

INVENTORY OF PLANTS USED IN TRADITIONAL MEDICINE IN TANZANIA. II. PLANTS OF THE FAMILIES DILLENiaceae--OPIliaceae

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Summary

Forty five plants are listed, which are used by traditional healers in the northeastern part of Tanzania. For each species are given: the botanical name with synonyms, vernacular name, collection number, locality, habitus, approximate distribution and medical use. Results of a literature survey are also reported, including medical use, isolated constituents and pharmacological effects.

Part I of this series (Hedberg et al., Journal of Ethnopharmacology, 6 (1982) 29-60) listed 62 plant species of the families Acanthaceae to Cucurbitaceae, which are used by traditional healers in the northeastern part of Tanzania. This paper continues the report of results of the inventory and comprises plants of the families Dilleniaceae to Opiliaceae (in alphabetical order). For abbreviations used, see Part I, pp. 32, 33.

DILLENiaceae

Tetracera boiviana Baill. TMP: 55,65. V: Mgoto-Ugotoke, Mkalafisi. L: Tanga district, Tongoni and Pongwe villages. H: Tree or shrub. D: E. Africa. Med: A decoction of the roots is drunk against the influence of "witchcraft" (implying that the healer cannot make a diagnosis). A decoction of the roots mixed with roots of Mzirapeku (*Rhynchosia albissima* Gandoger, TMP 68) is drunk to induce delivery in a woman who has been pregnant for more than 9 months. Lit: U: *Roots*: A piece of the root is tied to the wrist of

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all members of the family to protect them from influenza or pneumonia when the village is struck by these diseases. Domestic stock can be protected from wild predators by tying a piece of the root around the neck of one adult female of each kind (Kokwaro).

EBENACEAE

Euclea divinorum Hiern. Syn: (for species as a whole) *Euclea keniensis* R.E. Fries, *E. huillensis* Gürke, *E. lanceolata* auct. non E. Mey. TMP: 229. V: Mdala va shasi. L: Handeni district, Misima village. H: Shrub. D: E. tropical Africa. Med: A piece of the root is boiled with 7 pieces of sugar cane and the decoction drunk against stomach pains or constipation. Lit: U: *Roots*: A decoction of the roots mixed with roots of *Croton megalocarpus* is used for treatment of chest pains, pneumonia or internal body swellings called "kati" (Kamba). Soup made from root and bark is taken as a purgative. It is also a worm medicine and a tonic (Kokwaro).

EUPHORBIACEAE

Acalypha fruticosa Forsk. Syn: *Acalypha betulina* Retz., *A. chrysadenia* Suesseng. & Friedr., *A. paxiana* Dinter ex Pax, *Ricinocarpus fruticosus* O. Kuntze. TMP: 27, 42, 148. V: Mchakari, Simamanela (Makonde). L: Tanga district, Tongoni village. Korogwe district, Kijango village. H: Shrub, vine. D: Tropical Africa. Med: *Leaves*: For treatment of skin diseases the following preparations are used. A cold water extract for bathing. Dried leaves burnt and the smoke inhaled. Leaves pounded together with leaves of Mndungu (Mjafari, Matata, Mpombo, Mrungurungu, *Zanthoxylum chalybeum* Engl., TMP 40) and Mdimu wa chakani (*Suregada zanzibariensis* Baill., TMP 41) and the juice applied to affected parts. Leaves of the three plants boiled and the vapours inhaled. *Roots*: Paste of fresh roots applied to affected parts. Roots boiled together with roots of *Zanthoxylum chalybeum* Engl. and *Suregada zanzibariensis* Baill. and the decoction drunk. Both preparations used for treatment of skin diseases. Lit: U: *Roots*. For stomach problems, whooping cough and for gonorrhoea. To treat fever and colds and for toothache (Kokwaro). As a febrifuge, for chancre and to treat gonorrhoea (Watt.) *Leaves*: A cold-water extract for constipation (Kokwaro). For coughs, chest pains, stomach ache and cholera (Watt). *Aerial parts*: To prepare eye drops for conjunctivitis (Kokwaro and Watt). As a febrifuge and snake bite remedy (Watt).

Bridelia cathartica Bertol. Syn: *Bridelia fischeri* Pax, *B. melanthesoides* Klotsch, *Pentameria melanthesoides* Klotsch ex Baill. TMP: 45. V: Mnem-benembe. L: Tanga district, Lumbwa village. H: shrub. D: E. and S. Africa. Med: Decoction drunk to treat protruding rectum. Lit: U: Juice of root bark is drunk against amoebic dysentery. Powder of root bark blown into anus to treat hemorrhoids. Decoction drunk twice for stomach ache (Kokwaro).

Clutia abyssinica Jaub. & Spach. Syn: *Clutia abyssinica* vars. *calvescens* (partly), *firma* and *glabra* Pax & K. Hoffm., *C. glabrescens* Knauf, *C. lanceolata* Hochst. var. *glabra* A. Rich., *C. myricoides* Pax, *C. richardiana*? Oliv. TMP: 186, 190. V: Mhende. L: Lushoto district, Mayo village. H: Shrub. D: E. and C. tropical Africa. Med: Decoction of roots prepared together with roots of Mwiru (*Cassia didymobotrya* Fres., TMP 182), Fuiza (*Momordica calantha* Gilg, TMP 170), Mshegeshe (*Myrica salicifolia* Hochst. ex A. Rich., TMP 178), Mkumba (*Macaranga capensis* (Baill.) Sim., TMP 183), Mkome, Mtalanda, Mkwazu, Mwenga, Mshofu (*Uvaria* cfr. *leptocladon* Oliv., TMP 9, 18, 89), Mbawa, Kiandeme, Mtindi and Mtondo. The decoction is drunk against dizziness. Decoction prepared of roots and leaves together with roots and leaves of Fyofyo, Mlimbiti, Mkame, Uwenge (Cfr *Crassocephalum vitellinum* (Benth.) S. Moore, TMP 172), Nkongo, Hozandonghoi and Muuka (*Conyza pyrropappia* ssp. *oblongifolia* (O. Hoffm.) Wild, TMP 98, 99, 107, 116). This decoction is a remedy for "Kiguma", the symptoms of which are ugly sores on the body of an infant believed to have been caused by the mother. Lit: U: *Roots*: A decoction is drunk for headache, stomach ache, influenza, malaria and for indigestion. Decoction mixed with milk is used for treatment of liver pains (Kokwaro). The root is used as an ascarifuge, as a remedy for habitual abortions, to treat fits in children, for enlarged spleen and against influenza (Watt). *Leaves*: Leaves are boiled and the vapors used for fumigation against malaria (Kokwaro). The leaf sap is used as an application to wet dermatoses (Watt). *Wood*: The wood is smoked by women during menstruation (Watt).

Croton dichogamus Pax. TMP: 294. V: Mhande. L: Same district, Ikongwe-Kisiwani village. H: Shrub. D: Tropical Africa. Med: Powdered root in porridge or tea for tuberculosis. Leaves are also boiled and smoked to treat "Safura" (a kind of Kwasiorkor/malnutrition). Lit: U: *Roots*: Chopped roots are added to soup made from goat's meat and taken as a tonic (Kokwaro). *Leaves*: Smoke of burnt, dry leaves is inhaled by the patient or used for fumigation in treatment of fever. It is also an excellent remedy for chest ailments. The leaves are chewed or dried and smoked as a cigarette by the Sukuma. It also acts as a remedy for stomach diseases (Kokwaro).

