

A Guide to the **MEDICINAL PLANTS**
of
**TRINIDAD
& TOBAGO**



Commonwealth Secretariat



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A Guide to the
Medicinal
Plants
of
Trinidad
& Tobago''

by

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and

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Published by the
Commonwealth Secretariat
Marlborough House, Pall Mall,
London SW1Y 5HX



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1983

REVISION NOTES for the 'Guide to the Medicinal Plants of
Trinidad and Tobago' by C.E. Seaforth, C. D. Adams and Y.
Sylvester, Commonwealth Secretariat, 1983.

- On page 2 - Footnote, add: "Kinamone, P.A. et al. 1980. Clinical Toxicology, 17(3), 401-405-Abrin is perhaps the most toxic plant constituent known."
- On page 10 - Delete "(Chang, 1971)" from the penultimate line.
As Footnotes, add:
"1. Ando, Y. et al. 1976. Chem. Abstr., 85, 166487 - use of Polysaccharides in cosmetics.
"2. Matsui, H. and T. Matsukura. 1976. Chem. Abstr., 84, 95614 - use of Aloe in cough drops.
"3. Fujita, K. et al. 1976. Chem. Abstr., 85, 2506 - Bradykininase activity in Aloe extracts."
- On page 14 - as Footnote, add: "MacLeod, A.J. and N.M. Pieris, 1981. J. Agric. Food Chem., 29, 488-490 - volatile fruit flavours."
- On page 18 - - as Footnote, add: "Sharma, V. et al. 1982. J.C.S. (Perkin) (5), 1153-1155 - The Aristolochiaceae family contains the tumour - inhibitor, aristolochic acid. (See also T. Nakanishi et al. 1982. Phytochemistry, 21, 1759-1762.)"
- On page 38 - as Footnote, add:
"1. Teranishi, R. 1980. J. Agric. Food Chem., 28(1), 156-157 - volatiles from Capsicum oleoresin.
"2. Jones, P.G. and Fenwick, G.R. 1981. J. Sci. Food Agric., 32, 419-421. - on Capsicum glycoalkaloids."
- On page 40 - as Footnote add: "Emerua, E. 1982. J. Natural Prods., 45, 123-127. - antibacterial fruit extractives."
- On page 66 - as Footnote, add: "Agarwal, T. et al. 1980. Bull. Medico, Ethnobot Res., 1 (3), 401-407 - essential oils shown is antimicrobial."
- On page 84 - as Footnote, add: "Ndir, O and J.C. Pousset, 1981. Plantes medicinales et phytotherapie, XV, 113-125 - amoebicidal constituent in E. hirta."
- On page 98 - as Footnote, add: "Misra, T.N. et al. 1981. J. Natl. Prods., 44, 735. - on Hyptis essential oils."
- On page 124 - as Footnote, add: "Cooke, R.D. 1978. J. Sci. Food Agric., 29, 345-352. - The enzymatic assay of total cyanides."
- On page 132 - as Footnote add: "Khanna, P. et al. 1981. J. Natl. Prods. 44, 648 - a polypeptide constituent is hypoglycaemic."
- On page 142 - as Footnote, add: "Fleisher, A. 1981. J. Sci. Food Agric., 32, 1119-1122 - essential oils analyzed from O. basilicum plants cultivated in Israel."
- On page 172 - as Footnote, add: "Macleod, A.T. and N. de Troconis, 1982. Phytochem., 21 (6), 1339-1362. - on fresh fruit volatiles."

- On page 188 - in the last sentence, replace the word, "Gamma-aminobutyric acid" by the word, "Dopamine".
- On page 196 - as Footnote, add: "Srinivasan, K.K. and S.S. Subramanian. 1981. Argoya, 7 (2), 140-141 - mangiferin isolated from U. lobata and described as anti-inflammatory (and therefore therapeutic).
- On page 202 - delete: "Chang", C. Tetrahedron, 1971, 29, 1911.

C.E.S.
Jan. 1981

INTRODUCTION

This handbook describes and illustrates a number of plants still used for medicinal purposes in Trinidad and Tobago. It has been prepared so as to meet the growing needs of persons interested in learning the facts about local bush medicines. Unlike other publications on this subject (de Verteuil, 1889; Simpson, 1962; Wong, 1976; Morton, 1981), it is not simply a compilation of so-called medicinal plants nor is it anthropological. There is no conflict here with orthodox medical practice. And, as self-medication with wild plants is highly risky, this is not intended as a recommendation for the reader to go out and treat himself with herbal concoctions.

In her contribution extolling the virtues of Caribbean wild plants as medicinal agents, Honychurch (1980) stated that the "same plants might be used quite differently in Trinidad, Barbados or Dominica." The species that are regarded as therapeutic in Trinidad and Tobago need to be described clearly as being either curative, ineffective or poisonous. This book is concerned with such issues. It is the result of field studies in which a botanist, a pharmacist and a chemist interacted directly with the folk who are expert in the preparation and administration of the various herbal remedies.

Interviews were carried out in some twenty localities across the two islands. Good plant specimens were collected by local name, together with the precise rules and procedures for their administration as cures for specific illnesses. The plants were identified by botanical names and illustrated by line-drawings. Most of them have been screened by chemical methods (Farnsworth, 1966, Nahrstedt, 1980) for important classes of biologically-active plant substances, namely, the alkaloids, cyanides, the tannins and the saponins. Only positive tests are indicated in the texts.

Over one hundred plants have been presented here and arranged in alphabetical order by genus. For each species, a description of its use in medicinal preparations and also its pertinent biodynamic data, listing its known chemical constituents with marked biological and pharmacological activity, has been given. Wherever applicable an entry has been made for comparison with Wong's published findings about the use of the plant. But where there has been no specific pharmaco-chemical information, we have not presumed that the bio-active constituents found in another species of the same genus (or family) are also present in the plant under discussion. Wherever the combination of a number of plants is used this recipe has been described only under a single, presumably the major, species concerned.

This study has revealed that different plants have been confused with each other through similarities in their appearance or in the application of common names. These plants have been mistakenly collected and used in the place of other species, sometimes poisonous ones, by the less experienced bush medicine practitioners. (Herein lies a grave risk in the taking of unknown plant principles).

Some examples of common names as the source of confusion in plant identification are:

MINT:

Wild mint is *Hyptis atrorubens* and this name may be used for other species of *Hyptis*; Cocoa Mint is *Peperomia rotundifolia*. True mints are species of *Mentha*, some kinds of which, especially a variety of Spearmint, are grown in the local gardens.

MAN BETTER MAN:

This name is mostly given to *Achyranthes indica*, but has been applied to a species of Vervine (*Stachytarpheta*).

WILD COFFEE:

Cassia occidentalis, otherwise known as Maiomal coffee, and *Casearia guianensis* (Clean Teeth - Tobago).

CANDLE BUSH:

Three species of *Piper* are referred to by this name in Tobago. A species with thin rough leaves is called Male Candle Bush (*Piper hispidum*) and one with thick smooth leaves is called Female Candle Bush (*Piper tuberculatum*). The third species which resembles *Piper hispidum* very closely, except it has nearly smooth leaves, is *Piper guayranum*; the two are equally common.

In general, the plant names of Tobago are found to be free of cultural influences of the French, the Spanish and the Hindu of Trinidad. The medicinal plants of the two islands are not closely similar to those found in northern Venezuela by Morton (1975); also they include some forty species not mentioned in the lists of Jamaican medicinal plants by Asprey and Thornton (1953, 1955).

Vernacular names and descriptions and illustrations of plants are provided to enable the reader to identify and get to know the species which have medicinal uses. Identification is not always easy and other plants, not dealt with in this book, may perhaps have interesting properties. See also the earlier work of Williams (1928, 1951). It is imperative that any plant material which is to be used for medicinal purposes should be correctly identified. Residents of Trinidad and Tobago may consult the National Herbarium of Trinidad and Tobago at St. Augustine for this purpose. An up-to-date bibliographic section, an Index of vernacular names and a Glossary of technical terms have been included.

What comes next? Any work of this kind is merely the beginning of a programme aimed at developing the available plant resources of the country to the point where they may become pharmaceutical and related products. Therefore, concurrent chemical and pharmacological evaluation of selected plant extractives must be carried out, leading to products of commercial value (Bezanger-Beauquesne and Trotin, 1979; Hanlon, 1979), and to the promotion of modern industry. This requires greater commitments in time and money (Sarett, 1979) and governmental support.

In conclusion, we wish to acknowledge the encouragement and willing contributions from our several informants across both Trinidad and Tobago. Also, we thank the Caribbean Lexicography Project of the University of the West Indies for help with the spelling of vernacular names of plants and The Lord

Relator for his calypso "Old Time Remedy". We are particularly grateful to the Commonwealth Science Council for support for this work.

C.E. Seaforth
C.D. Adams
Y. Sylvester

"OLD TIME REMEDY"

by

*Lord Relator, 1971

1. Nowadays if you sick you in plenty pain,
Because it aint have good medicine again.
Nowadays if you not well you in plenty pain
Because it aint have good medicine again.
Nowadays people does be sick for a week.
Long time, one day you sick, next day you on your feet.
I living at my granny, so I bound to know
You can't beat a remedy of long ago.

Long ago, if the cold giving you trouble
Bois cannot, Black sage tea or some soft candle,
Vervine, Christmas bush or Shado beni
Bound to pass the cold immediately.
It is my belief
You could settle yourself with Soursop leaf.

2. I say we have a right to take example,
And try to live like de old people,
Because, as a youngster, I realise
De old people way of living is really wise.
It's only recently, look I find it strange,
Old people used to live to a hundred and change,
'Cause anything gone wrong with their body,
They could find a suitable remedy.

A long time purge to clear your bladder
Castor oil, Sweet broom tea or a good Senna
Burnt bread water was a cooling of class,
And children with worms used to take Worm grass.
Well, don't find I fast,
Worm grass used to show the worms where to pass.

3. I done make up my mind
To live like de people of de olden time.
I living at my granny, and I cocksure
Anything wrong with me, she could find the cure.
Modern-day medicine is really disgusting.
Just two small tablets cost a dollar and something.
I say dis kind of thing is too expensive.
So, it's like de old people I want to live.

Remove all de bruised blood you get from blows
With a good dose of egg, Nutmeg and Aloes.
And if you happen to suffer with gas,
Hot Orange peel tea bound to make it pass.
Well, don't find I fas'
Hot Orange peel tea bound to break your gas.

4. These people like dey make dis ting a study.
They always first class with their remedy.
Any part of the family that looking sick
Dey could always fix up a remedy quick.
You could have de cold, you could have the 'flu,
Well, let we suppose you can't remember who?
No need to panic, no need to worry,
All you want is a old people remedy.

Now, if you had fever from head to feet,
Cousay maho, Gwen-amba-feuille or Mapurite,
Jump-up-and-kiss-me or Man-better-man,
Granny-back-bone, Minny root or Zeb-a-femme,
And if you had asthma
It was legal to use some marijuana.

*Willard Harris is the Lord Relator - a Calypso Monarch
of Trinidad and Tobago.

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Abelmoschus moschatus

GUMBO MIS
GUMBO MUS
WILD OCHRO

(MALVACEAE)

Description

This is similar to the edible Ochro (*Abelmoschus esculentus*), but has stiff reflexed bristly hairs on the stem. The capsule has thin papery dark brown valves and is not markedly ribbed. There are fine ascending hairs on the capsule which when it is ripe splits longitudinally to release brown curved-striate kidney-shaped seeds. The seeds are a source of musk oil used in perfumery.

Habitat and Distribution

A native of south eastern Asia, introduced and established here and there in the New World.

Medicinal Uses

The seeds from the dried mature pods are ground to make a decoction to be taken for intestinal worms.

Wong (1976) states, "Aqueous and rum infusions of seeds for intestinal worms, snake-bite, rheumatism, colds, flu, cold in chest, asthma".

Biodynamic Notes

According to Morton (1981), the essential oils of the musky seeds have been chemically analysed.



Abrus precatorius

CRAB EYE
JUMBIE BEAD
LICKRISH

(LEGUMINOSAE-PAPILIONATAE)

Descriptions

Slender woody twiner. Leaves with many pairs of small leaflets rounded at both ends. The flowers are small, typically pea-like, dull pink in clusters. The pod is brownish, curls back on opening and reveals pendulous red and black seeds.

Habitat

Occurs wild in thickets, mostly in rather dry areas at low elevation throughout the subtropics and tropics.

Medicinal Uses

A cup of tea from a handful of leaves is taken to treat coughs, colds and fevers. The root is used as a substitute for the true Liquorice (*Glycyrrhiza glabra*).

