended as a fairly ornamental timber suitable for furniture and cabinet work.

(16) OXYANTHUS

Leaves medium-sized, 4-7 in. long, 1½-2½ in. broad, oblong to oblong-elliptic, cuneate to narrowly rounded and subequal-sided at the base ..... O.speciosus

Leaves very large, more than 10 in. long and 6 in. broad, ovate-elliptic, very unequal-sided and cordate at the base ..... O.unilocularis

OXYANTHUS SPECIOSUS DC. Eggeling 88, 387, 2436.

Understorey shrub or tree to 30 ft. or more. Leaves dark green, shining, glabrous except for tufts of hair in the axils of the nerves beneath; stipules lanceolate, acute, ½-⅔ in. long; petiole ¼-½ in. long. Inflorescence a short many-flowered corymb; flowers crowded, white, fragrant; corolla-tube slender, up to 2½ in. long. Fruit stipitate, obovoid, 1-2 in. long, about 1 in. diam., subwoody.

Mengo; Entebbe; Sesse; Mubende; Bugishu.

We include here Snowden 1082 originally determined as C.tubiflorus Hiern .

Eggeling 3387.

OXYANTHUS UNILOCULARIS Hiern

Understorey shrub or tree to 20 ft. with stout angular hollow branchlets. Leaves sessile or subsessile, pilose-hispid when young, glabrescent except on the nerves beneath, 10-20 in. long, 6-15 in. broad; stipules ovate, acute, about 1¼ in. long. Inflorescence a short many-flowered corymb; flowers crowded, white; corolla-tube very slender, 4-6 in. long. Fruit ovoid to sub-globose, 1-1¼ in. long and ¾-1 in. diam. The wood is a good fuel.

Entebbe; Sesse; Toro.

(17) PAVETTA

PAVETTA CRASSIPES K.Schum. Eggeling 1522, 1784.

Synonym. P.barteri Dawe

Anyango (Lango); Abalang (Luteso).

Glabrous savannah shrub, occasionally a tree to 15 ft. Branchlets stout, angular, pale, the bark cracking and peeling. Stems frequently corky, usually blackened by fire. Leaves clustered at the ends of the branches, linear to narrowly elongate-oblong or oblanceolate, 5-9 in. long, ½-2¼ in. broad, apex rounded, base

attenuate; midrib prominent, straw-coloured; petiole very short. Corymbs subsessile, many-flowered. Flowers white or greenish-white, fragrant, ½ in. long; calyx truncate; corolla-tube ⅓ in. long; style long-exserted.

Mengo; Mubende; Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Teso.

(18) RANDIA

1. Branchlets armed with spines ..... R.nilotica
   Branchlets unarmed ..... 2.

2. Flowers in corymbose cymes ..... R.lucidula
   Flowers solitary ..... 3.

3. Calyx-lobes ¾-1½ in. long; corolla-tube 2-7 in. long ..... R.malleifera
   Calyx-lobes ¼-⅓ in. long; corolla-tube ¾-1 in. long ..... R.urcelliformis

RANDIA LUCIDULA Hiern Eggeling 3211.

Understorey tree. Leaves elliptic to obovate-elliptic, 5-6 in. long, 1½-2 in. broad, apex acuminate, base cuneate; petiole ¼-½ in. long. Corymbs short, the rhachis usually less than 1 in. long; flowers white, fragrant, fluffy in the throat, about ½ in. long; calyx truncate, scarcely toothed. Fruits red, sub-globose with a flattened apex, about ½ in. diam.

Ankole (Kashoya Forest).

RANDIA MALLEIFERA Benth. & Hook.f. Eggeling 900,1630,2174.

Understorey shrub or tree to 15 ft. Leaves glabrous or nearly so, obovate to oval, 5-10 in. long, 2-4½ in. broad, apex acuminate, base cuneate; petiole up to ¾ in. long. Flowers axillary, white or brownish-white, fragrant, trumpet-shaped, pendulous, usually 6-9 in. long; calyx-tube tawny-pubescent, ½-¾ in. long; calyx-lobes narrowly linear; stigma exserted, club-shaped, 1½-3 in. long, white except the yellow stigmatic upper part. Fruit broadly ovoid, 1½-1¾ in. diam., obscurely 5-ribbed.

Bunyoro; West Nile.

The tree yields an ink-coloured dye, used by Congo natives working in Bunyoro for rubbing in tattoo cuts to give the resulting scars an added prominence.

RANDIA NILOTICA Stapf Eggeling 905, 1948.

Synonym. R.dumetorum Hiern

Galume (Madi).

Deciduous savannah shrub or tree to 15 ft., usually multistemmed. Branchlets stiff, spiny, pubescent, densely beset with rosettes of small leavès. Bark pale grey to almost white. Spines borne above the leaves, ½-1 in. long, very strong and woody, pale with dark tips. Leaves clustered on short lateral twigs or cushions, obovate, ½-3 in. long, ¼-1¼ in. broad, apex rounded, base long-cuneate; petiole very short. Flowers white, quickly fading to yellow, fragrant, solitary in the leaf-axils, often so numerous as to render the tree a mass of bloom; calyx glabrous, shortly and unequally lobed, about ⅓ in. long; corolla villous, ½- ⅔ in. long; anthers sessile, dark brown; stigma exserted, club-shaped, yellow. Fruits ovoid, ½-1 in. long, ½-½ in. diam., yellow when ripe, ribbed; seeds small, black. The wood makes a good fuel.

West Nile; Madi.

In West Madi the fruits are crushed and used as a fish-poison.

RANDIA (ROTHMANNIA) URCELLIFORMIS Hiern Eggeling 1603, 2770, 3075, 3153.

Synonyms. Gardenia urcelliformis Schweinf. ex Hiern ; Rothmannia urcelliformis (Hiern) Bullock

Understorey tree to 25 ft. Leaves glabrous, oblanceolate-elliptic to elliptic, 3-5 in. long, 1-1½ in. broad, apex acuminate, base cuneate; petiole about ¼ in. long. Flowers erect, axillary, trumpet-shaped, white with chocolate-purple markings, fragrant, 2½-3 in. long; calyx-tube pubescent, ½-¾ in. long; calyx-lobes filiform. Fruit ovoid, about 2½ in. long and 1 in. diam.

Entebbe; Toro; Bunyoro; Karamoja (Mt. Debasien). A common tree in the Debasien forests, 7-8,000 ft.

We include here Dawe 532 originally determined as R.sp.cf.R.caudata Hiern .

(19) SARCOCEPHALUS

SARCOCEPHALUS ESCULENTUS Afz. Eggeling 752, 1325.

Synonym. S. russeggeri Kotschy

Savannah shrub or tree to 30 ft. Branchlets stout, glabrous or minutely puberulous, drooping. Bark grey or brown, deeply fissured. Slash yellow with crimson streaks. Leaves shining dark green above, pale below, glabrous (sometimes minutely puberulous on the nerves below), broadly elliptic to rounded-ovate, 4-8 in. long, 2½-5 in. broad, apex abruptly and shortly acuminate, base shortly cuneate to subcordate; petiole red, ½-1¼ in. long; stipules very broadly triangular, about ½ in. long. Flowers white, extremely fragrant, in dense globose shortly pedunculate pendant heads about 1 in. diam.; calyx-teeth with caducous filiform-clavate appendages; corolla tubular, 5-lobed, about ⅓ in. long; stamens included; style exserted. Syncarp red-brown, globose or ovoid, 2-3 in. diam., pitted like a golf ball with the pentagonal scars of the flowers, resembling a large hard strawberry with a solid core; seeds small, numerous, surrounded by sweet edible crimson flesh. Wood deep red-brown, hard, probably suitable for inlay work.

Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Teso; Bugwere; Budama; Busoga.

The fruits are eaten in Teso in times of famine.

(20) TARENNA

TARENNA GRAVEOLENS (S.Moore) Brem. Eggeling 540, 2002, 2520, 2674.

Synonym. Pavetta graveolens S.Moore

Evergreen savannah shrub, usually about 10 ft. high; sometimes a small tree to 25 ft. Bark pale. Leaves glossy dark green, obtusely acuminate, ovate to ovate-elliptic, 2½-6 in. long, 1-2¼ in. broad, apex frequently mucronate, base cuneate; petiole up to 1¼ in. long. Flowers white, overpoweringly fragrant, in terminal corymbs up to 5 in. diam.; anthers and stigmas exserted. Berry black.

Ankole; Toro; Bunyoro; West Nile; Madi; Gulu; Chua; Karamoja.

A common shrub on the Lake Albert flats near Butiaba.

(21) TRICALYSIA

TRICALYSIA NIAMNIAMENSIS Schweinf. Eggeling 465,888,1590.

Shrub or tree to 20 ft. in ravines or among rocks. Leaves glabrescent except the nerve axils and lateral nerves beneath, narrowly elliptic to lanceolate, 1½-3½ in. long, ⅓-1⅓ in. broad, apex obtusely acuminate, base cuneate; petiole very short. Flowers white, fragrant, subsessile, ¼-⅓ in. long, in axillary clusters, usually from the axils of fallen leaves; calyx silky outside; corolla-tube glabrous outside. Berry shortly pubescent, ⅙ in. diam.

Mubende; Bunyoro; Madi; Gulu; Lango; Teso.

(22) VANGUERIA

1. Leaves, branchlets and inflorescence densely rusty-tomentose .... V.tomentosa

   Leaves, branchlets and inflorescence not as above .... 2.

2. Leaves glabrous ....V.apiculata

   Leaves pubescent .... 3.

3. Leaves elliptic to ovate-elliptic, acuminate.. V.linearisepala

   Leaves ovate to oblong-ovate, obtuse .... V.acutiloba

VANGUERIA ACUTILOBA Robyns Eggeling 2537.

Deciduous shrub or tree to 30 ft., in scrub or on the edge of forest. Leaves up to 8 in. long and 5 in. broad, rounded at the base; petiole ⅓-½ in. long. Inflorescence axillary up to 3 in. long. Flowers yellow-green, ⅓ in. long; calyx-lobes small, triangular; corolla-tube fluffy in the throat; corolla-lobes reflexed. Fruit edible, globose, about 1¼ in. diam., pale brown or yellow.

Mengo; Karamoja (Mt. Debasien); Teso; Bugishu (Mt. Elgon).

I include here Brasnett 157 originally determined as V. rotundata Robyns.

VANGUERIA APICULATA K.Schum. Eggeling 30,304, 1731,1801.

Mutugundo (Luganda).

Deciduous shrub or tree to 40 ft. in scrub and forest. Leaves rather thin, ovate, 1½-4½ in. long, ¾-2 in. broad, apex obtusely

long-acuminate, base broadly cuneate to rounded; petiole ¼-⅓ in. long. Flowers greenish-white, corymbose; sepals rather long, strap-shaped. Fruit edible, up to 1 in. diam.

Mengo; Entebbe; Masaka; Sesse; Ankole; Kigezi; Madi; Gulu; Chua; Bugishu.

We include here Dawe 207, 941 originally determined as V.edulis Vahl.

VANGUERIA LINEARISEPALA K.Schum. Snowden 2024.

Shrub or small tree in thickets on termite-hills in savannah. Leaves oblong-elliptic to lanceolate-elliptic, 2-5 in. long, ¾-1¼ in. broad, apex obtusely long-acuminate, base cuneate; petiole about ¼ in. long. Flowers greenish-white; sepals strap-shaped. Fruit globose, about 1 in. diam., brown when ripe.

Mengo; Ankole.

Perhaps only a pubescent form of V.apiculata K.Schum.

VANGUERIA TOMENTOSA Hochst. Eggeling 652.

Mutugundo (Luganda).

Shrub of small tree in thickets in savannah. Leaves broadly ovate to suborbicular, 1-3 in. long, ¾-2 in. broad, apex obtuse, base rounded to very broadly cuneate; petiole less than ⅕-in. long. Flowers creamy-white; sepals linear-oblong. Fruit about ¾ in. diam.

Ankole.

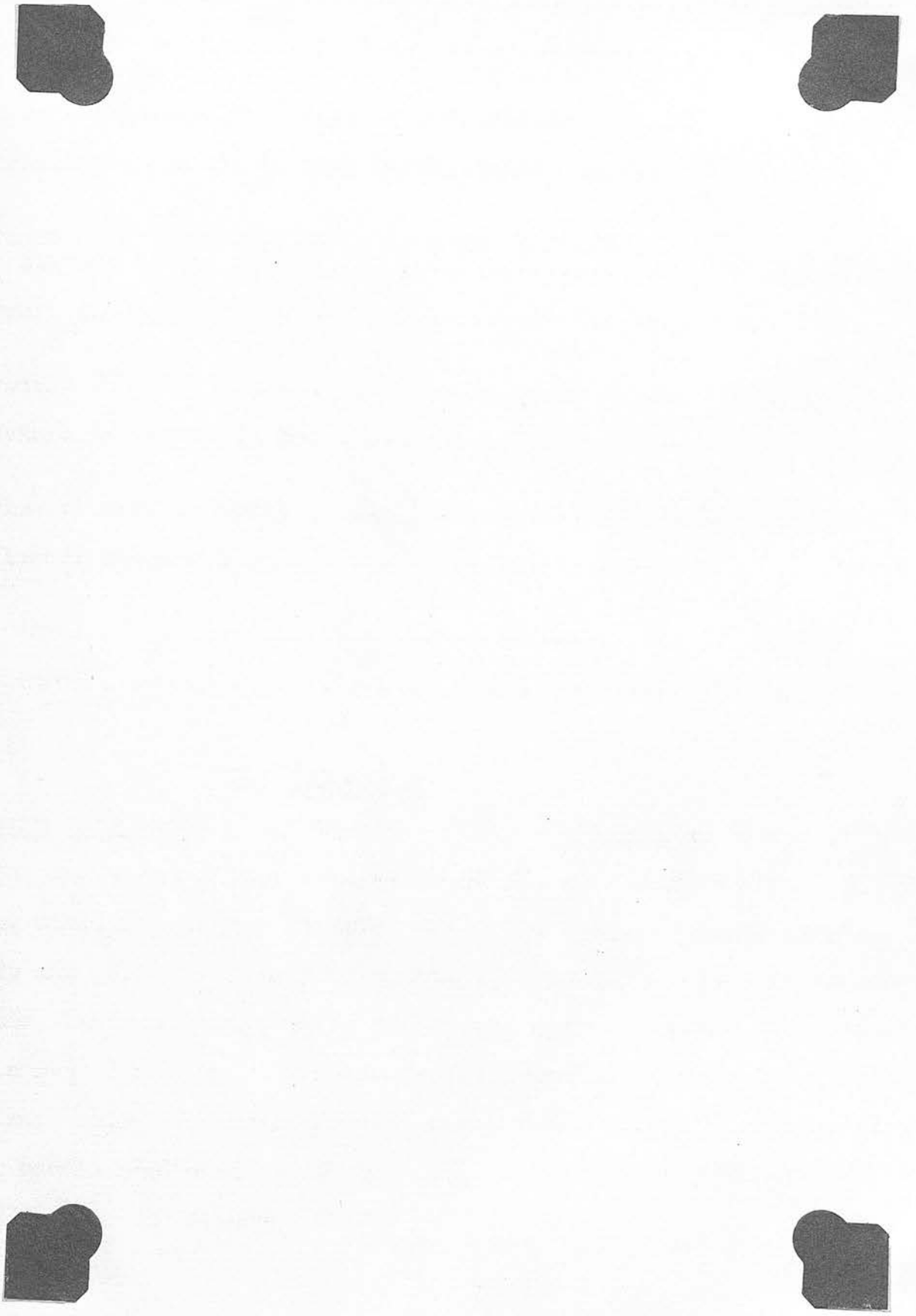

Fig.58. Balsamocitrus dawei Stapf. a. Leaf and spine-bearing branchlet. b. Inflorescence. Both natural size. c. Flower-bud x 5. d. Transverse section of fruit x½.

RUTACEAE

1. Leaves simple ..... (1) Aeglopsis
   Leaves compound ..... 2.

2. Leaves digitate or pinnately 3-foliolate ..... 3.
   Leaves pinnate (more than 5-foliolate) ..... 5.

3. Fruit very large (as large as a grape fruit); stamens 10 ..... (2) Balsamocitrus
   Fruit small; stamens 4-5 ..... 4.

4. Petals valvate in bud ..... (4) Diphasia
   Petals imbricate in bud ..... (7) Teclea

5. Flowers hermaphrodite ..... (3) Clausena
   Flowers unisexual..... 6.

6. Armed ..... (5) Fagara
   Unarmed ..... (6) Fagaropsis

(1) AEGLOPSIS

AEGLOPSIS EGGELINGII M.R.F.Taylor Eggeling 2310, 3006,3122.

Deciduous spiny bush or tree to 20 ft. on forest edges. Spines strong, straight, sharp, slender, $\frac{1}{3}$-$1\frac{1}{2}$ in. long. Leaves simple, densely and minutely glandular-punctate, crenulate, elliptic to obovate-elliptic, 3-$9\frac{1}{2}$ in. long, $1\frac{1}{4}$-$3\frac{3}{4}$ in. broad, apex acuminate, base cuneate; petiole $\frac{1}{4}$-$\frac{1}{3}$ in. long. Flowers greenish-white, in very short axillary panicles; calyx shallowly lobed; ovary 5-6-locular. Fruit yellow-green, woody, pear-shaped, up to 3 in. diam.; seeds surrounded by a strongly aromatic balsamic resin.

Toro; Bunyoro.

(2) BALSAMOCITRUS

BALSAMOCITRUS DAWEI Stapf (Fig. 58). Eggeling 1244, 1425.

Deciduous forest tree to 70 ft. Bark grey-black. Branchlets unarmed or spinose. Spines straight, sharp, stout, up to about $1\frac{1}{4}$ in. long. Leaves pinnately trifoliolate; petiole up to $2\frac{1}{2}$ in. long; leaflets crenulate, ovate to ovate-elliptic, blade 2-5 in. long, and

1¼-2½ in. broad, apex obtuse to sub-acuminate, base cuneate; petiolules of lateral leaflets ¼-¾ in. long, petiolule of terminal leaflet up to 1½ in. long. Flowers greenish-yellow, in contracted axillary panicles 2-3 in. long; petals ⅕ in. long. Fruit odorous, woody, (shell ⅕ in. thick), yellow-orange when ripe, ovoid-globose, up to 5½ in. long and 4½ in. diam., with 6-8 locules each containing several seeds up to ⅔ in. long. Wood yellow-white, medium even in grain, hard, nailing badly but not splitting, difficult to saw, planing badly, turning well, and taking a good polish. Weight 52 lb. per cu.ft. air dry. Bunyoro; Madi (Zoka Forest).

(3) CLAUSENA

CLAUSENA ANISATA (Willd.) Oliv. Eggeling 146,649,1837, 2742.

Musaniko, Musokolindo (Luganda); Mutonwa (Lunyoro); Muwonera (Lusoga).

Unarmed shrub or tree usually 6-10 ft. high, occasionally attaining 30 ft. Bark grey-green. Leaves strongly aromatic, up to 12 in. long; leaflets 11-37, alternate, entire or crenulate, glandular-punctate, more or less pubescent below (especially on the nerves), obliquely ovate to ovate-lanceolate, very variable in size, 1-4 in. long, ⅕-1½ in. broad, apex obtusely acuminate, base cuneate; petiolules very short. Flowers creamy-white, in lax axillary panicles 3-14 in. long. Drupes shining red-purple to blue-black, ellipsoid, about ⅓ in. long.

Mengo; Entebbe; Masaka; Ankole; Toro; Mubende; Bunyoro; West Nile; Chua; Teso; Karamoja; Bugwere; Bugishu; Budama; Busoga.

We include here Dümmer 247 originally determined as C.inequalis Benth.; also Snowden 884, 1077 originally determined as C.inequalis var. abyssinica Engl.

Two varieties, C.anisata var. mollis Engl. (Chandler 1394), and C.anisata var. multijuga Welw. ex Hiern (Bagshawe 390), have been recorded from Uganda; neither variety differs materially from the type.

(4) DIPHASIA

DIPHASIA ANGOLENSIS Verdoorn Dümmer 722.

RUTACEAE (194)

Small understorey tree. Branchlets hispid with grey or yellow hairs, unarmed. Leaves trifoliolate; petiole hispid-tomentose, ¾-3¼ in. long, usually somewhat flattened; leaflets entire, glabrous above except the midrib, sparingly hairy below, elliptic-obovate, 2-7 in. long, 1-2¾ in. broad, apex acuminate, base cuneate; petiolules hispid, up to about ⅓ in. long. Panicles axillary and terminal; flowers 4-merous; calyx-lobes short, rounded; petals much longer than the calyx; disc annular, hispid with long yellow hairs; ovary glabrous to sparingly hispid, formed of two entirely united carpels; style short; stigma peltate. Fruit ½-⅓ in. long, glabrous to sparingly hairy, covered with raised dots, sometimes 2-lobed, sometimes formed of one oblique carpel, the other aborting and visible only as a swelling at the base of the one which has developed.

Mengo (Mabira Forest).

I have not seen a specimen. The specimen cited is the sole record of the species from the Protectorate.

(5) FAGARA

1. Leaflets glabrous, apex conspicuously acuminate ..... 2.

   Leaflets pilose or pubescent at least on the midrib below, apex obtuse ..... F.sp.

2. Leaflets elongate-oblong, usually 4-8 in. long and 1½-2½ in. broad..... F.macrophylla

   Leaflets lanceolate to oblong-elliptic or elliptic-ovate, much smaller than above.... 3.

3. Lateral nerves at least 10 pairs spreading straight out from the midrib at a wide angle, with usually prominent secondary nerves more or less parallel to them ..... F.angolensis

   Lateral nerves fewer than above and more or less curved, with reticulate venation between ..... 4.

4. Leaf-rhachis strongly armed ..... F.stuhlmannii

   Leaf-rhachis unarmed ..... F.melanacantha

RUTACEAE (194)

FAGARA ANGOLENSIS Engl. Eggeling 190,434.

Synonym. Xanthoxylum nitens Hiern

Ntalyerungu (Lunyoro); Munyenye (Luganda).

Deciduous forest tree usually about 40 ft. high, sometimes attaining 80 ft. Stem armed with conical, woody, prickle-bearing outgrowths. Branchlets strongly armed with short strong prickles; prickles brown with darker tips, straight, or directed forwards or backwards. Leaves usually 8-18 in. long, the rhachis armed with recurved prickles; leaflets 11-15 (usually 13 or 15), entire or minutely crenulate, prominently punctate, oblong-elliptic, 2½-4 in. long, ¾-1½ in. broad, apex very long-caudate-acuminate, base cuneate; petiolules very short. Flowers creamy-white, in axillary panicles up to ~~at least~~ 12 in. long. Fruit reddish, globose, about 1/6 in. diam.; seeds black. Sapwood yellow-white; heartwood pale yellow, rather light but tough, perishable, medium-coarse in grain, finishing smoothly, taking a good polish. Mengo; Entebbe; Sesse; Bunyoro.

The wood is used in Buganda for making drums.

FAGARA MACROPHYLLA (Oliv.) Engl. Eggeling 442,1529, 3177.

Synonym. Xanthoxylum macrophyllum Oliv.

Mulemankobe (Lunyoro, Ankole dialect); Ntalyerungu (Lunyoro); Munyenye (Luganda).

Deciduous forest tree to 100 ft. Stem unarmed or with conical, woody, prickle-bearing protuberances. Bark grey, smooth. Slash yellow, fragrant. Branchlets and leaf-rhaches armed with short sharp straight prickles up to ¼ in. long. Leaves up to at least 3½ ft. long; leaflets 13-27, entire, prominently punctate, with the base rounded on one side and cuneate on the other; petiolules up to ⅓ in. long. Flowers creamy-white, sessile on the branches of the large panicles. Fruits reddish, subglobose, 1/5 in. diam.; seeds black, tasting of peppermint. Sapwood yellow-white, heartwood saffron-yellow, scented, fine-grained, hard, durable to weather; weight 45 lbs. per cu. ft.

air dry. It has been compared with satinwood.
Mengo; Ankole; Bunyoro; West Nile. A common tree in the Kalinzu Forest, Ankole, where the trees attain large dimensions but are mostly hollow.

The wood is suitable for interior carpentry, door-frames, gates, etc.; it is said to be suitable also for boat construction, mine and pile work, and for sleepers.

FAGARA MELANACANTHA (Planch.) Engl. Eggeling 1415,2096.

Synonym. Xanthoxylum melanacantha Planch.

Ntalyerungu (Lunyoro); Munyenye (Luganda).

Forest shrub or tree to 20 ft., usually in swampy ground. Branchlets reddish, armed with straight or recurved prickles up to $\frac{1}{3}$ in. long. Leaves up to 15 in. long; leaflets 9-15, thin, punctate, shortly crenate-serrate, broadly elliptic to ovate- or obovate-elliptic, 3-5$\frac{1}{2}$ in. long, 1$\frac{1}{2}$-2$\frac{1}{2}$ in. broad, apex caudate-acuminate, base cuneate; petiolules very short. Flowers creamy, in panicles 6-12 in. long; pedicels 1/10 in. long. Fruit orange-red, broadly ellipsoid, 1/5 in. long.
Mengo; Entebbe; Bunyoro.

FAGARA STUHLMANNII Engl. Stuhlmann 1205,2612.

Forest shrub or tree. Branchlets glabrous, strongly armed with sharp, stout, straight or slightly recurved, broad-based prickles up to $\frac{1}{2}$ in. long. Leaves 7-10 in. long; rhachis deeply grooved, strongly armed with recurved prickles; leaflets usually 13 or 15, punctate, crenate, very broadly elliptic to broadly elliptic-oblong, 1$\frac{1}{2}$-3$\frac{1}{2}$ in. long, 1-2$\frac{1}{4}$ in. broad, apex narrowly acuminate, base rounded; petiolules very short. Panicles pyramidal, puberulous, shorter than the leaves; petals ovate, 4-5-times as long as the calyx-lobes.
Sesse.

Maitland 413, originally determined as Xanthoxylum sp., should probably be referred here.

RUTACEAE (194)

FAGARA SP. Eggeling 2975, 3505.

Savannah tree to 25 ft. Stem armed with large woody spines. Branchlets armed with black recurved prickles. Leaves 6-9 in. long, tomentose when young, becoming glabrous except on the rhachis and on the midribs of the leaflets; rhachis armed with a few small scattered recurved prickles; leaflets 7-11, subsessile, crenulate, punctate, elliptic-lanceolate, $1\frac{1}{2}$-$2\frac{1}{2}$ in. long, $\frac{3}{4}$-1 in broad, midribs usually armed on the lower side with 1-2 very small recurved prickles, base cuneate. Inflorescence an axillary raceme 1-4 in. long with the yellow flowers in clusters along the axis. Fruit glandular-punctate, burning the mouth if bitten, ellipsoid, 1/5 in. long; seeds black.

Chua; Karamoja.

The whole plant is strongly aromatic. The bark of the roots is used in Chua as a substitute for quinine.

(6) FAGAROPSIS

FAGAROPSIS ANGOLENSIS (Engl.) Dale Eggeling 1138,1637,3083, 3166.

Synonyms. Clausenopsis angolensis Engl.; Clausena melioides Harms

Deciduous tree to 40 ft. on the edge of forests. Branchlets purple-brown, dotted with pale elliptical lenticels. Leaflets 5-11, usually 7 or 9, variable in shape, ovate-lanceolate to oblong-elliptic, $1\frac{1}{2}$-$3\frac{1}{2}$ in. long, 1-$1\frac{1}{2}$ in. broad, apex acuminate, base unequal-sided; petiolules very short. Panicles terminal, usually with two whorls of branches; flowers precocious, yellow-white. Fruit globose, $\frac{1}{4}$-$\frac{1}{2}$ in. diam., glandular-punctate. Wood variable in colour, usually pale yellow-grey when freshly cut, darkening on exposure to brown tinged with yellow-green. Although much of the timber is not or only slightly figured, much again is highly and most variably marked with dark curls and streaks upon a pale back-ground, or with the figure due not to colour difference only, but to variation in grain. Timber

moderately hard, strong, durable, straight-grained, fine and very even in texture, easy to saw, splitting badly if nailed near edges, finishing well, taking a high polish. Owing to felling shakes and bad cracking during the first few days after cross-cutting, it is difficult to obtain sound timber of large dimensions, but once sawn and carefully stacked under shade the wood dries without much further faulting; weight 40-44 lbs. per cu.ft. air dry.

Ankole; Toro; Bunyoro; Bugishu.

The wood is recommended for cabinet-work. It makes beautiful furniture and highly decorative panelling.

The Tanganyika Forest Department recommend the ring-barking of the standing tree at least a year before felling as a means of reducing the splitting and checking which results from the conversion of green timber.

I include here Snowden 1074 originally determined as Ekebergia rueppeliana A.Rich. (Meliaceae); also Eggeling 3083 determined as Ekebergia sp.

(7) TECLEA

1. Flowers in panicles; buds globose 2

   Flowers in racemes or cymes; buds ellipsoid.. 3.

2. Leaves not or only very sparingly punctate, at most with only one or two large translucent dots on each leaflet; inflorescences axillary; some of the flowers long-pedicellate ..... T.grandifolia

   Leaves densely minute-punctate; inflorescences terminal and axillary; flowers all sessile or subsessile ..... T.nobilis

3. Petioles glabrous; flowers pedicellate..... T.angustialata

   Petioles pubescent; flowers subsessile ..... T.trichocarpa

TECLEA ANGUSTIALATA Engl. Bagshawe 1206.

Evergreen understorey shrub or tree. Leaves 3-foliolate; petiole ½-1½ in. long, narrowly winged (wings broadest towards the top); leaflets glabrous, obovate, 2-4 in. long,

Fig.59. Teclea nobilis Del. a. Flowering branch, natural size. b. and c. Flowers x 2. c. Fruiting branch, natural size.

¾-1¾ in. broad, apex shortly and bluntly acuminate, base cuneate. Racemes short, axillary, pubescent; flowers few, lax, unisexual.

Toro.

I have not seen a specimen.

TECLEA GRANDIFOLIA Engl. Eggeling 396,1142,3167,3458.

Muzo (Lunyoro); Nzo (Luganda).

Evergreen understorey shrub or tree to 40 ft. Bark grey. Slash pale yellow-white with a pink margin. Leaves dark green, usually 3-foliolate, occasionally 2 - or 1-foliolate; petiole glabrous, grooved and noticeably flattened above, ¾-2 in. long; leaflets glabrous except sometimes on the midrib, sessile or very shortly petiolulate, elliptic-oblong to obovate-oblanceolate, usually 2-6 in. long and ¾-1¾ in. broad, apex acuminate, base cuneate. Flowers unisxual, creamy-white, in numerous, slender, lax, shortly and sparingly branched panicles up to 2 in. long. Fruit ellipsoid, 1/3 in. long, strongly pitted. Wood similar to that of T.nobilis Del.