Croton polytrichus Pax. TMP: 124, 241, 295. V: Mlawa, Mhangusa wana, Mchamwa. L: Korogwe district, Magoma village. Handeni district, Sindeni village. Same district Ikongwe-Kisiwani village. H: Shrub or tree. D: Tanzania. Med: Decoction of roots is drunk to drive out the Devil. Powdered roots are mixed with porridge or tea to treat impotence. Powdered root bark is mixed with powdered roots of Mhande (*Croton dichogamus* Pax, TMP 294) and taken in tea (without milk) for treatment of male impotence and "Kambaku" (blockage of nostrils by cold resulting in a heavy headache). The leaves are boiled with leaves of Mkame, Mtalawanda, Mwelekela (*Combretum exalatum* Engl., TMP 123), Mwooza, Mwiinukiwa,

Mvule (*Ficus* cfr. *vogelii* (Miq.) Miq., TMP 104), Mvunganiza, Mkombechi (*Croton pseudopulchellus* Pax, TMP 125), Mshofu (*Uvaria* cfr. *leptocladon* Oliv., TMP 9, 18, 89) and Ninda. The vapours from the boiling leaves are inhaled to drive out the Devil. Lit: U: The roots are used for headaches and labor pains (Kokwaro).

Croton pseudopulchellus Pax. TMP: 125. V: Mkombechi. L: Korogwe district, Magoma village. H: Tree. D: Tropical Africa. Med: Decoction of roots is drunk to drive out the Devil. The leaves of the plant are boiled with many other leaves and the vapours inhaled for the same purpose (See *Croton polytrichus*). Lit: U: *Roots*: A decoction of the root is drunk for asthma (Kokwaro). The same use is reported by Watt. *Leaves*: Leaves are boiled and applied to the chest for colds. An infusion of the leaves is given to cattle as a remedy for anthrax. The leaves are burnt and the smoke used as an insecticide in crops (Kokwaro). *Leaves and twigs*: A decoction of leaves and twigs is drunk for gonorrhoea (Kokwaro). The leaf and twig is used with the twig of *Teclea nobilis* in making a vapour bath for treatment of syphilitic sores together with local application of the pounded root of *Crossopteryx febrifuga* (Watt).

Erythrococca kirkii (Müll. Arg.) Prain. Syn: *Cladoxylon kirkii* Müll. Arg., *Erythrococca mitis* Pax. TMP: 227. V: Mnyembeule. L: Handeni district, Misima village. H: Shrub. D: Kenya, Tanzania. Med: A decoction of the roots together with roots of Mvungalwiza (*Ehretia amoena* Klotzsch, TMP 160, (118), 203) is drunk against fevers with convulsions in children.

Euphorbia candelabrum Tremaux. Syn: *Euphorbia calycina* N. E. Br., *E. murieli* N. E. Br. TMP: 230. V: Ganga. L: Handeni district, Misima village. H: Tree. D: E. Africa (Sudan-Rhodesia). Med: Roots boiled with chicken or fatty meat and the decoction drunk against general stomach pains and to treat infertility. Lit: U: The latex is used as an arrow poison, as an emetic in the treatment of snake bites and to treat eye tumours (externally) (Watt). A decoction of the stems is given to women after childbirth to clear out the afterbirth, but this should be done with extreme care (Kokwaro). The latex is used as a drastic laxative in a dose of 2 drops mixed with porridge (Haerdi).

Euphorbia heterochroma Pax. Syn: *Euphorbia impervia* Berger, *E. stuhlmannii* Schweinf. TMP: 242. V: Sapo. L: Handeni district, Sindeni village. H: Tree. D: N.E. Tanzania. Med: A decoction of the fresh roots is drunk for cough and to treat tuberculosis. Also the stems are used.

Macaranga capensis (Baill.) Sim. Syn: *Macaranga bachmanii* Pax, *M. usambarica* Pax & K. Hoffm., *Mallotus capensis* (Baill.) Muell. Arg., *Mappa capensis* Baill. TMP: 183. V: Mkumba. L: Lushoto district, Mayo village. H:

Tree. D: E. and S. Africa. Med: Decoction of roots mixed with roots of Mwinu (*Cassia didymobotrya* Fres., TMP 182), Fuiza (*Momordica calantha* Gilg., TMP 170), Mkunguma (*Sorindeia madagascariensis* DC., TMP 184) and Mshegeshe (*Myrica salicifolia* Hochst. ex A. Rich., TMP 178) drunk against mental illness (Kichaa).

Margaritaria cfr. *discoidea* (Baill.) Webster. Syn: (For species as a whole) *Cicca discoidea* Baill., *Flueggea bailloniana* (Muell. Arg.) Pax, *Flueggea fagifolia* Pax, *Flueggea nitida* Pax, *Flueggea obovata* Baill., *Margaritaria discoidea* ssp. *discoidea* Webster, *Margaritaria discoidea* ssp. *nitida* (Pax) Webster, *Margaritaria obovata* (Baill.) Webster, *Phyllanthus discoideus* (Baill.) Muell. Arg., *Phyllanthus flacourtioides* Hutch. *Securinega bailloniana* (Muell. Arg.) Pax. TMP: 197. V: Msereganga. L: Handeni district, Chanika village. H: Tree. D: Tropical Africa. Med: Decoction or infusion of fresh root drunk for abortion. Lit: U: *Roots*: A decoction is drunk against bilharzia, gonorrhoea, malaria and severe abscess (Haerdi). Roots are used as a slowly acting remedy for stomach disorders (Kokwaro). As a purgative and general stimulant and to facilitate conception (Kerharo). *Stem bark*: A decoction is drunk for the removal of postpartum pain and as an anthelmintic. The ash of the bark, mixed with "indigenous salt" and palm oil is applied locally for the relief of lumbar pain. A preparation with the ash is swallowed for the relief of amenorrhoea. It is also rubbed into scarifications or over the body as a stimulant and a tonic (Watt). *Leaves*: A decoction is drunk against malaria (Haerdi). A poultice of the leaf and twig is applied to jigger sores (Watt). C: The following five alkaloids have been isolated and their structure determined: phyllochrysin (Janot et al., 1958; Parello et al., 1963a; Bevan et al., 1964a; Rich, 1973), securinine (Parello et al. 1963a; Parello, 1966; Bevan et al., 1964b) phyllalbine (Parello et al., 1963b), phyllanthine and phyllantidine (Parello and Somashekar, 1965; Parello, 1968; Horii et al., 1972). Phyllalkine is a vanillic acid ester of tropanol and the other alkaloids are members of the *Securinega*-alkaloid group. P: The pharmacological activities of securinine have been extensively studied (Tourova, 1957; Quevauviller et al., 1967; Nazarov and Bulatov, 1971; Chang, 1974). Its main action is a strychnine-like CNS-stimulating activity, but it is less toxic than strychnine. Securinine has also sympathomimetic activity. The alkaloid has been used clinically in the Soviet Union for treatment of poliomyelitis-induced paresis and as a stimulating agent for treatment of general weakness and hypotension (Tourova, 1957). The metabolism of securinine has been studied by Yao and Sung (1973). Phyllochrysin has also CNS-stimulating activity and provokes medullary excitation, whereby it differs from securinine. It is also less toxic than securinine (Quevauviller and Blanpin, 1959; Foussard-Blanpin et al., 1967). Phyllalbine has sympatomimetic effects (Quevauviller et al., 1965).