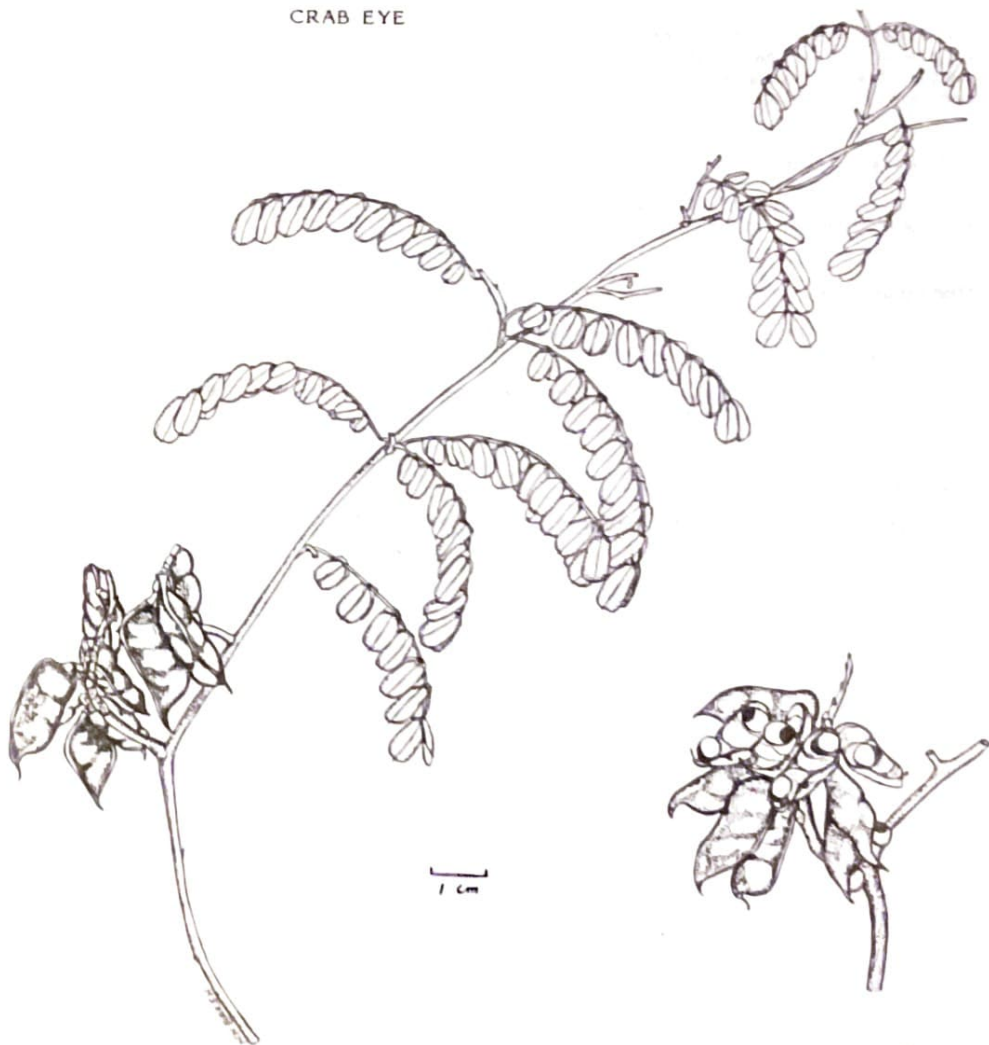
Wong (1976) states, "Leaves and vine in teas for cough and fever, in lochs for flu, cold in chest, consumption".

Biodynamic Notes

The seeds contain very toxic proteins, including Abrin, and the root stem and leaves contain small quantities of Glycyrrhizin (Merck Index).

The roots are said to yield antifertility activity (Milhet et al., 1978), and the leaves gave positive tests for alkaloids.

CRAB EYE



LOLOLAP
MAN-BETTER-MAN

Achyranthes indica

(AMARANTHACEAE)

Description

Short-lived loosely erect herb up to about 1 m high, the branches often quite long and thin. Leave opposite, broadening to a rounded tip ending in a short cusp. Flowers small and greenish in an elongated spike, turning downwards and becoming sharply spiny.

Habitat and Distribution

Common as a weed of cultivated places, pathsides and waste ground throughout the subtropics and tropics.

Medicinal Uses

An infusion of the whole plant either alone or mixed with Ti Marie (*Mimosa pudica*) is taken for colds.

Wong (1976) states, "Herb teas for flu, fever; bath for marasmus. Planted with money to bring good luck".

Biodynamic Notes

The related species *A. bidentata* contains uterotonic saponins (Yip et al., 1980).



COCOLICKA
ZEBAFAM

Ageratum conyzoides

(COMPOSITAE)

Description

Short-lived hairy herb usually about 30 - 60 cm high. Leaves opposite, stalked, ovate with bluntly toothed margin. Flower-heads in compact terminal rounded clusters, 5 - 7 mm in diameter. Florets numerous, mauve. Achenes black, topped by five awned scales.

Habitat and Distribution

Common in pastures and on waste ground. General in warm countries.

Medicinal Uses

An infusion of a handful of leaves in four cups of water is taken as a cooling, to treat colds and fevers, to clean out the womb and for painful menstruation, and as a diuretic.

An infusion in water of the mixtures of Santa Maria (*Lippia alba*), Basil (*Ocimum sp.*), Lickrish (*Abrus precatorius*), Nickaracka (*Gilricidia sepium*), Syrio (*Sambucus simpsonii*), Milk weed (*Euphorbia hirta*) and Man-better-man (*Achyranthes indica*) is taken also for colds, inflammation of the womb and sterility in women.

Wong (1976) states, "Herb teas for heat, flu, cough, pneumonia, cystitis, dysmenorrhoea, menorrhagia, in abortifacient. Root decoction for diabetes and postpartum clotting".

Biodynamic Notes

In East Africa this plant is described as a poisonous species (Morton, 1981). Its oils are antifungal (Sharma, and Jain, 1978), and its leaf extracts antibacterial (Durodola, 1977; Adesogan and Okunada, 1979).



GARLIC

Allium sativum

(*ALLIACEAE*)

Habitat and Distribution

The various kinds of *Allium* are grown in gardens and commercially, and large quantities of Onions are grown in Barbados for shipment to other islands such as Trinidad. Garlic, *Allium sativum* L. is, in the Caribbean, mostly imported from Mexico. All species of *Allium* are native of the northern hemisphere and the most useful of them, onion and garlic, probably originated in Western Asia.

Medicinal Uses

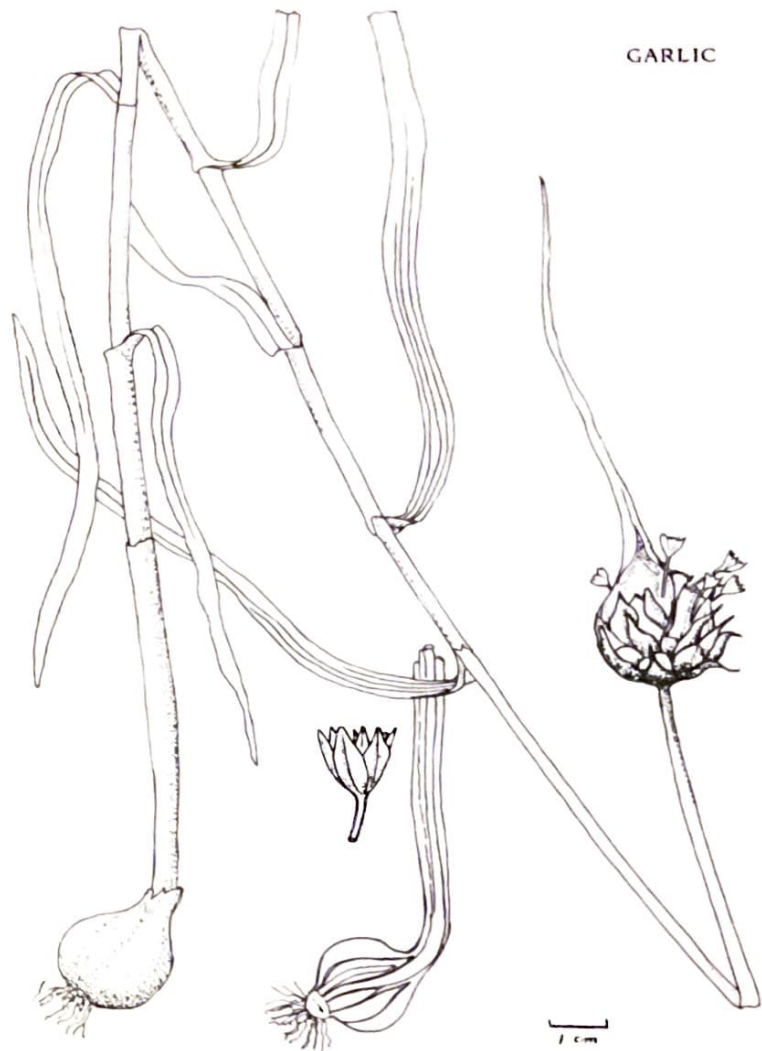
Garlic is used for toothache and also to make a tea to treat hypertension. For earache, burn a piece of garlic in coconut oil and use the cooled oil as eardrops. Also garlic is crushed and the scent inhaled during "worm fits".

Wong (1976) states, "Clove teas for intestinal worms, indigestion, oliguria, stomachache, infusion for hypertension. Rubbed on belly to facilitate parturition. In bath for bewitchment".

Biodynamic Notes

The oily constituent, Alliin, is a bactericide used in modern therapy (Merck Index) and many other active constituents have been noted, including skin-irritants and insect repellents (Morton, J.F. 1981).

*Footnote The Garlic Vine (*Pachyptera alliacea*) is a dicot of the family Bignoniaceae, native of South America, and contains odorous diallyl sulphides and the amino acid Alliin characteristic of Garlic and a few closely related *Allium* species.



(LILIACEAE)

Description

A tufted perennial herb developing rosettes of long fleshy pointed leaves from a shortly branched creeping rhizome. The leaves, which have soft marginal prickles, are brittle and when broken exude a clear yellowish viscous sap. The flowers are yellow and borne in an elongated compact raceme from the centre of the rosette. This species does not set fruit and is propagated by means of rhizome branches.

Habitat and Distribution

Although behaving as a native plant in the West Indies, this species is probably a native of the Mediterranean region.

Medicinal Uses

The exudate from a freshly cut leaf is beaten up with eggwhite and taken internally for colds, asthma and for bruises. Also leaf exudate mixed with seawater is drunk for stomach ulcers. A freshly sliced leaf is applied to skin wounds and, for headaches is tied around the head: also is used as a rectal suppository for constipation.

Biodynamic Notes

Anti-parasitic activity is shown by the plant extracts (Chang, 1971), and one of the constituents is Aloin, an established laxative (Merck, 1976).



CASHEW

Anacardium occidentale

(ANACARDIACEAE)

Description

Tree with usually rather gnarled spreading branches up to about 12 m high. Leaves spirally arranged on the branches, obovate-elliptical, up to about 18 cm long and 10 cm broad, rather leathery. Flowers in panicles exceeding the leaves, rather small, yellow turning pink, fragrant. Fruit in two distinct parts, the receptacle (apple) pear-shaped up to about 10 cm long, the drupe kidney-shaped up to about 3.5 cm long, the latter containing the edible kernel.

Habitat and Distribution

Common throughout the region in cultivation and as a relict, thriving mostly in rather dry areas. A native of the American tropics, now widespread.

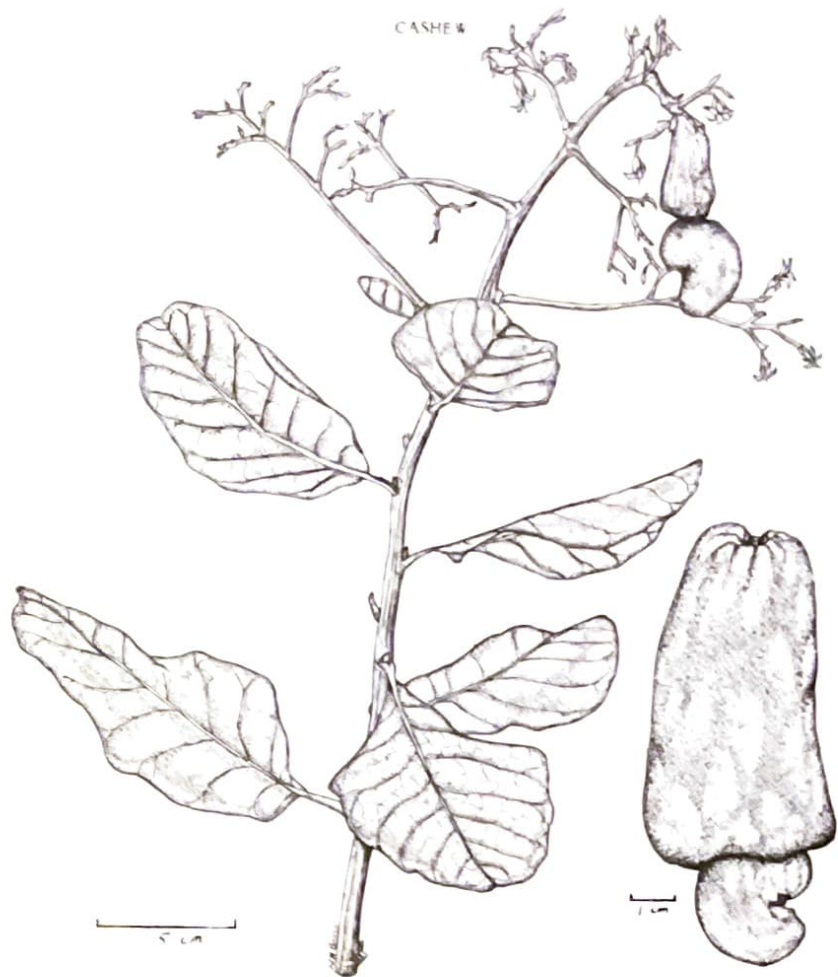
Medicinal Uses

A strong decoction of the tree bark alone or with Malomay (*Euphorbia hirta*) is taken for diarrhoea and dysentery. To destroy warts, ringworm and eczema, apply the heated seed to the skin.

Wong (1976) states, "Leaf tea (of Cashew) for diarrhoea, indigestion, stomachache. Bark tea for diarrhoea, dysentery. Seed in coffee for asthma. Loch of flowers for cough".