Mengo; Ankole; Bunyoro.

TECLEA TRICHOCARPA Engl. Bagshawe 1203.

Evergreen understorey tree or shrub. Leaves 3-foliolate; petiole pubescent, ½-1¾ in. long, flattened, sometimes narrowly winged. Leaflets sessile (at least the lateral ones), glabrous except the midrib, obovate to oblanceolate-elliptic, 1¼-3¾ in. long, ½-1¼ in. broad, apex rounded or obtuse, base cuneate. Racemes axillary, short; flowers unisexual, clustered; calyx cupular, ciliate. Fruit ellipsoid, ½ in. long, 1/3 in. diam., hairy.

Toro.

I have not seen a specimen.

TECLEA NOBILIS Del. (Fig.59). Eggeling 410,873,1738,3457.

Synonym. Toddalia nobilis Hook.f.

Nzo (Luganda); Muzo (Lunyoro).

RUTACEAE (194)

Evergreen understorey shrub or tree to 40 ft. Bark grey. Slash yellow (without a pink margin), rapidly oxidising to brown. Leaves dark green, normally 3-foliolate, occasionally 2- or 1-foliolate; petiole usually glabrous, narrowly and obscurely grooved, not markedly flattened, ¾-2 in. long; leaflets glabrous except sometimes on the midrib, narrow-lanceolate to elliptic or narrowly oblong-elliptic, usually 2-6 in. long and 2/3-2 in. broad, apex acute, base cuneate; petiolule up to ¼ in. long. Flowers polygamous, yellow-green, in stout erect strongly branched panicles 2-7 (usually 2-4) in. long. Fruit red, ovoid, up to 1/3 in. long, single-seeded, not strongly pitted. Wood yellow-white, dense, fine-grained, moderately hard, tough, fissile, nailing badly, turning easily and smoothly; weight 50-53 lbs. per cu.ft. air dry. Round poles are not very durable in the ground, having a useful life of only 2 - 4 years.

Mengo; Entebbe; Sesse; Masaka; Nkole; Kigezi; Toro; Mubende; Bunyoro; Madi; Gulu; Chua; Lango; Teso; Budama; Bugishu; Busoga.

Wherever the tree occurs, its wood is used by natives for spear-shafts and carved (knobbly) walking sticks. In Buganda it is the favourite wood for making the mallets used for beating out barkcloth.

The timber is very suitable for tool handles of all kinds and has been used in Kenya for the heads and shafts of golf clubs.

It is an excellent wood for turning and inlay work, and is used locally with blackwood (Dalbergia melanoxylon) for chessmen and chessboards, and for yellow-white inlaid designs on trays and tables.

SALICACEAE

SALIX

SALIX SUBSERRATA Willd. Eggeling 1922.

Synonym. S. safsaf Forsk.

Shrub or tree to 30 ft. growing on the banks of streams or actually in the water. Stem usually procumbent. Branchlets brown to red-brown, brittle. Leaves entire or serrulate, lanceolate, 2-4 in. long, ⅖-1 in. broad, lower surface blue-white with a red-brown midrib, apex acute to long-acuminate, base rounded to broadly cuneate; petiole up to ⅕ in. long. Catkins pedunculate, 1¼-2½ in. long, appearing with the leaves. Capsule ovoid, ¼ in. long.

West Nile.

A rare plant in Uganda.

SAMYDACEAE

Petals absent; flowers hermaphrodite ------ (1) Casearia
Petals present; flowers unisexual -------- (2) Trimeria

(1) CASEARIA

CASEARIA ENGLERI Gilg — Maitland 788.

Forest tree to 120 ft. with habit of Celtis soyauxii. Bole long, clean, cylindrical. Branchlets zig-zag, glaucous. Leaves simple, alternate, entire, glossy above, ovate-elliptic to elliptic-oblong, 2½-4½ in. long, 1¼-2 in. broad, apex obtuse to shortly and obtusely acuminate, base unequal-cuneate to rounded; petiole about ½ in. long. Flowers green, clustered on small cushions a little above the leaf axils; pedicels up to ¼ in. long. Fruits orange-yellow, ovoid-globose, ½-¾ in. long.

Sesse.

Eggeling 2033, 3447, 3459 from the Budongo Forest, Bunyoro, is either a variety of the above or else represents a new species. Flowering material has never been collected.

(2) TRIMERIA

TRIMERIA BAKERI Gilg — Eggeling 3435,3475.

Synonym. T. macrophylla Bak.f.

Jembelyambogo (Luganda).

Scandent shrub or tree to 20 ft. usually with several stems from the base, somewhat resembling a lilac in habit. Bark dark grey. Slash white. Leaves 5-9-nerved from the base, serrulate, usually pubescent on both surfaces, sometimes glabrous except on the nerves below, ovate to broadly ovate-elliptic, 2-5 in. long, 1¼-3½ in. broad, apex obtuse to shortly acute or apiculate, base subcordate to rounded; petiole ½-¾ in. long; stipules suborbicular, acuminate, toothed, up to about ½ in. diam. Flowers small, yellow-green to purplish, pubescent, in solitary axillary dioecious spikes 1-3 in. long in the axils of the leaves.

Ankole; Mubende; Bugishu; Busoga. In scrub and secondary forest.

SAPINDACEAE

1. Leaves simple ..... 2.
   Leaves trifoliolate ..... (1) Allophylus
   Leaves pinnate or bifoliolate ..... 3.

2. Fruit winged; ovules 2 in each ovary-cell .... (9) Dodonaea
   Fruit not winged; ovule 1 in each ovary-cell...(11) Pappea

3. Ovules 2 in each ovary-cell ..... 4.
   Ovule 1 in each ovary-cell ..... 5.

4. Fruit dehiscent ..... (7) Harpullia
   Fruit indehiscent .....(15) Zanha

5. Petals present ..... 6.
   Petals absent ..... 10.

6. Fruit dehiscent ..... 7.
   Fruit indehiscent ..... 9.

7. Sepals free ..... (8) Laccodiscus
   Sepals united ..... 8.

8. Calyx toothed ..... (12) Phialodiscus
   Calyx deeply lobed ..... (3) Blighia

9. Leaflets 1-3 pairs ..... (2) Aphania
   Leaflets more than 3 pairs ..... (4) Deinbollia

10. Sepals 5, united high up, imbricate in bud; stamens 10 ..... (5) Lecaniodiscus
    Sepals 4-6, united at the base only, valvate in bud; stamens 5-8 ..... 11.

11. Flowers in clusters ..... (6) Haplocoelum
    Flowers in racemes or panicles .....(10) Melanodiscus

(1) ALLOPHYLUS

Most of the members of this genus are shrubs; a few are small trees. They occur in fringing and secondary scrub, and on the edge of forests. Seventeen species have been recorded from Uganda but

few of the specimens are available for examination, and it is very doubtful if anything like this number of species are actually to be found in the Protectorate.

We describe here only those which definitely attain tree-size, and of which we have seen specimens or reliable descriptions.

1. Inflorescence a simple raceme (unbranched) ..... 2.
   Inflorescence paniculate (branched) ..... 3.
   Inflorescence racemose and paniculate on the same plant ..... 5.

2. Leaflets sessile or subsessile ..... A.africanus
   Lateral leaflets sessile, central leaflet petiolulate ..... A.macrobotrys

3. Flowers large (sepals $\frac{1}{10}$in. long)..... A.abyssinicus
   Flowers smaller than above ..... 4.

4. Leaflets glabrous except for occasional tufts of hair in the leaf axils below ..... 7.
   Leaflets puberulous (pilose on the midrib and nerves below)..... A.crebriflorus

5. Central leaflet $1\frac{1}{2}$-4 in. long, 1-$1\frac{1}{2}$ in. broad... A.subcoriaceus
   Central leaflet 4-6 in. long, $1\frac{1}{2}$-3 in. broad.... 6.

6. Leaflets crenate, oblong-obovate ..... A.africanus
   Leaflets serrate, rhomboid-elliptic ..... A.dümmeri

7. Central leaflet $1\frac{1}{2}$-4 in. long, 1-$1\frac{1}{2}$ in. broad... A.subcoriaceus
   Central leaflet 4-6 in. long, 2-3 in. broad .... A.africanus

ALLOPHYLUS ABYSSINICUS Radlk. Scott-Elliot 7910.

Shrub or tree to 50 ft. in mountain forest. Bark grey, smooth. Bole up to 6 ft. girth. Petiole glabrous or puberulous, usually 2-5 in. long; leaflets crenate-serrate, glabrous except for tufts of hair in the axils of the nerves below, oval to elliptic, 4-8 in. long, 2-4 in. broad, apex acute to shortly acuminate, base cuneate; petiolule up to $\frac{1}{3}$ in. long. Flowers white or yellow-white, in much-branched panicles up to 8 in. long; pedicels up to $\frac{1}{8}$ in. long.

Wood pale brown, perishable, requiring careful seasoning, hard, easy to work, taking a good polish. Weight 34-44 lb. per cu.ft. air dry.

Toro (Ruwenzori).

ALLOPHYLUS AFRICANUS P.Beauv. Bagshawe 77.

Shrub or tree to 30 ft. Petiole shortly pubescent, 1-4 in. long; leaflets sessile or subsessile, glabrous except for occasional tufts of hair in the axils of the nerves below, distantly crenate, oblong-obovate, 4-6 in. long, 2-3 in. broad, apex subacute, base cuneate. Inflorescences axillary and terminal, up to 8 in. long; flowers creamy-white, fragrant. Fruit glabrous, ellipsoid, up to ⅓ in. long.

Ankole.

ALLOPHYLUS CREBIFLORUS Bak.f. Dümmer 680.

Shrub or tree to 20 ft. Petiole pilose when young (generally sparingly pilose even when mature), 1½-3½ in. long; leaflets sessile, distantly serrate, sparingly puberulous, generally without tufts of hair in the axils of the nerves below, elliptic to ovate-elliptic, 2-4½ in. long, 1-2 in. broad, apex acuminate, base cuneate. Panicles axillary, sparingly branched, up to about 6 in. long; flowers creamy. Fruit globose, about ⅛ in. diam.

Mengo.

ALLOPHYLUS DUMMERI Bak.f. Dümmer 552.

Shrub or tree to 30 ft. Petiole glabrescent, 3-5 in. long; leaflets sessile or subsessile, distantly serrate, glabrous or with indistinct tufts of hair in the axils of the nerves below, 4-7 in. long, 1½-3½ in. broad, apex acuminate, base cuneate. Flowers creamy-white, in panicles 3-5 in. long.

Mengo.

ALLOPHYLUS MACROBOTRYS Gilg Eggeling 411.

Shrub or tree to 20 ft. Bark grey. Slash white. Petiole

glabrous or pubescent, usually 1½-3 in. long; leaflets distantly serrate, glabrous to puberulous, often with indistinct tufts of hair in the axils of the nerves below, ovate-oblong to rhomboid-obovate, 2½-6½ in. long, 1¼-3 in. broad, apex acuminate, base cuneate to rounded (often unequal-sided); petiolule of central leaflet ⅓-½ in. long. Flowers orange and white, in slender axillary and terminal racemes up to 6 in. long.

Mengo; Entebbe; Sesse; Ankole; Kigezi; Toro; Bunyoro; Bugishu; Busoga.

We include here Maitland 12 and Maitland 515, both originally determined as Schmidelia sp.

ALLOPHYLUS SUBCORIACEUS Bak.f. Eggeling 266, 482, 2202.

Mutete (Luganda).

Shrub or tree to 20 ft., often forming thickets. Petiole glabrescent, 1-1½ in. long; leaflets subcoriaceous, crenate or serrate or entire, glabrous except for tufts of hairs in the axils of the nerves below, oblong, apex obtuse, base cuneate; lateral leaflets sessile; petiolule of central leaflet up to ¼ in. long. Flowers creamy-white, in axillary and terminal inflorescences up to 4 in. long. Fruit ellipsoid-globose up to ¼ in. long.

Mengo; Entebbe; Toro; Mubende; West Nile; Lango; Budama; Busoga.

The upperside of the dried leaf is usually much darker (greyish red-brown) than is the underside.

(2) APHANIA

APHANIA SENEGALENSIS (Juss.) Radlk. Eggeling 1597,1944,3113,3513.

Understorey tree usually 30-40 ft. high, occasionally attaining 70 ft.: it resembles somewhat Khaya in appearance ~~and habit~~. Bark pale brown. Rhachis 1½-6 in. long; leaflets 2-6 (usually 4), entire, coriaceous, opposite or subopposite, broadly oblanceolate to elliptic or obovate-elliptic, 3-7 in. long, 1-2½ in. broad, apex very obtusely pointed, base cuneate; petiolules swollen, grooved above, very short. Flowers polygamous, creamy-white, in rather

lax terminal panicles up to 10 in. long; bracts, sepals and petals ciliate; stamens 7-8, filaments villous; ovary glabrous, 2-lobed to the base, one carpel usually abortive. Drupe glabrous, red, fleshy, edible, sweet and pleasant to the taste, ellipsoid-globose, ½-¾ in. long, with the basal style and the abortive carpel persisting at the base; seed bitter, probably poisonous if eaten in quantity. Wood grey-brown with dark veining, light, medium hard, fine-grained, easy to work, flexible, durable if not exposed to weather. It resembles walnut in appearance and qualities, and is suitable for turnery, cabinet work and interior carpentry.

Mengo; Toro; Bunyoro; West Nile; Gulu; Chua; Karamoja; Budama.

(3) BLIGHIA

BLIGHIA WILDEMANIANA Gilg & Radlk. Eggeling 1980.

Forest tree to 80 ft. Leaves indistinguishable from those of Guarea cedrata (Chev.) Pellegr. (Meliaceae). Leaf-rhachis usually 5-6 in. long, flattened above, slightly decurrent at the base; leaflets usually 8, opposite, inserted towards the upper side of the petiole, the topmost pair the largest, oblong to elliptic or oblanceolate-elliptic, 3½-9 in. long, 1¾-2¾ in. broad, apex acuminate, base obliquely cuneate; petiolules short, swollen. Flowers unknown. Capsule pale green, bladdery.

Bunyoro.

(4) DEINBOLLIA

Inflorescence with very short lateral branches, occasionally with one or two longer lateral branchlets at the base ..... D.fulvo-tomentella

Inflorescence with numerous spreading more or less elongated lateral branches ..... D.kilimandscharica

DEINBOLLIA FULVO-TOMENTELLA Bak.f. Chandler 1437.

Understorey shrub; occasionally a small tree. Branchlets hollow. Leaves usually 12-24 in. long; leaflets usually 14 or 16, subsessile, almost glabrous above except the midrib and lateral nerves, tawny-pubescent below, opposite or subopposite, oblong, 3-11 in. long, 1-3½ in. broad (usually 5-10 in. long and 2-3 in. broad), apex bluntly acuminate, base rounded. Inflorescence rusty-

pubescent, 5-12 in. long; flowers white; petals about ¼ in. long; stamens usually 18-20.

Entebbe; Sesse.

DEINBOLLIA KILIMANDSCHARICA Taub. Maitland 467.

Understorey tree to 20 ft. Leaves 12-18 in. long; leaflets usually 8-12, subsessile or shortly petiolulate, glabrous, opposite or subopposite, narrow-oblong, usually 5-8 in. long and 1¼-2¼ in. broad, apex obtusely acuminate, base broadly cuneate to rounded. Flowers small, creamy white, in panicles up to 9 in. long. Fruit glabrous.

Mengo; Entebbe.

This species has been confused in the past with Aphania senegalensis (Juss.) Radlk., from which it may be distinguished by the numerous leaflets.

(5) DODONAEA

DODONAEA VISCOSA Linn. Eggeling 656,2481.

Omushambya (Lunyankole).

Shrub or tree usually 6-12 ft. high, occasionally attaining 25 ft. Branchlets red-brown, angular, viscid, glabrous. Leaves thin, viscid, glabrous, subsessile, oblanceolate, 2-4 in. long, ½-1 in. broad, apex obtusely apiculate, base very-long-attenuate. Flowers yellow-green to creamy white, unisexual or polygamous, in short terminal panicles or subracemose; petals absent; stamens 5-8; pedicels slender. Fruit pale brown, flat, suborbicular to obcordate, deeply emarginate, broadly 2- or more-winged, up to ¾ in. diam. including the membranous wings; fruiting pedicels up to ⅓ in. long. Heartwood heavy, very hard and close-grained, suitable for engraving, turnery, tool-handles and walking-sticks.

Masaka; Ankole; Kigezi; Bugishu. In grasslands and thickets and on the margins of forest, 5,500-7,000 ft.

The plant has great powers of withstanding fire, and reproduces itself from seed very freely, even in dry rocky localities.

In some countries it is planted both as a sand-binder and to reclaim marshy land.

It makes an excellent hedge, being especially useful for this purpose in dry regions where other species do not ~~succeed~~ thrive.

(6) HAPLOCOELUM

HAPLOCOELUM FOLIOLOSUM (Hiern) Bullock Eggeling 635(b), 1775.

Deciduous savannah shrub or tree to 15 ft. Bark grey. Young foliage yellow or pink. Leaves paripinnate, 1-2½ in. long; leaflets 6-12 (usually 8), subequal or the terminal pair the largest, sessile or subsessile, broadly elliptic to obovate-elliptic, ⅓-1 in. long, ¾-½ in. broad, apex emarginate, base unequal-cuneate. Flowers usually precocious, fragrant, yellow, pedicellate, very numerous in dense axillary clusters (much-contracted panicles). Fruit ellipsoid ⅓-½ in. long; fruiting pedicels up to ⅓ in. long.

Ankole; Bunyoro (Butiaba Flats); Madi. A thicket-forming species in stream wash-outs and on rocky outcrops and dry flatlands. It has a superficial resemblance to Harrisonia abyssinica Oliv., from which it is readily distinguished by the absence of prickles.

(7) HARPULLIA

HARPULLIA SP. ? NOV. ? Eggeling 2007,3442,3448,3450.

Deciduous forest tree to 100 ft. with clean bole to 40 ft. and girth of 6 ft. at breast height. Buttresses usually well developed. Bark yellowish, especially towards the base of the trunk, covered with projecting lenticels. Leaves paripinnate, up to about 18 in. long; leaflets usually 8-24, opposite to subopposite or alternate, crenulate, glabrous, sessile or subsessile, oblong, 2-5 in. long, ¾-1½ in. broad, apex obtusely acuminate, base unequal-sided (rounded on the upper half, cuneate on the lower). Flowers usually more or less precocious, greenish-brown, tinged with pink or purple, in short dense terminal panicles; petals absent; sepals 5, large, tomentellous; disc conspicuous, shining red. Fruits clustered, bladdery, membranous, yellow-green to red-green outside, scarlet inside, top-shaped, about 1½ in. long and broad, 3-lobed, 3-locular, dehiscing loculicidally; seeds covered by a tomentose aril.

Masaka; Bunyoro.

We include here Forest Dept. 70, originally determined as

H.fosteri Sprague (H.multijuga Radlk.). This specimen is a perfect match for the species described above, differing from H.fosteri (as described in F.W.T.A.) in the absence of petals, the large sepals, and the 3-lobed capsule.

(8) LACCODISCUS

LACCODISCUS SP.NOV. Eggeling 535,1140,3142,3530.

Understorey shrub or tree to 50 ft., sometimes partly scandent. Leaves paripinnate, up to 18 in. long; rhachis angular, tawny puberulous. Leaflets usually 12-14, subopposite to alternate, dentate in the upper leaf, oblong-elliptic to obovate-elliptic, 3-10 in. long, $1\frac{1}{2}$-$3\frac{1}{2}$ in. broad (usually 4-6 in. long and $1\frac{1}{2}$-$2\frac{1}{4}$ in. broad), apex acuminate, base shortly cuneate to rounded; midrib deeply impressed above, prominent below; lateral nerves 12-15 on each side of the midrib, prominent; petiolules up to $\frac{1}{5}$in. long. Panicles golden- to rusty-tomentose, terminal, up to as long as the leaves, usually with long slender branches; flowers pedicellate in the axils of conspicuous lanceolate bracts; buds globose; bracts and sepals tawny golden-brown to rust-coloured when dry; petals grey-white, villous within; stamens central.

Mengo; Toro; Bunyoro.

We include here Eggeling 535 originally determined as Lychnodiscus sp.

(9) LECANIODISCUS

LECANIODISCUS CUPANIOIDES Planch. Thomas 1489.

Spreading understorey shrub or tree to 40 ft. Branchlets ridged, thinly pubescent. Leaves paripinnate; rhachis slender, woody towards the base. Leaflets 8-12, opposite to subopposite, glabrous, oblong to obovate-elliptic, usually 3-6 in. long and $1\frac{1}{4}$-$1\frac{3}{4}$ in. broad, apex broadly caudate-acuminate, base cuneate; petiolules swollen, very short. Racemes axillary, much shorter than the leaves (2 in. long in our specimen), puberulous; flowers dull yellow, more or less clustered, polygamous or dioecious, very fragrant; ovary densely setose-tomentose; pedicels slender, about $\frac{1}{5}$in. long. Fruit velvety yellow-tomentose, broadly ovoid to globose,

Fig.60. Pappea ugandensis Bak.f. a. Flowering branch b. Fruiting branch. Both natural size. c. Flower x 2½.

shortly beaked by the terminal style, about ¾ in. long; seeds brown to black, embedded in a sweet edible gelatinous pulp. Wood hard, cross-grained, of little value.

Toro (Bwamba).

An infusion of the bark is used in Bwamba as a purge.

(10) MELANODISCUS

MELANODISCUS SP.? NOV.? Eggeling 1600,1611,2178,3451,3463,

Mwataibale (Lunyoro).

Understorey shrub or tree to 40 ft. Branchlets softly pubescent. Foliage yellow-white, turning through pink and red to green. Leaves usually ~~apari~~ pari^pinnate, sometimes imparipinnate through the abortion of one of the terminal pair of leaflets; rhachis 1-5 in. long. Leaflets 2-8 (usually 4 or 6), opposite or subopposite, usually entire, sometimes undulate in the upper half, upper surface usually glabrous (at most pubescent only on the midrib), lower surface usually shortly pubescent, sometimes glabrous except the midrib and lateral nerves; lowest pair of leaflets the smallest, inserted near the base of the rhachis, broadly ovate to suborbicular, ¼-1 in. diam.; terminal pair of leaflets the largest, very variable in shape, oblong-lanceolate to oblong- or obovate-elliptic, 4-7 in. long, 1¼-2¾ in. broad, apex obtuse, base cuneate; petiolules up to ⅕ in. long. Flowers yellow-brown , pedicellate, in clustered terminal and lateral softly pubescent racemes or shortly-branched panicles up to 5 in. long; stamens 5-8, longer than the pedicels.

Bunyoro. A very common understorey tree in the Budongo Forest.

We include here Sangster 19 and Forest Dept. 1268 both determined originally as Phialodiscus sp.

(11) PAPPEA

PAPPEA UGANDENSIS Bak.f. (Fig. 60). Eggeling 612,660, 2346, 2358.

Mulemampangu, Melemambadzi (Luganda).

Monoecious savannah shrub or tree to 20 ft. Branchlets dark grey, pubescent or puberulous. Leaves crowded at the ends of the twigs, entire or slightly undulate, glabrous above, usually pub-

escent on the midrib and nerves below, oblong, 2-5 in. long, 1-2 in. broad, apex rounded to emarginate, base unequal-rounded to subcordate, lateral nerves 10-18 on each side of the midrib; petiole $\frac{1}{4}$-$\frac{3}{4}$ in. long. Inflorescence axillary, spike-like, $1\frac{1}{2}$-5 in. long, with the small yellow flowers clustered on condensed side-branches; calyx cupular, 5-lobed; male flowers with 8 stamens; female flowers with a 3-celled, hairy ovary. Fruit capsular, deeply 3-lobed, usually only one or two of the lobes maturing; lobes globose, $\frac{1}{3}$-$\frac{2}{5}$ in. diam. Seed arillate, edible. Wood hard.

Masaka; Ankole; Chua; Karamoja. On stony hillsides in dry savannah.

(12) PHIALODISCUS

PHIALODISCUS UNIJUGATUS (Bak.) Radlk. Eggeling 126,526,2164,3145, 3472.

Synonym. P.zambesiacus (Bak.) Radlk.

Nkuzanyana (Luganda).

Understorey tree usually 20-50 ft. high, or occasionally an upper-storey tree attaining 100 ft. in height although rarely exceeding 6 ft. in girth. Crown dense, resembling that of a mango, casting a heavy shade. Bark thin, brittle, grey to dark green, fairly smooth, horizontally ridged. Slash mottled brown, with crumbly fracture. Leaves paripinnate; leaflets 2-6, dark green and glossy above, opposite to subopposite, glabrous except for tufts of hair in the axils of the nerves below, elliptic to oblanceolate or obovate-elliptic, lower pair or pairs smaller than the uppermost pair, uppermost leaflets 2-8 in. long, $\frac{3}{4}$-4 in. broad (usually 2-5 in. long and 1-$1\frac{1}{2}$ in. broad), apex shortly and broadly acuminate, base cuneate; lateral nerves 6-12 on each side of the midrib, pale and prominent below; petiolules up to $\frac{1}{4}$ in. long. Racemes axillary, up to 6 in. long; flowers very fragrant; calyx small, with broad triangular teeth, soon open in bud; petals white, downy, funnel-shaped through the concrescence of the basal scales; stamens 8, grey-villous; disk united with the ribs of the calyx; pedicels pubescent, up to $\frac{1}{5}$ in. long. Capsule red, top-shaped, about $1\frac{1}{2}$ in. long, slightly 3-lobed, the lobes narrowly winged; after dehiscence the valves recurve and

become woody. Seeds shining dark brown to black, with a small yellow cupular basal aril. Sapwood yellow-white, very close-grained; heartwood said to be durable and useful for building.

Mengo; Entebbe; Masaka; Ankole; Toro; Mubende; Bunyoro; Busoga. Chiefly on the edge of forest and in secondary scrub. Very decorative when in full fruit.

We include here Dümmer 2953 and Bagshawe 1103, both originally determined as P.plurijugatus Rendle .

(13) ZANHA

ZANHA GOLUNGENSIS Hiern Eggeling 1631,1678,1769,1794.

Deciduous spreading forest tree to 60 ft. Branchlets red-grey, scaly when young. Leaves paripinnate, 4-9 in. long; leaflets 6-8, glabrous, entire or occasionally crenate, ovate to oblong (rarely lanceolate), 2-3½ in. long, 1-1¾ in. broad, apex obtusely acuminate, base cuneate, petiolules very short. Flowers small, olive-green, precocious, carried in dense head-like cymes at the ends of the branchlets; cymes 2-5 in. long; calyx-lobes ovate; petals absent. Fruit olive-like, ellipsoid, apiculate, ¾ in. long, turning from green through rosy pink to straw-yellow. Seeds black with an orange aril. Wood suitable for furniture and building purposes.

Entebbe; Bunyoro; Madi; Chua; Teso. Usually an understorey tree in rain and fringing forest; also found in scrub on rocky hills in dry areas.

The fruit is edible.

Fig.61. Aningeria altissima (A.Chev.) Aubr. & Pellegr.
a. Flowering branch, natural size. b. Flower-bud x 2½.
c. Expanded flower x 2½.

SAPOTACEAE

1. Corolla lobes with petaloid external appendages which give the impression that there are 3 series of petals ..... 2.

   Corolla-lobes without appendages ..... 3.

2. Sepals 6 in two series of 3 ---------- (5) Manilkara

   Sepals 8 in two series of 4 ---------- (6) Mimusops

3. Leaves clustered towards the top of the shoots (2) Butyrospermum

   Leaves not clustered towards the top of the shoots ---------- 4.

4. Seeds albuminous ---------- (3) Chrysophyllum

   Seeds exalbuminous ---------- 5.

5. Lateral nerves connected by numerous transverse veins ---------- (4) Malacantha

   Lateral nerves connected by a network of veins 6.

6. Sepals free or nearly so; corolla-tube longer than the corolla-lobes ---------- (1) Aningeria

   Sepals obviously united at the base; corolla-tube as long as or shorter than the corolla-lobes ---------- 7.

7. Corolla-tube shorter than the corolla-lobes; ovules attached at or above the middle; calyx and pedicels not markedly enlarged in fruit; stipules semi-persistent, subulate, $\frac{1}{3}$-$\frac{1}{2}$ in. long ---------- (7) Pachystela

   Corolla-tube as long as the corolla-lobes; ovules attached below the middle; calyx and pedicels woody and much enlarged in fruit; stipules early deciduous -------- (8) Sersalisea

(1) ANINGERIA

(Fig. 61).

ANINGERIA ALTISSIMA (A.Chev.) Aubr.& Pellegr. / Eggeling 1183, 1535, 1536, 3653.

Synonym. Sideroxylon altissimum (A.Chev.) Hutch.& Dalz.

Upperstorey forest tree to 170 ft. with clean cylindrical bole up to 90 ft. long and 12 ft. mid-girth. Buttresses medium-sized. Bark smooth, grey. Slash exuding a latex the colour of milky tea. Leaves entire, glabrous or at most hairy only on the midrib, elliptic

Fig.62. Butyrospermum parkii var. niloticum (Kotschy) Pierre. a. Leaf b. Flower-cluster. c. Flower-bud. d. Open flower. e. Seed. All natural size.

to obovate-elliptic, 2-5 in. long, 1-2½ in. broad, apex obtuse, base rounded to broadly cuneate; midrib impressed above; lateral nerves 12-24 pairs, prominent below; petiole tomentellous, ¼-½ in. long, often twisted. Flowers in axillary clusters; calyx pale brown, softly pubescent outside; corolla creamy-white; pedicels tomentellous, up to ¼ in. long in flower, attaining ¾ in. in fruit. Fruit puberulous, obovoid-globose, ¾ in. long; seeds ovoid, ½ in. long, glossy dark brown with a pale elliptic scar running nearly the whole length of the seed. Heartwood pale pink, easy to saw.

Mengo; Ankole; Toro (Bwamba); Bunyoro; West Nile; Chua.

The timber is of good quality and is suitable for constructional work.

(2) BUTYROSPERMUM (Fig. 62).

BUTYROSPERMUM PARKII var. NILOTICUM (Kotschy) Pierre / Eggeling 740, 847,

Synonyms. B. niloticum Kotschy; B. parkii Auct.; Bassia parkii G. Don.