Phyllanthus reticulatus Poir. Syn: *Phyllanthus prieurianus* Muell. Arg. TMP: 13, (114). V: Mkasiri (Mkwambamaji). L: Tanga district, Mpirani village (Korogwe district, Semangube village). H: Tree (shrub). D: Tropical Africa. Med: Decoction of roots used against venereal diseases. (Decoction of roots with roots of Mlama (*Combretum* cfr. *molle* R. Br. ex D. Don, TMP 121) and Mgunku (*Combretum* cfr. *collinum* Fres., TMP 113) against diarrhoea accompanied by mild anal bleeding). Lit: U: *Roots*: Decoction drunk against dysmenorrhoea, abscess and to treat spasms (Haerdi). The infusion is a remedy for gonorrhoea. A decoction is used as a purgative and as part of medicine for hookworm (Kokwaro). The root and fruit are used in Tanganyika for criminal poisoning (Watt). *Leaves*: The juice is drunk to treat spasms (Haerdi). The leaf and bark are used as a diuretic. The powdered leaf is applied locally to sores, burns, suppurations and chafes of the skin (Watt). *Entire aerial plant*: As a remedy for anaemia and intestinal haemorrhage (Watt).

Securinega virosa (Roxb. ex Willd.) Pax & K. Hoffm. Syn: *Fluggea microcarpa* Blume, *F. virosa* (Roxb. ex Willd.) Baill., *Phyllanthus virosus* Roxb. ex Willd., *Securinega microcarpa* (Blume) Pax & Hoffm. ex Aubrév. TMP: 14, 79, 105. V: Msokote, Mkwamba. L: Tanga district, Mpirani and Pongweni villages. Korogwe district, Kwaseangube village. H: Shrub. D: Tropics and S. Africa, Mascarene Islands, tropical and subtropical Asia, Australia. Med: *Roots*: Decoction of roots mixed with roots of Mkone (*Grewia plagiophylla* K. Schum., TMP 10) and Mgoto drunk against diseases believed to be caused by witchcraft. Decoction of roots with roots of Mngwene (cfr. *Uvaria lucida* Benth. ssp. *lucida*, TMP 80) as an anti-acid and to cure stomach pains. Decoction of roots together with roots of Mnkusu (*Harrisonia abyssinica* Oliv., TMP 106, 129) drunk against hernia. *Leaves*: Decoction of leaves together with leaves of Mkone (see above) Mgunga and Mgoto drunk against diseases believed to have been caused by witchcraft. For the same purpose a mixture of powdered dried leaves from this plant and Mkone (see above) are applied to incisions on the head and joints of the body. Lit: U: *Roots*: Decoction used against syphilis, dysmenorrhoea and oedema (Haerdi). A cold water extract is drunk for stomach ache. Roots and fruits are chewed for treatment of snake bites (Kokwaro). An infusion is drunk for malaria. The root and fruit are used as a snake bite remedy. The root is a gonorrhoea remedy (Watt). Preparations of the root are used to treat rheumatism, bilharzia, orchitis, frigidity, sterility, gonorrhoea, renal calculus and black-water fever (Kerharo). *Leaves*: The juice is drunk to treat epilepsy and mental illness (Haerdi). The leaf made into a paste with tobacco is used to destroy worms in sores (Watt). *Stem bark*: The bark is used as a remedy for diarrhoea and pneumonia (Watt). *Entire aerial plant*: The plant is used in India as a fish poison (Watt). C: *Roots*: The roots contain the alkaloids norsecurinine (Iketubosin and Mathieson, 1963; Saito et al., 1964a), dihydronorsecurinine (Saito et al., 1964a,b) and hordenine (Iketubosin and

Mathieson, 1963), first isolated and given the name fluggeine by Paris et al., 1955). *Leaves*: The leaves contain the alkaloids virosecurinine (Nakano et al., 1963; Saito et al., 1964b) and viroallosecurinine (Saito et al., 1964b). For structures and stereochemistry of the alkaloids from roots and leaves, see the review by Snieckus in Manske (1973).

Spirostachys africana Sond. Syn: *Excoecaria africana* Müll., *E. agallocha* Benth., *E. synandra* Pax, *Excoecariopsis dinteri* Pax, *E. synandra* Pax, *Maprounea africana* Müll., *Sapium africanum* O. Kuntze, *Spirostachys synandra* Pax, *Stillingia africana* Baill. TMP: 161, 192. V: Msalaka, Mharaka. L: Korogwe district, Kijango village. Handeni district, Chanika village. H: Tree. D: Tropical and S. Africa. Med: The latex, diluted with water, is added to porridge to induce diarrhoea and vomiting. A decoction of the root bark or stem bark is used against worms and sometimes to treat severe diarrhoea. Lit: U: *Root*: A decoction is used against syphilis (Kokwaro). As a purgative (Watt). *Stem bark*: Powdered stem bark or a decoction is mixed with porridge or rice and taken against worms. The treatment is dangerous (Haerdi). An infusion of the powdered bark is used in very small dose as a purgative. Deaths are said to have occurred as a result. A decoction of the bark is used as an emetic. The bark is used as a fish poison (Watt). C: The wood contains diosphenol and diterpene ketones and ketols (Baarschers and Horn, 1962; Baarschers et al., 1962).

Suregada zanzibariensis Baill. Syn: *Gelonium zanzibariense* (Baill.) Müll. Arg. TMP: 41. V: Mdimu wa chakani. L: Tanga district, Tongoni village. H: Shrub. D: Tropical E. Africa, Madagascar. Med: Decoction of roots mixed with roots of Mchakari (*Acalypha fruticosa* Forsk., TMP 42) drunk against infectious skin disease (Upele) Fresh leaves are pounded with a little cold water and applied to the infected parts of the skin. Lit: U: *Roots*: Decoction of roots used against hookworm. Also the stem bark is used for the same purpose (Haerdi). Roots are boiled in water and the decoction drunk as a purgative. Roots are chewed or pounded and soaked in water. The infusion is used for snake bite treatment (Kokwaro). *Leaves*: The juice is drunk for hookworm (Haerdi). The leaf and fruit are used in the treatment of snake bite and the leaf to relieve abdominal pains (Watt).

Synadenium glaucescens Pax. TMP: 194. V: Mnua. L: Handeni district, Chanika village. H: Succulent with latex. D: E. Tanzania, S.E. Kenya. Med: The bark is removed from the root, which is extracted with cold water. The extract is mixed with sugar and kept for 3 days before use. The mixture is drunk against severe cough or TBC. Lit: U: *Leaves*: The leaves are used as a purgative (Kokwaro, Watt). *Latex*: The latex is applied to peanuts and allowed to dry. One or two peanuts are eaten as a drastic purgative (Haerdi). The latex is used in the treatment of boils, but caution is required since the latex and the root can be toxic (Kokwaro).

FLACOURTIACEAE

Trimeria grandiflora (Hochst.) Warb ssp. *tropica* (Burk.) Sleum. Syn: *Trimeria bakeri* Gilg., *T. macrophylla* Bak. f., *T. tropica* Burk. TMP: 171. V: Mdagha. L: Lushoto district, Mambo village. H: Shrub. D: Tropical Africa. Med: Decoction of roots mixed with roots of Uwenge (Cfr. *Crassocephalum vitellinum* (Benth.) S. Moore, TMP 172) is drunk against sores on the body or in the mouth accompanied by fever and sometimes profuse sweating (Kiguma). Lit: U: *Roots*: A decoction is drunk to treat swollen scrotum and testicles. Also for treatment of dysmenorrhoea. Roots may also be shredded and the infusion made from them drunk to treat gonorrhoea. This treatment also relieves the pain in joints caused by gonorrhoea. The treatment is accompanied by profuse urination (Kokwaro). *Leaves*: An infusion of the leaves mixed with leaves of other plants is drunk for abdominal troubles in general (Watt). *Gum*: The gum that exudes from the bark is said to be of medicinal value, especially in healing old wounds (Kokwaro).