Biodynamic Notes

Although the fruit is edible, the seed oil is toxic and vesicant. The toxic agents are mainly phenols, such as Cardol, which also are found in the tree bark (Watt and Breyer-Brandwijk, 1962).



SOURSOP

Annona muricata
(ANNONACEAE)

Description

A tree rarely more than 8 m high. Leaves oblong-ovovate, acuminate, 8-25 cm long, 3.5 - 8 cm broad. The solitary flowers are pendent, with 6 greenish-yellow thick petals, the outer three about 3 cm long and broad, acuminate pointed, the inner nearly as long. The fruit is usually about 20 cm long and 10 cm broad but may be larger; it is covered with large curved soft prickles.

Habitat and Distribution

Native of tropical America; common in cultivation worldwide.

Medicinal Uses

Crushed Soursop leaves produce a scent which is inhaled for dizziness and fainting spells. The leaves are also used alone or with leaves of Portugal (*Citrus reticulata*), of Calabash (*Crescentia cujete*) and of Sapodilla (*Manilkara zapota*) to make a tea used as a sedative.

Wong (1976) states, "Poultice of (Soursop) fruit for ringworm. Leaf infusion and teas for hypertension, palpitation, heat, flu, insomnia. Crushed leaf inhaled for fainting".

A related species, wild in swamps near the sea in the warm parts of America and West Africa, is known as Anongdevac (*Annona glabra*). It has a narrowly buttressed trunk, slightly smaller leaves and smooth fruits with a dry pungent-aromatic pulp. The inner bark is striped, kept moist with salt, and used as a bandage for sprains and dislocations.

Biodynamic Notes

Various *Annona* species contain alkaloids and terpenoid derivatives (Bhaumik et al., 1979), still under biological test for activities. The seeds of *A. muricata* may be toxic (N.A.S., 1975). Isoquinoline alkaloids have been found in the leaves and the root - and stem bark of *A. muricata* (LeBoeuf et al., 1981).

SOURSOP



MAT ROOT

Aristolochia rugosa

(ARISTOLOCHIACEAE)

Description

A slender twiner, the stem somewhat hairy at first. Leaves broadly ovate-oblong, not lobed but often concave at the sides, the apex rounded and obtuse, the base deeply cordate, minutely hairy beneath, up to 11 cm long and 6 cm wide. Flower with an inflated base about 1 cm long, a trumpet-shaped tube 2.5 - 3 cm long and a scoop-shaped lip 1.0 - 1.5 cm long with a fringed margin, generally greenish or tinged purple in colour. Capsule about 3.5 cm long and 1.5 cm broad. Seeds flattened-cone-shaped, about 4.5 mm long and 3 mm broad.

Habitat and Distribution

Grows in thickets and on banks in north and south Trinidad; otherwise known only from some of the islands of the Lesser Antilles.

Medicinal Uses

Whole plant is used to make teas for diabetes and hypertension. The roots and leaves are chewed for snake-bite.

Wong (1976) states, "Root teas and infusions for indigestion, heat, amenorrhoea, dysmenorrhoea, jaundice, snake-bites, scorpion sting, in postpartum deparants".

Biodynamic Notes

Leaf extracts of *A. rugosa* gave positive tests for alkaloids. The oriental species *A. indica* contains antifertility agents which include sesquiterpenoid alcohols (Pakrashi et al., 1989). Aristolochic acid is a phagocyte stimulant found in a number of *Aristolochia* species (Singh and Philip, 1980; Batsford et al., 1980).



Aristolochia trilobata

SCIENTIFIC PLANT
TREF
TWEF

(ARISTOLOCHIACEAE)

Description

A slender-stemmed vine climbing by petiole-tendrils to 7 m or more, roots from the nodes when trailing on the ground. Leaf three-lobed, the lobes are blunt, rather leathery, up to about 15 cm broad, pale green beneath. Flower solitary at the node, the upper lip short and cordate, about 2.5 cm broad, the lower lip long-tailed up to about 35 cm long but only 2 - 3 mm broad. Capsule a six-lobed parachute-like censer. Seeds numerous, flat, heart-shaped.

Habitat and Distribution

In Central America and many of the West Indian islands.

Medicinal Uses

A cup of tea infused from three leaves is take for menstrual pains, and also to shorten labour in childbirth. Larger doses are regarded to be abortifacient.

Wong (1976) states "Leaf decoctions for diabetes, hypertension, snake-bites, dysmenorrhoea, as abortifacient, postpartum depurant, to ease parturition. Vine planted in garden against bewitchment".

TREF



Artocarpus altilis (Syn. *A. communis*)

BREADFRUIT

(MORACEAE)

Description

A tree up to 15 m or more high with large incised leaves. Male flowers are borne in spikes and female flowers are borne in spherical heads on the same plant. In the breadfruit the receptacle bearing the female flowers enlarges to a spherical stalked 'fruit' 20 to 30 cm in diameter, eventually with low superficial bumps or smooth. In the Chataigne (sometimes called Breadnut) the fruit contains seeds and has a rougher surface.

Habitat and Distribution

The various varieties are all the results of importations from the South Pacific which began in St. Vincent and Jamaica in 1793. They are common in cultivation everywhere where rainfall is adequate, mostly at low elevation.

Medicinal Uses

A slightly yellow leaf with or without Garlic (*Allium sativum*) is used to make a tea for diabetes and high blood pressure. It is alleged that there is a risk of inducing low blood pressure if the tea is too strong.

Wong (1976) states: "Young fruit rind tea for oliguria. Latex cataplasm for pain".

Biodynamic Notes

Blood-pressure lowering action of the leaf extracts of Breadfruit is due to the presence of Gamma-aminobutyric acid (Durand et al. 1962).,

BREADFRUIT



BAMBOO

Bambusa vulgaris

(GRAMINEAE)

Description

An arborescent grass with culms up to 10 m or more high deriving from a perennial massive stock by means of short ascending branches. Stem 10 - 12 cm in diameter with hollow internodes. Leaf-blades articulated to and deciduous from the sheath. Flowering infrequent.

Habitat and Distribution

Native of the Asian tropics and now very widespread.

Medical Uses

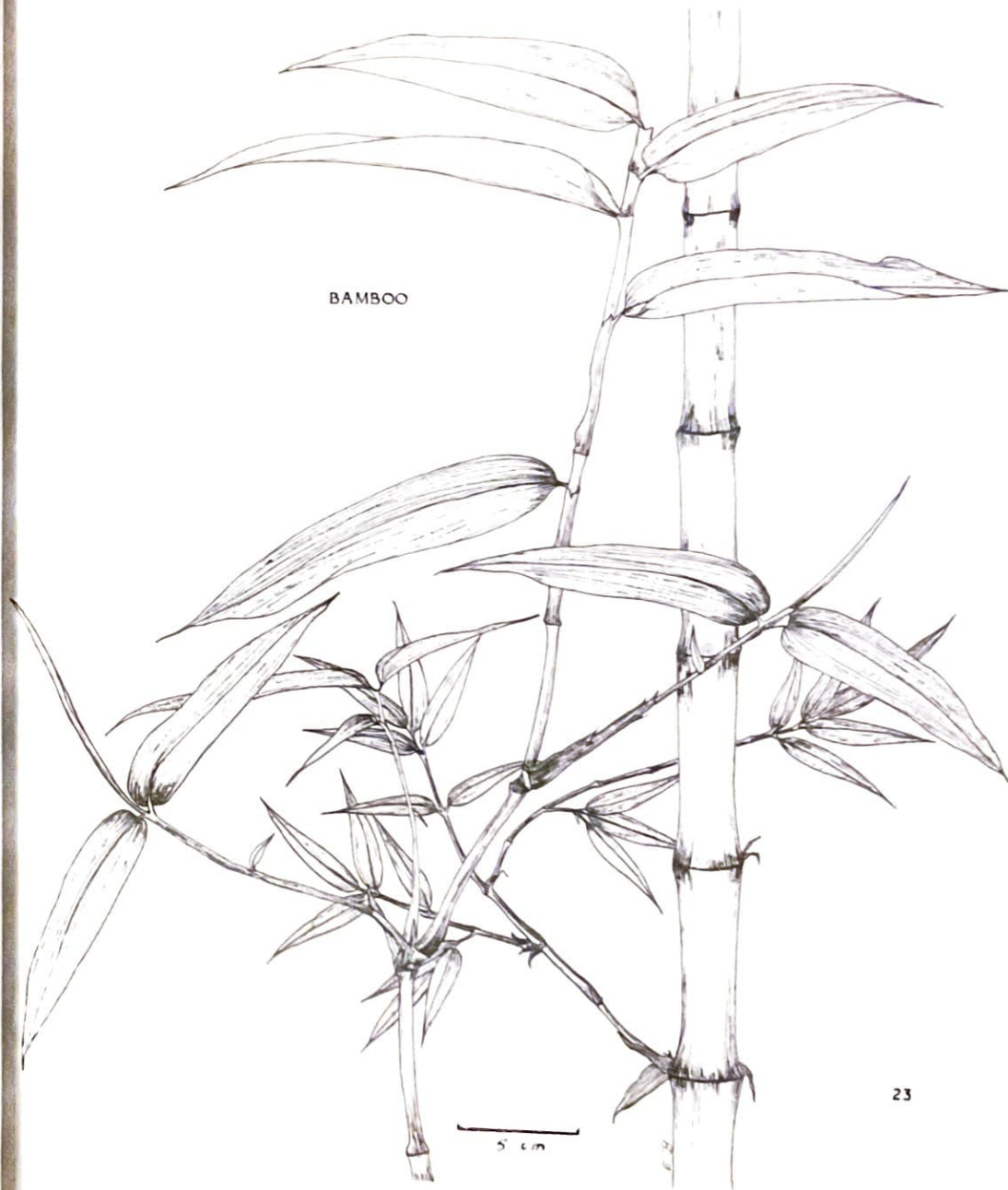
A tea from Bamboo leaves plus Tomato leaves (*Lycopersicon esculentum*) or Blackberry leaves (*Cordia curassavica*) is taken for malaria.

Wong (1976) states, "Root juice (of Bamboo) for bles, as purgative. Leaf baths and teas for flu, fever, pneumonia, stroke. Root decoction is abortifacient".

Biodynamic Notes

Bamboo leaves tend to accumulate cyanide (Culvenor, 1970).

BAMBOO



Begonia humilis

LOZEILLE
LOZEI BWA

(BEGONIACEAE)

Description

Soft, nearly glabrous and translucent-stemmed annual herb, rarely more than 30 cm high. Leaves alternate from distinct swollen nodes with deciduous stipules. Leaf-stalk 1 - 4 cm long. Leaf-blade strongly asymmetric, lanceolate to ovate, slightly cordate at base, acute at apex, irregularly toothed; surface with a few stiff hairs. Flowers white to light pink in axillary few-flowered inflorescences. Capsule oblique with three unequal wings, the larger about 8 mm long. Seeds numerous, very small.

Habitat and Distribution

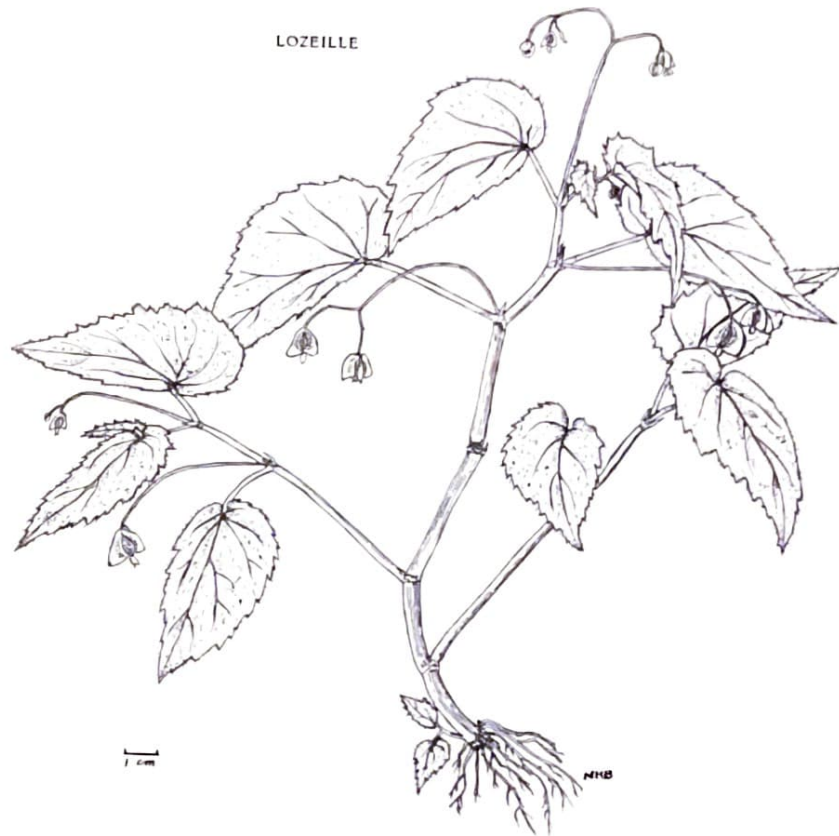
Reported from Jamaica, Dominica, Trinidad, Tobago and tropical South America; mostly on clay or rocky banks in damp shaded places.

Medicinal Uses

A tea for wheezing and bronchitis is made from a handful of plant tops infused into a cup of boiling water.

Wong (1976) states, "Herb in lochs and teas for cough, cold in chest, consumption, fever".