Awa (Madi); Komure (Lugbara); Lulu (Arabic); Imuru (Lango); Yaa, Yao (Acholi); Ekungulu (Luteso) : SHEA BUTTER TREE.

Gregarious savannah tree 20-40 ft. high, with stout bole usually about 12 ft. long and 4-5 ft. in. girth, branching like an oak into a number of large gnarled wide-spreading limbs which form a dense crown; the lower branches frequently droop almost to the ground. Bark dark grey to almost black, deeply fissured and cross-cut to form very thick square or rectangular scales 1½-2½ in. wide, this prominent scale-pattern extending even to the smaller branches. Slash crimson, exuding copious white latex. Branchlets stout. Leaves reddish when young, clustered towards the top of the branchlets, pubescent at first, glabrous or puberulous when mature, repand, oblong to obovate-oblong, blade up to 10 in. long and 4½ in. broad (usually 5-8 in. long and 2½ - 3½ in. broad), apex rounded, base rounded or subcordate to broadly cuneate; lateral nerves conspicuous, parallel, numerous (usually 20-30 pairs), spreading almost at right angles; petiole 1½-4 in. long (usually 2-2½ in. long). Flowers fragrant, 8- or 10-merous, borne in dense clusters at the extreme tips of the branchlets above the leaves of the previous year; sepals in two sizes, oblong -

lanceolate, ⅓-½ in. long, the outer row softly rusty-brown tomentose outside, the inner row pubescent and greenish (often with a pink tinge); corolla creamy-white, about as long as the calyx; staminodes petaloid, apiculate, toothed; ovary tomentose; style persistent; pedicels up to 1 in. long, ferruginous-tomentose. Fruit ellipsoid, 2-2½ in. long, 1½-1¾ in. diam., resembling a green plum; seeds 1-3 (usually 1, sometimes 2, rarely 3), shining dark brown with a large white scar resembling a split seed-coat running down one side, chestnut-like in shape but more oval and with one sharp edge, about 2 in. long and 1 in. diam. The seeds are edible and contain a valuable oil. Sapwood pink; heartwood deep rich red with a purple tinge, very hard and heavy, very resistant to termites, difficult to saw, tending to split, picking up under the plane, taking a high polish; weight 80 lb. per cu.ft. air dry.

West Nile; Madi; Gulu; Chua; Lango; Teso; Karamoja; Bugwere.

An important food-tree of Nilotic tribes, usually the dominant tree wherever it occurs, and frequently forming almost pure stands. It is common on dry laterite slopes, and is not found in alluvial hollows or on land subject to flooding; from many apparently suitable areas it is unaccountably absent.

The Shea-butter tree is often associated with the Meni-oil tree (Lophira alata), with which it is liable to be confused at a distance but from which it is easily distinguished at close quarters by the oblong, prominently nerved, long-petiolate leaves, by the scaly bark, and by the presence of latex.

Seedlings produce a long taproot which makes transplanting difficult and for this reason the tree is best propagated by seed sown in situ. Fresh seed is essential. Growth is slow, a tree taking 30 years to mature, although it is said to bear fruit at 12-15 years.

Large quantities of shea kernels (the "shea nuts" of commerce) are exported from West Africa, chiefly to Holland and Belgium. They contain an oil used for soap - and candle-making, as a butter - substitute, and as a constituent of the filling substance of chocolate creams.

Preparation of the kernels is simple; all that is required is that

is that the seeds should be separated from the fruit, and the seed-coat removed. Separation of the seeds is achieved either by gathering the fruits into trenches where the pulp decomposes in 3-4 weeks, or by drying the fruits in the sun till the seeds separate out. Shelling is easy, for the seed-coat is brittle and is easily cracked and removed when dry. Some tribes boil the seeds before cracking but more usually the shell is removed without any previous treatment beyond drying in the sun.

Thoroughly dried kernels weigh about ⅓ as much as the fresh nuts. They contain 45-60 % by weight of fat and 9% protein.

A trial shipment of shea fruits from Uganda was sent to Europe in 1931, but, although favourable reports as to quality were received, the crop is not an economic one at present prices, largely owing to the high cost of freight to the coast.

Although the nuts are not meantime exported from the Protectorate, they are used locally in Northern Uganda by the Nilotic tribes as a source of butter.

A 4-gallon kerosene tin of kernels(weighing about 27 lb.) will yield about 7 lb. of shea butter*, which is prepared by pounding the

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* Shea butter is the material obtained by native methods of extraction; shea oil is the name given to the product expressed from the kernels in Europe.

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usually roasted kernels (roasted till the fat begins to ooze) to a coarse pulp , and grinding the latter to a fine oily paste which has an odour somewhat resembling chocolate. From this paste, which contains tannin and is not edible, the butter is extracted by boiling and skimming, the impurities being removed in the scum. In some parts of Africa, where unroasted kernels are used, the butter is extracted by kneading by hand the crude finely-ground paste in cold water until the fat separates out as a semi-solid emulsion which is skimmed off and boiled. The final product has a strong smell, is usually oily to the touch, and varies in colour from grey to yellow, is eaten as butter, burnt as an illuminant, and used as a base for certain medicines. Properly prepared, it keeps well, and,

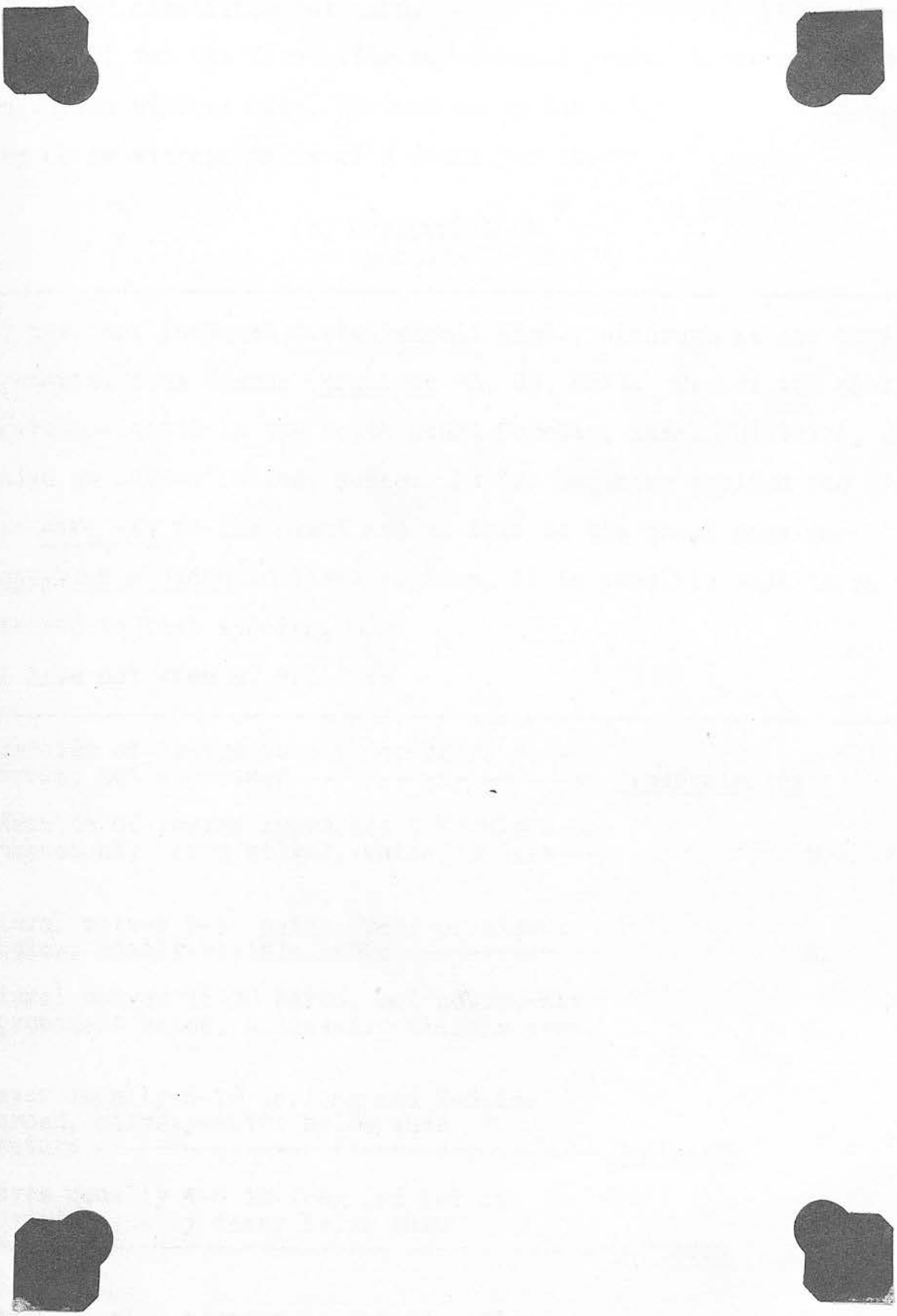

Fig.63. Chrysophyllum spp. - Leaves. a. C.albidum G.Don b. C.sp. near C.natalense Sond. (Eggeling 3164). c. C.fulvum S.Moore. All natural size.

if clarified, can be used quite acceptably for European cooking, making a good substitute for lard.

In 1937, for the first time for several years, there was a small internal sale of Shea nuts, 53 tons being taken by a local soap-making factory at an average price of 3 cents per lb.

(3) CHRYSOPHYLLUM *

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* I have not included C.stuhlmannii Engl., although it has thrice been reported from Uganda (Bagshawe 63, 88, 667). Two of the specimens were collected in the South Buddu Forests, Masaka District, and the third on Buvuma Island, Sesse. As Dr. Bagshawe applies the Luganda name Mukalata to the plant and as this is the usual name for Chrysophyllum albidum in these regions, it is possible that it should be referred to that species.

I have not seen a specimen

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1. Underside of leaves tomentose; hairs red-brown, not appressed ---------- C.perpulchrum

   Underside of leaves appressed puberulous or pubescent; hairs silvery-white or tawny-- 2.

2. Lateral nerves 8-16 pairs, very prominent below, easily visible above ---------- 3.

   Lateral nerves 15-20 pairs, not noticeably prominent below, not easily visible above 4.

3. Leaves usually 6-10 in.long and 2-3 in. broad, silvery-white below when mature ---------- C.albidum

   Leaves usually 4-6 in.long and 1-2 in. broad, usually tawny below when mature ---------- C.fulvum

4. Leaves usually rounded or obtuse, often mucronate ---------- C.glomeruliflorum

   Leaves acuminate or acute ---------- 5.

5. Flowers sessile or subsessile ---------- C.sp.near C.natalense

   Flowers pedicellate ---------- C.sp. prob. new nov.?

CHRYSOPHYLLUM ALBIDUM G.Don Eggeling 724,1219,2247.

Synonym. C.kayei S.Moore

Mululu (Luganda; Lunyoro); Nkalate (Luganda, Buddu dialect): WHITE

WHITE STAR APPLE.

Forest tree to 120 ft. Crown thick. Bole fluted, frequently free of branches for 70 ft. Bark pale brownish-green. Slash exuding white latex. Leaves (Fig. 63) dark green above, pale tawny below when young, silvery-white below when mature, oblong-elliptic to elongate-obovate-elliptic, 5-12 in. long, 1½-4 in. broad, apex shortly acuminate, base cuneate; primary lateral nerves widely spaced, 9-14 on each side of the midrib; secondary lateral nerves indistinct or invisible; petiole 2/3 - 1⅓ in. long. Flowers shortly pedicellate, in dense clusters in the leaf axils or from above the scars of fallen leaves; calyx 5-lobed, ⅛ in. long, rusty-pubescent outside; corolla half as long again as the calyx, creamy-white, the lobes equalling the tube in length. Fruit depressed-globose with a sharp point, about 1¼ in. diam., yellow or yellow-brown ripe, 5-celled, containing a pleasantly acid edible pulp; seeds bean-like, shiny-brown, oblong, compressed, about 1 in. long. Wood brownish-white, soft, coarse and open in grain, very perishable in contact with the ground, easy to saw and plane, nailing easily, taking a fine polish. It is suitable for constructional work and tool handles. Weight about 44 lb. per cu.ft. air dry.

Masaka; Ankole; Toro; Bunyoro; Budama; Busoga.

The tree is widely planted in West Africa for the sake of its fruit.

CHRYSOPHYLLUM FULVUM S.Moore Eggeling 1510, 1912, 3302, 3716.

Forest tree to 90 ft., with clean fluted bole to 90 ft. Leaves (Fig. 63) dark glossy green above, fawn-coloured-puberulous to foxy-red-pubescent below, elongate-obovate-elliptic, 3-9 in. long, 1-2½ in. broad, shortly and obtusely acuminate, base cuneate; primary lateral nerves 8-16 on each side of the midrib, impressed above; secondary lateral nerves invisible; petiole ½-¾ in. long. Flowers shortly pedicellate, in dense axillary clusters; sepals rusty-red; corolla yellow-white. Fruit ovoid-globose, 1½ in. long, with a mealy covering.

Kigezi; Ankole; West Nile. 5-7,000 ft.

We include here Eggeling 1912 originally determined as C.albidum G.Don.

Fig.64. Chrysophyllum spp. - Leaves. a. C.glomeruliflorum Hutch. & Dalz. b. C.perpulchrum Mildbr. ex Hutch. & Dalz. c. C.sp. nov.? All natural size.

SAPOTACEAE (222)

CHRYSOPHYLLUM GLOMERULIFLORUM Hutch.& Dalz. Eggeling 1216,1624,3144.

Synonym. Sideroxylon oblanceolatum S.Moore.

Munyamata (Lunyoro).

Understorey tree or shrub, usually 20-30 ft. high. Bole pale grey-brown, fluted. Leaves (Fig.64) pale grey-green above, silvery-grey-puberulous below, obovate-elliptic, 4-9in. long, 1¼-2½ in. broad (usually 4-6 in. long and 1½-2 in. broad), apex rounded to obtuse (rarely rounded and very shortly and obtusely acuminate), base cuneate; primary lateral nerves 18-22 pairs, slender, closely spaced; secondary lateral nerves very fine but easily visible; petiole ⅓-2/3 in. long. Flowers subsessile, yellow-white to greenish, overpoweringly fragrant, very numerous in dense axillary clusters; calyx grey-pubescent, 1/10 in. long. Fruit red, edible.

Toro; Bunyoro.

CHRYSOPHYLLUM PERPULCHRUM Mildbr.ex Hutch.& Dalz. Eggeling 2089,2239.

Mubakampungu (Lunyoro) : MONKEY STAR APPLE.

Forest tree to 100 ft., with slender bole rarely exceeding 9 ft. in girth, usually fluted towards the base. Bark smooth, pale brown. Slash reddish, a white latex exuding. Leaves (Fig.64) toughly coriaceous, green above, red-brown-velvety below, oblong-elliptic, 5-10 in. long, 1-3½ in. broad (usually 5-8 in. long and 1-2 in. broad), apex obtuse to shortly and bluntly pointed, base broadly cuneate; lateral nerves 10-20 (usually 15-20) on each side of the midrib; petiole ½-1¼ in.long. Flowers sessile, in axillary clusters; calyx rusty-tomentose, 1/6 in. long; corolla creamy. Fruits sessile, globose, about 1 in. diam., rusty-tomentose. Wood soft, white, light, very perishable in the ground, of little value.

Bunyoro. A common and very handsome tree in the Budongo Forest, easily recognised by the vivid [illegible] underside of the leaves. The fruits are edible but are inferior in taste to those of C.albidum.

We include here Dawe 789 originally determined as C.africanum A. DC.

CHRYSOPHYLLUM SP. NEAR C.NATALENSE Sond. Eggeling 3164.

SAPOTACEAE (222)

Forest tree to 80 ft. Leaves (Fig.43) silvery-fawn below, oblong-oblanceolate, 3-5 in. long, ¾-1¼ in. broad, apex acuminate, base cuneate; primary lateral nerves slender, 15-20 pairs; secondary lateral nerves indistinct; petiole ¼-½ in. long. Flowers sessile, axillary; calyx tomentose, rusty purple; corolla yellow-white. Fruit edible, eaten by the Banyankole in times of famine.
Ankole (Lake Lutoto).

CHRYSOPHYLLUM SP. NOV.? Eggeling 2248, 2300, 3385.
Munyama (Lunyoro)

Forest tree to 120 ft. Leaves (Fig.64) yellow-green above, grey to fawn below, oblong-oblanceolate to oblong-elliptic, 3-6 in. long, ¾-1¾ in. broad, apex acuminate, base cuneate; primary lateral nerves slender, 12-16 on each side of the midrib; secondary lateral nerves very faint; petiole ⅓-2/3 in. long. Flowers small, brown in bud, pedicellate, axillary; fruiting pedicels up to ⅓ in. long. Fruit yellow, globose, the size of a golf-ball . Wood white, close-grained, fine in texture, easy to saw and plane, finishing well; it will not take nails fissile, and is very perishable in the ground; weight 64 lb. per cu.ft. air dry.
Toro ; Bunyoro.

(4) MALACANTHA

Underside of leaves densely rusty-tomentose ... M.superba

Underside of leaves rusty-tomentose only on the midrib and nerves, or glabrous throughout ---------- M.sp.nr.M. alnifolia

MALACANTHA SUPERBA Verm. Eggeling 3499,3554

Forest tree to 150 ft. Bole heavily buttressed. Crown relatively small, rounded. Young parts covered with beauful golden-rusty tomentum. Bark grey. Slash white, exuding copious white latex. Leaves simple, alternate, densely tomentose below, glabrous above except on the midrib and lateral nerves, oblong-elliptic to obovate-elliptic, 4-5 in. long, 1½-2¼ in. broad, apex obtuse (usually with a snort mucro), base very broadly cuneate; lateral nerves 17-19 pairs; petiole ½-¾ in. long. Flowers pedicellate, clustered in the leaf-axils; calyx rusty-tomentose; corolla creamy yellow, soon falling.

Seeds brown with a large white hilum; they containing an edible oil. Heartwood white, hard.

Chua (Imatong Mts.; 5-8,000 ft.)

We include here Eggeling 3499 originally determined as Sideroxylon adolfi-friederici Engl.

MALACANTHA SP. NEAR M. ALNIFOLIA Pierre — Eggeling 3822

Mwiruni (Lugishu).

Forest tree to 150 ft. Crown dense. Bole buttressed to a third or even one-half of its height. Bark smooth, ashy-grey. Leaves usually almost glabrous when mature, obovate-oblong to elliptic, 7-17 in. long, 2½-7 in. broad (usually about 9 in. long and 4 in. broad), apex acute, base rounded; lateral nerves distinct, about 19 pairs; petiole twisted, about 1 in. long.

Flowers axillary, creamy-white. Fruits green, up to 1½ in. long, single-seeded; seed ellipsoid, up to ¼ in. long, shining chestnut-brown, with a large white oval hilum. Heartwood pale grey-brown, often with a pink tinge, hard to saw, easy to plane when dry, taking a good polish; weight 30-34 lb. per cu.ft. air dry.

Bugishu. Gregarious on the foothills of Mt. Elgon; 5-6,000 ft.

The timber is used in Kenya for general utility purposes, including cheap furniture, motor car bodies, and boxboards. Used in the round as a building pole its life is probably only 2-4 years.

We include here Brasnett 30 originally determined as Sideroxylon adolfi-friederici Engl.

(5) MANILKARA

1. Leaves more than 7 in. long ------ M. dawei

   Leaves less than 7 in. long ------ 2.

2. Petioles ¼-½ in. long; leaves wedge-shaped in the lower half -------- M. cuneifolia

   Petioles ½-1 in. long; leaves rounded or obtusely cuneate at the base ---------- 3.

3. Petiole ½-¾ in. long; leaves obovate- M. schweinfurthii

   Petiole ¾-1¼ in. long; leaves narrowly elliptic to narrowly obovate-elliptic ---------- M. sp.

Fig.65. Manilkara spp.- Leaves. a. M.dawei (Stapf) b. M.sp. (Eggeling 1512). Both natural size.

SAPOTACEAE (222)

MANILKARA CUNEIFOLIA (Bak.) Dubard — Eggeling 3743.

Synonym. Mimusops cuneifolia Bak.

Nkunya (Luganda).

Forest tree to 90 ft. Bark rough, pale grey to brown. Leaves (Fig. 44) leathery, glabrous, pale below, clustered at the ends of the branches, obovate, 2-5 in. long, ¾-3 in. broad, obtuse or rounded or emarginate at the apex; lateral nerves slender and inconspicuous; midrib prominent below. Flowers white, fragrant, fascicled in the leaf-axils; calyx ⅛ in. long, thinly brown-tomentose outside; pedicels ¼-⅜ in. long, slightly ferruginous. Fruit yellow, edible, up to 1 in. long. Wood very hard, dense, rich red-brown, difficult to saw and plane, tending to split when nailed, turning and polishing well, exceptionally strong and durable, used by natives for spear-shafts; weight 58-63 lb. per cu.ft. air dry.

Masaka (South Buddu forests).

The timber is extremely suitable for purposes requiring resistance to wear and tear, as for instance for paving blocks, flooring, mallets, and brake blocks. It is also of great value for bridge piers and for constructional work submerged in water, and is used in Kenya for dhow-building. Used (untreated) in the round as a building pole it is likely to have a useful life of over 10 years.

Mimusops propinqua S. Moore, of which the type is Bagshawe 76 from Buddu, is perhaps the same plant. We have not seen a specimen.

MANILKARA DAWEI (Stapf) — Dawe 353.

Synonym. Mimusops dawei Stapf

Glabrous forest tree to 80 ft. Slash exudes white latex. Leaves (Fig. 45) leathery, silvery-glaucous below, oblong-obovate, 7-11 in. long, 2½-3½ in. broad, apex rounded to obtuse, base broadly cuneate; Lateral nerves 12-25 pairs, not very prominent; midrib impressed above, prominent below; petiole 1-1½ in. long. Flowers 3-merous, 2-4 together in axillary clusters; sepals obtuse, oblong, up to ⅓ in. long; corolla white; stamens 6; staminodes 2-fid at the apex; style acicular, ⅓ in. long; ovary glabrous, 9-locular.

Mengo; Ankole. Rare.

Fig.66. Manilkara spp. - Leaves. a. M. schweinfurthii (Engl.) Dubard b. and c. M. cuneifolia (Bak.) Dubard. All natural size.

SAPOTACEAE (222)

We include here Chandler 1558 originally determined as Chrysophyllum sp.

MANILKARA SCHWEINFURTHII (Engl.) Dubard/Eggeling 777,886,1674,1756, 3486.

Synonym. Mimusops schweinfurthii Engl.

Thick-crowned tree to 50 ft. Bark black. Leaves (Fig. 44) dark green above, silvery grey-white below, tough and leathery, 3-7 in. long, 1-3½ in. broad (usually 4-5 in. long and 1¾-2½ in. broad), apex rounded or emarginate; lateral nerves spreading, numerous, slender, not prominent but nevertheless easily visible; midrib deeply impressed above, especially in the lower half, prominent below. Flowers sweet-scented, abundant, borne in dense axillary clusters; calyx cinnamon-brown; corolla creamy; pedicels brown-tomentose, ¼-⅓ in. long. West Nile; Madi; Gulu; Chua; Lango. A savannah tree found chiefly on the banks of streams and on lines of seepage.

We include here Tothill 2529 originally determined as Chrysophyllum sp. n.p./A specimen collected by Captain Grant in Madi, referred to by Baker in F.T.A. as closely approximating in habit and leaf to C. magalismontanum Sond., may belong here too : we have not seen it.

MANILKARA SP. Eggeling 1512, 3163.

Forest tree to 120 ft. Crown spreading. Bark grey-brown, fissured. Leaves (Fig. 45) pale below, blade 3-5 in. long and 1¼-1½ in. broad, apex obtuse; lateral nerves directed forwards, numerous, faint; midrib impressed above, prominent below. Flowers in axillary clusters; calyx and pedicels grey-brown; corolla yellowish; pedicels ¼-⅓ in. long Ankole; West Nile.

We include here Eggeling 3163 originally determined as M. cuneifolia (Bak.) Dubard

(6) MIMUSOPS

1. Leaves elliptic to obovate-elliptic; pedicels 1-1¾ in. long ---------- M. fragrans

   Leaves oblong or oblong-lanceolate to obovate-oblong; pedicels ⅓-½ in. long ---------- 2.

2. Leaves oblong-lanceolate, 4½-7 in. long, 1¼-2¼ in. broad. ---------- M. bagshawei

Fig.67. Mimusops fragrans Engl. Flowering branchlets.
Natural size.

SAPOTACEAE (222)

Leaves oblong to obovate-oblong, 3-4½ in. long, 1¼-1¾ in. broad ---------- M.ugandensis

MIMUSOPS BAGSHAWEI S. Moore Bagshawe 684.

Forest tree. Leaves glabrous above, pale below, apex lengthily cuspidate-acuminate, base cuneate; petiole ½-¾ in. long. Calyx-lobes ¼ in. long, obtuse or acute, tomentellous outside; corolla-lobes 1/5 in. long, broadly oblong, obtuse, with oblong-lanceolate appendages; pedicels ⅓-½ in. long. Fruit pale brown, globose, slightly more than ¾ in. diameter, single-seeded.

Entebbe.

Named after Dr. A.G. Bagshawe, medical officer to the Anglo - German Uganda Boundary Commission of 1903.

We have not seen a specimen of this plant, which may not be distinct from M.ugandensis Stapf.

(Fig.67).

MIMUSOPS FRAGRANS Engl. Eggeling 1508, 1923, 2001, 2425, 3515.

Spreading tree to 40 feet on the banks of watercourses in savannah. Branchlets slender, densely ferruginous-tomentose. Leaves glabrous when mature except sometimes on the midrib beneath, 3-4 in. long, 1¼-2 in. broad, apex obtuse or obscurely cuspidate, base broadly cuneate; petiole tomentose, ⅓-2/3 in. long. Flowers fragrant, erect or drooping, 2-4 together in the axils of the upper leaves; calyx-lobes 8, densely ferruginous, those of the outer row lanceolate, those of the inner row linear; corolla creamy-white, the 16 segments of the outer row shorter than the calyx, the 8 ligulate segments of the inner row as long as the the calyx; ovary globose, densely silky, 8-celled; pedicels densely ferruginous-tomentose. Fruit ellipsoid, slightly more than ¾ in. long; seed with a basal scar.

Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Teso; Karamoja; Bugishu.

We include here all Uganda records of M.kummel Hochst.

MIMUSOPS UGANDENSIS Stapf (incl.var. HETEROLOBA Stapf).

Eggeling 1474, 2302, 3059, 3104, 3759.

Synonym. M. toroensis Stapf

Musali (Luganda), Buddu dialect); Muma (Lunyoro, Lutoro dialect).

SAPOTACEAE (222)

Forest tree to 130 feet, glabrous except the buds and flowers. Bole thick, cylindrical. Bark dark brown, deeply channelled and cross-cut into small rectangles. Slash dark red, exuding white latex. Leaves shortly acuminate to lengthily cuspidate-acuminate at the apex, broadly cuneate at the base; petiole $\frac{1}{3}$-$\frac{3}{4}$ in. long. Flowers pendulous, numerous in axillary fascicles; calyx-lobes $\frac{1}{3}$ in. long, those of the outer row ovate-lanceolate, scarcely acuminate, pale brown pubescent, those of the inner row smaller, cinereous-tomentellous; corolla-lobes yellow-white, 1/5 in. long, subacute, those of the outer row narrow-oblong, those of the inner row lanceolate; ovary villous, 8-celled; pedicels $\frac{1}{3}$-$\frac{1}{2}$ in. long. Fruit yellow, ovoid, 1 in. long, flannelly when young, glabrous when mature.

Entebbe; Masaka; Ankole; Toro; Bunyoro.

The variety heteroloba Stapf with notched tips to the corolla-lobes, is probably only a sexual (female) form.

We include here Eggeling 1474, originally determined as Chrysophyllum sp.

(7) PACHYSTELA

PACHYSTELA BREVIPES (Bak.) Baill. Eggeling 440, 3641.

Synonym. Sideroxylon brevipes Bak.; Pachystela cinerea Pierre

Nkalate (Luganda).

Forest tree to 60 ft. Bole deeply fluted. Leaves glabrous, obovate, usually $3\frac{1}{2}$-$7\frac{1}{2}$ in. long and $1\frac{1}{2}$-$2\frac{1}{2}$ in. broad, apex bluntly acuminate, base very narrowly cuneate, lateral nerves 8-10 pairs; petiole $\frac{1}{4}$-$\frac{1}{2}$ in. long. Flowers fragrant, crowded in dense clusters on small cushions in the axils of the lowest leaves or on the bare branchlets; calyx-lobes appressed grey-tomentose, obtuse, twice as long as the tube; corolla-segments yellow-white, oblanceolate-spathulate, permanently erect; style persistent, $\frac{1}{8}$ in. long; pedicels 1/10 in. long. Fruit yellow, oblong-ellipsoid, $\frac{3}{4}$-1 in. long, prominently beaked, containing a milky juice and a white mucilaginous acid-sweet edible pulp. Wood brownish-white to reddish-yellow, fine-grained, hard, durable, fissile and nailing badly, planing easily and smoothly, turning indifferently; weight 60 lb. per cu.ft. air dry.

Mengo; Entebbe; Sese; Masaka; Ankole

SAPOTACEAE (222)

(8) SERSALISEA

SERSALISEA EDULIS S. Moore Eggeling 704, 1481, 1511.

Forest tree usually 50-70 ft. high, sometimes attaining 100 ft. Bole fluted. Leaves glabrous, oblanceolate, usually 4-9 in. long and 1½-2½ in. broad (occasionally up to 12 in. long and 4 in. broad), apex obtuse, base long-cuneate, lateral nerves 12-14 pairs; petiole ¼-¾ in. long. Flowers crowded in dense clusters on small cushions on the bare branchlets below the leaves; calyx campanulate, ⅛ in. long, red-brown tomentellous; calyx-lobes subacute, about as long as the calyx-tube; corolla-segments yellow-white, sharply recurved; style 1/6 in. long; flowering pedicels slender, ⅕ in. long; fruiting pedicels stout, ⅓-½ in. long. Fruit red, oblong-globose, ¾-1 in. long, ¾ in. diameter, rounded at the apex, tipped by the persistent style, containing a single seed surrounded by tart refreshing edible pulp. Wood uniform pale red-brown, medium coarse and open in grain, hard, fissile, difficult to nail and saw, planing easily and smoothly, turning badly; weight about 35 lb. per cu.ft. air dry. Mengo; Entebbe; Masaka; Bunyoro; West Nile.

We include here Dawe 293 originally determined as Sideroxylon sp., and Eggeling 704 originally determined as ? Pachystela sp.