LABIATAE

Coleus barbatus (Andr.) Benth. Syn: *Ocimum cinereum* R. Br., *Plectranthus barbatus* Andr. TMP: 167 (223). V: Mzugh'va (Vuga). L: Lushoto district, Mambo village, Handeni district, Misima village. H: Shrub. D: E. tropical Africa and tropical Asia. Med: Decoction of roots is used against stomach pains including delayed delivery of labour. It is also used against infertility in women. Leaves are pounded and drunk with water against cough and tonsillitis. A decoction of the leaves is drunk against rheumatism. Lit: U: *Leaves*: The leaves are crushed and the juice drunk as a remedy for stomach ache and as a purgative. The leaves are pounded and soaked in warm water and the water used to bathe children suffering from measles (Kokwaro). C: A diterpenoid called barbatusin has been isolated from the leaves and its structure determined (Wang et al., 1973).

Hoslundia opposita Vahl. Syn: *Hoslundia oppositifolia* P. Beauv., *H. verticillata* Vahl. TMP: 2, 7, 17, 24, 46, 51, 60, 63, 108, 128, 213. V: Mvuma (Mke), Msettette, Mtambaajongoo, Mserere, Mwumanyuchi, Mshwee, Mshwelele, Mnorwe. L: Tanga district, Mpirani, Tongoni, Lumbwa, Maranzara villages. Korogwe district, Kwasemangube and Mombo villages. Handeni district, Misima village. H: Shrub. D: Tropical Africa, S. Africa, Madagascar. Med: Decoction of roots drunk to drive out the Devil. The treatment is supported by inhalation of smoke from the burnt leaves. To drive out the Devil called Ndere (who is responsible for bad luck and "spoilage" of the body) mix leaves with leaves of Mbaazi, Mvuma mume (*Premna chrysoclada* (Boj.) Gürke, TMP 1, 8, 57, 59, 64) and Muhonga and boil them with a white or red male chicken. Dry the leaves and burn with the

heart and tongue of the cock. Incise the patient on the chest, tongue, eye brow, on top of the navel and at the base of the small finger. Also use a small piece of "hirizi ya simba" (= a tuft of hair coughed out by a lion before his death or taken out of the stomach of the lion). Decoction of roots with roots of Mwendere (*Cyphostemma adenocaula* (Steud. ex A. Rich.) Descouings, TMP 16, 154), Kivunjanyuki and Mdimu against stomach pain (mchango) and to reduce excessive menstrual bleeding. To treat bad breath accompanied by aching of head and chest, the leaves are mixed with leaves of Chazi (*Cissus rotundifolia* (Forsk.) Vahl, TMP 26), dried and powdered and the powder smoked in a pipe letting the smoke pass both mouth and nostrils. Decoction of roots is drunk against vomiting and diarrhoea. To treat measles-like swellings on the skin, leaves are soaked in water and applied to the swelling (mopping). Leaves are boiled with leaves of Msuza, Mnyamavu and Mvuma and the vapours inhaled to treat polio. The roots are boiled with roots of Mshashu (*Conyza pyrhopappa* A. Rich. ssp. *oblongifolia* Wild, TMP 98, 99, 107, 116) and the decoction used against convulsions in children. A decoction of the roots mixed with roots of Mbwakabwaka, Mdengwe (*Harrisonia abyssinica* Oliv., TMP 126, 129), Mpupu and Mnyongapembe is used against painful swelling of the male genital organs and for severe stomach pains in women. A decoction of the roots mixed with roots of Mtulavuha (*Maytenus putterlickioides* (Loes?) Exell & Mendonca, TMP 211) is drunk against irregular menstruation. Lit: U: *Roots*: Decoction used against malaria (Haerdi). The decoction is used as a cough remedy. Roots are crushed with water and the extract drunk to treat fever and colds. The roots are boiled with beans and eaten for stomach pains (Kokwaro). The root is used for the relief of abdominal pains and as a febrifuge (Watt). *Leaves*: The juice is a malaria remedy (Haerdi). An infusion of the leaves is used as a cooling wash for feverish children. The leaves are chewed and applied to fresh wounds to accelerate healing (Kokwaro). The leaf is used as a snake-bite remedy, febrifuge and for the relief of swelling known as "dulasi" (Watt). *Entire plant (or part not specified)*: The plant is mixed with *Indigofera emarginella* for treating fits in children (Kokwaro). As a remedy for gonorrhoea, for cystitis and for blenorrhoea; for liver disease, cough, pains in the chest, fever, hookworm, for disorders of the stomach, for wounds and for mental disturbance. The plant is poisonous (Watt).

Hyptis suaveolens Poit. TMP: 91. V: Kifumbasi. L: Tanga district, Kiomoni village. H: Herb. D: Tropical Africa, Asia, Australia (Queensland). Med: To treat convulsions in children. The child is bathed with a mixture of the mothers urine and crushed leaves of the plant. See also *Uvaria acuminata*, TMP 89 (Annonaceae). Lit: U: *Flowers*: The flowers are introduced into the nostrils against headache and cold (Kerharo). *Stems with flowers and fruits*: An infusion is drunk as an expectorant. A decoction is used as a tonic. The powdered plant parts are used against migraine (Kerharo). P:

The aqueous extract is toxic to mice in a dose of 1 mg/kg (i.p.) and causes contractions of the guinea pig ileum. The ethanol extract is not toxic but has the same effect on the guinea pig ileum. Both extracts have no effect on the rat uterus, the heart and duodenum of the rabbit or on the blood pressure of the dog (Kerharo).

Leonotis mollissima Gürke. Syn: *Leonotis intermedia* Lindl., *L. velutina* Fenzl ex Benth., *L. rugosa* Benth., *L. dysophylla* Benth. in E. Meyer, *L. melleri* Bak. TMP: 271. V: Iriro. L: Same district, Suji village. H: Shrub. D: Egypt to S. Africa. Med: A decoction of the roots is used against infertility. Lit: U: *Roots*: Decoction used against attacks of dizziness, malaria and heart trouble. Decoction of roots and leaves of this plant mixed with the same plant parts of *Lippia javanica* (Burm. f.) Spreng. is used against eruptions resembling acne (Haerdi). An extract of the roots is used in the treatment of wounds, festering sores and intestinal worms. An infusion is drunk to treat dysentery and intestinal disorders (Kokwaro). *Leaves*: The juice is used against attacks of dizziness, malaria and heart trouble. The juice is mixed with the juice of *Biophytum sensitivum* (L.) DC. and drunk against encephalitis (Haerdi). Young leaves and buds are used for the treatment of conjunctivitis. The leaves are chewed for cramp in the stomach. The plant is used for indigestion (Kokwaro). The leaf is a snake-bite remedy (Watt).