LOZEILLE



Bidens pilosa

NEEDLE GRASS
RAILWAY DAISY

(COMPOSITAE)

Description

Short-lived erect variably hairy herb rarely as much as 1 m high. Lower leaves often simple, the upper with one to three pairs of lateral toothed leaflets. Flower-heads on long or short stalks in a terminal inflorescence. Outer florets with a white spreading conspicuous limb (these rarely altogether absent); inner florets short and regular, yellow. Achenes black with two, rarely three, retrorsely barbed awns.

Habitat and Distribution

A common weed of roadsides and waste places, generally distributed through the tropics of both hemispheres.

Medicinal Uses

An infusion of the leaves is used as a tonic, and also for diabetes.

Biodynamic Notes

Plant juices, have been shown as antibacterial (Watt and Breyer-Brandwijk, 1962). The consumption of this plant might be tumour-promoting in the esophagus (Mirrish, et al., 1979). The presence of Phenylheptatrivine in the plant cuticle is said to protect *B. pilosa* against certain microorganisms in the presence of sunlight (Wat et al., 1979).

NEEDLE GRASS



ROUKOU

Bixa orellana

(BIXACEAE)

Description

Shrub or small tree usually between 3 and 6 m high with spreading branches, slender rusty-brown twigs and heartshaped leaves on long stalks. The leaves are thin and lustrous and mostly about 15 cm long and 10 cm broad. The light pinkish-mauve petals and numerous purple stamens make the flowers very showy. The distinctive fruits are blunt or pointed capsules 3 - 4 cm long covered with rather soft reddish bristles and opening when ripe to release the seeds. The seeds are covered with an oily vermilion coloured coating used in food processing as a pigment for colouring soups, cheeses and cosmetics.

Habitat and Distribution

This species is native from Mexico to Brazil. It has been cultivated in the Caribbean islands from prehistoric times, and has been introduced to most warm parts of the world.

Medicinal Uses

Mixture of the roots of Roukou and of Lime (*Citrus aurantifolia*) with Coraili vine (*Momordica charantia*) are boiled to make a strong tea taken every day to treat diabetes. Roukou leaves are also applied on sprains.

Wong (1976) states, "Root teas (of Roukou) for oliguria, jaundice. Seed infusion for oliguria. Aqueous and rum infusions of root for diabetes, flu, venereal diseases".

Biodynamic Notes

Roukou pigments are popular food additives which are relatively non-toxic (Preston and Rickard, 1980).

ROUKOU



OLIVE BUSH

Bontia daphnoides

(MYOPORACEAE)

Description

A shrub or low bushy tree up to 6 m or more high. The numerous branches are ascending in posture and bear dense foliage. Leaves are spirally arranged and narrowly oblong to linear in shape. They are up to about 11 cm long but not more than 2 cm broad. The flowers are inconspicuous, about 2 cm long, tawny-yellow blotched purple, the anterior lip curled downwards. The fruit resembles a somewhat pointed olive about 1.5 cm long. This plant is not at all related to the true Olive of the Mediterranean region of Europe.

Habitant and Distribution

Native of northern South America and the islands of the West Indies mostly on rocky terrain near the sea. It is otherwise occasional in cultivation as an item of horticulture interest for its dense foliage.

Medicinal Uses

The leaf tea is taken for weakness of the bladder, to clean the womb and for menstrual pains. A tea of the leaves, alone or together with Silk Fig leaves (*Musa sp.*) also is taken for high blood pressure and diabetes.

Wong (1976) states, "Leaf teas for nephritis, hypertension, cough, cold. Leaf infusion for heart".

Biodynamic Notes

No pharmacodynamic comment is available about Olive bush. However, the flower extracts of *Musa sapientum* show hypoglycaemic activity (Jain, 1969).



Bryophyllum pinnatum

LEAF-OF-LIFE
NEVER DEAD
PARVU
WONDER-OF-THE-WORLD

(CRASSULACEAE)

Description

Glabrous laxly erect fleshy herb up to about 1 m high. Leaves opposite in pairs, the lower simple, the upper pinnate, the blades up to about 18 cm long and 12 cm broad, the margin with curved crenations, producing at times small plantlets in the notches. Flowers nodding in terminal panicles. Calyx light green turning yellowish, inflated, about 3 cm long. Corolla dull brownish-red, 2.5 - 4.5 cm long, the lobes triangular. Stamens attached to the constriction of the corolla-tube.

Habitat and Distribution

Common in many parts of the West Indies both in and out of cultivation where it has escaped on to roadside banks, especially in rocky terrain. Native of Madagascar.

Medical Uses

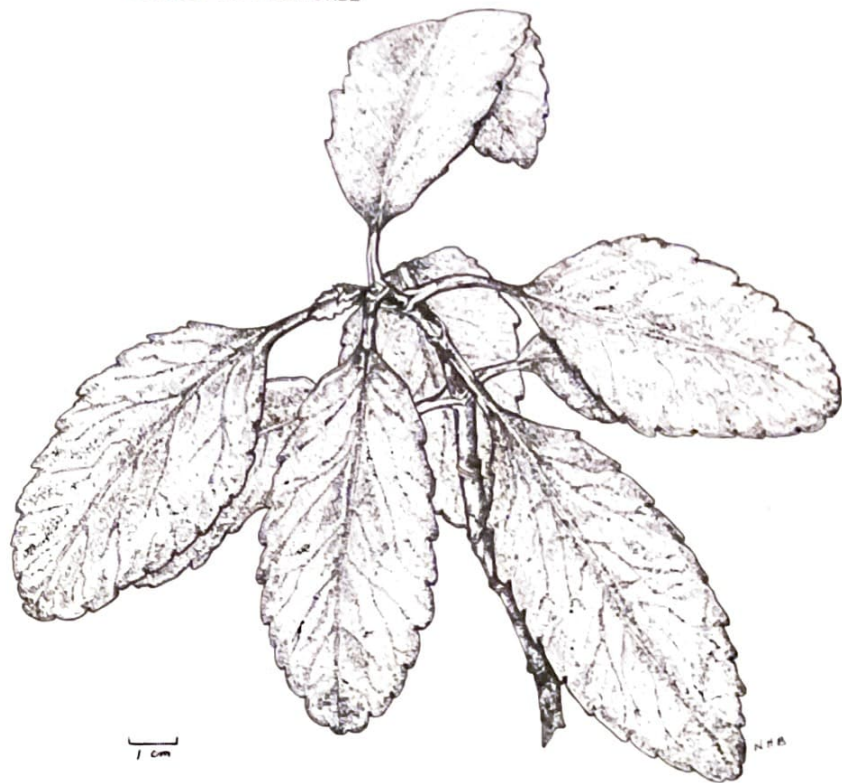
For earache, the leaves are warmed and the sap squeezed into the ear. The heated leaves are also applied topically to treat sprains, bruises, ulcers, swellings and even arthritis and tay tay worm. It is reported that sometimes this treatment produces severe skin blisters. A decoction of the leaves is also taken to clean the bladder.

Wong (1976) states, "Leaf poultice for earache, sprains, dysmenorrhoea, cold in head. Leaf juice for ophthalmia and earache. Leaves in bath for bewitchment".

Biodynamic Notes

Antimicrobial properties have been attributed to this plant (Boakye-Yiadom, 1977).

WONDER-OF-THE-WORLD



PIGEON PEAS

Cajanus cajan

(LEGUMINOSAE-PAPILIONATAE)

Description

A short-lived shrub to about 3.5 m high (some varieties are uniformly shorter). The leaves have three elliptical silvery-hairy leaflets up to about 9 cm long. Flowers in stalked racemes, yellow or yellow with brown markings. Pods obliquely ribbed, up to about 7 cm long and 13 - 14 mm broad. Seeds green, smooth, about 8 mm in diameter.

Habitat and Distribution

Native of the Asian tropics now widespread in the subtropics and tropics of both hemispheres.

Medicinal Uses

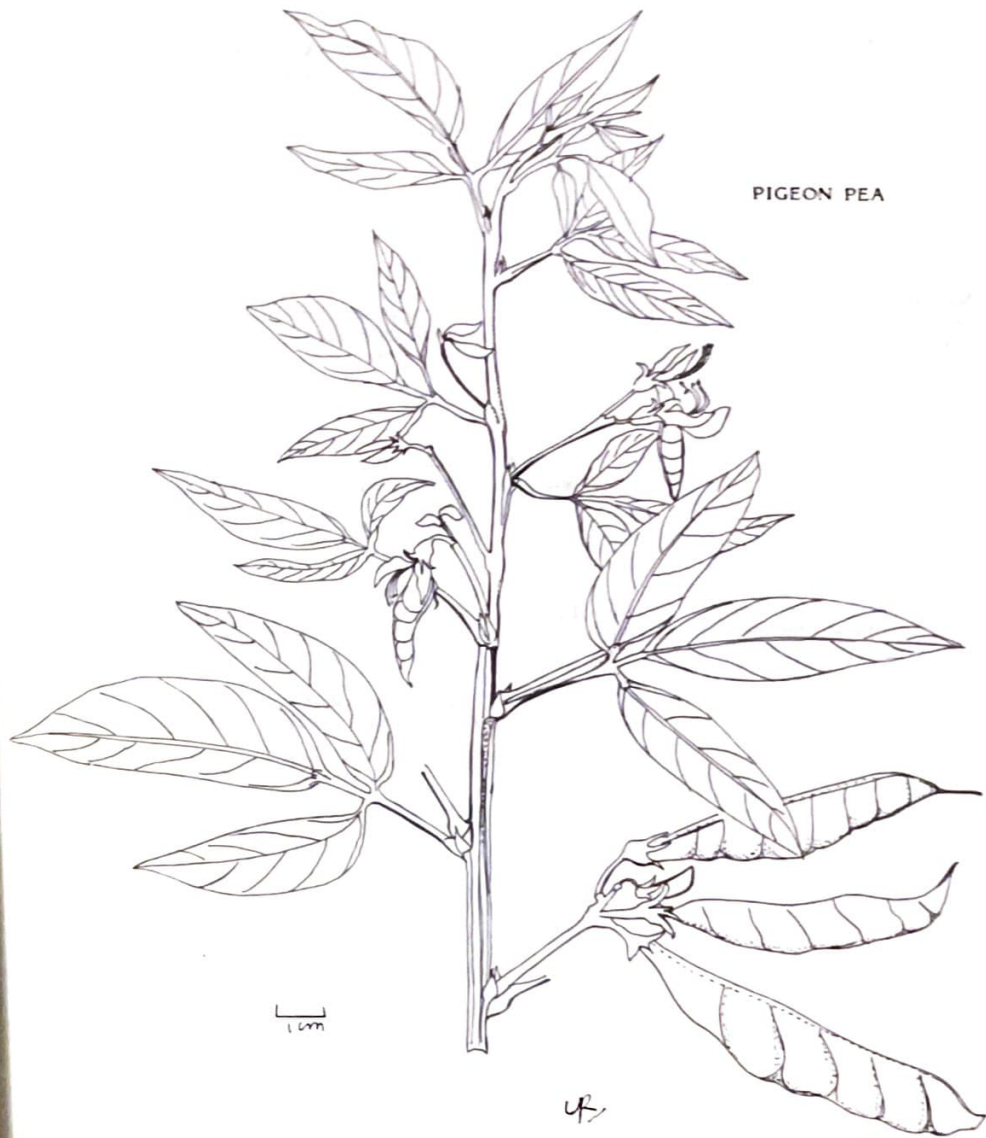
The leaves are boiled and applied to wounds, skin infections and ulcers. A decoction of the leaves is drunk and also used as a gargle for infected gums and toothache. A cup of tea made from three leaves is taken by children in cases of bed-wetting.

Wong (1976) states, "Leaf juice is poison antidote and for flu. Leaf infusion baths for stroke and bewitchment".

Biodynamic Notes

An antimicrobial agent, Cajanone, has been isolated from the root of *C. cajan* (Preston, 1977).

PIGEON PEA



Capraria biflora

DITAY PAYEE
FREGOSA
FRIOSA
TITI PAY

(SCROPHULARIACEAE)

Description

Erect bushy herb undershrub up to about 1.5 m high, very variable in hairiness. Leaves spirally arranged, up to about 9 cm long, toothed mostly in the distal half. Flowers on slender stalks with white bell-shaped corollas about 1 cm long. Seeds small and numerous in an ovoid capsule 4 -6 mm long.

Habitat and Distribution

Common on disturbed ground and along roadsides and in ditches. Throughout subtropical and tropical America; introduced and established sporadically in the Old World.

Medicinal Uses

The leaf tea is used as a febrifuge, and also to treat the griping effects accompanying the purgative action of Castor oil (*Ricinus communis*). Either the leaf juices or the aqueous extracts of the leaves is used as an eyewash.

Wong (1976) states, "Leaf tea or dew on leaf is eyewash for ophthalmia. Herb teas for flu, fever, dysmenorrhoea, heat, vomiting, measles, as postpartum depurants".

DITAY PAYEE



BIRD PEPPER

Capsicum frutescens

(SOLANACEAE)

Description

A shrub usually 1 - 2 m high with erect or straggling branches. Leaves alternate, ovate, shortly wedge-shaped at the base, acuminate pointed, mostly up to about 9 cm long and 4.5 cm broad, often smaller, rarely larger. Flowers greenish-white with greyish anthers, about 1 cm across. Fruit an elongated-conical berry rarely more than about 2 cm long, ripening red or orange.

Habitat and Distribution

Cultivated and naturalized in disturbed places and thickets, mostly near habitations. Native probably of tropical America now widespread in warm countries.

Medicinal Uses

Bird Pepper leaves are used to make a tea which is taken for palpitation.