Dawe 647, originally determined as Pachystela msolo Engl., should probably also be referred to this species.

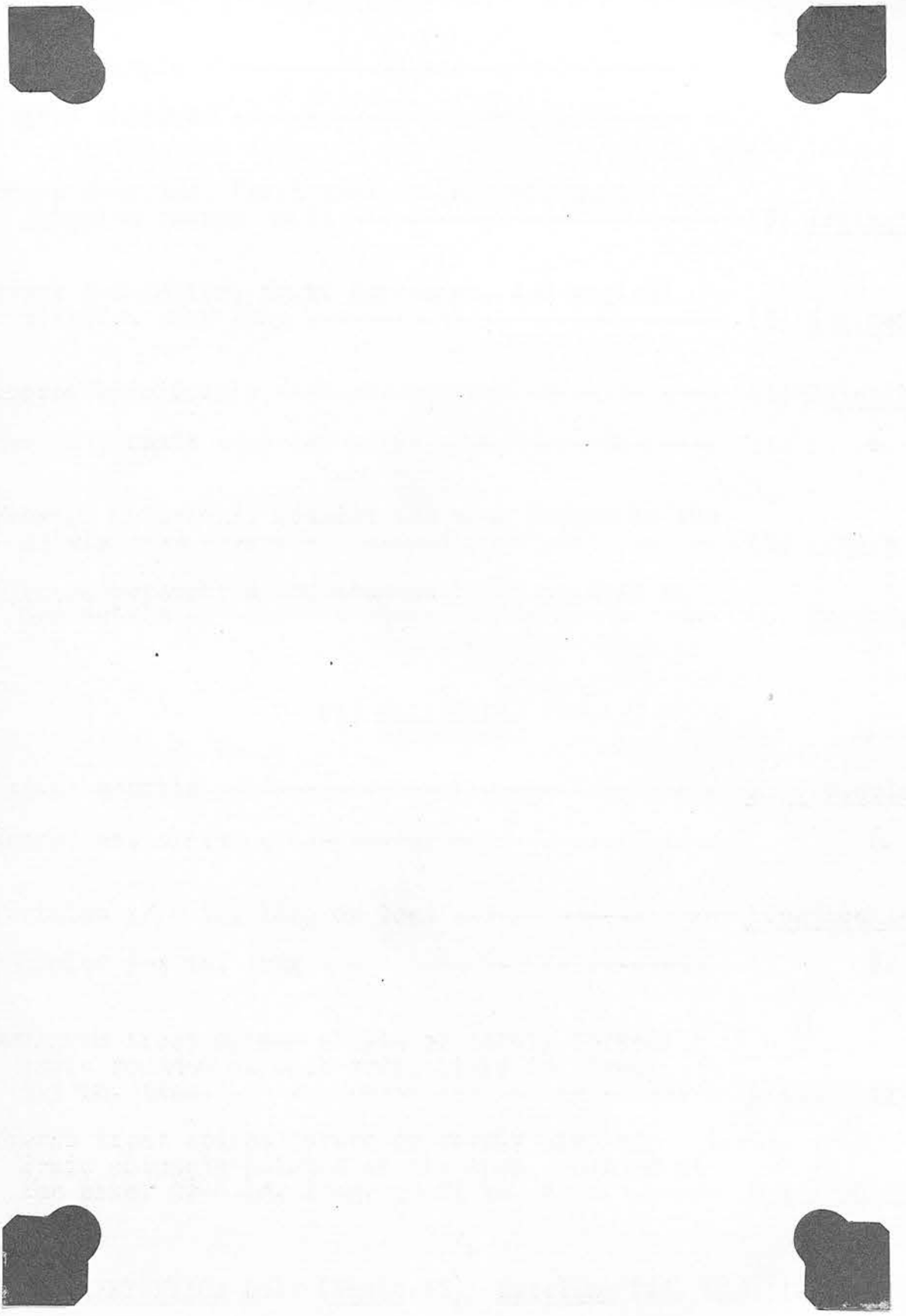


Fig.68. Balanites aegyptiaca Del. a. Flowering branch. b. Fruits. Both natural size.

SIMARUBACEAE

1. Leaves simple ---------- 2.
   Leaves compound ---------- 3.

2. Ovary 2-celled; fruit more or less ellipsoid; stipules rather small ---------- (3) Irvingia

   Ovary 5-6-celled; fruit depressed, 4-6-angled; stipules very long ---------- (4) Klainedoxa

3. Leaves bifoliolate ---------- (1) Balanites
   Leaves pinnate ---------- 4.

4. Flowers unisexual; stamens the same number as the petals ---------- (2) Brucea
   Flowers hermaphrodite; stamens twice as many as the petals ---------- (5) Odyendea

(1) BALANITES

1. Leaves sessile ---------- B. orbicularis
   Leaves petiolate ---------- 2.

2. Petioles 1/10 in. long or less ---------- B. pedicellaris
   Petioles $\frac{1}{3}$-$\frac{1}{2}$ in. long ---------- 3.

3. Savannah tree; spines simple or rarely forked; fruit rounded at both ends, $1\frac{1}{4}$-$1\frac{3}{4}$ in. long, $\frac{3}{4}$-1 in. diam. ---------- B. aegyptiaca
   Forest tree; spines forked or rarely simple; fruit obtusely pointed at the apex, rounded at the base, $2\frac{1}{2}$-4 in. long, $1\frac{3}{4}$-$2\frac{1}{2}$ in. diam. ------ B. wilsoniana

(Fig. 68).

BALANITES AEGYPTIACA Del. (Photo. 42). Eggeling 744, 913, 1223, 2845.

Mutete (Lunyoro; Bugungu dialect); Loba, Logba (Lugbara, Madi); Tŏŏ (Gang) : DESERT DATE; HEGLIG; EGYPTIAN MYROBALAN.

Savannah tree usually 15-20 ft. high, sometimes attaining 35 ft. Crown spherical, with a tangled mass of long thorny twigs whose leafless ends droop or protrude here and there from the main thicket. Bark grey to dark brown, with thick ragged scales and long vertical fissures in which the yellow of the new bark can be seen. Slash pale yellow. Branchlets green, smooth, armed with straight, green, forward

forward-directed, supra-axillary spines up to 3¼ in.long. Leaves grey-green; petiole ⅓-2/3 in. long; leaflets obovate to orbicular-rhomboid, usually 1-2 in.long and ½-1½ in. broad (exceptionally as much as 3 in. long and 2½ in.broad), subsessile or with petiolules up to ⅓ in.long. Flowers yellow-green, about ½ in. diam., in supra-axillary fascicles or rarely subracemose; sepals 5, deciduous; petals 5, about 1/5 in. long; stamens 10; disk small; pedicels about ⅓ in. long. Fruit green at first, turning yellow as it ripens, broadly oblong-ellipsoid, containing a large hard pointed stone surrounded by yellow-brown sticky edible flesh. In the ripe fruit there is a space between the flesh and the thin leathery wrinkled skin so that the latter is readily removed. Wood pale yellow-brown, moderately well figured, slightly lustrous, compact and fine-grained, durable and resistant to insects, sawing easily, planing smoothly, suitable for turnery; it resembles beech in quality and makes excellent hoe-and axe-handles; weight 48-50 lbs. per cu.ft. air dry.

Kigezi; Ankole; Toro; Mubende; Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Teso; Karamoja; Bugwere; Bugishu. In dry savannahs and on low-lying flatlands subject to inundation.

The fruits (the Heglig berries of the Sudan) are an article of diet among the Madi and Acholi. The pulp is fibrous, oily and gummy, and has a bitter-sweet taste, so that the pulp covered kernels are extremely refreshing to suck.

The dried fruit is sometimes called the desert date and the unripe fruit Egyptian myrobalan. The kernel yields over 40% of an oil, sometimes called Zachun oil, believed to have been an ingredient in the Spikenard mentioned in Scripture. The pulp contains 40% of sugar, and a saponin substance which forms a soapy lather with water. An emulsion made from the fruits is lethal to the freshwater snails which act as intermediary hosts for Bilharzia, and to the two larval stages of the bilharzial parasite. It is also lethal to the water flea cyclops, the carrier of Guinea-worm disease. As the berries are non-toxic to man and domestic animals, wells and other water supplies can be readily treated.

Very strong emulsions of the fruits are used by the Acholi for poisoning fish.

SIMARUBACEAE (195)

BALANITES ORBICULARIS Sprague Eggeling 2846.

Savannah bush or small tree to 15 ft., usually multi-stemmed. Spines straight, stout, up to 1½ in. long. Being modified branches, they bear leaves and flowers, and the lower portion is rough and twig-like. Leaves grey-green, tomentellous; leaflets sessile, orbicular, 2/3-1 in. diam., usually shallowly notched at the apex. Flowers pale green, fascicled or subracemose; pedicels short.
Karamoja. In very dry savannah.

BALANITES PEDICELLARIS Mildbr. ex Schlecht. Brasnett 80.

Dense savannah bush or small tree. Spines straight, stout, sharp, axillary or terminating lateral branchlets, about ½ in. long in our specimen. Leaves grey-green, more or less glabrous; leaflets very shortly petiolulate or subsessile, obovate, 2/3-¾ in. long, ⅓-½ in. diam., rounded or emarginate at the apex, tapered to the base. Flowers greenish, fascicled; sepals sandy-tomentose, 1/5-¼ in. long; petals exceeding the sepals; ovary densely pilose with shining hairs; pedicels ½-¾ in. long. Fruit yellow.
Karamoja.

BALANITES WILSONIANA Dawe & Sprague Eggeling 1634,2038.

Synonym. B. dawei Sprague (nomen).
Mukunga (Lunyoro); Lukoyo (Lunyoro, Toro dialect).

Deciduous forest tree to 120 ft. Lower stem deeply fluted, the ridges rarely armed with woody spines. Bark yellow-grey to grey-green, fairly smooth. Slash very hard, pale yellow-brown with an underlying layer of white silky fibres. Branchlets armed with bifurcate supra-axillary spines up to 3½ in. long. The bifurcation of the spines is due to the main axis of the spines being bent to one side by the almost equally vigorous growth of a lateral branch which is borne in the axil of a minute scale leaf. Petioles ⅓-2/3 in. long; leaflets glabrous, broadly ovate to ovate-orbicular, 2-4 in. long, 1¼-2 in. broad, apex acuminate, base rounded; petiolules ¼-⅓ in. long. Flowers pale green in supra-axillary umbels; peduncle up to 1/5 in. long; buds nearly globose; petals ⅓ in. long; disk large; pedicels

about ⅓ in. long. Fruit ovoid-ellipsoid, longitudinally 5-ribbed, yellow-green when ripe, with a strong unpleasant odour; seeds about 2 in. long and 1 in. diam. Wood soft, resembling bass wood in colour but much firmer, stronger and tougher; it works fairly easily with all tools. The medullary rays give flecked markings as in beech and birch. Being straight in grain, the wood cleaves fairly well, but also takes nails. It turns and polishes well, and is a good general purposes wood; weight 45 lbs. per cu.ft. air dry.

Toro; Bunyoro.

The fruits of this tree are much relished by elephants which are mainly responsible for its distribution, the seed passing through the animals undigested.

The fruit-pulp is toxic to the carriers of Bilharzia and Guinea-worm. The seeds contains an oil used as an unguent by the Baamba, who also use the seed for food.

(2) BRUCEA

BRUCEA ANTIDYSENTERICA Mill. Eggeling 980.

Shrub or small tree to 20 ft. Leaves pinnate, 9-24 in. long; leaflets 7-13 (usually 9), opposite or sub-opposite, reddish-pubescent below, narrowly ovate to oblong, 1½-5 in. long, 1-2½ in. broad, apex obtuse or shortly apiculate, base rounded and usually unequal-sided. Flowers small, yellow-green, subsessile, clustered at intervals on the axis of pilose-tomentose spikes 4-10 in. long. Fruit bright-red, ellipsoid, ⅓-½ in. long.

Kigezi (Mt. Muhavura; 7,000 ft.).

(3) IRVINGIA

IRVINGIA SP. Eggeling 1184.

WILD MANGO.

Forest tree to 60 ft. Leaves coriaceous, glabrous, glossy and dark above, paler beneath, prominently reticulate, elliptic to ovate-elliptic, 4-5 in. long, 2-2½ in. broad, apex shortly and broadly acuminate, base cuneate to narrowly rounded; lateral nerves 9-12 pairs; petiole ⅓-½ in. long. Fruit single-seeded, dependant, broadly

Fig.69. Klainedoxa gabonensis Pierre a. Leaves and stipules. b. Fruit. All natural size.

ellipsoid, 2½-3 in. long, 2-2½ in. diam., yellow, mango-like; it is edible but poor in flavour (tasting of turpentine), has a smooth skin, a fibrous bristly exocarp and a hard endocarp.
Entebbe; Toro; Bunyoro.

In the absence of stipules and flowers it is impossible to name this species exactly. In the past it has been called I.sp.near I.smithii Hoof.f., but from the descriptions of both plants in F.W.T.A it would seem to be much more closely allied to I.gabonensis Baill.

The seeds are cooked and eaten in Bwamba.

(4) KLAINEDOXA

KLAINEDOXA GABONENSIS Pierre (Fig. 69). Eggeling 1404,1579.

Synonym. K.gabonensis var.oblongifolia Engl.; K.oblongifolia Stapf.

Mukuzanyana (Lunyoro).

Large evergreen forest tree to 150 ft. with a very thick crown which is often umbrella-shaped in old trees. Buttresses prominent, sharp, spreading, sometimes plank-like. Bark grey, somewhat fissured. Leaves coriaceous, glabrous, glossy, ovate to broadly elliptic or oblong-lanceolate, usually 3-5 in. long and 1¾-2 in. broad, apex shortly acuminate, base shortly cuneate; stipules deciduous, glabrous, linear, 2-4 in. long, sharp-pointed, enclosing the buds. Flowers small, reddish, in glabrous paniculate racemes about 6 in. long; sepals 5; petals 5, twice as long as the sepals; pedicels very short. Fruit depressed-globose, 1¼-1½ in. long, about 2 in. diam., hard, 5-angled, containing 5 seeds. Wood red-brown to golden-brown, with wide dark veining, very hard, dense, fairly coarse and open in grain, often ornamented with zigzag markings, very durable but too hard for general use; weight 60-65 lbs. per cu.ft. air dry. It is suggested as suitable for piles, carpentry, stair treads, sleepers, etc.
Mengo; Masaka; Bunyoro.

Readily redognised by the long stipules which protrude above the canopy, and which usually can be found in large numbers under the tree.

(5) ODYENDEA

ODYENDEA LONGIPES Sprague Dawe 458.

SIMARUBACEAE (195)

Forest tree to 80 ft. Leaflets usually 11, coriaceous, elliptic-oblong, 2-5 in. long, 1¼-2 in. broad, apex acuminate, base obtuse; petiole ½-¾ in. long. Flowers in terminal and axillary corymbose panicles; calyx 5-lobed, lobes elliptic-orbicular; petals 5, ovate-oblong or oblong, ¼ in. long; stamens 10; pedicels ⅛ in. long. Toro.

SOLANACEAE (250)

SOLANACEAE

Anthers opening by slits lengthwise ---------- (1) Discopodium
Anthers opening by terminal pores ---------- (2) Solanum

(1) DISCOPODIUM

DISCOPODIUM PENNINERVIUM Hochst. Eggeling 1132, 1625, 2388.

Forest undershrub or small tree to 20 ft. Stems slightly fleshy. Branchlets brown-tomentose. Leaves entire or undulate or toothed, elliptic to oblong-elliptic, up to 10 in. long and 5 in. broad, glabrous above, generally slightly pubescent on the midribs and on the 10-12 pairs of lateral nerves below, apex broadly acuminate, base cuneate; petiole up to 2 in. long. Flowers numerous, fasciculate, yellow-green to yellow-white, about $\frac{1}{3}$ in. long; calyx-lobes spreading, broadly triangular; corolla cylindric, tomentellous outside above the calyx, lobes more or less reflexed, half as long as the tube; stamens and style included; pedicels $\frac{1}{4}$-$\frac{1}{2}$ in. long. Berry orange-yellow, globose, $\frac{1}{4}$-$\frac{1}{3}$ in. diam.
Mengo; Entebbe; Ankole; Kigezi; Toro; Bunyoro; Karamoja; Bugishu.

(2) SOLANUM

Only two of the numerous Uganda members of this genus attain tree-size. They may be distinguished as under -:

Leaves deeply pinnately lobed ---------- S.aculeastrum
Leaves entire ---------- S.giganteum

SOLANUM ACULEASTRUM Dunal Eggeling 1134.

Spreading shrub or tree to 20 ft., in savannah or scrub. Stem clothed in short dense white stellate tomentum on the younger parts. Spines $\frac{3}{4}$ in. long, much compressed, recurved. Leaves mostly paired or ternate, more or less ovate, 4-7 in. long, $2\frac{1}{2}$-4 in. broad, green above, white with dense stellate tomentum beneath, spiny on the midrib; petiole up to 1 in. long. Cymes extra-axillary, racemose, the lowest flower alone fertile; calyx cupular, 5-fid, enlarged in fruit; corolla-lobes 5, about $\frac{1}{2}$ in. long, white or yellow-white, stellate.

stellate-hairy outside, glabrous within. Berry globose, 1½-2 in. diam., smooth, lemon-yellow, edible but very bitter.
Kigezi; Toro; Bugishu. (6,500 - 8,000 ft.).

SOLANUM GIGANTEUM Jacq. Chandler 1215.

Shrub or tree to 25 ft. in secondary scrub and on the edge of forest. Branches tomentose. Spines up to 1/6 in. long, broad-based, much compressed. Leaves elliptic-lanceolate, 4-15 in. long, 1½-6 in. broad, acute at the apex, cuneate at the base, unarmed, glabrous above, white-tomentose beneath; petioles up to 2 in. long. Cymes axillary and terminal, corymbose, many-flowered; calyx-lobes 5; corolla-lobes 5, violet-purple, 1/6 in. long, white-tomentose outside, glabrous within. Berry shining red, the size of a pea.
Mengo; Entebbe; Toro; Bunyoro; Bugishu. (3,500 - 5,000 ft.).

STERCULIACEAE (130)

STERCULIACEAE

1. Petals present; flowers hermaphrodite ---------- 2.
   Petals absent; flowers unisexual or polygamous-- 3.

2. Petals much larger than the sepals ---------- (2) Dombeya
   Petals much smaller than the sepals ---------- (3) Leptonychia

3. Anthers arranged in an irregular mass --------- (5) Sterculia
   Anthers arranged in whorls ---------- 4.

4. Seeds few, not winged, not containing endosperm- (1) Cola
   Seeds numerous, winged, containing edosperm ---- (4) Pterygota

(1) COLA

COLA CORDIFOLIA R.Br. Eggeling 889, 1612.

Synonym. Sterculia cordifolia Cav.

Mujugangoma (Lunyoro); Kitoko (Kuamba).

Deciduous forest tree to 120 ft. Crown spreading. Trunk shortly buttressed. Bark thick, ashy-grey, peeling in vertical strips, slightly fissured. Slash mottled yellow-white, exuding gum. Leaves simple, alternate, ovate to broadly ovate, usually 5-7 in. long and 4-5 in. broad on flowering shoots, sometimes as much as 24 in. long and 20 in. broad towards the base of the branches, glabrous above, stellate-pubescent to tomentose below, apex obtuse, base cordate to truncate; petiole 1½-6 in. long. Flowers small, white (becoming pink as they fade), subsessile, thickly clustered on the ~~bra~~ branches of the axillary ochry-tomentose inflorescences. Fruit a stellate cluster of 4-5, shortly beaked, oblong, follicles; follicles smooth and pinkish-white inside, felty-~~scarlet~~ and scarlet tomentose outside at first, drying to brown, opening almost flat; seeds inedible, ¾-1 in. long, ½ in. diam., ~~enclosing~~ enclosed in a fleshy edible aril with an agreeable taste, and they are embedded in an edible pulp which is mucilaginous at first but hardens as the follicle matures. Sapwood yellow-white; heartwood grey-brown, subject to blue discolouration, soft, porous, coarse and open in grain, perishable, said to be a good firewood; weight about 35 lbs. per cu.ft. air dry.

Ankole; Toro; Bunyoro; Madi.

STERCULIACEAE (130)

(2) DOMBEYA

1. Flowers arranged in heads, not spreading in fruit -- 2.

   Flowers in lax cymes, dry and papery and spreading in fruit ---------- 5.

2. Inflorescence a simple umbel or the peduncle forked into two branches each terminating in a simple umbel ---------- 3.

3. Underside of leaves pubescent; a species of mountain forest ---------- D. leucoderma

   Underside of leaves densely velvety-tomentose; a savannah species ---------- D. dawei

4. Leaves emarginate or rounded at the apex; a savannah species ---------- D. emarginata

   Leaves acuminate at the apex; a species of moutain forest ---------- D. goetzenii

5. Leaves usually velvety-tomentose; a savannah species ---------- D. rotundifolia

   Leaves puberulous; a species confined to forest - edges ---------- D. mukole

DOMBEYA DAWEI Sprague Eggeling 439,613,1450,3456,3630.

Nkokwa, Kikokwa (Luganda).

Savannah shrub or tree, usually 6-10 ft. high, sometimes attaining 20 ft. Bark brown, pilose on young twigs, valued as a tie-fibre. Leaves crenate-serrate, broadly ovate, not infrequently 3-lobed, blade usually 3½-7 in. long and 2-4½ in. broad, apex acuminate, base cordate, lobes (when present) acute, upper surface pubescent (stellate-pilose on the nerves); stipules lanceolate, usually about ½ in. long; petiole 1½-2½ in. long, pilose at first. Flowers usually white, sometimes faintly flushed with pink, 3-15 together in axillary umbels; peduncle usually 1-2½ in. long; sepals ½-2/3 in. long; petals 2/3 -¾ in. long and broad; stamens 15; pedicels pilose, ½-1½ in. long. Capsule up to ⅓ in. long.

Masaka; Kigezi; Ankole; Toro; Bunyoro; Bugishu; Budama.

Named after Mr. M.T. Dawe who discovered the plant in Buddu.

D. parvifolia K. Schum. appears to be a small-leaved, small-flowered form.

Fig. 70. Dombeya spp. - Leaves. a. D. emarginata E. A. Bruce (Natural size). b. D. goetzenii K. Schum. ($x\frac{1}{2}$).

STERCULIACEAE (130)

DOMBEYA EMARGINATA E.A. Bruce Eggeling 547, 3224, 3476.

Nhohwa, Kikohwa (Luganda).

Bushy savannah shrub or tree, usually 6-10 ft. high, sometimes attaining 25 ft. Bark brown, tomentose or pilose on young shoots, used for tying. Leaves (Fig. 70) 3-5-lobed, crenulate-denticulate, suborbicular to very broadly ovate, sometimes broader than long, usually 3-7 in. diam., apex rounded and emarginate and with the tip of the midrib projecting, base deeply cordate, lobes rounded, upper surface pubescent or pilose, lower surface densely tomentose; stipules ¼-1 in. long; petiole usually 1½-3 in. long. Flowers white, crowded in axillary inflorescences; peduncle pilose, usually 4-8 in. long, sparingly branched; sepals ⅓-2/3 in. long; petals up to ½ in. long and ¾ in. broad; pedicels ¼-1 in. long. Capsule ⅓-½ in. long.

Mengo; Ankole; Kigezi; Mubende; West Nile.

I have not seen a specimen of Dombeya bagshawei Bak.f., of which the type (the only record of the species from Uganda) is Bagshawe 391 from Toro, but from the description it seems likely that it is the same plant as the above. If this is the case Baker's name has priority.

Bagshawe 451, determined as D. pedunculata K.Schum., probably belongs here too.

DOMBEYA GOETZENII K.Schum. Eggeling 1045, 1260, 2375.

Synonym. D. runsoroensis K.Schum.

Tree to 50 ft., with bole up to 4 ft. in girth. Bark grey, smooth. Slash yellow-brown. Branchlets pubescent when young, glabrescent. Leaves (Fig. 70) dark green, usually with red nerves, denticulate, suborbicular to broadly ovate, rarely trilobed, 5-14 in. long, 3½-10 in. broad, softly pubescent on both surfaces, long-acuminate at the apex, deeply cordate and often with overlapping lobes at the base; stipules as least ⅓ in. long; petiole up to as long as the blade. Inflorescence up to 12 in. long; pseudo-umbels 10-18-flowered; flowers pale pink (deep red at the base of the staminal tube); sepals up to ½ in. long; petals ⅓-½ in. long; stamens numerous; stigmas 5; pedicels up to 1¾ in. long. Capsule densely pubescent to tomentose, 5-celled, 10-seeded. Wood uniform brownish-white, fine-grained, soft, tough, easy to saw and plane, nailing well without splitting,

not suitable for turnery; weight about 27 lbs. per cu.ft. air dry.
Toro; Kigezi; Chua.

In mountain forest; 5,500 - 7,500 ft.

I include here Thomas 1146 and Snowden 1517, originally determined as D. leucoderma K.Schum.

DOMBEYA LEUCODERMA K.Schum. Eggeling 2473,2835,2883.

Shrub or tree usually 15-20 ft. high, sometimes attaining 60 ft., found chiefly on the edge of forest. Leaves denticulate, ovate, 2-7 in. long, 1½-4½ in. broad, puberulous to pubescent above, pubescent to tomentose beneath, apex long-acuminate, base cordate (often with overlapping lobes); petiole 1½-4½ in. long, villous to almost glabrous. Flowers white or pink, on simple or once-branched peduncles up to 4 in. long; sepals up to 2/3 in. long and ⅓ in. broad; petals up to ½ in. long and broad; pedicels 1-1¾ in. long.

Chua; Karamoja; Bugishu. In mountain forest; 7,000 - 9,500 ft. D. leucoderma K.Schum. is closely related to and perhaps not specifically distinct from D. goetzenii K.Schum., both plants (and perhaps also D. schimperiana A.Rich and D. mastersii Hook.f.) being probably merely geographical forms of one widely-spread species.

I include here Eggeling 2473, 2883, originally determined as D. sp. near D. schimperiana A.Rich.

Eggeling 2515 originally determined as D. mastersii Hook.f. may belong here. Typical D. mastersii does not occur in Uganda, records of the species being referable variously to D. emarginata, D. dawei, D. goetzenii and D. leucoderma.

DOMBEYA MUKOLE ~~K.Schum.~~ Sprague Eggeling 531, 1188, 1565.

Mukole (Luganda, Lunyoro, Kuamba, Lukonjo).

Tree to 40 ft., very handsome when in full flower. Leaves (Fig. 71) crenate-serrate, stellate-puberulous on both surfaces, broadly ovate, 2-5 in. long, 1¼-4¼ in. broad, apex acuminate, base cordate; petiole ½-1¾ in. long. Flowers, white, chiefly precocious, in axillary cymes 2-4 in. long; sepals 1/5 in. long; petals oblique, slightly more than ⅕ in. long; stamens 15; stigmas 3; ovary 3-locular; pedicels ⅓ in. long. Wood red-brown, hard, cross-grained, nailing badly; weight about 48 lbs. per cu.ft. air dry.

Fig. 71. Dombeya mukole Sprague. Three leaves from the same tree. All natural size.

Mengo; Entebbe; Masaka; Ankole; Toro; Bunyoro; Busoga.

I include here Eggeling 531, originally determined as D. umbraculifera K.Schum. (from which D.mukole may not be specifically distinct);also Snowden 659, originally determined as D.gilgiana K. Schum.

DOMBEYA ROTUNDIFOLIA Harv. Eggeling 853, 1503, 1647, 1785,2487.

Synonyms. D.multiflora var.vestita K.Schum.; D.quinqueseta Exell; D.reticulata Mast.

Riang (Gang).

Savannah shrub or tree, usually 6-15 ft. high, occasionally attaining 20 ft. Branchlets glabrous or nearly so. Leaves ovate, acute or obscurely lobed, 2½-8 in. long, 2-7 in. broad (usually 2½-6 in. long and 2-4 in. broad), cordate at the base, stellate-tomentose (often densely so) on both surfaces; lateral nerves very prominent beneath; petiole 1-4 in. long. Peduncle up to 4 in. long; flowers white or pinkish-white, precocious, woolly-tomentose in bud; sepals up to ⅓ in. long; petals oblique, up to 2/3 in. long; pedicels ⅓ in. long.

Ankole; Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Teso; Karamoja; Bugwere; Bugishu.

(3) LEPTONYCHIA

Leaves elliptic to obovate-elliptic, about 2½ times as long as broad, rounded at the base ---------- L.multiflora

Leaves oblanceolate to narrowly oblong-oblanceolate, 3½-4½ times as long as broad, cuneate to obtuse at the base ---------- L. sp.

LEPTONYCHIA MULTIFLORA K.Schum. Eggeling 1621.

Slender understorey shrub or tree about 15 ft. high. Leaves alternate, entire, mostly 3-5½ in. long and 1¼-2¼ in. broad, apex acuminate; lateral nerves 5-6 pairs; petiole about ⅓ in. long. Flowers in short axillary cymes; sepals green-ochre, oblong, up to 1/5 in. long; petals white, very short, the inner face covered with white hairs; stamens as long as or exceeding the sepals; pedicels up to ⅓ in. long. Capsule warty, obovoid-globose, up to ½ in. long, 3-valved; seeds enveloped in a spongy scarlet aril.

Mengo; Entebbe; Bunyoro.

I include here Eggeling 1621, Maitland 624 and Dummer 4406, all originally determined as Grewia sp.

LEPTONYCHIA SP. Eggeling 3172,3649.

Understorey shrub or tree to 20 ft. Leaves alternate, entire, mostly 3½-4½ in. long and ¾-1 in. broad, caudate-acuminate at the apex, slightly unequal-sided at the base; lateral nerves usually 5 pairs; petiole about 1/5 in. long. Flowers in short axillary cymes; sepals pale green, linear-oblong, exceeding ⅓ in. in length; petals white, very short, the inner face covered with white hairs; stamens 1/5 in. long; pedicels up to ⅓ in. long.

Ankole (Kalinzu Forest).

I include here Eggeling 3172 originally determined as L. multiflora K.Schum.?

(4) PTERYGOTA

PTERYGOTA SP. NOV. Eggeling 1609, 1913, 3474.

Mukoko (Lunyoro); Ndaula (Lunyoro, Mubende dialect).