Ocimum suave Willd. Syn: *Ocimum dalabaense* A. Chev., *O. trichodon* Bak. ex Gürke. TMP: 77. V: Kivumbasi. L: Tanga district, Pongwe village. H: Shrub. D: W. and E. Africa, Tropical Asia. Med: Decoctions of roots and leaves is drunk against extension of the rectum accompanied by severe stomach pains. Lit: U: *Roots*: Scrapings of the root mixed with scrapings of *Zingiber officinale* Roscoe are applied to inflamed tonsils in treatment of angina (Haerdi). *Leaves*: Crushed leaves are applied to gums and throat in treatment of stomatitis. Rolled leaves are pushed into the rectum to treat painful constipation. Crushed leaves are placed in rectum against hemorrhoids (Haerdi). Leaves are rubbed between the palms and snuffed as a treatment for blocked nostrils. The leaves are also used for abdominal pains, sore eyes, ear troubles and for coughs. An infusion of the leaves is used as a disinfectant and as an insecticide (Kokwaro). The leaf is used to perfume chewing tobacco and snuff (Watt). *Entire aerial plant*: The herb is used as a stomachic and as an "anticathartic". The smoke from the burning plant is used as a mosquito repellent (Watt).

Plectranthus cfr. *assurgens* (Bak.) Morton. Syn: *Coleus assurgens* Bak. TMP: 277. V: Msasio. L: Pare district, Suji village. H: Shrub. D: Tropical Africa. Med: Powdered leaves snuffed against headache and abdominal pain.

Satureja punctata (Bth.) Briq. Syn: *Micromeria punctata* Benth., *M. purtschelleri* Gürke. TMP: 177. V: Kidimdim. L: Lushoto district, Mayo

village. H: Herb. D: W. Africa to Sudan, Congo. E. and S. Africa. Med: Decoction of leaves drunk against swellings on cheeks and face in general ("Mpahazi"). The boiled leaves are used to mop the swollen area. The treatment is combined with treatment with leaves of Fuiza (*Momordica calantha* Gilg., TMP 170), Luungu, Mshegheshe (*Myrica salicifolia* Hochst. ex A. Rich., TMP 178), Mhende (*Clutia abyssinica* Jaub. & Spach., TMP 186, 190), Jeni, Mzughwa (*Coleus barbatus* Benth, TMP 167) and Kifinganamsi.

LILIACEAE

Asparagus buchananii Bak. TMP: 240. V: Mwinikanguru. L: Handeni district, Sindeni village. H: Shrub. D: Tropical Africa. Med: Decoction of roots used against irregular menstruation. Lit: U: An infusion or decoction of the roots is used to treat bilharzia and gonorrhoea (Kokwaro). Watt also mentions the same uses of the root decoction.

LOGANIACEAE

Strychnos spinosa Lam. Syn: *Strychnos buettneri* Gilg, *S. cardiophylla* Gilg & Busse, *S. carvalhoi* Gilg, *S. courteti* A. Chev., *S. cuneifolia* Gilg & Busse, *S. dulcis* A. Chev., *S. emarginata* Bak., *S. euryphylla* Gilg & Busse, *S. gilletii* De Wild., *S. gracillima* Gilg var. *paucispinosa* De Wild, *S. harmsii* Gilg & Busse, *S. laxa* Solered., *S. leiosepala* Gilg & Busse, *S. iokua* A. Rich., *S. madagascariensis* Poir., *S. megalocarpa* Gilg & Busse, *S. miniungansamba* Gilg, ? *S. muegbe* Chiov., *S. omphalocarpa* Gilg & Busse, *S. pluvialis* A. Chev., *S. radiosperma* Gilg & Busse, *S. rhombifolia* Gilg & Busse, ? *S. sansibariensis* Gilg, *S. schweinfurthii* Gilg, *S. spinosa* sensu Dale 1952 non Lam., *S. spinosa* Lam. var. *pubescens* Bak., *S. volkensii* Gilg. TMP: 198. V: Mtonga. L: Handeni district, Chanika village. H: Tree. D: Tropical and S. Africa, Madagascar. Med: A cold water extract of the fresh root bark is used against severe gripping stomach pains. Lit: U: *Roots*: Juice from the roots is dropped into the ears as a remedy for earache. A decoction of the roots is used as a head wash for colds while some of the liquid is taken orally at the same time. The root decoction is also drunk with milk to cure dropsy. Roots may be chewed for snake bite treatment, or they may be boiled and the decoction drunk for the same treatment (Kokwaro). The powdered roots are used in combination with other drugs for treatment of syphilis and other venereal diseases (Kerharo). The root mixed with the root of *Leonotis leonurus* and other plants is used for snake bite. The root is used as a febrifuge, an emetic and as an application to sore eyes. The root together with that of *Afromosia laxiflora* is used as a febrifuge. The grated root mixed with coconut oil is applied locally for the removal of jiggers. A decoction of the root is used as an analgesic (Watt). *Stem bark*: The powdered bark is used against cough and for stomach trouble (Kerharo). *Leaves*: The powdered leaf is applied to syphilitic sores and the leaf juice

used locally for relief of pain in the eye and conjunctivitis. A decoction is used as an analgesic (Watt). The leaf juice is used against malaria and meningitis (Haerdi). *Leaves and stems*: An extract is used to treat retarded growth in small children and also in the treatment of metrorrhagia (Kerharo). *Fruits*: The fruit is regarded as non-toxic and is used as an emetic (Watt). The fruit without seeds is used to treat retarded growth in small children (Kerharo). *Seeds*: The seeds are toxic (Kokwaro). Two or three seeds are sufficient to produce nausea (Watt). The seeds are emetic and are used as an antidote in low doses but are poisonous at high doses (Kerharo). *C: Fruits and seeds*: The seeds yield no alkaloid, an opinion with which others disagree (Watt). No alkaloids were found in the seeds, the shells, the stems or the leaves of *Strychnos spinosa* grown in Florida (Lofgren and Kinsley, 1942). Small amounts of alkaloids were found in the fruit shell (0.009%) and in the entire fruit with seeds (0.012%) (Mathis and Duquenois, 1963). *P*: The seed, fruit shell, stem and leaf are non-toxic to the guinea pig and the mouse (Lofgren and Kinsley, 1942). A weak muscle relaxant activity has been found in extracts of the stem bark and of the stem with leaves (Sandberg et al., 1969; Verpoorte and Bohlin, 1976).

MALVACEAE

Hibiscus micranthus L. f. TMP: 39, 142, 199. V: Mchungang'ombe, Msase, Mharashambuzi, L: Tanga district, Tongoni village. Korogwe district, Mombo village. Handeni district, Magarimabovu village. H: Shrub. D: Drier parts of tropical Africa, S. Africa, Madagascar, Arabia, India. Med: The fresh plant is crushed with a little water and the juice applied to a snake bite in which a small incision has been made. A decoction of the root is also drunk for the same purpose. The fresh plant is boiled with a hen and seeds of Mkweme and roots of Mshashu (*Conyza pyrropappa*, A. Rich. ssp. *oblongifolia* (O. Hoffm.) Wild, TMP 98, 99, 107, 116, 193) and the decoction used to treat miscarriage. A decoction of the fresh roots is used against convulsive fevers in children. Lit: U: A decoction of the root is used to treat bronchitis. The leaves are used to treat earache (Kokwaro). The juice of the leaf is a renal remedy (Watt).