Wong (1976) states, "Leaf decoctions for asthma, cough, cold in chest, consumption. Leaf poultice on boils. Fruits eaten for indigestion, in gargle for sore throat".

Biodynamic Notes

Capsaicinoids are the pungent principles in *C. frutescens* and are also powerful skin irritants (Evans and Schmidt, 1980).

A related species of *Capsicum* contains anti-neoplastic agents, the Physalins (Matsuura et al., 1972).
The leaf extracts gave positive alkaloidal tests.



BIRD PEPPER

PAPAI
PAWPAW

Carica papaya

(CARICACEAE)

Description

Unbranched or little branched soft-stemmed short-lived tree up to 5 m or sometimes more high. Leaves large and dissected on long stalks spirally arranged, latterly caducous leaving large conspicuous scars on the trunk. The stems are hollow and all parts of the plant exude a thick milky sap. The male and female flowers are borne on separate plants (very rarely some plants are found which bear bisexual flowers). The male flowers are produced on long stalks several together. They are very fragrant. The female flowers are borne solitary or very few together in the axils of the leaves; they are larger. Fruits (in different varieties) vary in size and shape; a common shape is ovoid or pear-shaped narrowed to the stigma-tip, but flask-shaped fruits narrow at the base are sometimes found. The flesh of the fruit is yellow or orange and the seeds have a pulpy coat.

Habitat and Distribution

Native of tropical America, now widespread in cultivation in warm countries.

Medicinal Uses

The green Pawpaw fruit is cut and rubbed hard onto ringworm affected areas on the skin until they bleed. Half a green pawpaw fruit is boiled in water to make a strong decoction, salt is added, and this is taken to produce sterility in women. The green or yellow fruit is crushed and mixed with Sour Orange juice and taken as required to treat high blood pressure.

Wong (1976) states, "Young fruit juice for bles, flu, hypertension. Decoctions and infusions of root of male plant for oliguria, venereal diseases, constipation, heat, flu, bles; used as rubs for scorpion stings".

Biodynamic Notes

All parts of the Pawpaw plant contain alkaloids such as Carpaine, which is amoebicidal, antibacterial and digitalis-like without any bad side-effects (Burdick, 1971; Boum, 1978).



Cassia alata

FRENCH GUAVA
TARANTAN
WILD SENNA

(LEGUMINOSAE-CAESALPINIOIDEAE)

Description

Short-lived shrub up to 3.5 m high. Leaves pinnately compound with 6 - 12 pairs of broadly oblong leaflets, blunt at the tip, unequal at the base, the terminal pair up to about 15 cm long and 8 cm broad. Flowers roundish in compact axillary racemes, golden-yellow and very showy. Pods 4-winged, 10 - 15 cm long, black when ripe. Seeds angular, arranged transversely in the pod.

Habitat and Distribution

Locally common along streambanks and in swampy places; often cultivated. A native of tropical America, now widespread in warm countries.

Medicinal Uses

Rub leaves on the skin to treat "lohtah". As a cooling and to purify the blood, use a handful of leaves to make an infusion with one litre of water and drink as required. The tea is also used for intestinal worms.

The older people of San Rafael village in Trinidad well remember the case of a Frenchman who had been a disgraced magistrate and banished from his homeland to live in French Guyana. He migrated to East Trinidad in the early 1940's. This Frenchman cultivated Tarantan and harvested and sold it to the various householders in Tunapuna, San Rafael and their environs. He left Trinidad to return to join the French armies serving in Europe in World War II.

Wong (1976) states, "Leaf juice rub for eczema, vitiligo. Leaf teas for diarrhoea, worms. Tea of flowers and leaves for constipation, as purgative".

Biodynamic Notes

The leaves and fruit of *C. alata* contain the purgative anthracene derivatives of Aloe emodin and Rhein (Rai, 1978; Smith and Ali, 1979).

TARANTAN



Cassia occidentalis

BRUKA
CAFE BOUCAT
GRANNY COFFEE
MAIOMAL COFFEE
WILD COFFEE

(LEGUMINOSAE-CAESALPINIOIDEAE)

Description

Erect shrubby herb 1-2 m high. Leaves compound with mostly 4-5 pairs of ovate to lanceolate leaflets up to about 10 cm long, often with a narrow red margin. Flowers yellow. Pod linear rather compressed. Seeds in one row, broadly ovoid with a smooth flat areole on each side, dark olive-coloured, about 4 mm long.

Habitat and Distribution

Common in waste places which may get very dry; commoner at low elevations particularly coastal. General in the subtropics and tropics.

Medicinal Uses

For cleaning out the womb use a few handfuls of the roots of *C. occidentalis* to each litre of water, and take one teacupful three times a day. For painful menstruation take a tea thrice daily made from *C. occidentalis* mixed with Bed Grass root (*Vetiveria zizanioides*), Zebafam (*Ageratum conyzoides*) and Pop Bush (*Passiflora foetida*).

Wong (1976) states "Root decoctions of (this plant) and infusions for womb inflammation, are abortifacients, purgative postpartum depurants. Seed decoction for palpitation colds, congestive heart failure".

Biodynamic Notes

Most *Cassia* species have been established as cathartic, and may even be insecticidal, antimicrobial or poisonous to livestock (Morton, 1981).



Catharanthus roseus
(Syns. *Lochnera rosea*, *Vinca rosea*)
(APOCYNACEAE)

OLD MAID
PERIWINKLE

Description

Erect or bushy straggling herb up to about 80 cm high. Leaves opposite in pairs, oblong-elliptical, 2 - 7 cm long, up to about 3 cm broad. Flowers solitary or in small clusters. Corolla with a narrow straight tube expanded immediately below the limb; the limb flat of 5 obovate lobes about 2 cm long; pink with a crimson eye; white with a yellow eye; white with a yellow eye; long, cylindrical.

Habitat and Distribution

Widespread near habitations in the subtropics and tropics of both hemispheres. Originally described from Madagascar.

Medicinal Uses

The tea made from this herb is very popular for both diabetes and blood pressure. There is a grave risk here, because the tea is known to reduce sugar levels in the urine without affecting the blood-sugar level.

Wong (1976) states, "Tea of white flowers and leaves for diabetes. Leaf infusion for oliguria. Root infused in whiskey for diabetes".

Biodynamic Notes

Its extractives were found to be anti-cancer in activity quite by chance by researchers studying the plant for antidiabetic action. Two major alkaloids, Vincristine and Vincalokoblastine are now extracted from the plant for use in modern treatment of certain types of cancer.

For this purpose the plant is cultivated on a large scale for commercial exploitation in many parts of the world (Taylor and Farnsworth, 1975).



Cecropia peltata

BOIS CANO
BWA CANO
TRUMPET TREE

(MORACEAE)

Description

Tree up to about 20 m high, the hollow branches long-spreading and ascending. Leaves rather large on long stalks, the blades with up to 11 lobes, divided to about halfway, strongly veined, whitish beneath. Male spikes 3 - 5 cm long in clusters of 12 - 30; female spikes 4 - 6 cm long in clusters of 2 - 6, enlarging in fruit.

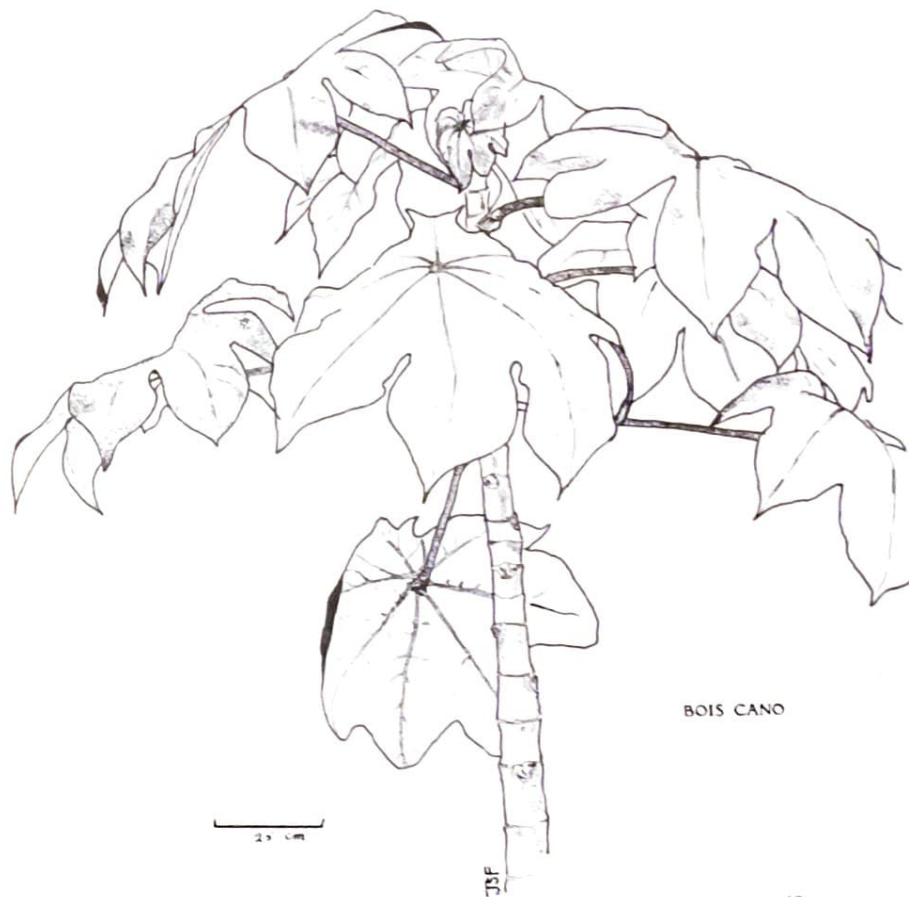
Habitat and Distribution

The characteristic adventive of recently cleared forest in most sufficiently rainy parts of the region. The limits of distribution are unclear because of taxonomic difficulties in what are probably a number of closely related variants.

Medicinal Uses

Dry leaves of Bois cano, Black Sage (*Cordia curassavica*) and Tomato leaves (*Lycopersicon esculentum*) are made into a tea or syrup and taken for colds and coughs. The dry Bois Cano leaves are also made into a tea to treat hypertension.

Wong (1976) states, "Dry leaf decoctions for cough, flu, fever. Juice of bark and root for snake-bites, scorpion-stings".



BOIS CANO

Chenopodium ambrosioides

SEME CONTRA
SIMEN CONTRA
WORM GRASS

(CHENOPODIACEAE)

Description

Bushy taprooted herb up to over 1 m high, although usually smaller. The plant has a strong garliclike smell and the roots are strongly pungent. The lower leaves are sinuate-margined, usually about 5 - 8 cm long and 1 - 2 cm broad, the upper are much smaller and entire. The flowers are very small and greenish or yellowish in clusters in elongated terminal inflorescences.

Habitat and Distribution

Often cultivated in yards and around habitations, sometimes escaping on to nearby waste ground especially near water. Widespread in warm countries.

Medicinal Uses

A teacup on an infusion of 50 g plant in water is a remedy for the treatment of intestinal worms in children. This must be followed with a purgative. Often something sweet is taken to "stimulate" the worms prior to taking a decoction of Worm Grass mixed with Garlic (*Allium sativum*) and Pursley (*Portulaca oleracea*).

Wong (1976) states, "Herb teas and infusions for intestinal worms, fatigue, indigestion, palpitation, dyspnoea, dysentery, asthma, in postpartum depurants. Poulitice of herb for sores".

Biodynamic Notes

Ascaridole is the oily constituent of this plant responsible for its anthelmintic properties (de Pascula et al., 1981); and it is a characteristic for plants of the family Chenopodiaceae



Citrus aurantifolia

(RUTACEAE)

Description

A rather small tree bearing low and continuously replacing the leaf and fruit-bearing twigs; very spiny. Leaves elliptical, mostly 4 - 7 cm long and 2 - 4 cm broad, the petiole narrowly winged and articulated to the blade, dark green, somewhat leathery, sharply aromatic. Flowers in short axillary racemes, white, fragrant. Fruit subspherical, up to about 5 cm long, ripening yellow with a greenish very acid pulp.

Habitat and Distribution

There are many varieties. All are in cultivation although occasionally plants may grow up as escapes or be present as relicts in abandoned farms. Native of tropical Asia, very prevalent in the West Indies.