Forest tree to 150 ft., often with clean bole to 90 ft. Crown rounded, relatively small. Buttresses medium-sized. Bark pale brown, rough. Leaves flannelly-tomentose when young, becoming more or less glabrous except in the axils of the nerves below, ovate-orbicular, trilobed, blade 4-12 in. long and 3½-10 in. broad, lobes rounded or obtuse, apex bluntly acuminate, base cordate; petiole 2-5 in. long. Flowers few, in cymes up to 4 in. long from the uppermost axils; sepals thick, brown, densely tomentellous, ½ in. long. Fruit broadly ellipsoid, 4-6 in. long, many-seeded; seed with an oblique oblong pithy wing about 3 in. long and 1-1⅓ in. broad.

Kigezi; Ankole; Toro; Mubende; Bunyoro; West Nile.

The Witch Tree of Mubende Station. Chiefly found in gallery forests and on forest edges.

(5) STERCULIA

Leaves digitately nerved, lobed ---------- S. cinerea

Leaves pinnately nerved, undulate ---------- S. dawei

STERCULIA CINEREA A.Rich. Eggeling 863, 1683.

Deciduous savannah tree to 40 ft. Crown spreading, irregular. Bole buttressed at the base. Bark grey-purple, flaking in oblong scales which leave pale grey or greenish-yellow patches on falling. Inner bark fibrous, yielding a string. Slash meat-red with paler streaks, exuding a white gum and a watery sap. Leaves stellate-pilose above, grey-tomentose below, suborbicular (with 5 entire or sinuous long-pointed lobes), 3½-7 in. diam., cordate at the base with broadly overlapping auricles; nerves prominent below; petiole 1-5 in. long. Cymes erect, 2-4 in. long, chiefly from the ends of the branches; flowers precocious; calyx ½ in. long, 5-lobed, downy, green outside, purple-red with green lines inside; stamens 15, united into a slender column; style curved. Follicles sessile, usually 4 together, grey-green or brown, oblong, beaked, 2-3 in. long, 1½-2 in. diam., the underside grooved where the fruit splits; the outside of the follicle is downy, the inside velvety, and there are numerous stiff, pungent, red-brown bristles along the inner side of placental line; seeds numerous, oblong, ½ in. long, purple-black, with a fleshy yellow-brown aril at the base. The seeds have a taste something like that of ground nuts, and are eaten by the Acholi and Karamojong. The empty follicles persist on the tree after the seed has fallen. Wood, white, soft, useless.

Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Karamoja. Chiefly on rocky ground.

I include here all Uganda specimens originally determined as S. tomentosa Guill. & Perr.

STERCULIA DAWEI Sprague Eggeling 132,3138,3365.

Kitoko (Kuamba).

Forest tree to 90 ft. Branchlets thick, red-brown, very fibrous. Leaves broadly obovate-oblong to oval, 4-8 in. long, 3-6 in. broad, sparsely stellate-plose on both surfaces, apex rounded to (rarely) shortly and obtusely cuspidate, base rather shallowly cordate (lobes overlapping only very slightly), lateral nerves 7-11 pairs; petiole sparingly pilose to tomentose, 1-3 in. long. Flowers tomentose, in axillary panicles 2-6 in. long from the uppermost axils; calyx ¼ in. long, green outside, purple-red inside.

Follicles generally in threes, boat-shaped, 3-4 in. long, green at first, bright red when ripe, fading to brown; seeds black.

Entebbe; Toro; Bunyoro.

THEACEAE

ADINANDRA

ADINANDRA SCHLIEBENII Melchior Eggeling 3274.

Evergreen forest tree to 120 ft. Leaves alternate, coriaceous, glabrous, denticulate, oblanceolate to oblong-oblanceolate, 4-5 in. long, 1-1¼ in. broad, apex shortly acuminate, base cuneate; lateral nerves numerous, scarcely more prominent than the veins; midrib impressed above, prominent below; petiole ¼-½ in. long, grooved above. Flowers handsome, solitary, axillary, brick red, up to 2 in. long; sepals apparently 7 (the outermost two are actually bracteoles), broadly imbricate, increasing in size inwards; inner sepals ovate, acute, ¾ in. long; petals 3 times as long as the sepals, brick red to orange-red at the apex, shading to yellow at the base, soon falling; ovary 5-celled, superior; style simple, slender, gradually tapered, 2 in. long, tomentose; pedicels curved, 1¼ in. long.

Kigezi. In mountain forest; 7,000 ft.

THYMELAEACEAE

LASIOSIPHON

Leaves finely and obscurely pubescent near the base, otherwise glabrous ---------- L. glaucus

Leaves densely pubescent with long adpressed silky hairs ---------- L. lampranthus

LASIOSIPHON GLAUCUS Fresen. Eggeling 817, 2464.

Much-branched shrub or tree to 30 ft. Branchlets finely pubescent when young, becoming glabrous. Leaves glaucous, oblanceolate, 3 in. long, ⅓-2/5 in. broad, base cuneate, margin recurved in the lower part. Flowers yellow, fading to brown, very numerous in dense terminal heads 1-1½ in. diam.; involucral bracts very finely tomentellous or glabrous; calyx-tube ⅓-½ in. long, with a dense tuft of silky golden hairs at the base; calyx-lobes villous on the back, with a tuft of hairs projecting beyond the apex; ovary villous with long erect hairs.

Chua (Imatong Mts.); Bugishu (Mt. Elgon). On the edge of forest; 6,500 - 9,500 ft.

The bast yields a very strong fibre.

LASIOSIPHON LAMPRANTHUS Gilg Eggeling 805.

Synonym. Gnidia lamprantha Gilg

Much-branched shrub or tree 10-15 ft. high. Branchlets densely tomentose. Leaves pale green or glaucous, narrowly oblanceolate, ¾-1¾ in. long, 1/5 - 2/5 in. broad, obtuse at the base. Flowers yellow to orange-yellow, fading to brown, very numerous in dense terminal heads 1-1½ in. diam.; involucral bracts densely pubescent; calyx-tube ⅓-½ in. long, with a dense tuft of silky white hairs at the base; calyx-lobes villous on the back; ovary glabrous in the lower half, with a tuft of white hairs at the apex.

Ankole; Toro; Chua; Bugishu. In grasslands; 5,000 - 7,500 ft.

The inner bark yields a white fibre of local value for cord- and rope-making.

Both this species and the preceding are worth cultivating for ornament.

TILIACEAE

1. Flowers enclosed in an involucre of bracts; petals absent ---------- (5) Ledermannia

   Flowers not enclosed in an involucre of bracts; petals present ---------- 2.

2. Petals glandular within the base ---------- (4) Grewia

   Petals not glandular within the base ------ 3.

3. Fruit dehiscent, 5-angled, the valves subtruncate ---------- (1) Cistanthera

   Fruit indehiscent ---------- 4.

4. Fruit ribbed; seeds not winged ---------- (3) Glyphaea

   Fruit not ribbed; seeds winged ---------- (2) Desplatzia

(1) CISTANTHERA

CISTANTHERA SP. NOV.? ~~probably new.~~ Eggeling 3366.

Mbaka (Kuamba).

Forest tree attaining at least 60 ft. Branchlets brown, rough. Bark fibrous. Leaves alternate, simple, glabrous above, with tufts of hair in the axils of the nerves beneath, obovate-elliptic, 2½-4 in. long, 1-1¾ in. broad, apex acuminate, base rounded; midrib impressed above, very prominent below; petiole slender, 2/3 - 1 in. long. Flowers not seen. Fruits 1½-1¾ in. long, broadly turbinate, subtruncate, 5-pointed; valves ridged, rough, olive-brown, woody; seeds winged, resembling those of Entandrophragma, up to 1 in. long.

Toro (Bwamba). Fairly common in parts of Bwamba in riparian forest, chiefly on the forest edge.

(2) DESPLATZIA

DESPLATZIA LUTEA A.Chev. Eggeling 1464,1607,2131.

Mukoma-nyakabito (Lunyoro).

Deciduous forest tree to 60 ft. Leaves coarsely and distantly toothed, elongate-oblong to oblong-oblanceolate, 5-10 in. long, 1¾-4 in. broad, apex long-acuminate, base rounded, nerves and veins prominent below; petiole ⅓-2/3 in. long. Panicles axillary and

and terminal, up to 2 in. long; flowers about 1 in. diam., creamy-yellow with a vivid yellow anther-tuft, borne in small pseudo-umbels which terminate the branches of the panicle; sepals ½ in. long, tomentellous, fleshy, snapping if bent; petals 1/5 in. long. Fruit oblong, 3-5 in. long, 2-3½ in. diam., tough, fibrous, pendulous, exuding an orange gum at the edges when cut; flesh white, rapidly oxidising to brown.

Toro; Bunyoro.

(3) GLYPHAEA

GLYPHAEA LATERIFLORA (G.Don) Hutch. & Dalz. Eggeling 208.

Synonym. Glyphaea grewioides Hook.f.

Mukoma-nyakabito (Lunyoro).

Straggling shrub or tree to 20 ft. Leaves denticulate to subentire, oblong to oblong-obovate, 2½-5 in. long, ¾-3 in. broad, apex caudate-acuminate, base rounded; petiole up to 2/3 in. long, dilated at the apex. Flowers few, in terminal or leaf-opposed cymes up to 2 in. long; sepals 4, green, ½-2/3 in. long; petals 4, bright golden-yellow, slightly shorter than the sepals; stamens yellow, numerous; pedicels slender in flower, thickened in fruit, up to 1⅓ in. long. Fruit spindle-shaped, beaked, longitudinally ridged, 2-3 in. long, about ½ in. diam., brown when ripe.

Mengo; Entebbe; Sesse; Masaka; Toro; Bunyoro.

In secondary scrub and on the edge of forest.

The stems are used in Masaka for walking-sticks. The bark yields a fibre.

(4) GREWIA

Over a dozen species of Grewia have been recorded from Uganda, but of these only four attain tree-size. The latter may be distinguished as under -:

1. Leaves densely tomentose beneath ---------- G. pubescens
   Leaves not densely tomentose beneath ---------- 2.

2. Leaves scabrous ---------- G. sp. near G. platyclada
   Leaves not scabrous ---------- 3.

3. Leaves usually 2-4 in. long and ¾-1½ in. broad -- G.mollis
Leaves usually 1-2 in. long and ½-¾ in. broad ---------- G.nyanzae

GREWIA MOLLIS Juss. Eggeling 288,368, 836, 1171.

Mukoma, Mukomakoma (Luganda, Lunyoro); Eparisi (Gang, Teso dialect); Pobo (Gang).

Savannah shrub or tree to 20 ft. Bark black, rough, deeply fissured. Branches twiggy at the ends; twigs flattened, often drying purplish. Leaves pale green above, hoary below, oblong-lanceolate to oblong-elliptic, 2-5 in. long, ¾-1¾ in. broad, unequal-rounded at the base; lateral nerves prominent; tertiary nerves numerous, parallel, distinct. Pedicels 1-3 in the leaf-axils, each pedicel bearing 2-3 flowers; flowers yellow; sepals linear-oblong, ⅓ in. long, downy outside; petals oblong, tapering, shorter than the sepals; ovary villous. Fruit globose, the size of a small pea, black when ripe.
Mengo; Entebbe; Sesse; Masaka; Ankole; Toro; Mubende; Bunyoro; West Nile; Madi; Gulu; Chua; Teso; Karamoja; Budama; Busoga.

The wood is used in Acholi for spears. The bast yields a useful fibre.

I include here Liebenberg 298 and 748, originally determined as G.carpinifolia Juss.

GREWIA NYANZAE Drummond Eggeling 255,666,1599,1972, 2936.

Mukoma, Mukomakoma (Luganda, Lunyoro).

Savannah shrub or tree to 15 ft. Bark grey to brown, yielding at tie-fibre used in hut-building. Leaves serrulate or crenulate, broadly lanceolate to ovate or obovate-oblong, 1-2¾ in. long, 2/5 - 1¼ in. broad, glabrous or nearly so above, hairy to green and glabrous below; lateral nerves subprominent, tertiary nerves obscure; petiole 1/10 - ¼ in. long, dilated at the apex. Pedicels axillary and terminal, solitary or paired, each bearing 2-3 flowers; flowers yellow, ½ in. diam.; sepals oblong, obtuse, up to ⅓ in. long; petals usually notched, shorter than the stamens; ovary villous.
Mengo; Entebbe; Masaka; Sesse; Ankole; Bunyoro; West Nile; Chua; Teso; Karamoja; Bugishu; Busoga.

I include here all Uganda specimens determined as Grewia bicolor

Juss., these being indistinguishable from specimens determined as G.nyanzae Drummond. It is probably that the latter is a synonym of G.bicolor Juss. but we have not had an opportunaty of verifying this by comparison of the types.

The stems are used in Masaka and Ankole for sticks and for tool-handles.

GREWIA PUBESCENS P.Beauv. Eggeling 2018,3379.

Synonym. G.tetragastris R.Br.

Shrub or tree to 15 ft. Leaves denticulate, oblong-ovate or oblong-elliptic to narrowly oblong-obovate, 2½-6½ in. long, ¾-2½ in. broad, apex acutely acuminate, base unequal-cuneate to rounded; petiole up to ½ in. long. Stipules, bracts and bracteoles linear-subulate. Peduncles 2/3 - 1½ in. long, single or paired, axillary or leaf-opposed, each bearing 2-10 (usually 2-4) flowers; flowers large, up to 2 in. diam.; sepals linear-oblong, usually about ¾ in. long, pale green outside, white or pale pink inside, finally reflexed; petals pale pink, lanceolate, shorter than the sepals; stamens pale pink, 2/3 in. long; torus glabrous in the lower half; pedicels up to ½ in. long. Fruit 4-lobed(lobes the size of small peas), red-brown, slightly hispid.

Mengo; Toro; Bunyoro. In scrub and on the edge of forest.

Of the specimens cited above, Eggeling 2018 was originally determined as Grewia sp. and Eggeling 3379 as G.sp. near G.glandulosa Vahl. Both are a good match for other Uganda material determined as G.pubescens and G.tetragastris.

GREWIA SP. NEAR G.PLATYCLADA K. Schum. Eggeling 289.

Mukomakoma, Mukoma (Luganda).

Shrub or small tree in savannah or scrub. Leaves denticulate, ovate-oblong to obovate-oblong, 3½-5½ in. long, 1½-2½ in. broad, apex, abruptly acuminate, base unequal-rounded to shallowly cordate; petiole setose-tomentose. Peduncles axillary, single or paired, less than ¼ in. long, each bearing 2-5 (usually 3) flowers; mature flower-buds oblong with a swollen base; flowers orange; sepals strap-shaped, about ¾ in. long, tomentose outside; petals about ½ in.long;

stamens numerous, exceeding the petals; pedicels exceeding the peduncles, up to ½ in. long, appressed bristly.

Mengo; Entebbe; Ankole.

I include here all Uganda specimens originally determined as G. forbesii Harv.

(5) LEDERMANNIA

LEDERMANNIA CHRYSOCHLAMYS Mildbr. & Burret Eggeling 1234.

Scandent shrub or straggling understorey tree to 20 ft. Leaves reticulate, distantly serrate (the tips of the lateral and tertiary nerves frequently projecting as spinules beyond the apex of the teeth), oblong to oblong-lanceolate or oblong-obovate, 9-12 in. long, 4-5 in. broad, apex acute, base unequal-rounded or sub-cordate, stellate-pilose with red-brown hairs on the midrib and nerves below; midrib, lateral nerves and tertiary nerves prominent below, the latter parallel; petiole dark-brown-tomentose, up to 1 in. long. Cymes compressed, short, axillary or on the old wood; flowers subsessile or shortly pedicellate, crowded in shortly pedunculate clusters of usually 4 together, each cluster enclosed in bud by an involucre of suborbicular bracts ¼-2/3 diam.; axis of inflorescence, peduncles, outside of bracts and sepals fulvous-tomentose; sepals linear, about ½ in. long, yellow within; stamens numerous, about ⅓ the length of the sepals; peduncles up to ½ in. long, usually much less.

Toro (Bwamba); Bunyoro (Budongo Forest). An uncommon species.

Fig.72. Celtis spp. - Leaves. a. C.adolfi-frederici Engl. b. C.kraussiana Bernh. c. C.soyauxii Engl. All natural size.

ULMACEAE

1. Fruit a samara with broad membranous wings --- (3) Holoptelea
   Fruit a drupe ---------- 2.

2. Branchlets armed with axillary spines -------- (2) Chaetacme
   Branchlets unarmed ---------- 3.

3. Cotyledons very broad; male calyx-lobes imbricate ---------- (1) Celtis
   Cotyledons very narrow; male calyx-lobes induplicate-valvate ---------- (4) Trema

(1) CELTIS

1. Mature leaves glabrous below ---------- 2.
   Mature leaves pubescent below or with tufts of hair in the axils of the main nerves ------ 5.

2. Leaves broadly elliptic to oblong-elliptic --- 3.
   Leaves narrowly elliptic or lanceolate to obovate or obovate-oblong ---------- 4

3. Leaves irregularly toothed in the upper half-- C. brownii
   Leaves entire ---------- C. adolfi-frederici

4. Leaves narrowly elliptic to lanceolate ------ C. durandii var. ugandensis
   Leaves obovate to obovate-oblong ---------- C. soyauxii

5. Leaves serrate ---------- C. kraussiana
   Leaves entire or inconspicuously toothed, never serrate on fertile shoots ---------- 6.

6. Leaves scabrid, ovate or broadly ovate, glabrous or almost so below except for tufts of hair in the axils of the main nerves ---- C. integrifolia
   Leaves not scabrid, elliptic to obovate-elliptic, shortly ferruginous-pilose below ---------- C. zenkeri

CELTIS ADOLFI - FREDERICI Engl. Eggeling 2157, 3364.

Evergreen forest tree to 150 ft., somewhat resembling Antiaris in habit, with thick, dark, rounded or flattened crown and drooping branchlets. Buttresses spreading, sharp. Slash hard, granular, very

Fig.73. Celtis spp. and Morus lactea (Sim) Mildbr. - Leaves. a. C.durandii Engl. var. ugandensis Rendle b. C. integrifolia Lam. c. Morus lactea (Sim) Mildbr. (Syn. Celtis lactea Sim). All natural size.

very crumbly, with brown spots on a yellow-white ground. Leaves (Fig. 72) coriaceous, base (nerves prominent on both surfaces, the central one reaching, and the other two almost reaching, the apex of the blade), broadly elliptic to oblong-elliptic, 5½-6½ in. long, 2-3 in. broad, apex acuminate, base very unequal-sided (more or less rounded on one side, more or less cuneate on the other); petiole stout, grooved above, ⅓-¾ in. long. Inflorescence axillary, paniculate, up to 1½ in. long; flowers small, greenish; ovary densely hairy; fruiting pedicels very short and stout. Drupe ovoid-globose, ¾-4/5 in. long, about ½ in. diam.

Toro (Bwamba); Bunyoro (Bugoma Forest). An uncommon tree in Uganda.

CELTIS BROWNII Rendle Eggeling 1156,1422,3587.

Evergreen understorey bush or tree to 20 ft., sometimes subscandent. Bark smooth, grey-green to olive brown. Slash mottled pale brown. Leaves (Fig. 74) thinly coriaceous, 3-nerved from the base (the outside pair not especially prominent above but distinctly prominent below although not as much so as the central one), broadly elliptic to oblong-elliptic, 2¾-6 in. long, 1¼-2½ in. broad, apex acuminate, base as in C.adolfi-frederici; upper surface minutely punctate with cystoliths; petiole grooved above, ¼-½ in. long. Inflorescence axillary, paniculate, ¾-1¾ in. long; flowers white; ovary glabrous, with the exception of a dense ring of white hairs at the base; fruiting pedicels very short and stout. Drupe ellipsoid, ⅓-½ in. long. Wood grey-brown; weight about 39 lbs. per cu.ft. air dry.

Mengo (Mabira Forest); Toro (Bwamba); Bunyoro (Budongo Forest).

I include here Maitland 470 and 625, both originally determined as Strychnos sp. near S.densiflora Bail.; also Eggeling 1422 originally determined as Celtis sp. near C.prantlii Priemer, from which latter C.brownii may not be specifically distinct.

CELTIS DURANDII Engl. var. UGANDENSIS Rendle Eggeling 2293,3038,3041, 3068,3143.

Synonym. C.ugandensis Rendle,

Nyamanunka (Lunyoro, Toro dialect).

Deciduous understorey tree usually 40-50 ft. high, sometimes attaining 90 ft. Crown spreading. Bark grey-white. Slash hard, very thickly speckled with chocolate-brown on a white ground. Leaves (Fig. 73) thin,

pinnately nerved, entire, 2-5 in. long, ¾-1½ in. broad, apex long-acuminate, base unequal-cuneate or obtuse; lateral nerves 3-5 pairs, prominent beneath; petiole slender, up to ⅓ in. long. Flowers greenish-yellow, precocious, in small short-stalked clusters at the lower nodes of the branchlets; ovary glabrous; fruiting pedicels slender, up to ⅓ in. long. Drupe ovoid, yellow, ⅓ in. long. Wood white, non-durable.

Mengo; Entebbe; Kigezi; Toro; Bunyoro; Busoga.

The species is remarkable for the peculiar foetid smell of the decaying wood.

CELTIS INTEGRIFOLIA Lam. Eggeling 1721,1821.

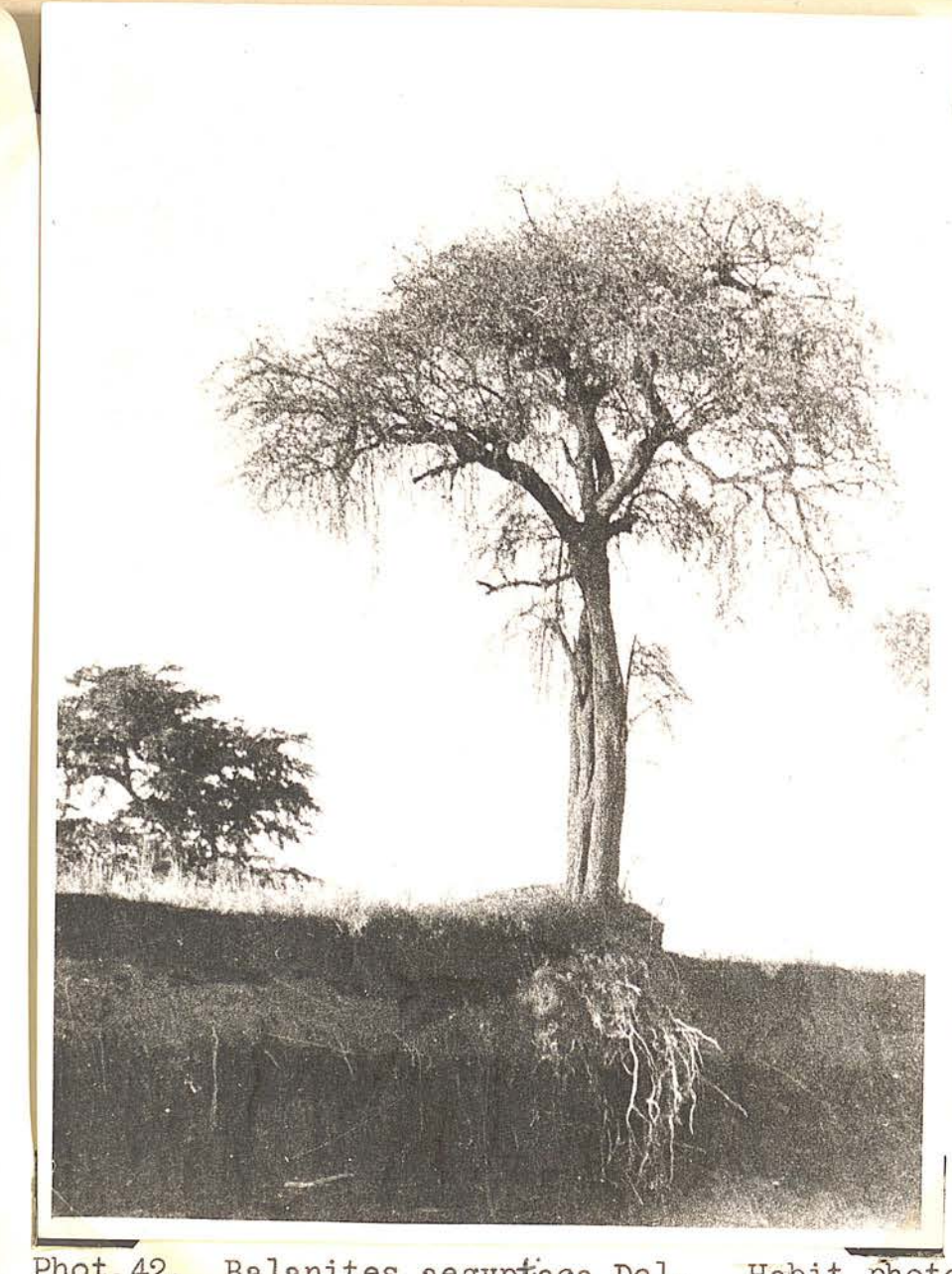
Zingale (Madi).

Tree to 60 ft., usually in streamside forest in dry areas, sometimes gregarious in small stands. Crown spherical; limbs large and crooked; twigs slender, horizontal or drooping. Bole slender, fairly straight, frequently bearing clusters of adventitions shoots. Buttresses small, sharp. Bark fairly smooth , pale grey with brown patches where the scales have dropped. Scales thin, hard, loosening from the base first and remaining attached at the upper end, giving them the rather curious appearance of sliding down the tree (Lely). Slash hard, mottled dark brown, crumbly. Leaves (Fig. 73) thinly coriaceous, entire on fertile shoots, sometimes serrate on adventitions twigs, 3-5-nerved from the base (nerves prominent below), 1½-3 in. long, 1-2 in. broad, apex acutely acuminate, base obliquely and broadly rounded; petiole about ¼ in. long. Flowers yellow-green, in small axillary panicles; ovary densely grey-pubescent; fruiting pedicels 1/5 in. long. Drupe pale brown, ovoid-ellipsoid, ⅓-½ in. long. Wood pale yellow, soft, fairly close-grained, easy to work with all tools, planing to a dull smooth finish, cracking very little during seasoning but not durable and liable to discolour; weight 35 lbs. per cu.ft. air dry.

West Nile; Madi; Gulu.

CELTIS KRAUSSIANA Bernh. Eggeling 874,2678,3088,3181,3478.

Synonym. C.rhamnifolia Presl.



Phot. 42. Balanites aegyptiaca Del. Habit photo of a leafless tree.

Phot. 43. Celtis soyauxii Engl. Habit photo.

Nyamanunka (Lunyoro, Toro dialect); Akasinsa (Luganda); CAMDEBOO STINKWOOD.

Deciduous forest tree to 80 ft. Bole smooth, slender, beech-grey. Twigs reddish, ferruginous-pubescent when young. Slash brown-spotted. Leaves (Fig. 72) 3-nerved from the base (nerves prominent below), ovate to elliptic-ovate or ovate-lanceolate, 1½-3¾ in. long, ½-1¾ in. broad, ferruginous-pubescent when young, generally glabrous when mature except on the veins beneath but sometimes pubescent on both surfaces, apex acuminate, base unequal-rounded; petiole up to ¼ in. long. Male flowers in subsessile or stalked fascicles of 4-7 flowers from the lower leafless nodes of the branchlets; female flowers 1-2 at the upper nodes, generally in the axil of a young leaf; ovary densely hairy; fruiting pedicels slender, up to ¾ in. long. Drupe brown, subglobose, 1/5 in. diam. Wood yellow-white, tough, even-grained, used in Kenya for tool-handles; weight about 48 lbs. per cu.ft. air dry.

Mengo; Ankole; Toro; Mubende; Bunyoro; Madi; Chua; Karamoja; Busoga.

I include here Eggeling 3441 originally determined as C. sp.? C. australis L.; also Small 1139 originally determined as C. sp. near C. occidentalis L.

CELTIS SOYAUXII Engl. (Photo. 43). Eggeling 1475, 2250, 2255, 3149, 3370

Synonym. C. usambarensis Engl.

*Mukomakoma (Lunyoro); Bolwe (Kuamba); Lufugo (Luganda).

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* In the Budongo forest in Bunyoro five species of Celtis occur. Of these both C. soyauxii Engl. and C. zenkeri Engl. are called Mukomakoma but are recognised as distinct, no Lunyoro name being applied to the other three species. African Forest Rangers in this area have adopted the habit of referring to the five species as under -:

Mukomakoma	No.	1	-	C. soyauxii
"	"	2	-	C. zenkeri
"	"	3	-	C. durandii var. ugandensis
"	"	4	-	C. brownii

C. kraussiana is uncommon and rarely encountered. It would presumably be Mukomakoma No. 5

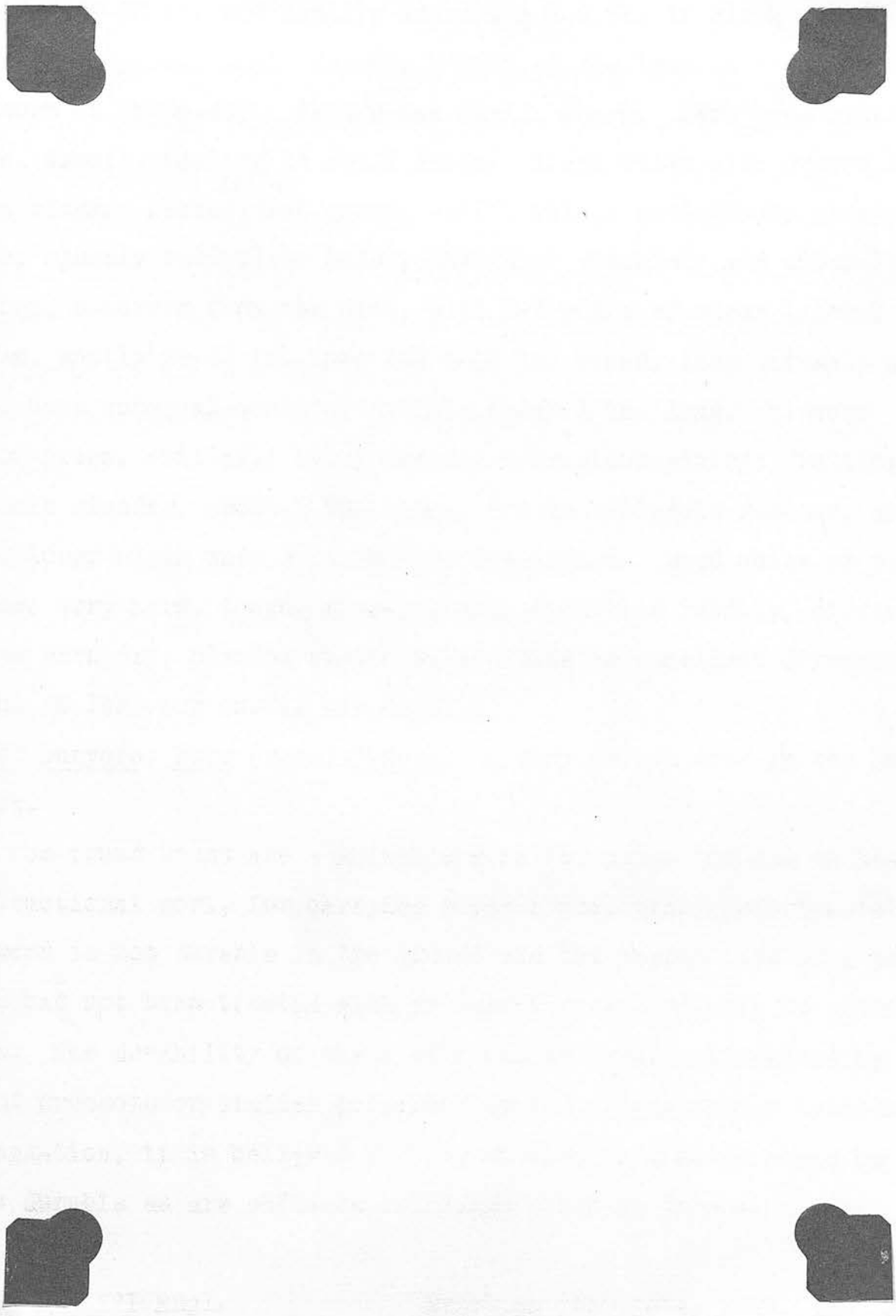

Fig.74. Celtis spp. - Leaves. a. C.zenkeri Engl. b. C.brownii Rendle. Both natural size.