Sida rhombifolia L. TMP: 100. V: Uvuvundi (Ufyagio). L: Korogwe district, Kwasemangube village. H: Herb. D: The tropics. Med: The roots are boiled with roots of Chegonde (cfr. *Cissampelos pareira* L. v. *orbiculata* (DC.) Miq., TMP 101) and the decoction used against frequent abortions. Lit: U: *Roots*: The root is mucilaginous and has been used as a substitute for that of *Malva rotundifolia*. The root is used as an abortifacient and as a snakebite remedy (Watt). *Leaves*: The leaf is said to be emollient and is used as a poultice for inflammations. *Entire aerial parts*: The herb has been used as a snakebite remedy. In Queensland a decoction of the tips is a diarrhoea remedy (Watt). *Undefined plant parts*: An extract or an infusion of the plant

is used as a tuberculosis remedy and against rheumatism. In Vietnam the plant is regarded as a purgative (Watt). C: The plant has given negative tests for bitterness, alkaloids, volatile oil, hydrocyanic acid, saponin and triterpenoids (Watt). Small amounts of alkaloids, particularly ephedrine, have been found in Indian plants, but these results could not be verified on material from Australia (Kerharo). P: An extract of the plant caused contraction of the guinea pig ileum, equivalent to 90% maximal acetylcholine contraction, in a dose corresponding to 13 mg fresh plant material per ml bath fluid (Hooper and Leonard, 1965).

MELIACEAE

Cfr. *Cedrela odorata* L. TMP: 156. V: Mvuje (Swahili). L: Korogwe district, Kijango village. H: Tree. D: Introduced to and cultivated in Africa. Med: To treat numb soles of the feet, a piece of bark, the size of a foot, is cut out and dipped in hot water, whereupon the numb sole is immediately placed on the hot bark. Lit: C: Several terpenoid compounds have been isolated from the essential oil and from the timber (Smolders, 1964; Adeoye and Bekoe, 1965; Bevan et al., 1965; Chan et al., 1966).

MENISPERMACEAE

Cissampelos pareira L. var. *orbiculata* (DC.) Miq. Syn: *Cissampelos orbiculata* DC. TMP: 30 (101). V: Chegonde. L: Tongoni (and Kwasemangube) village. H: Vine. D: E. tropical Africa, tropical Asia to the East Indies. Med: A decoction of the dried leaves is used against diarrhoea in small children (boiled together with roots of *Uvuvundi* (*Sida rhombifolia* L., TMP 100) and the decoction drunk against frequent abortions). Lit: U: Roots: A decoction is drunk against hookworm. Scrapings of the root are eaten against snake bites and also rubbed into scars at the place of the bite (Haerdi). Roots are powdered and soaked in water and used as a remedy for sore throat, cold, cough and snake bite. Roots and leaves are chewed for stomach pains and for pregnancy pains. Burnt root and leaves are used for curing wounds (Kokwaro). In Africa the root is used in pregnancy, as a sexual stimulant, for the relief of abdominal pains, rheumatic pains and headache, as a tonic and diuretic and for treatment of blennorrhagia, haematuria and colic. An infusion of the root is drunk against snake bite. A decoction is used as a wash for a child who has pimples on its body. The carbonized root is rubbed into sacrifices for the relief of neuralgia. Outside Africa the root has been used for many purposes such as a purgative, antiperiodic, in dyspepsias and diarrhoeas, for cough, as an emmenagogue and febrifuge and as a solvent for urinary calculi (Watt). C: The following bisbenzylisoquinoline alkaloids have been isolated and their structure determined: *l*-bebeerine (Bhattacharji et al., 1955), *cissampareine* (Kupchan et al., 1965, 1966), *l*-curine (Kupchan et al., 1960), *hayatidine* (Bhatnagar and Popli, 1967a), *hayatine* (Bhattacharji

et al., 1952, 1955; Mukerji and Bhandari, 1959; Kupchan et al., 1960; Agarwal et al., 1960; Milne and Plimmer, 1966; Bhatnagar et al., 1967), hayatinine (Bhattacharji et al., 1952; Mukerji and Bhandari, 1959; Kupchan et al., 1960; Bhattacharji et al., 1962; Bhatnagar and Popli, 1967b), *d*-isochondrodendrine (Kupchan et al., 1960), (+)-4''-*O*-methylcurine (Haynes et al., 1966). These alkaloids have been isolated from the roots or from a mixture of roots and vines. Srivastava and Khare (1963, 1964) isolated 11 quarternary alkaloids and 5 tertiary alkaloids besides the known hayatinine, hayatine, *d*-isochondrodendrine and *l*-bebeerine. **P:** A crude mixture of chloroform soluble alkaloids had a transient relaxant effect on smooth muscle, but did not affect skeletal muscle (Roy et al., 1952). Hayatine chloride has no activity on the contractions of skeletal muscle, but hayatine methiodide and hayatine methochloride have a muscle relaxant activity similar to *d*-tubocurarine. Hayatine methiodide is slightly more potent and less toxic than *d*-tubocurarine (Pradhan et al., 1952; Pradhan and De, 1959; Mukerji and Bhandari, 1959). The action of hayatine methiodide on the central nervous system was studied by Sur and Pradhan (1964). Injected intraventricularly, intrathecally or intracisternally the drug caused an increase of the blood pressure, the rate and depth of respiration and the somatic reflexes. Salivation, lacrimation and pupillary dilatation were also produced. Following intravenous administration in dogs and humans the concentration of hayatine methiodide reaches its maximum value after 2 min. After 15 min no hayatine methiodide can be detected. Only 4- 8% of the total injected dose is excreted in the urine (Basu and Pradhan, 1964).

MIMOSACEAE

Acacia cfr. *bussei* (Harms ex) Sjöstedt. **Syn:** *Acacia benadirensis* sensu Chiov. **Fl.** Somala, p.p. **TMP:** 289. **V:** Mkababu. **L:** Same district, Kisiwani village. **H:** Tree. **D:** E. and N.E. Tropical Africa. **Med:** Powdered pods mixed with porridge are eaten against feminine sterility. A decoction of the roots is drunk against early hydrocele or painful testicles. **Lit:** **U:** A decoction of the bark is drunk as a cure for coughs (Kokwaro).

Acacia mellifera (Vahl) Benth. ssp. *mellifera*. **Syn:** *Acacia senegal* (L.) Willd. ssp. *mellifera* (Vahl) Roberty, *Mimosa mellifera* Vahl. **TMP:** 220. **V:** Msasa. **L:** Handeni district, Misima village. **H:** Tree. **D:** N.E., E. and S. Tropical Africa, Arabia. **Med:** A decoction of the roots drunk against infertility. **Lit:** **U:** The bark is boiled in water and the liquid used as a remedy for stomach trouble, sterility, pneumonia, malaria and for cleaning primary infection of syphilis (Kokwaro). The bark is used as a stimulant and is cooked with meat (Watt). **C:** The leaves contain rutin and apigenin-6,8-bis-D-glucoside (Thieme and Khogali, 1974).

Acacia polyacantha Willd. ssp. *campylacantha* (Hochst. ex A. Rich.) Brenan. **Syn:** *Acacia caffra* (Thunb.) Willd. var. *campylacantha* (Hochst. ex A. Rich.)