Medicinal Uses

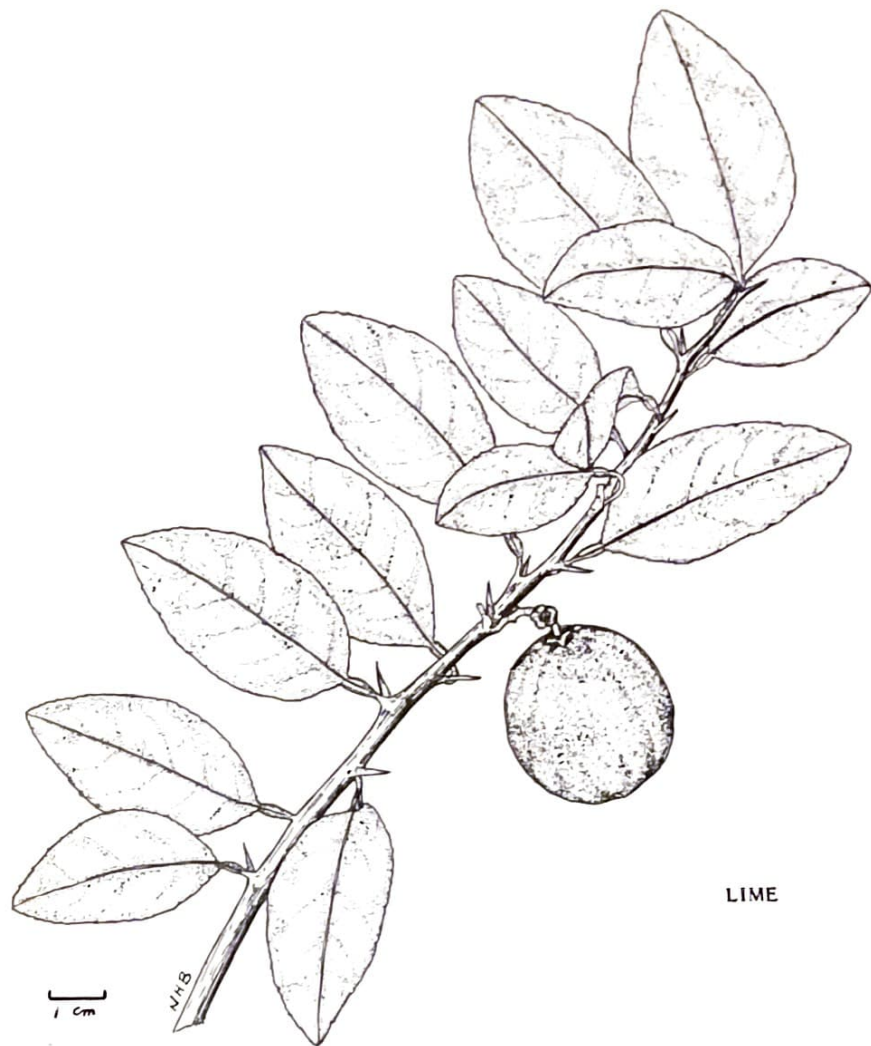
Lime bud tea is used for gripe in babies. Half of a roasted green lime is applied with salt to the skin for ground itch. Black coffee plus Lime juice is drunk for arthritis.

Wong (1976) states, "Fruit juice for heat, flu, sore throat, fever, worms, cystitis, rheumatism, dysmenorrhoea; as rub for erysipelas, thrush, pneumonia, sores, toothache, bewitchment. Root infusion for venereal diseases, scorpionsting. Lime bud tea for empacho and insomnia".

Biodynamic Notes

The *Citrus* species have been quite well analyzed for vitamin C and other constituents (Watt and Breyer-Brandwijk, 1962).

Orange peel oil is very popular for stomach pains and upsets (Morton, 1981). Even in whole oranges contamination is known to occur which produces Mycotoxins on the outer surface of the fruits (Stinson et al., 1981). Such mycotoxins are described as the greatest health hazards due to chemicals in the rural and agricultural environment (Schlatter, 1980).



LIME

COCONUT

Cocos nucifera

(PALMAE)

Description

A slender-trunked palm up to 20 or even sometimes 30 m high. The trunk tapers from a swollen base and is often curved; it is always unbranched. The leaves are pinnate in a crown and bear all their leaflets in the same plane; the leaflets are reduplicate folded. Inflorescences are axillary and bear the separate female flowers at the bases of the branches and the numerous male flowers along them. Fruits are large, up to 30 cm or so long, and contain one large seed.

Habitat and Distribution

Common, mostly in plantations near the sea - perhaps the most important of all palms economically. Origin uncertain, but most likely the Old World tropics. It is not really naturalized in the West Indies and when left unattended dies out.

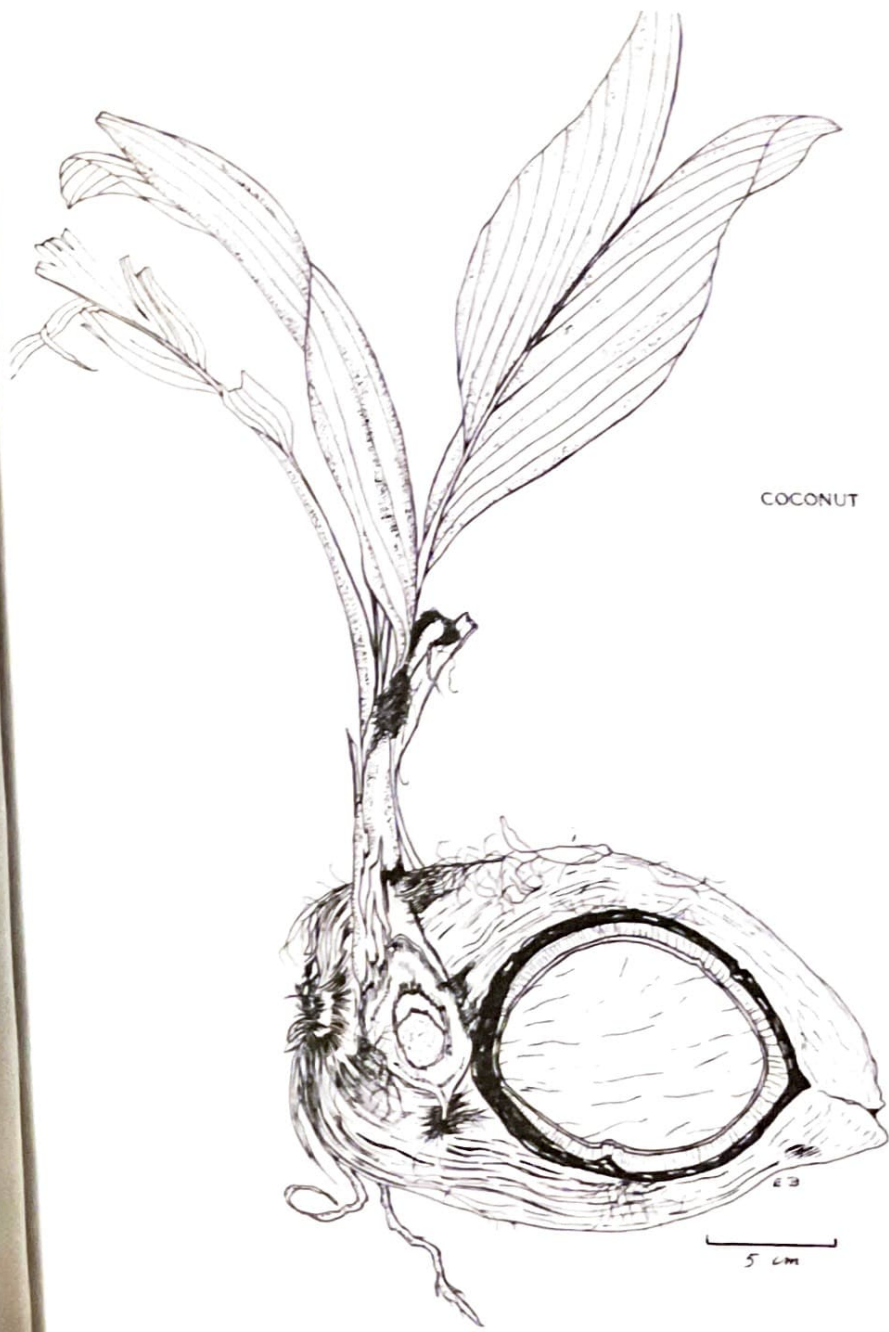
Medical Uses

Coconut root and husk and Roukou root (*Bixa orellana*) are used to make a tea for amenorrhoea. Coconut oil is a popular rubifacient. The roots of Coconut, Malomay (*Euphorbia hirta*) and Pigeon Pea (*Cajanus cajan*) are boiled and the decoction is drunk for venereal disease. The stalk attached to the Coconut fruit is used as a chewstick and tooth brush, usually described as DATWAN. Also the combined saps from the crushed coconut root, lime root (*Citrus aurantifolia*) and Guinea Grass root (*Panicum maximum*) are placed into the cavity in the treatment of toothache or used as a gargle for the same purpose.

Wong (1979) states, "Root teas for heat, venereal disease, amenorrhoea, mouth-wash for toothache. Coconut flesh poultice for erysipelas. Oil rub for rash, lice, flu. Husk teas for dysmenorrhoea, amenorrhoea, menorrhagia. Coconut water and coffee to children with jaundice".

Biodynamic Notes

No harmful constituents in Coconut (Perry and Metzger, 1980).



COCONUT

Colubrina arborescens

(RHAMNACEAE)

Description

Tree up to 13 m high, usually much smaller. Leaves ovate-lanceolate to oblong, up to about 12 cm long and 6 cm broad, rusty-woolly tomentose beneath at least when young. Flowers small, greenish. Capsule rounded bearing a few shiny black seeds.

Habitat and Distribution

In natural thickets and low woodlands on rocky terrain in the drier islands, Florida, Central America and West Indies south to Barbados.

Medicinal Uses

The unsweetened beverage made from the bark of this plant is taken to treat diabetes. Pieces of Mauby bark are traded in small bundles across the West Indian islands, and are imported into Trinidad and Tobago to make a diluted decoction taken as a cooling drink.

Biodynamic Notes

Colubrina faralaotra contains isoquinoline alkaloids (Guinaudeau et al., 1976), but *C. arborescens* does not.

Sister species *C. asiatica* contains a hypotensive and spasmolytic essential oil (Kar et al., 1970).

Footnote

Colubrina elliptica (Syn. *C. reclinata*) is a related species with less tomentose leaves and the capsule less enveloped in the persistent calyx. It has a closely similar distribution and ecological preference.



MAUBY

Cordia curassavica

(BORAGINACEAE)

Description

Shrub or small tree with rough dark brown bark and aromatic foliage, up to about 5 m high. Leaves lanceolate or elliptical, up to 25 cm long and 10 cm broad but usually much smaller, the margin somewhat toothed shallowly, mostly pointed at both ends and shortly stalked. Inflorescences spicate, 15 cm or more long, usually drooping. Flowers small, white, the corollas shortly funnel-shaped. Fruit (drupe) small, ripening red and protruding from the cuplike calyx.

Habitat and Distribution

Native of Central and North South America and the southern Caribbean, usually found in disturbed and mainly inhabited areas or lastro (ruinate).

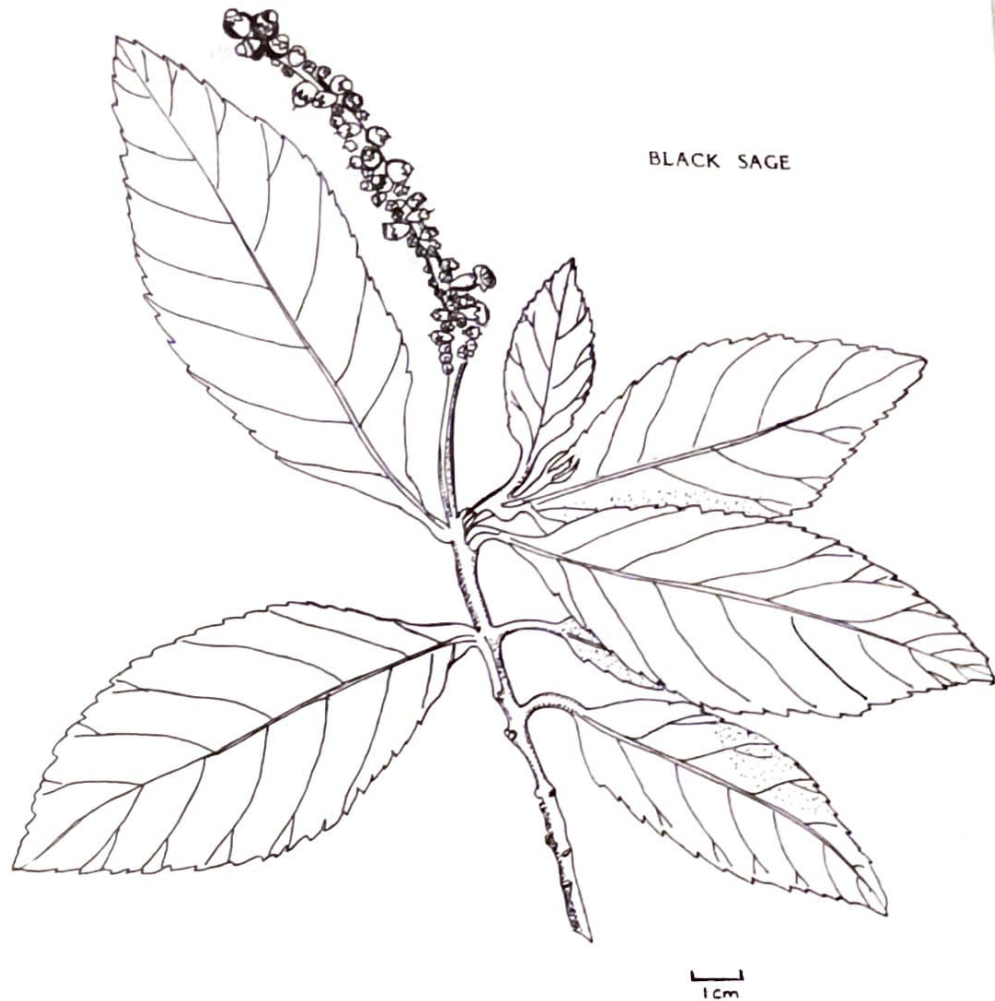
Medicinal Uses

Leaf teas are taken for colds and fevers.

Wong (1976) states, "Decoctions of fresh or old leaves for colds, flu, fever, pneumonia, insomnia, cough. Leaf juice for malarial fever".

BLACK SAGE

BLACK SAGE



Crescentia cujete

(BIGNONIACEAE)

Description

A tree with numerous low spreading branches, rarely as much as 10 m high. Leaves oblanceolate in clusters on reduced shoots along the older branches, up to 20 cm long and 6 cm broad. Flowers borne on the old wood in clusters; calyx about 2 cm long, deeply split; corolla broadly campanulate with an irregular fimbriate margin, greenish-white to greenish-yellow with brownish purple markings, foul-scented. Fruit hard, unilocular, smooth, green, spherical, up to about 25 cm in diameter.