Evergreen second-storey forest tree 60-100 ft. high, with exceptionally straight slender cylindrical bole frequently clear of branches for 60-80 ft. and usually measuring 4-6 ft. in girth above buttresses. Crown small for the height of the tree (a typical crown is shown in Photo.43). Buttresses small, sharp. Bark pale brownish-white, smooth, scaling in small discs. Slash white with concentric brown rings. Leaves (Fig.72) dark green, stiff, thinly coriaceous, glossy above, closely reticulate below, entire or obscurely and obtusely toothed, 3-nerved from the base, with 2-3 pairs of upper lateral nerves, mostly 2½-4½ in. long and 1-1¾ in. broad, apex obtusely acuminate, base subequal-cuneate; petiole about ¼ in. long. Flowers yellow-green, axillary; ovary densely ferruginous-hairy; fruiting pedicels slender, about ¾ in. long. Fruits ellipsoid-globose, about ⅓ in. long, black when ripe, sharply 3-4-angled. Wood white or pale yellow, very hard, tough, fine-grained, splitting readily, difficult to saw when dry, planing smoothly, yielding an excellent firewood; weight 48 lbs. per cu.ft. air dry.

Mengo; Bunyoro; Toro (rare); Busoga. A very common tree in the Budongo Forest.

The round stems are a suitable size for poles for use in heavy constructional work, for carrying power-lines, etc. Unfortunately the wood is not durable in the ground and the useful life of a pole which had not been treated with preservative is unlikely to exceed 2 years. The durability of the timber can be greatly increased by the use of creosote or similar preservative and, given proper methods of impregnation, it is believed that poles of this species could be rendered as durable as are softwood telegraph poles in Europe.

CELTIS ZENKERI Engl. Eggeling 1190,1564, 2006,2178, 2258.

Synonym. C.stuhlmannii Engl.

Mukomakoma (Lunyoro).

Deciduous second-storey forest tree to 100 ft. Bole clean for 40-60 ft., usually 5-8 ft. in girth above buttress. The stem is thicker than but not so straight as that of C.soyauxii. Crown irregular, spreading. Buttresses fairly wide and sharp. Bark smooth, pale brownish-yellow tinged with orange, lenticellate. Slash yellow-white with brown lines and mottlings. Young branchlets tomentose.

(Fig. 74)
Leaves 3-nerved from the base, pale green, thinly coriaceous, entire (rarely inconspicuously toothed), 2½-6 in. long, 1¼-2¾ in. broad, apex shortly and acutely acuminate, base unequal-cuneate to rounded; lateral nerves 2-3 pairs above the basal nerves, prominent beneath; petiole 1/6 - ¼ in. long. Flowers greenish-white, in short dense axillary panicled cymes, those towards the base of the branch male, those in the upper part bisexual or female; ovary ovoid, densely hairy; fruiting pedicels very short. Drupe downy, ovoid-globose, ridged, about ⅓ in. long, red when ripe. Wood white or pale yellow, not durable in the ground.

Mengo (Mabira Forest); Toro (Bwamba); Bunyoro (Budongo and Bugoma Forests).

Poles of this species are not so useful as those of C.soyauxii owing to the slight sinuosity of the stem. The wood is as durable as that of C.soyauxii when treated.

(2) CHAETACME

CHAETACME MICROCARPA Rendle — Eggeling 332,1143, 2966.

Mubambanjobe (Lunyoro).

Straggling thorny bush or much-branched spreading tree to 30 ft. Branchlets zig-zag, drooping. Bark grey. Slash brownish. Spines ¼-¾ in. long. Leaves entire, stiffly coriaceous, glabrous, elliptic, 2-3 in. long, 1-1⅓ in. broad, apex obtuse (usually mucronate due to the prolongation of the midrib beyond the end of the blade), base unequal-rounded; margin reflexed in dried specimens; midrib prominent below; lateral nerves numerous; petiole up to ¼ in. long. Flowers monoecious, yellow-white, in short dense axillary cymes. Drupe globose, 2/5 - ½ in. diam., waxy-yellow, tipped by the 2 style-arms. Wood yellow-white, very heavy.

Mengo; Entebbe; Ankole; Toro; Mubende; Bunyoro; Chua; Karamoja; Budama; Busoga. Common in secondary scrub and on the edge of forest.

I include here all Uganda speciemens originally determined as C. aristata Planch.; also Thomas 1485 originally determined as Irvingia sp.

(4) HOLOPTELEA

HOLOPTELEA GRANDIS Mildbr. Eggeling 1139,1248, 1610.

Synonym. H.integrifolia Rendle

Mumuli (Lunyoro); Mutaa (Madi).

Light-demanding deciduous forest tree to 120 ft., with sinuous bole up to 50 ft. long and 8-11 ft. in girth, buttressed with sharp flanges which do not spread laterally but may extend 15 ft. up the stem. Crown irregular, open, with drooping branchlets. Bark patchy, yellow to orange, scaly, covered with corky excrescences, often cracked longitudually, brittle like that of beech. Slash hard, pale yellow-brown, smelling of fresh walnuts. Leaves entire, glabrous, thin, ovate to elliptic-oblong, 2¼-4 in. long, 1¼-2¼ in. broad, apex shortly and broadly acuminate, base rounded to shallowly cordate; lateral nerves 5-8 pairs, slightly prominent below; midrib prominent below; petioles ¼-½ in. long. Flowers in small branched axillary cymes ½-1 in. long. Samara reminiscent of the Hymenocardia, broadly obovate to suborbicular, 1¼-1½ in. long, about 1 in. diam., apex rather deeply emarginate and with the two tomentose styles projecting from the notch, base cuneate; wings puberulous, striate with numerous radiating lines from the oblique fruit-body. There are 6,000-7,000 seeds to the lb. Wood white to yellow-white, slightly lustrius moderately hard, planing and nailing well, sawing easily, difficult to split, liable to termite attack, suitable for indoor carpentry, flooring, etc.; weight about 40 lbs. per cu.ft. air dry.
Bunyoro; West Nile; Madi. Sparingly distributed through the Budongo and Bugoma forests in Bunyoro, common in the Zoka forest in East Madi, and the dominant species in the small Bula forest in West Nile.

(4) TREMA

TREMA GUINEENSIS Ficalho Eggeling 154, 1797, 2967.

Synonyms. T.affinis Blume; T.nitens Blume.

Kasisa (Luganda); Nkulajo (Lunyoro, Busoga dialect).

Fast-growing, lightdemanding tree usually 20-40 ft. high, sometimes attaining 80 ft. It is very short-lived, dying as a rule after 5-6 years. Crown spreading spreading. Bole straight, slender (a tree

(a tree 3 ft. in girth is a a large specimen). Slash white. Bark thin, smooth, pale grey, lenticellate, slightly fissured, sometimes used as a tie-fibre. Branchlets densely white-pubescent. Leaves usually closely serrulate, unequal-sided, ovate to ovate-oblong, usually 3-4½ in. long and 1-1¾ in. broad, scabrid or scabrous above, softly and densely white-pubescent below, apex caudate-acuminate, base rounded to subtruncate or subcordate, lateral nerves 4-6 pairs, prominent below; petiole ¼-2/5 in. long. Flowers small, yellow-green, polygamous, in very dense axillary clusters; petals absent; sepals 5, persistent. Drupe subglobose, ¼ in. diam., glabrous, black when ripe. Wood white, faintly tinged with pink, very perishable.

Mengo; Entebbe; Sesse; Masaka; Ankole; Toro; Bunyoro; Madi; Chua; Karamoja; Budama; Busoga. A very common species in secondary forest and on forest edges, regenerating profusely in felling gaps, etc., especially on bare soil.

The inner bark is rubbed on native-made rope to blacken the latter. In addition to colouring it, this treatment is said to have a preservative effect on the rope.

T.guineensis var. hochstetteri Engl. (Syn. T.hochstetteri Engl.) is a coarse large-leaved form of the above. A very small-leaved form also occurs, Eggeling 1797 from Madi being an example.

UMBELLIFERAE (213)

UMBELLIFERAE

* STEGANOTAENIA

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* Notwithstanding its specific name, Heteromorpha arborescens Cham. & Schldtl. does not attain tree-size in Uganda. It is an open bush with trifoliolate, bifoliolate and unifoliolate leaves, and is never more than 10 ft. in height.

STEGANOTAENIA ARALIACEA Hochst. Eggeling 256,1165

Synonym. Peucedanum fraxinifolium Hiern

Muhotora (Lunyoro); Ekibundubundu (Luganda, Busoga dialect); Ebusubus (Gang, Lango dialect); Ebusibusi, Enyongai (Gang, Teso dialect).

Deciduous savannah tree usually 10-15 ft. high, sometimes attaining 25 ft. Crown shapeless, low-branched. Bark grey-brown, thick and corky, horizontally fissured. Leaves pinnate, crowded near the ends of the branches, 5-15 in. long, much relished by elephants when young; petiole sheathing at the base; leaflets 5-9, glabrous, irregularly dentate with long-acuminate teeth, broadly ovate to elliptic(lateral leaflets oblique), 1½-4½ in. long, ¾-2¾ in. broad, apex very acutely-acuminate, base rounded to sub-cordate; the lateral leaflets are sessile or shortly petiolulate, the terminal leaflet has a petiolule up to 1½ in. long. Flowers white, usually appearing well before the leaves, borne in compound umbels which are clustered 6-8 together at the ends of the stout twigs; peduncle 4-8 in. long with a bract-bearing node (from which sometimes springs a whorl of compound umbels) 1-2 in. from the apex; primary rays 1-1¾ in. long; pedicels up to ¼ in. long. Fruit obovate-oblong, ½ in. long,, ¼-⅓ in. broad, winged, 3-ribbed. Wood white, light.

Mengo; Entebbe; Masaka; Ankole; Toro; Mubende; Bunyoro; West Nile; Madi; Gulu; Lango; Teso; Karamoja; Bugishu; Busoga.

URTICACEAE (169)

URTICACEAE

OBETIA

OBETIA PINNATIFIDA Baker — Eggeling 642, 1618.

Low-branched, fleshy-stemmed shrub or tree to 25 ft. with the habit of a paw-paw. Bole up to 15 in. thick at the base. Upper stem and branchlets clothed in dry brown stipules and densely covered with stinging hairs. Leaves ovate in general outline, deeply lobed to pinnatifid (the primary segments sometimes again pinnately lobed), 3-12 in. long and broad, apex of leaf and segments acuminate to long-acuminate, base deeply cordate, margin coarsely crenate; the upper side of the leaf bears stinging hairs on the prominent veins, the hairs being also sparsely scattered over the surface; the lower side is matted with a whitish velvety tomentum; petiole stout 3-6 in. long, tomentose, beset with stinging hairs; stipules persistent, ovate, up to 1 in. long. Male panicle about 4 in. long, female panicle 6-12 in. long; flowers creamy-yellow.

Mengo; Ankole; Toro; Bunyoro; Busoga. In scrub.

VERBENACEAE (263)

VERBENACEAE

Leaves simple ---------- (1) Premna

Leaves digitately 3-7-foliolate ---------- (2) Vitex

(1) PREMNA

PREMNA ANGOLENSIS Guerke — Eggeling 2049,3082.

Tree 30-50 ft. high on forest edges. Bole seldom straight, similar in its wavy nature to that of Cordia millenii, which tree it also resembles in habit. Leaves entire, in whorls of 4 at each node, ovate to elliptic, mostly 3½-8 in. long and 1¾-5 in. broad, glabrous except the lower parts of the midrib and lateral nerves below, apex abruptly and shortly cuspidate, base broadly unequal-cuneate to rounded, midrib impressed above, prominent below; lateral nerves 5-7 pairs; petiole 1-2½ in. long. Flowers small, in long thyrsoid panicles up to 1 ft. long from the ends of the branchlets; sepals 4, pale green; petals 4, white tinged with green; stamens 4, brown. Wood white, not durable, used by natives in Kenya for woodcarving, etc. Mengo; Toro; Bunyoro; Madi.

(2) * VITEX

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* Vitex simplicifolia Oliv.(type specimen: Speke & Grant 701/5 from Madi) is not keyed as it does not attain tree-size. It is distinguished from all other Uganda species of Vitex by its unifoliolate leaves.

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1. Leaflets 3-foliolate ---------- V.madiensis
   Leaflets 5-7-foliolate ---------- 2.

2. Leaflets glabrous beneath ---------- V.cuneata
   Leaflets pubescent to tomentose beneath ---------- 3.

3. Cymes long-stalked, mostly 5-7 in. long ---------- V.fischeri
   Cymes short-stalked, mostly 1½-2 in. long ---------- V.amboniensis

Fig.75. Vitex cuneata Thonn. a. Leaf and young inflorescence. b. Flower, side view. c. Flower, front view. d. Fruit. All natural size.

VITEX AMBONIENSIS Guerke Eggeling 386,1150,1206, 3046, 3148.

Rwata (Lunyoro).

Understorey tree to 45 ft., chiefly on the edge of forest. Branchlets clothed with yellow-brown hairs. Petiole pubescent, 3-5 in. long; leaflets 5-7, entire, glabrous above, finely tawny-pubescent beneath, oblanceolate-oblong, 2-5½ in. long, 1 1/5 - 2 1/5 in. broad, apex narrowly acuminate, base cuneate; petiolule up to 2/5 in. long. Cymes axillary, dense; peduncles ¼-¾ in. long; flowers white and lilac; bracts, calyx and corolla densely tawny-pubescent outside. Fruit glabrous, ellipsoid, 1-1½ in. long, mucronate, green spotted with white when young, probably black when ripe.

Mengo; Entebbe; Ankole; Toro; Bunyoro.

I include here Eggeling 1206 originally determined as V.keniensis Turrill; also Snowden 1828 originally determined as V. sp. near V. tangensis Guerke.

VITEX CUNEATA Thonn. (Fig. 75). Eggeling 351,1168.

Synonym. V.cienkowskii Kotschy & Peyr.

Oyelo (Gang); Ewelo (Gang, Teso dialect); Ledo (Madi); Muhomozi (Lunyoro); Owelo (Gang, Lango dialect) : BLACK PLUM.

Deciduous savannah tree, usually 30-40 ft. high, occasionally attaining 50 ft. Crown dark green, rounded. Bark pale brown to grey-white, appearing smooth at a distance, with long narrow vertical fissures and stringy ridges. Slash yellow-white, darkening later. Branchlets glabrous. Leaves usually 5-, rarely 7-foliolate; petiole 2-3½ in. long; leaflets entire, coriaceous, obovate, 2-6 in. long, 1⅓-3 in. broad, apex slightly apiculate or rounded or emarginate, base cuneate; petiolule 2/5 - 4/5 in. long. Cymes axillary, mostly short and stout, densely flowered; peduncle up to 3 in. long; calyx hirsute, 1/5 in. long, enlarged in fruit; corolla white except the largest lobe which is violet, very villous outside, 2/5 in. long. Fruit glabrous, oblong-ellipsoid, ¾ in. long, black when ripe, edible, sweet, mealy, somewhat prune-like in taste. Wood white or yellow-white to pale brown, darkening in age, even and straight in grain, fine and uniform in texture, soft, moderately durable, easy to work with tools; it smoothes reasonably but does not take a polish, nails

nails satisfactorily and does not split; it tenons, mortises, recesses and moulds well; weight about 53 lbs. per cu.ft. air dry. The timber has some resemblance to teak, and is used locally in West Africa for boat timbers (ribs, etc.), for small canoes, house-building and so on. It is suitable for uses to which poplars and deals are put, for interior fittings, boxes, crates, shelving, low-grade furniture, etc. It must not be exposed to damp, and is not suitable for purposes calling for great strength.
Mengo; Mubende; Bunyoro; West Nile; Madi; Gulu; Chua; Lango; Teso; Bugwere; Bugishu; Budama; Busoga. A very common tree in Bunyoro, West Nile, Madi, Acholi and Lango.

VITEX FISHERI Guerke Eggeling 91,1773.

Mukurembe, Mukontambale, Kanyunkule (Luganda, Busoga dialect).

Savannah bush or tree to 30 ft. Bark grey. Slash white. Young branchlets and petioles densely clothed with orange-tawny tomentum. Leaves 5-foliolate; petiole 2½-5½ in. long; leaflets entire, scabrous and puberulous above when young, scabrous and almost glabrous above when mature, tomentose beneath, ovate-elliptic to elliptic or slightly obovate-elliptic, 2½-6 in. long, 1¼-2½ in.broad, apex shortly acuminate, base broadly cuneate to rounded; petiolule up to ½ in. long. Cymes axillary, densely flowered; peduncles 3½-5 in. long; flowers pubescent, white and mauve. Fruit oblong-globose, about 2/5 in. long, black when ripe, cupped in the enlarged membranous calyx.
Mengo; Entebbe; Masaka; Sesse; Ankole; Madi; Gulu; Chua; Lango; ~~Lango~~; Teso; Bugwere; Bugishu; Budama; Busoga. A very common tree in the Eastern Province.

I include here Dawe 193 originally determined as V.sp. near V. aesculifolia Bak.; Thomas 1222, Jameson 32 and Chandler 832 originally determined as V.keniensis Turrill; and Dummer 2558 originally determined as V.tomentosa Roxb.

VITEX MADIENSIS Oliv. Eggeling 747,1698, 1786, 3470.

Synonym. V. schweinfurthii Guerke; also of Bak.

Oyelo gwok (Gang).

Savannah shrub or tree to 15 ft. Branchlets pubescent or villous when young. Leaves usually 3-foliolate, rarely 5-foliolate or unifoliolate, subcoraceous, fragrant when crushed; petiole 2-4 in. long; leaflets glabrous above when mature, always slightly hairy on the midrib beneath, sometimes pubescent all over the lower surface, deeply crenate to subentire, obovate to obovate-elliptic, 2-6 in. long, 1¼-3 in. broad, apex cuspidate or obtuse, base cuneate; petiolule of terminal leaflet ½-1½ in. long; petiolules of lateral leaflets ¼ - 2/5 in. long. Cymes axillary, rather lax; peduncle slender, 2½-5 in. long; flowers creamy-white and violet, pubescent. Fruit oblong, about 1 in. long, edible.

Mubende; West Nile; Madi; Gulu; Chua; Teso; Lango.

I include here Chandler 110 originally determined as V.sp. near V.camporum Buettn.

V.schweinfurthii Bak. is a more pubescent form with subentire leaflets.

V.simplicifolia Oliv. may be only a unifoliolate variety.

Fig.76. Rinorea ardisiaeflora (Welw.) O.Ktze. Flowering branch. Natural size.

VIOLACEAE (40)

VIOLACEAE

RINOREA

1. Leaves spinose-dentate ---------- R.ilicifolia
   Leaves not spiny ---------- 2.

2. Flowers in short loose racemes; peduncles relatively long ---------- R.ardisiaeflora
   Flowers paniculate; pedicels ~~Pedicels~~ short ---------- 3.

3. Branches of panicle spreading, less than ½ in. long ---------- R. poggei
   Lower branches of panicle ascending, at least 1 in. long ---------- 4.

4. Leaves membranous; leaf-apex acutely long-acuminate ---------- R. dentata
   Leaves coriaceous; leaf-apex obtusely acuminate ---------- R. oblongifolia

RINOREA ARDISIAEFLORA (Welw.) O.Ktze. (Fig. 74). Eggeling 1582,2269,2306.

Muikaraheyere (Lunyoro).

Understorey shrub or slender tree to 20 ft., with spreading crown. Leaves obtusely serrulate to subentire, glabrous above, at first thinly pubescent but eventually glabrous beneath, elliptic to ovate-elliptic, 2-4½ in. long, ¾-1¾ in. broad, apex obtusely long-acuminate, base broadly cuneate to rounded; petiole up to 1/5 in. long. Flowers white, fragrant, ¼-⅓ in. long, in axillary and terminal fascicles or clustered racemes up to 1½ in. long; petals about 4 times as long as the sepals; pedicels slender, ¼-½ in. long. Bunyoro. A very common understorey species in the Budongo forest.

RINOREA DENTATA (P.Beauv.) O.Ktze. Uganda Forest Dept. 65.

Synonym. Alsodeia dentata P.Beauv.

Understorey shrub or tree to 15 ft. Leaves crenate-serrate to serrulate, glabrous above, usually shortly pilose on the nerves beneath, obovate-elliptic, 3-10 in. long and 1-4 in. broad (usually 4-6 in. long and 1-2½ in. broad), cuneate at the base; petiole 1/5 - 2/5 in. long. Inflorescence 2-4 in. long, laxly paniculate; flowers

flowers subpendulous; sepals purple-brown; petals yellow-white, about twice as long as the sepals; pedicels shorter than or equalling the calyx. Fruit-valves pointed.

Masaka.

RINOREA ILICIFOLIA (Welw. ex Oliv.) O.Ktze. Eggeling 149, 2303.

Synonym. Alsodeia ilicifolia Welw.

Glabrous evergreen understorey shrub or tree to 15 ft. Leaves toughly coriaceous, narrowly elliptic to elliptic-oblong, 3-9 in. long, 1-2½ in. broad, apex acute, base obtuse to rounded, midrib prominent on both surfaces but especially beneath; petiole deeply grooved, ¼-¾ in. long. Inflorescence a narrow terminal racemose panicle 2-3 in. long with very short ascending lateral branches, or the nodding yellow-white flowers in nearly sessile clusters of 2-8; petals about twice as long as the sepals; pedicels shorter than or equalling the calyx. Capsule coriaceous, about ¾ in. long. Wood hard, dense, white with a pretty pink silver-grain; weight 53 lbs. per cu.ft. air dry.

Mengo; Entebbe; Toro; Bunyoro.

The wood is sometimes used for barkcloth mallets, handles of implements and walking sticks.

RINOREA OBLONGIFOLIA (C.H.Wright) Marquand ex Chipp Eggeling 537.

Understorey shrub or tree to 50 ft. Leaves entire, glabrous, elliptic to oblong, 5-10 in. long, 1¾-3¼ in. broad, apex acuminate, base obtuse; petiole usually ⅓-½ in. long, sometimes as much as 2½ in. long. Panicles much-branched, up to 5 in. long; flowers yellow-white, the outside of the petals plum-coloured; petals about twice as long as sepals; pedicels up to about 1/5 in. long. Capsule ½-¾ in. long, sub-woody.

Mengo; Bunyoro.

I include here Dawe 761 and Eggeling 537 originally determined as R.brachypetala (Turcz.) O.Ktze. (Alsodeia brachypetala Turcz.).

RINOREA POGGEI Engl. Eggeling 1435,1601,2180,2309,3151.

Synonyms. Alsodeia dawei Sprague; Rinorea dawei (Sprague) O.Ktze.

VIOLACEAE (40)

Understorey shrub or tree to 15 ft. Leaves stiff, crenate or obscurely serrate, obovate-elliptic, 3-6 in. long, 1¼-2½ in. long, apex obtusely acuminate, base cuneate (often broadly so); petiole grooved, up to 1 in. long. Inflorescence a stiff racemose panicle, 2-5 in. long, similar in type to that of R.ilicifolia; petals reflexed at the tip, 1½-2 times as long as the pilose sepals; pedicels up to 1/5 in. long, usually much less. Capsule ovoid, ½ in. long. Mengo; Entebbe; Toro; Bunyoro.

The wood is durable and the poles are valued in Bunyoro for hut-building.

I include here Dawe 716 originally determined as Alsodeia sp. near A.longicuspis Engl.

ABBREVIATIONS OF AUTHORS' NAMES.

Afz.	Afzelius
Arn.	Arnott
Aubr.	Aubreville
Auct.	Auctorum
Bag.	Bagshawe
Baill.	Baillon
Bak.	J.G.Baker
Bak.f.	E.G.Baker, son
Beauv.	Palisot de Beauvois
P.Beauv.	" " "
Benth.	Bentham
Bernh.	Bernhardi
Boj.	Bojer
von Brehm.	
Brem.	
Brongn.	Brongniart
Br.	Brown
Buettn.	Buettner
Burm.	Burman
Cav.	Cavanilles
Cham.	Chamisso
Chev.	Auguste Chevalier
A.Chev.	" "
Chiov.	Chiovenda
Cogn.	Cogniaux
Comm.	Commerson, Commelin
DC.	A.P. De Candolle
A.DC.	Alphonse De Candolle, son
C.DC.	Casimir De Candolle, grandson
Dalz.	Dalziel
Decne.	Decaisne
Del.	Delile
Desr.	Desrousseaux
Desv.	Desvaux
De Wild.	De Wildeman
Dryand.	Dryander
Dur.	Durand
Durazz.	Durazzini

Ehrenb.	Ehrenberg
Engl.	Engler
Fresen.	Fresenius
Forsk.	Forskål
Gehrm.	
Ghesq.	Ghesquière
Gmel.	Gmelin
Guill.	Guillemin
Harv.	Harvey
Haum.	Hauman
Havil.	Havilland
Hemsl.	Hemsley
Hochst.	Hochstetter
F.Hoffm.	F.Hoffmann
Hook.	W.J.Hooker
Hook.f.	J.H.Hooker, son.
Hutch.	Hutchinson
Jacq.	Jacquin
Juss.	A.L.Jussieu
A.Juss.	Adrien Jussieu
Ker-Gawl.	
Klatt.	
Knobl.	
Ktze.	Kuntze
Kze.	Kunze
L.	Linnaeus
L.f.	C.Linnaeus, son.
Lam.	Lamarck (Monnet de la Marck).
Laws.	Lawson
Lepr.	Leprieur
Lesch.	Leschenault
Less.	Lessing
L'Hérit.	L'Héritier
Linn.	Linnaeus
Linn.f.	C.Linnaeus, son.
Lodd.	Loddiges

Lodd.	Loddiges
Loes.	Loesener
Lour.	Loureiro
Mart.	Martius
Mast.	Masters
Merr.	
Mey.	Meyer
Mildbr.	Mildbraed
Mill.	Miller
Miq.	Miquel
Muell.Arg.	J.Mueller of Argau
Oliv.	Oliver
Pellegr.	Pellegrin
Perr.	Perrottet
Pers.	Persoon
Peyr.	Peyritsch
Phill.	Phillips
Pilg.	Pilger
Planch.	Planchon
Poir.	Poiret
Radlk.	Radlkofer
Raws.	
Rich.	Richard
A.Rich.	Achille Richard
Rochebr.	
Roem.	Roemer
Roxb.	Roxburgh
Rumph.	Rumphius
S.Moore	Spencer le M.Moore
Sch.-Bip.	C.H.Schultz of Bipontinus (Zweibrucken).
Schellenb.	Schellenb.
Schltdl.	Schlechtendal
Schlecht.	"
Schltr.	Schlechter
Schum.	Schumacher
K.Schum.	K.Schumann
Schweinf.	Schweinfurth.
Seem.	Seemann
Sm.	Smith
Solered.	Solereder
Sond.	Sonder
Steud.	Steudel
Szyszyl.	
Taub.	Taubert
Thonn.	Thonning
Thunb.	Thunberg
Trem.	Tremaux
Tul.	Tulasne
Turcz.	Turczaminew
Verm.	Vermoesen
Von Brehm	
Warb.	Warburg
Walp.	Walpers
Wang.	Wangerin
Welw.	Welwitsch
Willd.	Willdenow

GLOSSARY OF BOTANICAL TERMS.

abaxial, farthest from the axis.
abortion, suppression.
abruptly-pinnate, the same as paripinnate.
accrescent, increasing in size.
achene, a small dry single-seeded indehiscent fruit of 1 carpel.
acicular, needle-shaped.
actinomorphic, the same as regular.
aculeate, armed with prickles.
aculeolate, armed with small prickles.
acuminate, tapering to a sharp point.
acute, sharply pointed but not tapered.
adaxial, nearest the axis.
adherent, slightly united to a part of another series.
adpressed, the same as appressed.
adnate, closely united to a part of another series.
adventitious, used of buds produced elsewhere than in the axils of the leaves or the extremities of the branches.
aerial, used of roots arising from above the surface of the earth or water.
aestivation, the arrangement of the sepals and petals in bud.
alate, winged.
albumen, the same as endosperm.
albuminous, containing albumen.
alternate, used of leaves borne singly at each node.
anatropous, inverted.
androecium, the male part of a flower; the stamens.
annular, ringlike.
annulate, marked with rings.
anterior, facing away from the axis upon which the organ is inserted.
anther, the part of the stamen which contains the pollen.
apiculate, ending abruptly in a sharp point.
apocarpous, composed of separate carpels.
appendage, the same as process.
appressed, pressed close.
arborescent, attaining the size of a tree.
aristate, bearing an awn.
aril, an appendage arising from the funicle and covering or partly covering the seed.
armed, bearing spines, prickles, or thorns.
articulation, a joint.
articulated, jointed.
ascending, growing or sloping upwards.
asymmetric, not divisible by one or several planes into two or more similar parts.
attenuate, tapering.
auriculate, having small ear-like lobes or appendages, usually at the base.
awn, a long bristle-like appendage on a fruit.
axil, the upper angle between a stem and an organ arising from it.
axillary, arising from an axil.
axile, on the axis
axis, (1) that part of a stem on which the idividual flowers or leaflets are borne.
(2) the central column of an ovary where the inner angles of the cells unite.
baccate, berry-like.
balsam, fluid resin.
barbed, with bristles or spines directed backwards.
barbellate, shortly barbed.
bark, the outer coat of a plant.
barren, not bearing flowers or fruit or pollen.
basal, arising from the base.
basifixed, attached by the bottom.
beak, a pointed, usually terminal, outgrowth.
bearded, bearing a long awn.
berry, a juicy indehiscent fruit having the seeds immersed in pulp.
bi-, two. (e.g. bilocular, with two compartments.)
bifid, cleft into two parts at the tip.
bifurcate, forked into two parts at the tip.
bilabiate, two-lipped, as when two or three lobes of a calyx or corolla stand separate as an upper lip from the others forming a lower lip.
bipinnate, twice pinnate; when the pinnae of a pinnate leaf are themselves pinnate.
bisexual, having two sexes in the same flower or inflorescence.
blade, the upper expanded part of a leaf or leaf-like organ.
bloom, (1) a flower. (2) a pale waxy powder.
bole, the lower undivided part of a trunk.
bract, a modified leaf, usually reduced in size, especially one in whose axil the branch of an inflorescence or a flower arises.
bracteate, bearing bracts.
bracteole, a small bract arising close under a flower or on its pedicel.