Aubrév., *A. campylacantha* Hochst. ex A. Rich., *A. catechu* (Linn. f.) Willd. ssp. *suma* (Roxb.) Roberty var. *campylacantha* (Hochst. ex A. Rich.) Roberty, *A. catechu* sensu P.O.H.C.: 191, non (L.f.) Willd., *A. suma* sensu Harms in N.B.G.B. 4, non sensu stricto. **TMP:** 202. **V:** Mgunga. **L:** Handeni district, Magarimabovu village. **H:** Shrub. **D:** Tropical and S. Africa. **Med:** Roots boiled with sodium bicarbonate and the decoction drunk against asthma. **Lit:** **U:** *Roots:* A cold water extract is given to a young child to drink for treatment of sores on the head or body (see also leaves). A cold water extract is also used externally and internally to treat snake bites (Kokwaro). Also Watt mentions the use of the root as a snake bite remedy. A child sleeping restlessly is washed with an infusion of the root (Watt). A decoction is drunk against malaria and abscess (Haerdi). The bark of the root is used as a stimulant (Kerharo). *Leaves:* Leaves are pounded, dried, ground and rubbed into sores on the head or body of a young child (Kokwaro). *Undefined plant parts:* The plant has been used as an ingredient in the treatment of gonorrhoea. The tree has been used as a leprosy remedy and is regarded as an aphrodisiac and a healer in pneumonia, throat maladies and tooth troubles (Watt). **C:** Apigenin-6,8-bis-D-glucoside and rutin have been isolated from the leaves (Thieme and Khogali, 1974). Dimethyltryptamine is present in an amount of 0.004% (Wahba and Elkheir, 1975).

Acacia stublmanni Taub. **TMP:** 83. **V:** Mumbwe. **L:** Tanga district, Pongwe village. **D:** E. and S. Africa. **Med:** A cold-water extract is drunk as a prophylactic against Mburushi (cholera?).

Albizia anthelmintica A. Brogn. **Syn:** *Albizia anthelmintica* Brogn. var. *pubescens* Burt-Davy, *A. conjugato-pinnata* Vatke, *Besenna anthelmintica* A. Rich. nom. prov. **TMP:** 122. **V:** Mfureta. **L:** Korogwe district, Magoma village. **H:** Shrub. **D:** E. and S. Africa. **Med:** Fresh root bark is boiled with eggs and roots of Mwengele (*Cyphostemma adenocaula* (Steud. ex A. Rich.) Descouings, **TMP** 16, 154), Mkusu (*Harrisonia abyssinica* Oliv., **TMP** 106, 129), Mhogola, Mluwati and Mbaazi. The decoction is drunk on the first day of menstruation to treat sterility in women. The decoction is also used to prepare porridge which is eaten. **Lit:** **U:** A decoction of the root or bark is used as an anthelmintic, mainly against tapeworm and as a purgative. An overdose can cause death. A decoction of leaves and bark caused the death of a woman. Roots are also said to be used against fever and gonorrhoea and as a sexual stimulant for women (Kokwaro). Watt also mentions the use as an anthelmintic, but states that the dose of the bark is 60 g or more and that no untoward effects of the bark have been observed when using it as an anthelmintic for human beings. The bark has been given to children of 6–8 years for treatment of taenia without undesirable effects. Watt also mentions the use of the root as a remedy for stomach troubles, the rootbark as a febrifuge and purgative and the bark as a sexual stimulant, as a gonorrhoea remedy, against nervous complaints, to treat swelling of the body,

in childbirth and as a remedy for syphilis and rheumatism. Taken immediately before menses the bark is said to prevent pregnancy. **C:** Early chemical studies, indicating a.o. the presence of saponins, are reviewed by Watt. The triterpenic saponins musennin and deglucomusennin have been isolated from the root bark and their structure determined (Tschesche and Forstmann, 1957; Tschesche et al., 1966; Tschesche and Kämmerer, 1969). **P:** Musennin is identified as the anthelmintic principle of the root bark (Tschesche and Forstmann, 1957).

Cfr. *Albizia glaberrima* (Schumach. & Thom.) Benth. **Syn:** (for species as a whole) *Albizia eggelingii* Bak. f., *A. glabrescens* Oliv., *A. warneckei* Harms, *Mimosa glaberrima* Schumach. & Thom., *Pithecollobium glaberrimum* (Schumach. & Thom.) Aubrév. **TMP:** 288. **V:** Mshai. **L:** Same district, Kisiwani village. **H:** Tree. **D:** (for species as a whole) Tropical Africa. **Med:** A cold-water extract of the root bark is drunk against bilharzia or "blocked urine passage". **Lit:** **C:** A triterpene glucoside (also found in 6 other *Albizia* and in one *Samanea* species) has been isolated and characterized (Comeau and Braun, 1974a,b,c).

Albizia barveyi Fourn. **Syn:** *Albizia hypoleuca* Oliv., *A. pallida* Harv. non. Fourn. **nom. illegit.**, *A. pospichilii* Harms. **TMP:** 225. **V:** Msisimizi. **L:** Handeni district, Misima village. **H:** Tree. **D:** E. & S. Africa. **Med:** Roots are boiled with chicken and the decoction drunk to prevent accidental abortion or if a woman does not conceive. **Lit:** **U:** In Tanganyika the root is a "part" medicine for any intestinal troubles (Watt).

Albizia **cfr.** *versicolor* Welw. ex Oliv. **TMP:** 47. **V:** Mchane. **L:** Tanga district, Lumbwa village. **H:** Tree. **D:** E. Africa to Angola and S. Africa. **Med:** The root bark is removed and the rest of the root ground to a fine powder, which is snuffed to treat "Kambaku" (probably sinusitis, characterized by a bad smelling mucous in the nose and headache of the forehead. These symptoms are accompanied by chest pains with loud coughing). **Lit:** **U:** **Roots:** Decoction drunk against scrofula and gonorrhoea (Haerdi). Roots are pounded or boiled and the decoction is drunk as an anthelmintic and purgative. The dried powdered root is eaten against headache (Kokwaro). The root bark is used to treat headache by chewing the powder, which is then spat out. The root bark is used as a purgative and a soap substitute (Watt). **Stem bark:** The decoction is drunk against scrofula. A cold-water extract is beaten to produce foam and eaten as a remedy for cough. The bark is crushed with a little water and the juice dropped into the eye to remove irritating particles (Haerdi). A decoction is drunk as an anthelmintic and purgative (Kokwaro). An infusion of the bark is used as an application to sore eyes and skin rashes. The bark is used as a soap (Watt). **C:** The plant contains saponins and gives a positive Mayer's test for alkaloids (Haerdi).