Habitat and Distribution

Widespread in the tropics, frequently in semi-cultivation.

Medicinal Uses

Round Calabash leaves (three leaves) in a decoction of water (one cup) is taken for the "nerves" and for palpitation. The inner bark of the Calabash tree is squeezed, and the juice is used to treat bruises in the eye.

Wong (1976) states, "Loch of fruit flesh for cold in chest. Leaf teas for palpitation, hypertension, flu, pneumonia".

Biodynamic Notes

Calabash leaf extracts gave negative tests for antibiotic activity (Watt and Breyer-Brandwijk, 1962).

ROUND CALABASH



Croton conduplicatus

(EUPHORBIACEAE)

Description

A shrub with rather slender branches up to about 3 m high. Leaves ovate, 4 - 9 cm long and 2 - 4.5 cm broad, on slender petioles up to 3 cm long, without glands. The whole of the younger parts of this plant is covered with a mealy covering of minute stellate hairs. Inflorescences terminal, racemose of clusters of longer-stalked male flowers nearer the tip and solitary shorter-stalked female flowers towards the base. Capsules about 5 mm long. Seeds three, about 3 mm long.

Habitat and Distribution

A rare plant of Venezuela, the Dutch West Indies (southern group), Patos and the Bocas Islands of Trinidad. Probably known on the main island of Trinidad only in cultivation as a medicinal plant. It has been misnamed as *Croton flavens*, a different species known only from Jamaica.

Medicinal Uses

Warm one green leaf and one yellow leaf and squeeze juices into the ear for earache. Then use the plant residue as an earplug.

Under *Croton flavens*, Wong (1976) describes the uses of this plant also as - "Rubbed on belly for postpartum pain. In teas for sore throat and pneumonia".



LOVE VINE

Cuscuta americana

(CONVOLVULACEAE)

Description

Leafless twiner with yellow or orange smooth glabrous stems up to 2 mm thick, parasitic on herbs, shrubs and low trees. Flowers tightly clustered in cymose inflorescences, rounded in outline, about 3 mm wide; corolla greenish or yellow-white. Capsule splitting around the middle, 1-2 seeded. Seeds about 1.5 mm long.

Habitat and Distribution

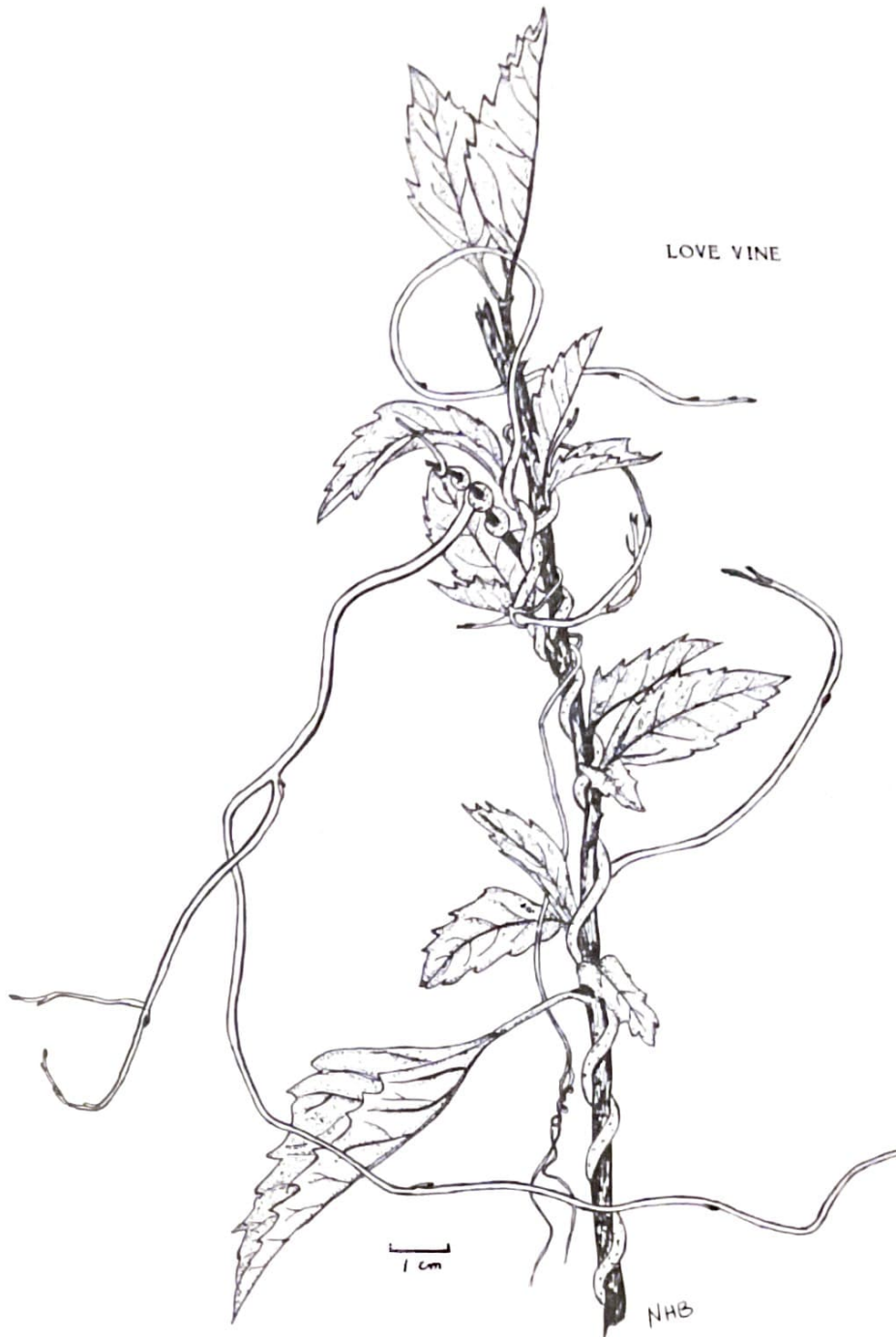
Common, especially on ornamental 'Croton' and Hibiscus bushes, throughout tropical and southern subtropical America.

Medicinal Uses

As a "cooling", the recipe consists of two handfuls of Love Vine to about one litre of boiling water to make a decoction which is taken as required. For jaundice, a strong decoction is taken made from yellow Moka (*Musa sp.*), a piece of pumpkin (*Cucurbita pepo*), Lash root (*Agave sp.*) and Love Vine. Patients are usually advised not to eat curry or other "greasy" foods when taking this tea.

Wong (1976) states, "Plant decoctions (of Love Vine) are baths for marasmus. Infusion drunk for jaundice".

LOVE VINE



Cymbopogon citratus (Syn. *Andropogon citratus*)

(GRAMINEAE)

Description

A densely tufted perennial grass with leaf-blades tapered to both ends up to 1 m long and 5 - 15 mm broad. The flowering panicles are rarely formed; inflorescences are 30 to 60 cm long and nodding, the partial inflorescences are paired racemes of spikelets subtended by spathes.

Habitat and Distribution

Frequently cultivated in gardens and along pathsides. Probably originated in India, now widespread in the tropics.

Medicinal Uses

Alone or mixed with Carpenter Grass (*Justicia pectoralis*), Black Sage (*Cordia curassavica*), Ditay Payee (*Capraria biflora*), Shado Beni (*Eryngium foetidum*), Santa maria (*Lippia alba*) and Tansy (*Ambrosia cumanensis*), Lemon Grass is used in a decoction to treat fevers and colds.

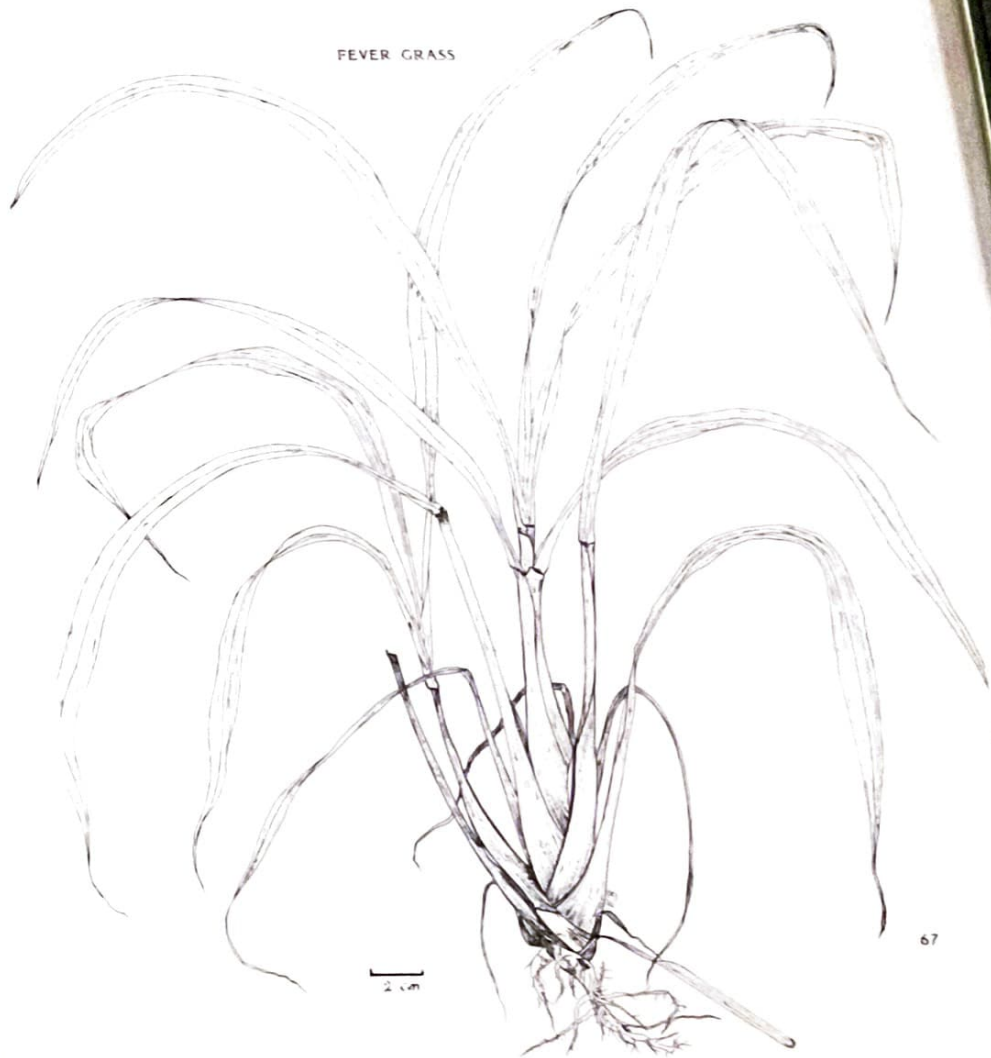
Wong (1976) states, "Grass and rhizome teas (of Fever Grass) for colds, flu, fever, pneumonia, malarial fever; in lochs for cough, consumption. Rhizome infusion is mouthwash for pyorrhoea".

Biodynamic Notes

Fever Grass yields a volatile oil used commercially in perfumery trade (Perry and Metzger, 1980; Morton, 1981).

FEVER GRASS
LEMON GRASS

FEVER GRASS



CONGOLALA

Eclipta alba

(COMPOSITAE)

Description

Herb of variable habit, either decumbent and trailing or erect and bushily branched. Leaves opposite in pairs, sessile, elliptic-lanceolate, often serrulate, up to about 8 cm long and 2 cm broad, rough on both surfaces. Flower-heads usually solitary on long stalks, up to about 1 cm across. The involucre bracts are leafy, the outer (ray) florets are white, numerous, with linear ligules. Achenes usually rugose, black, without pappus appendages.

Habitat and Distribution

Common in wet places. General in the subtropics and tropics.

Medicinal Uses

For athlete's foot, wash the area with an aqueous decoction of Congolala containing a little pot salt.

Wong (1976) states, "Bush teas for marasmus, cough, whooping cough. In baths for marasmus".

Biodynamic Notes

Extracts of this plant have been used against carbon tetrachloride-induced liver damage. (Khim and Nyum, 1978). Biochemical studies are continuing (Morton, 1981).



CONGOLALA

Eleusine indica

DUTCH GRASS
FOWL-FOOT GRASS
PAYAPUL
PIE PUL
PIED POULE

(GRAMINEAE)

Description

A tufted grass with erect and spreading culms up to about 30 cm or more long in flower. The culms are very tough and are usually smooth and dark green. The leaves are strongly keeled. Spikes mostly 2 - 5 radiating from the apex of the peduncle, sometimes with one slightly below, 4 - 17 cm long, the spikelets in two rows along one side of the rachis. Spikelets ovate, 2 - 6 flowered.

Habitat and Distribution

Very common in trampled and mown places, a weedy grass of mostly non-arable sites. In all warm countries.

Medicinal Uses

To clean the bladder an infusion of this plant is taken for nine consecutive days. A strong drink made from Pie Pul root, Mang Bush (*Flemingia strobilifera*), Bamboo leaves (*Bambusa vulgaris*) and Soursop leaves (*Annona muricata*) is taken every two days for arthritis.

Wong (1976) states, "Grass and root decoctions for cystitis, heat, pneumonia".

Biodynamic Notes

In Africa and Australia this plant has produced nitrate and cyanide toxicities (Watt and Breyer-Brandwijk, 1962).