branch, an outgrowth of root or stem which repeats its structure.
branchlet, a little branch.
bush, the same as shrub.
buttress, an aerial outgrowth derived from root and stem which joins the lateral roots to the trunk and acts as a support for the latter.
caducous, falling early.
calycine, calyx-like, used especially of bracts which simulate a calyx.
calyptra, a cap-like covering.
calyptriform, cap-like
calyx, the outer (usually green) protective envelope of a flower, consisting of free or united sepals.
campanulate, bell-shaped.
capitate, gathered into a compact cluster or head.
capitulum, a compact cluster (head) of flowers.
capsule, a dry dehiscent fruit, composed of two or more united carpels.
carpel, a modified leaf folded lengthwise and united by its edges to form a simple ovary, or one of several such united to form a syncarpous ovary.
caruncle, a small hard aril; an outgrowth near the hilum of certain seeds.
catkin, a closely packed, bracteate, pendulous, often deciduous spike, usually composed of small inconspicuous unisexual flowers.
caudate, with a long tail-like tip.
cauliflorus, producing flowers from the main stem or main branches away from the leaves.
cauline, arising from the main stem or main branches.
cell, a compartment.
chartaceous, papery.
ciliate, with an eyelash-like fringe of hairs along the edge.
ciliolate, minutely ciliate.
cinereous, ash-grey.
circinate, coiled like a watch-spring.
circumscissile, opening as if cut circularly around, the upper part coming off like a lid.
clavate, club-shaped, thickened at the end.
claw, the narrowed base of a perianth-leaf, especially of a petal.
cleft, cut half-way down.
coccus, each separate part of a lobed capsule.
coherent, slightly united to a member of the same series.
collateral, placed side by side.
column, see staminal-column.
compound, composed of several similar parts, as a leaf of several leaflets.
compound fruit, a fruit in which the fruits of separate flowers unite into a mass.
compound umbel, an umbel in which each ray again bears an umbel or umbellule.
compressed, flattened lengthwise from side to side (laterally), or from front to back (dorsally).
concrescent, used of an organ united to an originally distinct organ of the same or of a different series by the growth of the tissue between them.
cone, (1) a regular tapering solid with a circular base. (2) a spike-like inflorescence, flower, or fruit with large bracts or scales bearing naked seeds on their upper surface, usually becoming woody at maturity.
confluent, blended into one.
connate, closely united to a member of the same series.
conical, cone-shaped.
connective, a prolongation of the filament connecting the lobes of an anther.
connivent, converging; especially used of parts which are nearer together above than below.
constricted, compressed at intervals.
contiguous, closely adjacent; touching or almost touching.
continuous, uninterrupted.
contorted, twisted; used chiefly of petals or sepals in the bud when each overlaps an adjoining one on one side, and is overlapped by the other adjoining one on the other side.
convolute, rolled up lengthwise from one or both margins.
cordate, heart-shaped; a term applied to the base of a leaf when it has two rounded basal lobes with a deep notch between them.
coriaceous, leathery.
corolla, the inner (usually coloured) envelope of the flower, consisting of free or united petals.
corona, a crown-like circle of appendages between the corolla and the stamens.
corymb, a more or less flat-topped inflorescence in which the branches of pedicels start from different points but all reach to about the same level.
cotyledon, a seed-leaf; the first type of leaf produced by an embryo plant, usually differing greatly from later leaves.

crenate, notched with blunt or rounded teeth.
crenulate, minutely crenate.
crispate, curly.
cuneate, wedge-shaped.
cupular, cup-shaped.
cusp, a sharp rigid point.
cuspidate, abruptly tipped with a sharp rigid point.
cyclic, with the parts in whorls.
cyme, an inflorescence in which the central flower opens first and the first branches at least are usually forked or opposite.
cymose, with a main axis ending in a flower, and several stronger lateral axes.
cystolith, a bladder-like mineral and usually partly crystalline concretion of an epidermal cell.

deciduous, falling off; not bearing green leaves throughout the year.
decurrent, prolonged downwards usually in the form of narrow wings.
decussate, in pairs borne at right angles to the next pair immediately above or below.
definite, limited in number.
deflexed, bent or directed sharply downwards.
dehiscent, opening spontaneously when ripe.
deltoid, shaped like an equal-sided triangle.
dentate, prominently toothed and the teeth directed outwards.
denticulate, minutely toothed.
depressed, more or less flattened from above downwards.
descending, growing downwards.
determinate, flowering from above downwards.
diadelphous, in two groups or bundles.
dichotomous, forking regularly into equal or subequal branches.
dicoccus, a two-lobed capsule.
dicotyledon, a plant whose embryo and germinating seedling has two seed-leaves.
didymous, divided into two rounded lobes; used of anthers which are distinctly 2-lobed but have almost no connective.
didynamous, in two pairs of unequal length.
diffuse, spreading loosely, widely and irregularly.
digitate, the same as palmate.
dioecious, unisexual, the male flowers on one individual and the female flowers on another.
disc, the same as disk.
disk, (1) a ring-shaped or cup-shaped or cushion-like enlargement of the receptacle within the calyx or corolla or stamens, sometimes lobed or cut up into so-called glands.
(2) used of the central florets of a flower-head of Compositae when different from those on the margin.
dissected, deeply divided.
dissepiment, a partition in an ovary or fruit, usually formed by the margins of the carpels.
distal, furthest from the axis or point of attachment.
distichous, regularly arranged one above another in two opposite rows one on each side of the stem.
divaricate, spreading at a wide angle.
divergent, spreading at a narrow angle.
divided, compound; having the main divisions extending to the axis.
dorsal, situated on the back; used of parts turned away from the axis.
dorsifixed, used of an anther attached by its back to the filament.
drupe, a fruit which contains one or more than one "stone" (a hard endocarp containing the seed) surrounded by a succulent fleshy mesocarp and a thin membranous or leathery epicarp.

ellipsoid, an elliptic solid.
elliptic, one and a half to two times as long as broad, thickest in the middle and narrowed towards both ends.
elongate, drawn out.
emarginate, notched at the tip.
embryo, the young plant still enclosed in the seed.
endemic, confined naturally to a certain area.
endocarp, the innermost layer of pericarp.
endosperm, the nutritive material stored within the seed.
entire, having an uninterrupted margin, without teeth or lobes.
envelope, covering.
epicalyx, a whorl of bracts surrounding a flower and resembling an outer calyx.
epicarp, the outermost layer of the pericarp.
epigynous, used of sepals, petals, and stamens borne on the ovary or adnate to it.
epipetalous, borne on the petals.
epiphyte, a plant which grows on another plant without deriving nourishment from it.

ephemeral, transitory, lasting only a day or a few days.
equal-pinnate, the same as paripinnate.
evergreen, bearing green leaves throughout the year.
exocarp, the outer layer of the pericarp.
exotic, introduced, brought from another country.
exserted, protruding.
exstipulate, without stipules.
extra-, outside (e.g. extra-petiolar, outside the petiole, on the side of the petiole away from the stem).
extrorse, facing outwards.
eye, bud.

f., abbreviation for forma (form).
falcate, sickle-shaped.
fascicle, a cluster.
fasciculate, clustered.
female, used of flowers provided with pistils but not with stamens, and of inflorescences and plants bearing only female flowers.
ferruginous, rust-coloured.
fertile, capable of producing pollen or ovules.
-fid, cleft, (e.g. 3-fid, cleft into three parts).
filament, the stalk of a stamen.
filiform, thread-like.
fissile, tending to split.
flabellate, fan-shaped.
flexuouse, zig-zag; bent alternately in opposite directions.
flexuous, the same as flexuose.
floret, a small flower, especially one of a head or cluster.
flower, the individual reproductive organ of a plant.
fluted, with deep vertical channels.
foliaceous, leaf-like.
-foliate, bearing leaves (e.g. 4-foliate, bearing four leaves).
-foliolate, bearing leaflets (e.g. 5-foliolate, bearing 5 leaflets).
follicle, a pod which opens only along one suture (usually the suture to which the seeds are attached).
forked, divided into two sub-equal branches.
form, a division of a species.
free, not united.
frond, the leaf of a fern.
fruit, the ripened ovary of a seed plant with its contents.
fugaceous, falling off early.
fugitive, the same as fugaceous.
fulvous, tawny, yellow-brown or yellow-grey.
funicle, the stalk of an ovule or seed.

gall, an abnormal outgrowth caused by an insect.
gamopetalous, with the petals united either entirely or at the base.
gamosepalous, with the sepals united either entirely or at the base.
gelatinous, jelly-like and more or less transparent.
glabrescent, becoming glabrous or nearly so.
glabrous, hairless.
gland, (1) a wartlike outgrowth. (2) a liquid-secreting organ.
glandular, possessing glands.
glaucous, dull grey-green or blue-green.
globose, spherical.
glomerule, a small compact cluster of inconspicuous shortly-stalked flowers.
glumaceous, glume-like, chaffy.
glume, a chaffy bract.
glutinous, sticky.
gregarious, growing in company with others of its kind.
gum, a product of disintegration of internal tissue, swelling or dissolving in water, insoluble in alcohol or ether.
gum-resin, a mixture of gum and resin.
gynaecium, the female part of a flower, consisting normally of at least one ovary, one style, and one stigma.
gynobasic, arising from the base of the ovary.
gynophore, a stalk supporting the gynaecium, formed by an elongation of the receptacle.

habit, general appearance and manner of growth.
head, a mass of sessile or sub-sessile flowers arranged on a common receptacle.
herbaceous, not woody.
hermaphrodite, having functional organs of both sexes in one flower.
hilum, the scar on a seed where it was attached to the funicle or placenta.
hispid, covered with stiff bristle-like hairs.
host, the plant from which a parasite or epiphyte obtains nourishment or support.
hyaline, thin, membranous, and almost transparent.
hypogynous, used of sepals, petals and stamens borne at the base of the ovary or below it.
hirsute, covered with rather long coarse hairs.

imbricate, overlapping, used chiefly of flower-buds in which one sepal or petal is wholly internal and one wholly external, the others overlapping at the edges only.
imparipinnate, pinnate with an odd terminal leaflet.
incised, rather deeply and irregularly toothed.
included, not projecting; concealed within the staminal-tube or the tube of the corolla or perianth.
indefinite, numerous.
indehiscent, remaining closed when ripe.
indeterminate, flowering from below upwards.
indigenous, native.
indumentum, covering (of hair, scales, wax, etc.).
induplicate, with margins folded inwards but not overlapping.
indusium, a thin scale-like outgrowth of a frond covering the immature sorus.
inferior, of an ovary which appears to be below the calyx, the latter being adherent to it.
infertile, not capable of producing pollen or ovules.
inflexed, bent inwards.
inflorescence, the flowering part of a plant and the arrangement of the flowers upon it.
infra-, below. (e.g. infra-petiolar, below the petiole).
infructescence, the inflorescence in the fruiting stage.
inter-, between. (e.g. internode, the space between two nodes.
interrupted, not continuous.
intra-, within. (e.g. intra-petiolar, within the petiole; between the petiole and the stem).
introduced, exotic, brought from another country.
introrse, facing inwards.
involucel, a secondary involucre; the involucre of a partial inflorescence.
involucre, a whorl of bracts surrounding the base of a flower or flower-cluster.
involute, rolled inwards.
irregular, capable of division in only one plane into similar halves.

jointed, (1)divided into portions which subsequently separate.
(2) separating at the point of attachment.
-jugate, denotes number of pairs (e.g. multijugate, with many pairs).

keel, (1) the two partially united lowest (anterior) petals of a papilionaceous flower.
(2) a projecting ridge.
kernel, the part lying within the hard shell of a nut or drupe.

laciniate, narrowly divided into long slender irregular segments.
lactiferous, yielding a milky juice.
lamina, the blade of a leaf.
lanate, with long soft entangled woolly hairs.
lanceolate, lance-shaped; 3-6 times as long as broad (the broadest part below the middle), tapered gradually to the apex.
lateral, borne on the side.
latex, a milky, usually sticky, fluid.
laticiferous, latex-bearing.
lax, loose, not compact.
leaf, a thin green organ borne on the stem at the nodes, divisible in its simplest form into blade (the upper expanded portion) and petiole (the stalk): the petiole is sometimes lacking and the blade may be much modified.
leaflet, a single division of a compound leaf.
legume, a one-celled fruit opening by two valves.
lenticel, a breathing-pore in the bark.
lepidote, covered with small scurfy scales.
liane, a woody climber.
ligulate, strap-shaped, provided with a strap-shaped appendage; used especially of the ray-florets in many Compositae.
limb, (1) the upper, usually expanded, part of a gamosepelous or gamopetalous calyx or corolla.
(2) a main branch.
linear, long and very narrow (many times as long as broad), with almost parallel edges.
lip, one of the two divisions of a gamosepalous calyx or corolla which is cleft into an upper (anterior) and a lower (posterior) portion. See bilabiate.
livefence, livehedge, a fence or hedge composed of growing plants.

lobe, a division of a leaf, perianth or anther. Lobed margins have large usually rounded teeth and shallow notches or sinuses.
lobulate, divided into little lobes.
locellate, divided into small compartments.
loculus, a compartment.
loculicidal, splitting along the back (midrib) of each carpel.
loriform, strap-shaped.

male, used of flowers provided with stamens but not with pistils, and of inflorescences or plants bearing only male flowers.
marcescent, withering but not falling.
median, placed in the middle line of a bilateral organ.
medifixed, attached by the middle.
medullary rays, compressed cellular tissue lying between the vascular bundles in the stem and visible in transverse section as a series of radial lines or rays running more or less continuously from the pith to the bark.
membranous, thin, dry, flexible, and usually translucent.
mericarp, a partial fruit (e.g. one of the separate indehiscent 1-seeded carpels of a schizocarp or one of the halves of the fruit of an umbellifer.).
-merous, denotes number of parts (e.g. a 4-merous flower has 4 sepals, 4 petals, 4 stamens and a 4-celled ovary.).
mesocarp, the middle layer of the pericarp, often fleshy or succulent.
monadelphous, united into one group or bundle.
moniliform, resembling a string of beads.
monocotyledon, a plant whose embryo and developing seedling has one seed-leaf.
monoecious, unisexual, and both male and female flowers on the same plant.
mucilaginous, sticky; the same as glutinous.
mucro, a short stiff point.
mucronate, ending abruptly in a very short stiff point.
multi-, many. (e.g. multi-foliolate, with many leaflets.).

naked, not enveloped by a perianth or by carpels.
nerve, a vascular bundle in a leaf, usually appearing as a projecting ridge on the under surface.
net-veined, with the lateral nerves irregularly connected by small veins like the meshes of a net.
neuter, without fertile sexual organs.
node, a joint; the point on a stem or branch at which a leaf or branch is borne.
nut, a dry indehiscent 1-seeded fruit, usually with a hard dry pericarp (shell).

ob-, inverted. (e.g. ob-ovate, ovate with the broadest part at the top).
oblique, unequal-sided , slanting.
oblong, 2-6 times as long as broad, with sides more or less parallel, and a rounded apex.
obscurely, dimly, not prominently.
obtriangular, with the outline of an inverted cone.
obtuse, blunt or rounded at the tip, i.e. narrowed but not pointed.
ochry, ochre-coloured, pale yellow-brown.
odd-pinnate, the same as impari-pinnate.
offset, a short runner or basal lateral branch rooting at the tip and producing a new plant.
opposite, (1) used of leaves and branches, borne two together at the nodes on different sides of the stem at the same level. (2) of stamens, placed in front of the petals instead of alternating with them.
orbicular, flat with a circular outline.
organ, any part of a plant performing a function.
ostiole, a mouth, especially the small opening at the top of a fig.
oval, broadly elliptic.
ovary, the lower part of the pistil which contains the ovules.
ovate, egg-shaped; used of a flat surface which is scarcely twice as long as broad and has its broadest part below the middle.
ovoid, egg-shaped; used of a solid.
ovule, the grain-like body which after fertilisation becomes the seed; the immature seed.

palmate, used of a compound leaf whose leaflets radiate from the apex of the petiole like the outspread fingers of a hand.
palmi-nerved, with nerves radiating from one point.
pandurate, fiddle-shaped.
panduriform, the same as pandurate.

panicle, a compound raceme; a (usually) pyramidal inflorescence in which the axis is divided into several branches bearing several flowers, the lower branches being typically longer and blossoming earlier than the upper branches.
paniculate, arranged in the form of a panicle.
papilionaceous, literally, butterfly-like. A term used to describe the characteristic flower of the pea family (Papilionaceae). See keel, standard, wing.
papilla, a small soft pimple-like protuberance.
papillose, covered with small soft pimple-like protuberances.
pappus, a tuft or ring of hairs or scales round the top of the fruit of plants belonging to the family Compositae.
parallel-nerved, with the principal nerves nearly parallel and connected almost at right angles by equally subparallel side-nerves.
parasite, a plant which derives all or part of its nourishment from another plant.
parietal, attached to the wall of a 1-celled syncarpous ovary, usually at the sutures of the carpels.
pari-pinnate, pinnate without an odd terminal leaflet.
parted, not quite divided; used of simple leaves divided almost to the midrib or to the base of the blade.
partial, incomplete; as partial-umbel, one of the small umbels together constituting a compound umbel.
-partite, cleft nearly but not quite to the base (e.g. 5-partite, divided nearly to the base into 5 segments).
pectinate, comb-like; arranged or divided like the teeth of a comb.
pedicel, the stalk of each individual flower or fruit of an inflorescence or infructescence.
pedicellate, provided with a pedicel.
peduncle, the common stalk of a cluster of flowers or fruits or the stalk of an inflorescence consisting of only one flower.
pedunculate, provided with a peduncle.
pellucid, translucent, almost transparent.
peltate, with the stalk attached to the undersurface instead of to the edge.
pendulous, hanging down, suspended from above.
penninerved, with pinnate nervation.
penta-, five (e.g. pentamerous, 5-merous).
perennial, living for more than two years.
perfect, used of flowers which have both fertile stamens and fertile pistils; also of stamens which contain pollen, as opposed to staminodes which do not.
perianth, the floral envelope, consisting of calyx or corolla or both; used especially of flowers in which the calyx and corolla are similar or sub-similar and cannot readily be distinguished.
pericarp, the wall of the fruit; its layers may be fused into one, or more or less divisible into epicarp, mesocarp and endocarp.
perigynous, surrounding the ovary but free from it; used of sepals, petals and stamens inserted on the margin of a more or less concave receptacle which is free from the ovary and at some distance from and usually higher than the ovary.
persistent, remaining attached, not dropping off.
petal, one of the inner (usually brightly coloured) perianth-leaves.
petaloid, petal-like.
petiolate, having a petiole.
petiole, the stalk of a leaf.
petiolulate, having a petiolule.
petiolule, the stalk of a leaflet.
phalange, a bundle of stamens united by their filaments.
pilose, covered with rather long soft slender scattered hairs.
pinna (plural pinnae), the primary division of a pinnate leaf.
pinnate, used of a compound leaf which has the leaflets arranged along each side of a common rhachis.
pinnatifid, with the margin pinnately cleft about quarter-way to the midrib.
pinnatilobed, with the margin pinnately cleft about half-way to the midrib.
pistil, the same as gynaecium.
pistillate, the same as female.
placenta, the (usually) thickened or raised part of the ovary to which the ovules are attached.

plicate, folded like a fan.
plumose, feathered; having fine hairs on each side.
pod, a dry dehiscent fruit formed of a single carpel including (1) a legume and (2) a siliqua.
pollen, the fertilising powdery dust contained in an anther.
polygamous, having male, female, and hermaphrodite flowers on the same individual; partly unisexual and partly hermaphrodite.
pore, a minute round opening.
posterior, facing the axis upon which the organ is inserted.
precocious, flowering before the leaves unfold.
prickle, a sharp outgrowth from a stem, readily pulling off with the bark without tearing the wood.
primary, original, first.
process, a projection or outgrowth.
procumbent, lying along the surface of the ground.
prop-root, a supporting root which leaves the stem some distance above soil-level and enters the ground some distance from the point where the trunk rises from the soil.
prostrate, the same as procumbent.
proximal, nearest to the axis or point of attachment.
pseudo-, false. (e.g. pseudo-stipules, false stipules, leaves which simulate stipules.).
puberulous, minutely pubescent.
pubescent, covered with short soft hairs.
pulp, the fleshy part of a fruit surrounding the seeds.
pulvinate, swollen.
pulviniform, the same as pulvinate.
punctate, marked with dots or translucent glands.
pungent, ending in a sharp rigid point.
pustulate, with slight pimple-like swellings.
pyrene, a stone of a drupe.
pyriform, pear-shaped.

raceme, an inflorescence in which the flowers are borne on pedicels along an unbranched axis, the lower flowers opening first.
racemose, having the characteristics of a raceme.
-ranked, in rows (e.g. 3-ranked, in three rows.).
raphe, a prolongation of the funicle in the form of a ridge of tissue over the surface of the ovule.
ray, (1) used of the florets on the margin of a flower-head of the Compositae when different from those of the centre.
(2) one of the radiating branches of an umbel.
(3) medullary rays, see medullary.
receptacle, the extremity of the peduncle or pedicel to which the sepals, petals, stamens and pistil are united.
reduced, fewer in number and/or smaller in size than is usual.
reduplicate, doubled along the midrib with the margins turned outwards.
reflexed, bent abruptly backwards.
regular, capable of division through two or more planes into similar halves.
reniform, kidney-shaped.
repand, of an uneven or wavy margin with shallow undulations; slightly sinuate.
resin, a product of secretion or of disintegration of internal tissue, insoluble in water but soluble in alcohol or ether or carbon dishulphide, burning with a sooty flame.
reticulate, the same as net-veined.
retrorse, the same as reflexed.
retuse, shallowly notched at the apex.
revolute, used of margins rolled backwards towards the midrib.
rhachis, the axis of an inflorescence or of a compound leaf.
rhizome, a root-like stem prostrate on or creeping under the ground. It sends rootlets downwards and branches, leaves, or flowering shoots upwards, and is distinguished from a true root by the presence of buds, leaves, or scales.
rhomboid, four-sided with the opposite sides equal, and adjacent angles unequal.
rib, a strong, more or less projecting, nerve.
riparian, confined to river-banks.
root, that part of a plant which anchors it to the gound and through which it obtains nourishment from the soil.
rootstock, the same as rhizome.
rosette, a dense cluster of leaves resembling in arrangement the petals of a double rose.
rotundate, intermediate between orbicular and oblong.
rudimentary, very imperfectly developed.

rufous, red-brown.
rugose, wrinkled.

sac, a soft membraneous pouch-like appendage.
saccate, provided with a sac.
sagittate, arrow-shaped, i.e. with two acute basal lobes directed downwards.
salver-shaped, with a long narrow tube and a flat spreading limb.
samara, an indehiscent one-seeded fruit provided with a wing.
scabrid, slightly scabrous.
scabrous, rough to the touch.
scale, (1) a reduced leaf, usually sessile and scarious. (2) a tiny flat plate-like body attached by its centre.
scaly, covered with scales.
scandent, climbing.
scarious, thin and dry, rather stiff, not green.
schizocarp, a dry compound fruit splitting when ripe into several indehiscent 1-seeded carpels (mericarps).
secondary, coming next or second. (e.g. secondary forest, the forest growth appearing after the original (primary) forest has been cut down.).
seed, the ovule after fertilisation; it contains the embryo and (sometimes) albumen.
seed-leaf, the same as cotyledon.
segment, a part or division of an organ.
semi-, half, partly, (e.g. semi-deciduous, partly deciduous.).
sepal, one of the outer (usually small, green) perianth-leaves.
septate, divided by one or more partitions.
septicidal, splitting along the lines of junction of the carpels, each carpel then itself usually splitting down its ventral suture.
septum, a partition.
sericeous, silky.
series, a usually similar group or whorl.
serrate, toothed like a saw, with regular pointed teeth directed towards the apex.
serrulate, minutely serrate.
sessile, without a stalk.
setaceous, bristle-like.
setose, beset with bristles.
sheath, a protective covering.
shrub, a woody perennial plant of low stature branching from near the base.
siliqua, a pod divided into two cells by a thin partition, opening by two valves which fall away from a frame on which the seeds are borne.
simple, unbranched or undivided.
simple fruit, a fruit which results from the ripening of a single carpel or ovary.
sinuate, uneven or wavy with rather deep undulations.
sinus, the depression between two adjoining teeth or lobes.
slash, a gash cut on the bole of a tree.
slit, a long narrow opening.
smooth, without protuberances.
sorus, a group of sporangia.
sp., abbreviation for species; plural, spp., (e.g. Khaya sp., a species of Khaya; Khaya spp., several species of Khaya.).
spadix, a spike with a thick axis and inconspicuous flowers, usually enveloped by a spathe.
spathe, a large bract or pair of bracts enclosing a spadix, or two or more bracts enclosing a flower-cluster.
spathaceous, resembling a spathe.
spatulate, (spathulate), spoon-shaped, broadly rounded above and tapering to the base.
species, the unit of classification.
specific, pertaining to a species.
spicate, arranged in a spike.
spike, an inflorescence with the flower sessile along an unbranched axis, the lower flowers opening first.
spikelet, a spike-like partial inflorescence.
spine, strictly a deep-seated sharp rigid outgrowth from a plant, not pulling off with the bark and not containing vascular tissue; used here loosely with thorn to denote any sharp deep-seated rigid woody outgrowth whether containing vascular tissue or not.
spinescent, becoming spiny; tapering to a sharp rigid point.
spine-shield, a horny shield round the base of the spines in certain species of Euphorbia.
spinose, beset with spines or thorns.
spiral, of parts arranged regularly around an axis as if placed on the thread of a screw.
sp. nov., abbreviation for the Latin species nova, a new species.

sporangium (plural, sporangia), the minute, usually globular case in which spores are produced.
spore, the one-celled, sexless, powderlike reporductive body of plants which do not produce seeds, e.g. tree-ferns.
spur, a slender usually hollow extension of some part of a flower.
stalk, a supporting stem.
stamen, one of usually several similar male parts of a flower consisting normally of a filament, an anther and a connective.
staminal, pertaining to an anther (e.g. staminal-tube, staminal-column, the tube or column formed by stamens united by their filaments).
staminate, the same as male.
staminode, an imperfectly developed stamen without an anther or with an anther which is incapable of producing pollen.
standard, the large posterior petal of a papilionaceous flower; it is the outside petal in the bud.
stellate, star-shaped, used principally of hairs with several arms radiating horizontally.
stem, the body of a plant; in a tree it is divisible into trunk, limbs, branches, branchlets and twigs; from the ultimate parts of the stem the leaves and flowers are produced.
sterile, sexless; without fertile ovules or pollen.
stigma, the point or surface of the pistil through which fertilisation by the pollen-grain is accomplished.
stigmatic, pertaining to the stigma.
stilt root, one of several similar roots on which the main stem of certain trees is borne. In a stilt-rooted tree the trunk does not make contact with the ground but terminates some distance above soil-level (e.g. Myrianthus arboreus).
stipe, the stalk of a carpel or pistil.
stipel, a small secondary stipule at the base of a leaflet.
stipellate, provided with stipels.
stipitate, borne on a stipe.
stipulate, provided with stipules.
stipule, a leaf-like or scale-like appendage of a leaf, usually at the base of the petiole.
stock (rootstock), the same as rhizome.
striate, marked with fine parallel longitudinal lines, grooves, or ridges.
strigose, covered with appressed bristles.
style, the narrowed upper part of a pistil carrying the stigma.
sub-, nearly, slightly, or under. (e.g. sub-sessile, nearly sessile; subcoriaceous, slightly leathery; subterranean, underground.)
subtend, hold or extend underneath; bear in an axil; enclose or embrace.
subulate, awl-shaped.
succulent, juicy, watery, or pulpy.
sulcate, grooved.
superior, used of an ovary when the sepals, petals and stamens are attached below it, or are borne on the rim of a receptacle which surrounds it.
superposed, placed vertically one above another.
suture, a line of junction, especially the line of opening of a carpel; the dorsel suture of a carpel represents the midrib of the carpel, and the ventral suture represents the united margins on which the ovules and placentas are borne.
syn., abbreviation for synonym.
syncarp, a syncarpous fruit.
syncarpous, composed of two or more united ovaries.
symmetrical, divisible by one or several planes into two or more similar parts.
synonym, a different name for the same plant.

tannin, an astringent substance derived chiefly from bark, used in the preparation of leather and writing ink.
terete, cylindrical or tapering, and round in cross-section.
terminal, borne at the end.
ternate, arranged in whorls or clusters of three.
tetragonal, with four angles.
tetramerous, 4-merous; having the parts in fours.
thorn, strictly a deep-seated sharp rigid outgrowth from a plant, not pulling off with the bark; it is strictly a modified twig, produced from a bud and contains vascular tissue; used here loosely with spine to denote any sharp deep-seated rigid woody outgrowth whether containing vascular tissue or not.

thorny, beset with thorns or spines.
throat, the mouth of the corolla-tube.
thyrse, an inflorescence which closely resembles a typical panicle but differs from it in that, while the main axis is indeterminate, the branches are determinate and cymose.
tomentollous, shortly tomentose.
tomentose, densely covered with short soft hairs.
tomentum, a covering of short soft hairs.
tooth, a short projection on a margin, especially if sharp and directed outwards.
toothed, with short marginal projections.
torulose, cylindrical with contractions or swellings at intervals.
torus, the same as receptacle.
tree, a tall woody perennial plant having the stem unbranched for a considerable distance from the ground.
tri-, three (e.g. triangular, with three angles and bounded by three straight lines).
trunk, the main stem of a tree.
truncate, terminating abruptly as if the end had been cut off in a straight line.
tube, a hollow cylinder, especially the lower united portion of a gamosepalous or gamopetalous calyx or corolla, and the cylinder formed by a ring of stamens united by their filaments.
tubercle, a small wart-like knob.
tuberculate, covered with tubercles.
tumid, swollen.
turbinate, top-shaped.
twig, a small branchlet.
type locality, the place where the type specimen was collected.
type-specimen, the specimen from which a plant was originally described.
typical, having the characteristics of the type specimen.

umbel, an inflorescence in which the divergent pedicels or peduncles spring from the same point.
umbellate, arranged in umbels.
umbellifer, a plant belonging to the family Umbelliferae.
umbellule, a little or partial umbel; one of the divisions of a compound umbel.
umbonate, with a central protuberance resembling the boss of a shield.
unarmed, without prickles, spines, or thorns.
undershrub, a low-growing shrub.
understorey, belonging to one of the lower tiers of a forest.
undulate, the same as repand.
unequal-pinnate, the same as imparipinnate.
unguiculate, clawed, provided with a claw.
uni-, one. (e.g. uni-locular, with one loculus; uni-sexual, one-sexed, having flowers or organs of one sex only.
urceolate, with a short inflated tube contracted near the top and then slightly expanded in a narrow rim.
urticating, stinging like a nettle.

valvate, (1) with margins meeting but not overlapping. (2) opening into valves.
valve, (1) one of the parts into which a ripe pod or capsule splits. (2) the flap by which certain anthers open.
var., abbreviation for variety.
variagated, of leaves which are partly pale in colour.
varietal, pertaining to a variety.
variety, a division of a species.
vascular, containing fibre-like bundles of vessels (confluent cells) for the transportation of fluid.
vein, a small nerve.
velutinous, velvety to the touch.
venation, the arrangement of the veins of a leaf.
ventral, situated in front, used of parts facing the axis.
vernation, the arrangement of the leaf in bud.
verrucose, the same as tuberculate.
versatile, used of an anther attached by its back to the very tip of the filament so as to swing loosely.
verticellate, the same as whorled.
vexillum, the same as standard.
villose, shaggy, with long weak hairs.
villous, the same as villose.
virgate, slim, straight, and erect.
viscid, sticky; the same as glutinous.
viscous, the same as viscid.

whorl, a group of three or more similar parts arranged in a circle about an axis.
whorled, arranged in whorls.
wing, (1) any flat membranous expansion. (2) one of the two lateral petals of a papilionaceous flower.
winged, provided with wings.

zygomorphic, the same as irregular.