Dichrostachys cinerea (L.) Wight et Arn. ssp. *africana* Brenan & Brummitt. Syn: (for species as a whole) *Dichrostachys glomerata* (Forsk.) Chiov., *D. glomerata* (Forsk.) Chiov. ssp. *glomerata* Brenan, *D. glomerata* (Forsk.) Chiov. var. *grandiflora* (Lanza) Bak. f., *D. glomerata* (Forsk.) Chiov. ssp. *nyassana* (Taub.) Brenan, *D. nutans* (Pers.) Benth., *D. nutans* (Pers.) Benth. var. *grandiflora* Lanza, *D. nyassana* Taub., *D. platycarpa* (Welw. ex.) Oliv., *Mimosa cinerea* L., *M. glomerata* Forsk. *M. nutans* Pers. TMP: 25, 43, 92. V: Kikuratembe, Mtunduru, Kivunta tembe, Chikula gembe. L: Tanga district. Tongoni, Lumbwa and Kiomoni villages. H: Tree. D: of species as a whole: tropical and subtropical Africa, Arabia, tropical Asia, Australia. Introduced into Florida and Cuba. Med: Leaves are chewed by the healer and given to the patient who swallows them to cause emesis in treatment of poisoning. To treat snake bite, the leaves are chewed and the paste applied to the bite. Incisions are also made at the site of the bite. A decoction of the fresh roots is used for the same purpose. Lit: U: *Roots*: Roots, bark and leaves are boiled together with unspecified plants and used as an inhalant. Roots are chewed or macerated and put on snake bites to remove poison. Crushed roots are mixed with food and eaten as an aphrodisiac. A decoction can be used for the same purpose. The decoction is used as an astringent for scorpion bite (Kokwaro). The root is used for chest complaints, as a leprosy and syphilis remedy, as a diuretic and purgative, as an aphrodisiac and as an antidote to snake bite. The smoke of the root is inhaled to treat pulmonary tuberculosis (Watt). The vapour of boiling roots is used to treat mental diseases (Kerharo). *Stem bark*: A decoction is drunk against elephantiasis and applied cold after circumcision to heal the wound. The powdered bark is used externally for all sorts of skin affections. The bark is also used to relieve postpartum pain, as a remedy for snake bite and scorpion sting and as an emetic (Watt). The bark has diuretic properties. The powdered bark is eaten to treat poisoning. The bark is used against tooth decay (Kerharo). *Leaves*: The leaf juice is drunk against lepra. The ash of leaves and fruits is mixed with oil and applied externally against the same illness. The leaf juice is drunk against pneumonia (Haerdi). An extract of the leaves is mixed with a little salt and used as treatment for conjunctivitis and stomach ache. Chewed leaves are placed on a scorpion bite. Leaves are pounded and applied locally to cause anaesthesia. They are also used for treatment of ulcers and gonorrhoea (Kokwaro). The leaf is used for indigestion and diarrhoea. Fresh leaves are used to treat abscesses and skin conditions. The leaf is a remedy for snake bite and scorpion sting. A cold-water infusion of the powdered leaf is squirted into the nose and mouth to relieve headache. The smoke of the leaf is inhaled to treat pulmonary tuberculosis (Watt). The leaves have diuretic properties (Kerharo). *Undefined plant parts*: A decoction is used as a vaginal douche. As a remedy for catarrh, sore throat, colic, diarrhoea, headache, venereal diseases, urethral complaints, abdominal complaints, bronchitis, pneumonia, epilepsy and internal abscesses. The plant has

analgesic properties and is used as an anthelmintic (Watt). C: The presence in leaves and roots of alkaloids and saponins has been indicated (Bouquet, 1972). Haerdi, on the other hand, obtained a negative test for alkaloids. P: A patent has been filed for an aqueous extract of the stem bark useful for furuncle and blennorrhoea treatment (Limelitte, 1958).

MORACEAE

Ficus cfr. *vogelii* (Miq.) Miq. Syn: *Ficus kaba* De Wild., *F. senegalensis* Miq., *Urostigma vogelii* Miq. TMP: 104. V: Mvule. L: Korogwe district, Kwase-mangube village. H: Tree. D: Tropical Africa. Med: A decoction of the roots with roots of Mtomokwe is drunk against hernia (internal). Heavily spiced food, pepper and excess of sugar should be avoided during the treatment. Lit: U: *Bark*: An infusion of the bark is used for leprosy ulcers and as a stomachic, astringent, antidiarrhoeic and antidysenteric. The bark is also used as a purgative but none the less considered to be astringent. A decoction is used for stomach ache and colds (Watt). A decoction of the bark is used against diarrhoea and against colic. It is also used in preparations against sterility (Kerharo).

MYRICACEAE

Myrica salicifolia Hochst. ex A. Rich. TMP: 178, 276. V: Mshegehshe, Mgwangwi. L: Lushoto district, Mayo village. Pare district, Suji-Malinia village. H: Shrub or small tree. D: Tropical Africa. Med: A decoction of the leaves with leaves of *Fuiza* (*Momordica calantha* Gilg., TMP 170), Luungu, Kidimdim (*Satureja punctata* (Bth.) Briq., TMP 177), Mhende (*Clusia abyssinica* Jaub. & Spach., TMP 186, 190), Jeni, Mzughwa (*Coleus barbatus* Benth., TMP 167) and Kifinganamsi is used to mop affected areas in treatment of "Mpahazi" (swellings on the cheek and face). The powdered, dry stem bark is mixed with honey and eaten against cough. Lit: U: The bark is chewed to cure toothache. A decoction of the bark is mixed with milk and given to children as a tonic. Roots are used as a slow acting medicine in stomach troubles and for headaches. Pounded young leaves are mixed with ghee and rubbed on skin diseases (Kokwaro).

OLACACEAE

Ximenia caffra Sond. Syn: *Ximenia americana* L. var. *caffra* (Sond.) Engl., *X. americana* L. var. *tomentosa* Engl. TMP: 11, 201, 204, 232. V: Machokuona, Mtundukura, Mtundwi. L: Tanga district, Mpirani village. Handeni district, Magarimabovu and Sindeni villages. H: Tree. D: Tropical and S. Africa. Med: The roots are pounded and boiled with maize flour to a porridge which is eaten against sterility in women. A decoction of the roots is drunk against dysmenorrhoea and bloody diarrhoea. A decoction of roots mixed with stems of *Mbwakabwaka* (*Deinbollia borbonica* Scheff.,

TMP 206) is drunk against mental illness. A decoction of the roots mixed with chicken and roots of Mlama (*Combretum* cfr. *molle* R. Br. ex D. Don., TMP 121) is used against severe stomach ache or colic. Lit: U: *Roots*: A decoction is drunk to treat abscess and against malaria and bilharzia. Powdered root bark is applied to syphilitic sores (Haerdi). The root decoction is a part-medicine for syphilis, hookworm and chest pains (Kokwaro). The root is a remedy for fever and diarrhoea and a decoction is used for syphilis and ancylostomiasis. It is said to have purgative effect (Watt). *Leaves*: The leaf juice is drunk against malaria (Haerdi). The leaf juice with a little water is put into an itchy eye in treatment of trachoma, especially in children. Fresh leaves are chewed and the juice swallowed for stomach ache (Kokwaro). A decoction of the leaf is a remedy for hookworm and syphilis (Watt).

OPILIACEAE

Cfr. *Opilia celtidifolia* (Guill. & Perr.) Endl. ex Walp. Syn: (for species as a whole) *Groutia celtidifolia* Guill. & Perr., *Opilia amentacea* Roxb. var. *tomentella* Oliv., *O. amentacea* sensu Oliv. FTA 1-non Roxb., *O. angiensis* De Wild., *O. ruwenzoriensis* De Wild., *O. tomentella* (Oliv.) Engl., *O. parviflora* A. Peter. TMP: 250. V: Mwevumbulo. L: Handeni district, Sindeni village. D: Tropical Africa. Med: A decoction of the roots mixed with roots of Mjavikari (*Premna chrysoclada* (Boj.) Gürke, TMP 248) and Mkongodeka (cfr. *Grewia goetzeana* K. Schum., TMP 249) is used against mental illness. Lit: U: *Roots*: A decoction is drunk against headache (Haerdi). The decoction is used for fever and influenza (Kokwaro). The root has purgative and diuretic properties (Kerharo). *Leaves*: An extract of the leaves, containing salt, is used as an anthelmintic. A cold-water extract is drunk against oedema and a decoction is used against tooth abscess (Kerharo). C: The stem bark contains saponins with oleanolic acid or hederagenin as the aglucone (Shihata et al., 1977).

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