GLOSSARY OF VERNACULAR, EUROPEAN AND TRADE NAMES.

Abalang	Pavetta crassipes
Abura	Mitragyna stipulosa
Acacia, apple ring	Acacia albida
" , black-galled	" drepanolobium
" , falcon's claw	" campylacantha
" , shiny-leaved	" buchananii
" , white-galled	" seyal var. fistula
Acara	" sieberiana
African blackwood	Dalbergia melanoxylon
" breadfruit	Treculia africana
" copaiba balsam	Daniellia oliveri
" cutch	Acacia campylacantha
" ebony	Dalbergia melanoxylon
" fan palm	Borassus aethiopum
" laburnum	Cassia sieberiana
" locust bean	Parkia filicoidea
" mahogany	Khaya anthotheca
" Nutmeg	Pycnanthus kombo
" pencil cedar	Juniperus procera
Akasinsa	Celtis kraussiana
Akwakwalo	Strychnos innocua
Alelemo	Ximenia americana
Ali	Acacia stenocarpa
Alikwalo	Strychnos innocua
Aliya	Securidaca longipedunculata
Ambatch	Herminiera elaphroxylon
Angili	Parinari curatellaefolia
Anyango	Pavetta crassipes
Apple, monkey star	Chrysophyllum perpulchrum
Apple ring acacia	Acacia albida
Apple, sodom	Calotropis procera
Apple, white star	Chrysophyllum albidum
Apple, wild custard	Annona chrysophylla
Asa	Acacia sieberiana
Asāro	" "
Awa	Butyrospermum parkii var. niloticum

Bagambanimpyata	Pseudospondias microcarpa
Balsam, African Copaiba	Daniellia oliveri
Bamboo	Arundinaria alpina; Oreobambos buchwaldii; Oxytenanthera abyssinica
Banda	Arundinaria alpina
Barkcloth tree	Ficus natalensis
Bean, African locust	Parkia filicoidea
Beyo	Afzelia africana
Bigleaf mahogany	Khaya grandifoliola
Biskere	Raphia monbuttorum
Bito	Daniellia oliveri
Bitoke	" "
Black-galled Acacia	Acacia drepanolobium
Black-galled whistling thorn	Acacia drepanolobium
Black plum	Vitex cuneata
Blackwood, African	Dalbergia melanoxylon
Bolwe	Celtis soyauxii
Borassus palm	Borassus aethiopum
Breadfruit, African	Treculia africana
Brown olive	Olea chrysophylla
Budongo heavy mahogany	Entandrophragma utile
" mahogany	" angolense
Buffalo thorn	Ziziphus mucronata
Cabbage tree	Anthocleista spp.
Calabash nutmeg	Monodora myristica
Camel foot	Bauhinia thonningii
Camdeboo stinkwood	Celtis kraussiana
Canarium	Canarium schweinfurthii
Cedar, Africana pencil	Juniperus procera
Chumu	Diospyros mespiliformis
Chwaa	Tamarindus indica
Coffee, wild (excelsa)	Coffee excelsa
Coffee, wild (robusta)	Coffea canephora
Coffee, Shari	Coffea excelsa
Copaiba balsam, African	Daniellia oliveri
Coral, Uganda	Erythrina abyssinica
Corkwood	Ricinodendron africanum
Crabnut, Uganda	Carapa grandiflora

Crabwood, Uganda	Carapa grandiflora
Custard apple, wild	Annona chrysophylla
Cutch, African	Acacia campylacantha
Date, desert	Balanites aegyptiaca
Date palm, wild	Phoenix reclinata
Deleb palm	Borassus aethiopum
Desert date	Balanites aegyptiaca
East African olive	Olea hochstetteri
" " yellow-wood	Podocarpus gracilior; P. milanjianus
Ebabu	Rhus glaucescens
Ebata	Albizzia zygia
Ebilaboni	Hymenocardia acida
Ebolo	Annona chrysophylla
Ebony, African	Dalbergia melanoxylon
" , West African	Diospyros mespiliformis
Ebulai	Ficus platyphylla
Ebura	Parinari excelsa
Ebusibusi	Cussonia arborea; Steganotaenia araliacea
Ebyong	Ficus glumosa
Edulo	" capensis
Egalayi	Lannea stuhlmannii
Egirigiryoi	Acacia campylacantha
Egyptian myrobalan	Balanites aegyptiaca
Ekibundibunzi	Smithia kotschyi
Ekbundubundu	Grewia mollis
Ekimeng	Combretum ghasalense
Ekinyekanyeme	Vernonia auriculifera
Ekisim	Acacia stenocarpa
Ekoboi	Terminalia dawei, T. spekei, T. velutina
Ekoryayi	Gardenia jovis-tonantis
Ekulonyi	Combretum binderianum
Ekungulu	Butyrospermum parkii var. niloticum
Ekwalakwala	Strychnos innocua
Ekwero	Combretum gueinzii
Elamoi	Ximenia americana
Elecherai	Crossopteryx febrifuga

Elgon olive	Olea welwitschii
Elila	Securidaca longipedunculata
Elilyoi	" "
Elio	Ficus gnaphalocarpa
Emuko	Erythrina abyssinica
Emuturu	Heeria reticulata
Engerengerai	Gymnosporia senegalensis
Engosorot	Erythrina abyssinica
Enkoni-nyabito	Synadenium grantii
Enkukura	Euphorbia calycina
Enyitai	Stereospermum kunthianum
Enyongai	Grewia mollis
Epapai	Bauhinia thonningii
Eparisi	Grewia mollis
Eputon	Pseudocedrela kotschyi
Eputu	" "
Eramori	Syzygium guineense
Erere	Ficus ingens
Eri	Khaya grandifoliola, K. senegalensis
Eryecho	Bridelia scleroneuroides
Esa	Elaeis guineensis
Esilang	Ziziphus mauritiana
Etekwa	Albizzia coriaria
Eteregu	Hymenocardia acida
Etirai	Dichrostachys glomerata
Etiriri	Acacia sieberiana
Etitai	Lannea schimperi
Eturubango	Albizzia malacophylla var. ugandensis
Ewayo	Rhus incana
Ewelo	Vitex cuneata
Falcon's claw acacia	Acacia campylacantha
False iroko	Antiaris toxicaria
" muvule	" "
" nutmeg	Pycnanthus kombo
Fan palm, African	Borassus aethiopum
Fig	Ficus spp.

Flame, Nandi or Uganda	Spathodea campanulata
" of the forest	" "
Flat crown	Albizzia gummifera
Frankincense tree	Boswellia papyrifera
Gall acacia, black	Acacia drepanolobium
" " , white	" seyal var. fistula
Galumai	Randia nilotica
Gedu nohur	Entandrophragma angolense
Giant yellow mulberry	Myrianthus arboreus
Grey plum	Parinari excelsa
Groundsel, tree	Senecio spp.
Guarea, scented	Guarea cedrata
Gum arabic, Sudan	Acacia senegal
Gyabazito	Pygeum africanum
Heather, tree	Erica spp.; Philippia spp.
Heglig	Balanites aegyptiaca
Hungi	Philippia benguelensis, P. johnstonii, P. sp. near P. hexagona
Ililia	Crataeva adansonii
Imuru	Butyrospermum parkii var. niloticum
Incense tree	Canarium schweinfurthii
Iroko	Chlorophora excelsa
" , false	Antiaris toxicaria
Ironwood, Uganda	Cynometra alexandri
Itchi	Phoenix reclinata
Iti	Tamarindus indica
Itu	Borassus aethiopum
Jembelyambogo	Trimeria bakeri
Jirikiti	Erythrina abyssinica
Joge	Parkia filicoidea
Jujube tree	Ziziphus mauritiana
Kabalira	Ficus capensis
Kaboga	" congensis
Kaffir orange	Strychnos innocua
Kafunkula	Neobontonia melleri

Kajolyanjovu	Dracaena steudneri
Kakonso	Rhus incana
Kakonsokonso	" glaucescens, R. incana
Kaliba	Musanga smithii
Kalunginsanvu	Syzygium cordatum, S.guineense
Kano	Syzygium guineense
Kanyunkule	Vitex fischeri
Kasana	Acacia stenocarpa
Kasankisanki	Rhus glaucescens, R. incana
Kasisa	Trema guineensis
Kasone	Acacia stenocarpa
Katazamiti	Bridelia micrantha
Katomatoma	Bosqueia phoberos
Kibere	Acacia campylacantha
Kibo	Raphia monbuttorum
Kididi	Elaeophorbia drupifera
Kidodwe	Ficus vallis-choudae
Kifabakazi	Spathodea campanulata
Kigali	Bauhinia thonningii
Kigere	Musanga smithii
Kikokwa	Dombeya dawei, D.emarginata
Kikumbu	Musanga smithii
Kilere	Terminalia brownii
Kinyaruba	Cyathea deckenii
Kirai	Khaya senegalensis
Kirama	Bauhinia thonningii
Kiruhura	Myrianthus arboreus
Kirumbo	Khaya anthotheca
Kirundo	Antiaris toxicaria
Kisongo	Ricinodendron africanum
Kisoro	Erythrina abyssinica
Kitalankuba	Senecio multicorymbosus
Kitoko	Cola cordifolia; Sterculia dawei
Kitwekyankima	Conopharyngia holstii
Kiwondowondo	Maesa lanceolata
Kiyirikiti	Erythrina abyssinica
Kokowe	Ficus brachypoda

Kŏmŭre	Butyrospermum parkii var. niloticum
Kŏŏ	Oxytenanthera abyssinica
La	Ziziphus mauritiana
Laburnum, African	Cassia sieberiana
Labwori	Vernonia amygdalina
Lacar, okuto-	Acacia sieberiana
Lado	Kigelia aethiopica
Lagos rubber	Funtumia elastica
Laliya	Securidaca longipedunculata
Lango	Ziziphus mauritiana
Lasa	Acacia sieberiana
Ledo	Vitex cuneata
Lemon wood	Xymalos monospora
Leyo	Boswellia papyrifera
Liku	Lophira alata
Lilo	Securidaca longipedunculata
Lilyo	" "
Loba	Balanites aegyptiaca
Locoro	Erythrina abyssinica
Locust bean, African	Parkia filicoidea
Logba	Balanites aegyptiaca
Lopai	Stereospermum kunthianum
Lubwera	Fluggea virosa
Lufugo	Celtis soyauxii
Lukandwa	Flugea virosa
Lükindu	Phoenix reclinata
Lukoyo	Balanites wilsoniana
Lulu	Butyrospermum parkii var. niloticum
Lumboro	Strychnos innocua
Lunaba	Pycnanthus kombo
Lusambya	Markhamia platycalyx
Luwawu	Ficus exasperata
Luzibaziba	Alchornea cordifolia
Mahogany	Entandrophragma spp.; Khaya spp.
" , African	Khaya anthotheca; K. grandifoliola

Mahogany, big leaf	Khaya grandifoliola
" , Budongo	Entandrophragma angolense
" , Budongo heavy	" utile
" , Senegal	Khaya senegalensis
" , Uganda	" anthotheca
Makaku	Trichilia emetica
Makindu palm	Phoenix reclinata
Malere	Cyathea deckenii, C.dregei; Terminalia brownii
Malindi	Cordyla richardii
Mango, wild	Irvingia sp.
Mario	Khaya grandifoliola, K.senegalensis
Masa	Daniellia oliveri
Maza	Bauhinia thonningii
Mba	Elaeis guineensis
Mbaka	Cistanthera sp.
Mbala	Chlorophora excelsa
Meli	Afzelia africana
Meni oil tree	Lophira alata
Mkokowe	Ficus brachypoda
Mimbiri	Spondianthus ugandensis
Miyanja	Symphonia gabonensis var. macrantha
Modo	Erythrina abyssinica
Modoti	" "
Monkey star apple	Chrysophyllum perpulchrum
Motangu	Dalbergia melanoxylon
Mpewere	Piptadenia africana, P. buchananii
Mpimbya	Maba abyssinica
Mubajangabo	Erythrina excelsa
Mubajansai	Morinda lucida
Mubakampungu	Chrysophyllum perpulchrum
Mubambanjobe	Chaetacme microcarpa
Mubani	Canarium schweinfurthii
Mubengeya	Annona chrysophylla
Mubimba (Uganda)	Sesbania spp.
Mubumbo	Lannea barteri, L.schimperi
Mubura	Parinari excelsa
Muchenche	Piptadenia africana

Mucholie	Albizzia ferruginea; Cathormion altissimum
Mudo	Erythrina abyssinica
Mudoti	" "
Mufe	Myrianthus arboreus
Mufumbi	Entandrophragma utile
Mufunjo	Dalbergia melanoxylon
Mufuwanduzi	Acacia sieberiana
Mugaba	Trichilia heudelotii
Mugabagaba	Anthocleista schweinfurthii
Mugali	Bauhinia thonningii
Mugando	Acacia stenocarpa
Mugasha	Scutia myrtina
Mugavu	Albizzia coriaria
Mugeye	Piptadenia africana
Mugote	Pygeum africanum
Mugu	Acacia campylacantha
Mugunga	Myrianthus arboreus
Muhekeheke	Caloncoba schweinfurthii
Muhimbi	Cynometra alexandri
Muhindi	" "
Muho	Mitragyna stipulosa
Muhoko	Maba abyssinica
Muhomozi	Vitex cuneata
Muhongera	Maesopsis eminii
Muhotora	Steganotaenia araliacea
Muikaraheyere	Rinorea ardisiaeflora
Muikya	Kigelia aethiopica, K.moosa
Muirikiti	Erythrina abyssinica
Mujogo	Carapa grandiflora
Mujojo	Parkia filicoidea
Mujugangoma	Cola cordifolia; Cordia abyssinica, C. millenii
Mujugantara	Polyscias fulva
Mujwa	Alstonia congensis
Mukakwa	Ziziphus mucronata
Mukalata	Tylostemon ugandensis
Mukanaga	Hymenocardia acida
Mukara	Terminalia velutina

Mukebu	Cordia abyssinica, C. millenii
Mukerembe	Vitex fischeri
Mukinga	Acacia mildbraedii
Mukoge	Tamarindus indica
Mukoko	Ficus brachypoda; Pterygota sp. nov.
Mukole	Dombeya mukole
Mukongoliko	Acacia campylacantha
Mukontambale	Vitex fischeri
Mukora	Combretum binderianum
Mukoma	Grewia spp.
Mukomakoma	" "; Celtis spp.
Mukoma-nyakabito	Desplatzia sp.; Glyphaea lateriflora
Mukunga	Balanites aegyptiaca; Piptadenia africana, P. buchananii
Mukunyu	Ficus gnaphalocarpa, F. mucuso, F. sycomorus
Mukusu	Entandrophragma angolense; Lovoa brownii, L. swaynnertonii; Uapaca guineensis
Mukuzanyana	Klainedoxa oblongifolia
Mulberry, giant yellow	Myrianthus arboreus
" , Uganda	Morus lactea
Mulemambadzi	Pappea ugandensis
Mulemampangu	" "
Mulemangundu	Stereospermum kunthianum
Mulemankobe	Fagara macrophylla
Mulimbi	Bombax reflexum
Mulindi	Herminiera elaphroxylon
Mulirira	Harungana madagascariensis
Murongo	Albizzia grandibracteata, A. zygia
Mururu	Chrysophyllum albidum
Mululiza	Vernonia amygdalina
Muma	Mimusops ugandensis
Mumara	Erythrophloeum guineense
Mumuli	Holoptelia grandis
Munabuliko	Gymnosporia senegalensis
Munankwasi	Symphonia gabonensis var. macrantha
Munazi	Parinari curatellaefolia, P. excelsa
Mungogwenkende	Conopharyngia holstii
Mungu	Polyscias fulva

Munginya	Acacia hebecladoides, A. sieberiana
Munondo	Tamarindus indica
Munyama	Khaya anthotheca, rarely K. grandifoliola
Munyamadzi	Apodytes dimidiata
Munyamaija	Lasiodiscus mildbraedii
Munyamata	Chrysophyllum glomeruliflorum, C.sp. nov.?
Munyankono	Strombosia grandifolia
Munyara	Spathodea campanulata
Munyenye	Fagara angolensis, F.macrophylla, F.melanacanth
Munyinya	Acacia hebecladoides, A. sieberiana
Muralike	Trichilia prieuriana
Muramma	Combretum gueinzii
Murangara	Croton macrostachys
Murungurungu	Baphia wollastonii
Mussa	Kigelia moosa
Musali	Garcinia buchananii; Mimusops ugandensis
Musanda	Funtumia elastica; F.latifolia
Musandasanda	Symphonia gabonensis var. macrantha
Musaniko	Clausena anisata
Musansa	Phoenix reclinata
Musanvuma	Sapium ellipticum
Musasa	" "
Museke	Arundinaria alpina
Musekeseke	Oreobambos buchwaldii
Musenene	Podocarpus gracilior, P. milanjianus
Musese	Rhus glaucescens
Museta	Terminalia brownii
Mushabeya	Albizzia gummifera
Mushebera	" "
Mushimba	Panari excelsa
Musiku	Mitragyna rubrostipulacea
Musinyamuro	Myrianthus arboreus
Musisa	Albizzia coriaria
Musita	" "
Musizi	Maesopsis eminii
Musodo	Ricinodendron africanum
Musogasoga	Croton macrostachys

Musokolindo	Clausena anisata
Mutaa	Holoptelia grandis
Mutambuzi	Spondianthus ugandensis
Mutatabankubebe	Hymenocardia acida
Mutete	Allophylus subcoriaceus; Balanites aegyptiaca
Mutiaza	Acacia sieberiana
Mutoke	Baphiopsis stuhlmannii; Funtumia latifolia
Mutole	Piptadenia buchananii
Mutoma	Ficus natalensis
Mutongana	Carapa grandiflora
Mutongoli	Acacia hebecladoides
Mutonwa	Clausena anisata
Mutuba	Ficus natalensis
Mutugundo	Vangueria apiculata, V. tomentosa
Mutumba	Chlorophora excelsa; Cordia abyssinica, C. millenii
Muvule	" " .
" , false	Antiaris toxicaria
Muwafu	Canarium schweinfurthii
Muwawa	Acacia sieberiana
Muwanika	Dichrostachys glomerata
Muwonera	Clausena anisata
Muyanja	Symponia gabonensis var. macrantha
Muyati Muyemberera	Croton macrostachys
Muyirikiti	Erythrina abyssinica
Muyovu	Entandrophragma spp., especially E.cylindricum
Muyumbu	Ziziphus mucronata
Muzinda	Treculia africana
Muziru	Pseudospondias microcarpa
Muzo	Teclea grandifolia, T.nobilis
Mvule	Chlorophora excelsa
Mvule, false	Antiaris toxicaria
Mwanyi	Coffea canephora
Mwasa	Tylostemon ugandensis
Mwataibale	Melanodicus sp.
Mwebende	Myrianthus arboreus
Mweganza	Macaranga schweinfurthii

Mweramenyo	Acacia sieberiana
Mwianja	Symphonia gabonensis var. macrantha
Mwiha	Warburgia ugandensis
Mwirima	Capparis afzelii
Mwiruni	Malacantha sp. near M.alnifolia
Mwongogwenkende	Conopharyngia holstii
Mwolola	Entada abyssinica
Myrobalan, Egyptian	Balanites aegyptiaca
Namalagala	Ficus depauperata
Nandi flame	Spathodea campanulata
Ndaula	Pterygota sp. nov.
Ndawa	Combretum gueinzii
Ndebesa	Stereospermum kunthianum
Ndela	Schrebera macrantha
Ngwabuzito	Pygeum africanum
Ngote	" "
Nigerian pearwood	Guarea cedrata
Nkalate	Chrysophyllum albidum; Pachystela brevipes
Nkikimbo	Myrica kandtiana
Nkokwa	Dombeya dawei, D. emarginata
Nkoba	Baikiaea minor; Lovoa brownii; Mildbraediodendron excelsum
Nkondwe	Securidaca longipedunculata
Nkoni	Euphorbia media var. bagshawei
Nkukuru	Elaeophorbia drupifera
Nkulumire	Croton megalocarpus
Nkulajo	Trema guineensis
Nkunya	Manilkara cuneifolia
Nkuzanyana	Phialodiscus unijugatus
Nkwasi	Symphonia gabonensis var. macrantha
Nongo	Albizzia grandibracteata; A.zygia
Nsabi	Bosqueia phoberos
Nsagalane	Xylopia eminii
Nsali	Garcinia buchananii
Nsambya	Markhamia platycalyx
Nserere	Ficus brachypoda
Ntalyerungu	Fagara angolensis; F.macrophylla; F.melanacantha

Ntanyenya	Cassia mannii
Ntasesa	Pygeum africanum
Ntungo	Borassus aethiopum
Ntunku	" "
Nutmeg, african	Pycnanthus kombo
" , calabash	Monodora myristica
" , false	Cycnanthus kombo
Nyabuliko	Gymnosporia senegalensis
Nyadokanet	Borassus aethiopum
Nyakatoma	Morus lactea
Nyamanunka	Celtis durandii var. ugandensis, C.kraussiana
Nzingu	Mitragyna rubrostipulacea, M.stipulosa
Nzo	Teclea grandifolia, T.nobilis
Ober	Albizzia maranguensis
Obul	Mitragyna stipulosa
Obwipe	Podocarpus gracilior, P.milanjianus
Obwolo	Annona chrysophylla
Oding	Erythrina abyssinica
Odra	Oxytenanthera abyssinica
Odugo	Combretum binderianum
Oduk	" gueinzii
Odurakot	Acacia campylacantha
Oduru	Ficus congensis
Odwong	Gardenia jovis-tonantis
Ogali	Bauhinia thonningii
Oil palm	Elaeis guineensis
Okang	Hymenocardia acida
Okango	" "
Okecu	Combretum binderianum, C. ghasalense,C.gueinzii
Okodokodwoyi	Ziziphus mauritiana
Okuto-lacar	Acacia sieberiana
Okuto-oryang	" stenocarpa
Olam	Ficus gnaphalocarpa, F.sycomorus
Olango	Ziziphus mauritiana
Olawu	Erythrina abyssinica
Oli	Acacia stenocarpa

Olili	Sesbania spp.
Olimo	Ximenia americana
Olive, brown	Olea chrysophylla
Olive, East African	" hochstetteri
Olive, Elgon	" welwitschii
Olive, wild	" chrysophylla
Oluo	Erythrina abyssinica
Olwaa	Antiaris toxicaria; Chlorophora excelsa
Olwedo	Lonchocarpus laxiflorus
Omomo	Psorospermum campestre
Omugabagaba	Cassia didymobotrya
Omugorogoro	Dracaena steudneri
Omugunza	Cyathea deckenii
Omuhanga	Maesa lanceolata
Omuhanza	Rhus incana
Omuhulizi	Podocarpus gracilior, P. milanjianus
Omujesi	Hagenia anthelmintica
Omumba	Pygeum africanum
Omunyaishu	Ilex mitis
Omushambya	Dodonaea viscosa
Omushusha	Macaranga kilimandscharica
Omuyove	Entandrophragma excelsum
Oo	Mitragyna stipulosa
Opok	Terminalia dawei; T. spekei; T. velutina
Opolok	Stereospermum kunthianum
Oput	Pseudocedrela kotschyi
Orange, Kaffir	Strychnos spinosa
Ordeal tree	Erythrophloeum guineense
Oruyenzhe	Euphorbia media var. bagshawei
Oryang, okuto-	Acacia stenocarpa
Osai	Cussonia arborea
Otago	Rhus incana
Oteng	Lophira alata
Otitimo	Sclerocarya birrea
Ovolo	Annona chrysophylla
Owak	Albizzia grandibracteata, A. zygia
Owelo	Vitex cuneata
Oyelo	" "

Oyelo gwok	Vitex madiensis
Oyoro	Crataeva adansonii
Oyuru	" "
Palm, African fan	Borassus aethiopum
" , Borassus	" "
" , Deleb	" "
" , Makindu	Phoenix reclinata
" , Oil	Elaeis guineensis
" , Palmyra	Borassus aethiopum
" , Raphia	Raphia monbuthorum
" , Wild date	Phoenix reclinata
Palmyra palm	Borassus aethiopum
Pattern wood	Alstonia congensis
Pear, white	Apodytes dimidiata
Pearwood, Nigerian	Guarea cedrata
Pillar wood	Cassipourea elliottii
Pine, screw	Pandanus chiliocarpus
Plum, black	Vitex cuneata
" , grey	Parinari excelsa
" , wild	Ximenia americana
Pobo	Grewia mollis
Podo	Podocarpus gracilior, P. milanjianus
Poyi	Dalbergia melanoxylon
Pwoyo	Ficus vasta
Raphia palm	Raphia monbuthorum
Red-hot poker tree	Erythrina abyssinica
Red stinkwood	Pygeum africanum
Red thorn	Acacia lahai
Riang	Dombeya rotundifolia
Ripi	Antiaris toxicaria
Robusta coffee, wild	Coffea canephora
Rota	Hexalobus monopetalus
Rubber, wild	Funtumia elastica, F. latifolia
Rwata (Lunyoro)	Vitex amboniensis Gürke
Sapele	Entandrophragma cylindricum
Sausage tree	Kigelia aethiopica, K. moosa

Scented guarea	Guarea cedrata
Screw pine	Pandanus chiliocarpus
Sekoba	Trichilia reducta
Senegal mahogany	Khaya senegalensis
Sesambya	Trichilia redacta
Setala	Polyscias fulva
Shari coffee	Coffea excelsa
Shea butter tree	Butyrospermum niloticum var. parkii
Shiny-leaved acacia	Acacia buchananii
Shittim wood	" seyal
Sodom apple	Calatropis procera
Soursop, wild	Annona chrysophylla
Star apple, monkey	Chrysophyllum perpulchrum
" " , white	" albidum
Stinkwood, Camdeboo	Celtis kraussiana
" , red	Pygeum africanum
Stool wood	Alstonia congensis
Sudan gum arabic	Acacia senegal
Tamarind	Tamarindus indica
Thorn, black-galled whistling	Acacia drepanolobium
" , buffalo	Ziziphus mucronata
" , red	Acacia lahai
" , wait-a-bit	" mellifera
" , white-galled whistling	" seyal var. fistula
Tido	Khaya grandifoliola, K. senegalensis
Tóó	Balanites aegytiaca
Tolokyo	Juniperus procera
Tree groundsel	Senecio spp.
Tree heather	Erica spp.; Philippia spp.
Tugu	Borassus aethiopum
Uganda crabnut	Carapa grandiflora
" crabwood	" "
" coral	Erythrina abyssinica
" flame	Spathodea campanulata
" ironwood	Cynometra alexandri

Uganda mahogany	Khaya anthotheca
" mulberry	Morus lactea
" walnut	Lovoa brownii
Umbrella tree	Musanga smithii
Upas tree	Antiaris toxicaria
Violet tree	Securidaca longipedunculata
Vundi	Chlorophora excelsa
Wait-a-bit thorn	Acacia mellifera
Walnut, Uganda	Lovoa brownii
Weri	Euphorbia calycina
West African Ebony	Diospyros mespiliformis
Whistling thorn, black-galled	Acacia drepanolobium
Whistling thorn, white-galled	" seyal var. fistula
White-galled acacia	" " " "
" " whistling thorn	" " " "
White pear	Apodytes dimidiata
White star apple	Chrysophyllum albidum
Wild coffee (excelsa)	Coffea excelsa
" " (robusta)	" canephora
" custard apple	Annona chrysophylla
" date palm	Phoenix reclinata
" mango	Irvingia sp.
" olive	Olea chrysophylla
" plum	Ximenia americana
" rubber tree	Funtumia elastica, F. latifolia
" soursop	Annona chrysophylla
Yaa	Butyrospermum parkii var. niloticum
Yago	Kigelia aethiopica
Yao	Butyrospermum parkii var. niloticum
Yellow wood, East African	Podocarpus gracilior, P. milanjianus
Zingale	Celtis integrifolia
Zingili	Prosopis africana

INDEX TO GENERA AND SPECIES.

(Straight on)