PAYAPUL



DRAGON BLOOD

Eleutherine bulbosa

(IRIDACEAE)

Description

An herb growing from a bulb having bright red shiny scale-leaves. Foliage of green leaves plaited with distinct lateral longitudinal veins, up to about 4 cm broad. In flower about 60 cm or more high, the white flowers about 2 cm across on erect branches; flowers open in the evening. Capsule enclosed in a spatheaceous bract.

Habitat and Distribution

Origin uncertain, mostly cultivated but naturalised in some of the Caribbean islands. Also in the Old World tropics.

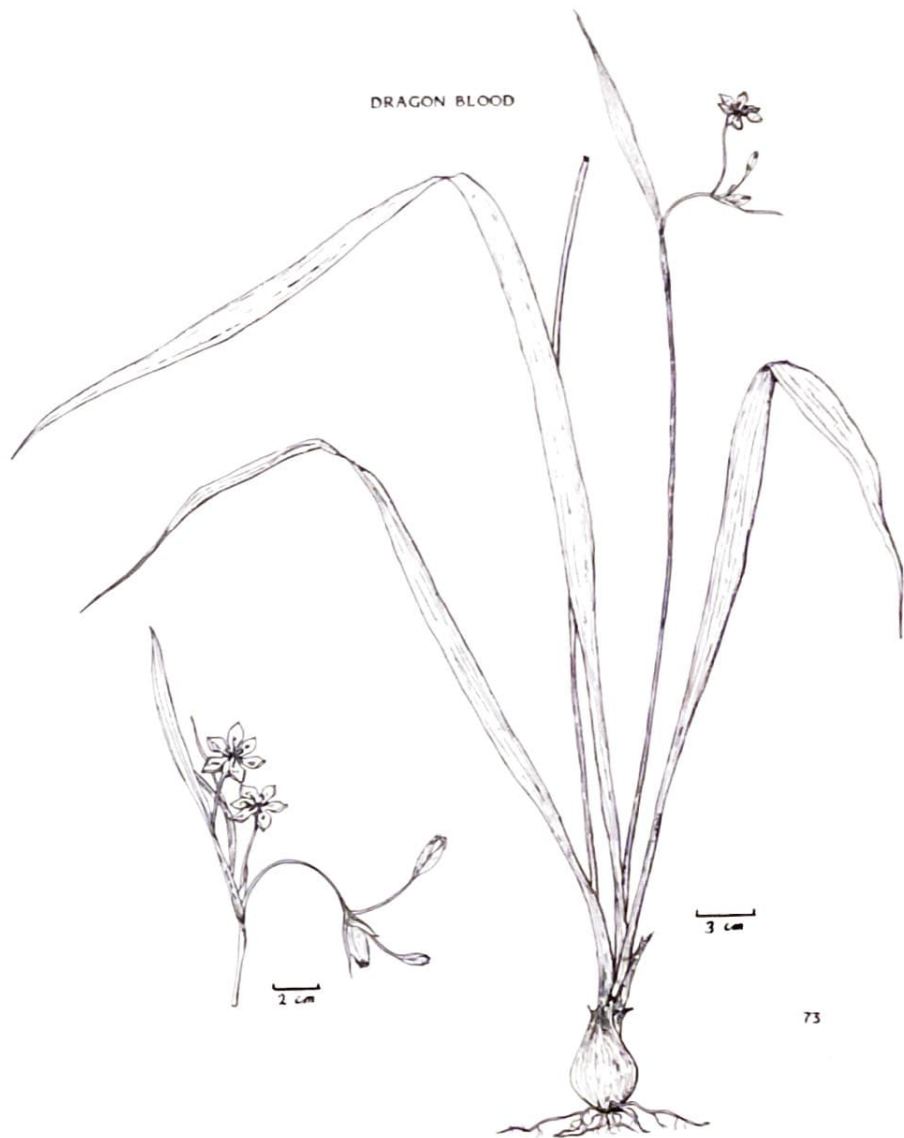
Medicinal Uses

A tea is made from the corms and taken for menstrual pains.

Biodynamic Notes

Naphthoquinones of unknown biodynamic activity have been obtained from this plant (Schmid and Ebnother, 1951; Farnsworth, 1975). Ethanolic extracts of this plant are abortifacient (Weniger et al., 1980).

DRAGON BLOOD



MAYOC CHAPELLE

Entada polystachya
(LEGUMINOSAE-MIMOSOIDEAE)

Description

High-climbing unarmed woody vine with bipinnate leaves, sometimes developing tendrils from the terminal pinnae. Pinnae 2 - 6 pairs. Leaflets 6 - 8 pairs, oblong, mostly 2 - 4 cm long and 1 - 2 cm broad. Inflorescence with many spikelike branches bearing numerous minute cream-coloured strong-scented flowers. Fruit a flat pod up to 25 cm or more long and about 6 cm broad, comprising thin rectangular windborne segments, each containing one seed and separating from the marginal frame.

Habitat and Distribution

In thickets at low elevations, mainly along rocky shores. Tropical continental America, Hispaniola and some of the Lesser Antillean islands from Guadeloupe southwards; Trinidad and Tobago.

Medicinal Uses

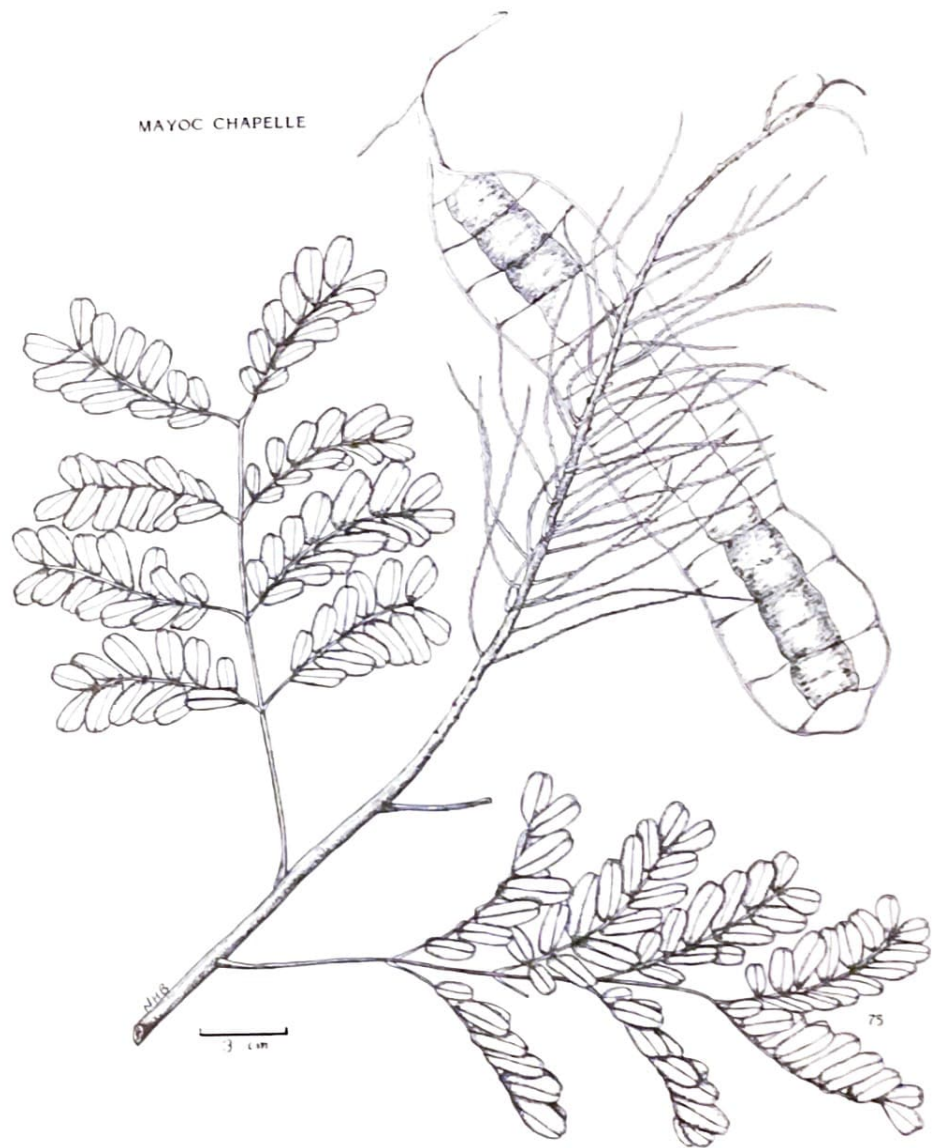
Scrapings from the stem of Mayoc Chapelle are soaked in water and the infusion is taken for venereal disease.

Wong (1976) states, "Root decoctions and infusions for heat and venereal diseases".

Biodynamic Notes

"*Entada polystachya*" has been described as being poisonous to cattle (Lewis and Lewis, 1977).

MAYOC CHAPELLE



Eryngium foetidum

(UMBELLIFERAE)

Description

Taprooted biennial pungently scented herb. Older leaves in a basal rosette, oblanceolate, serrate-dentate, up to 30 cm long and 4 cm broad. Flowering shoot divaricately branched, bearing more deeply toothed leaves. Flower-heads cylindrical subtended by a whorl of 5 - 6 unequal bracts resembling the upper leaves.

Habitat and Distribution

Locally common along damp or shaded tracks and near cultivations especially on heavy soils. Native of continental tropical America and the West Indies.

Medicinal Uses

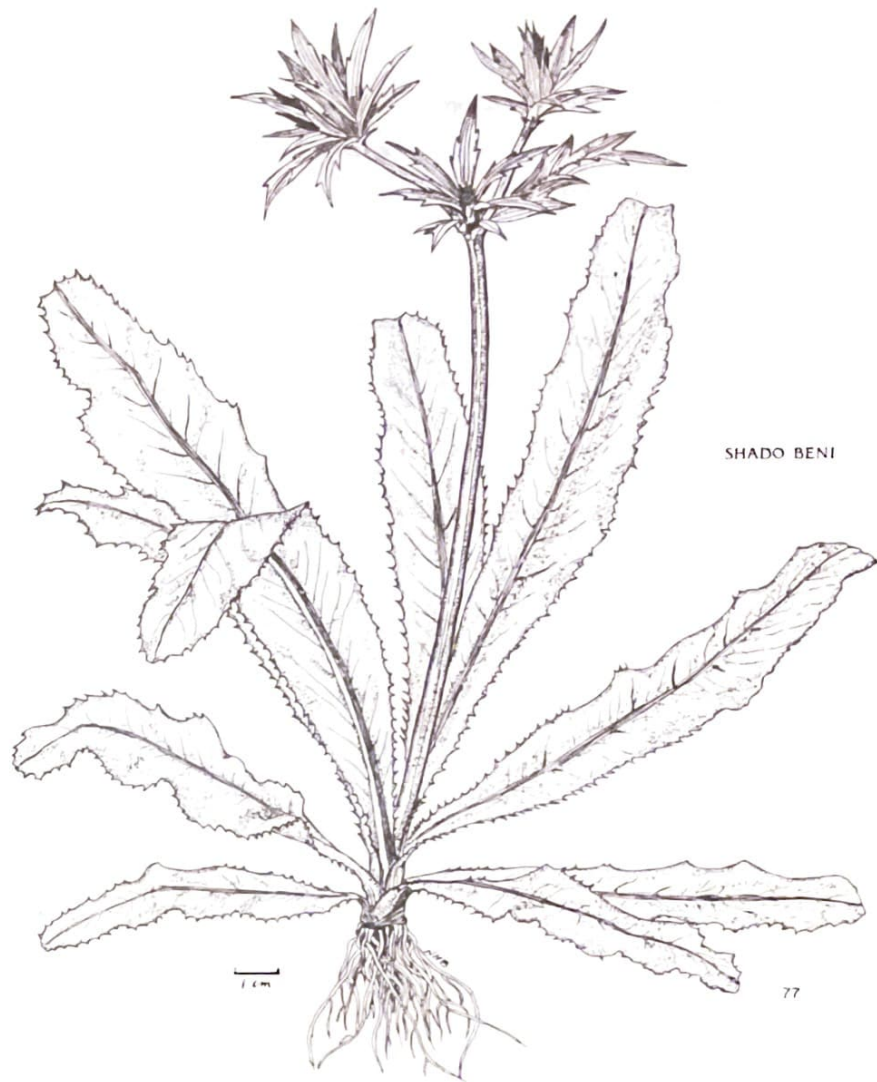
Leaf decoction is taken for colds and in cases of pneumonia. (Plant tops, especially the leaves are a very popular spice for meat dishes).

Wong (1976) states, "Leaf teas for fever, flu, diabetes. Leaf baths for cough, heat; urinary infusion baths for fever, flu, pneumonia. Root decoctions for fever, cold, cough, pneumonia, malarial fever, constipation. Infusion of root in rum and vermouth for bles, worms".

Biodynamic Notes

The above-ground plant parts are described as quite nutritious (Morton, 1981).

FIT WEED
SHADO BENI



SHADO BENI

Eupatorium macrophyllum
(COMPOSITAE)

ZEB CHAT

Description

Eupatorium macrophyllum is a shrub up to about 2 m high with velvety strongly striate stems. Leaves opposite in pairs, broadly ovate, cordate at base, acute or broadly acuminate at tip, three-nerved, irregularly crenate, up to about 20 cm long. Flower-heads numerous, crowded in rounded compact panicles. Involucre about 5 mm long, the bracts closely imbricate in about six series. Florets up to 50, whitish. Achenes a little over 1 mm long.

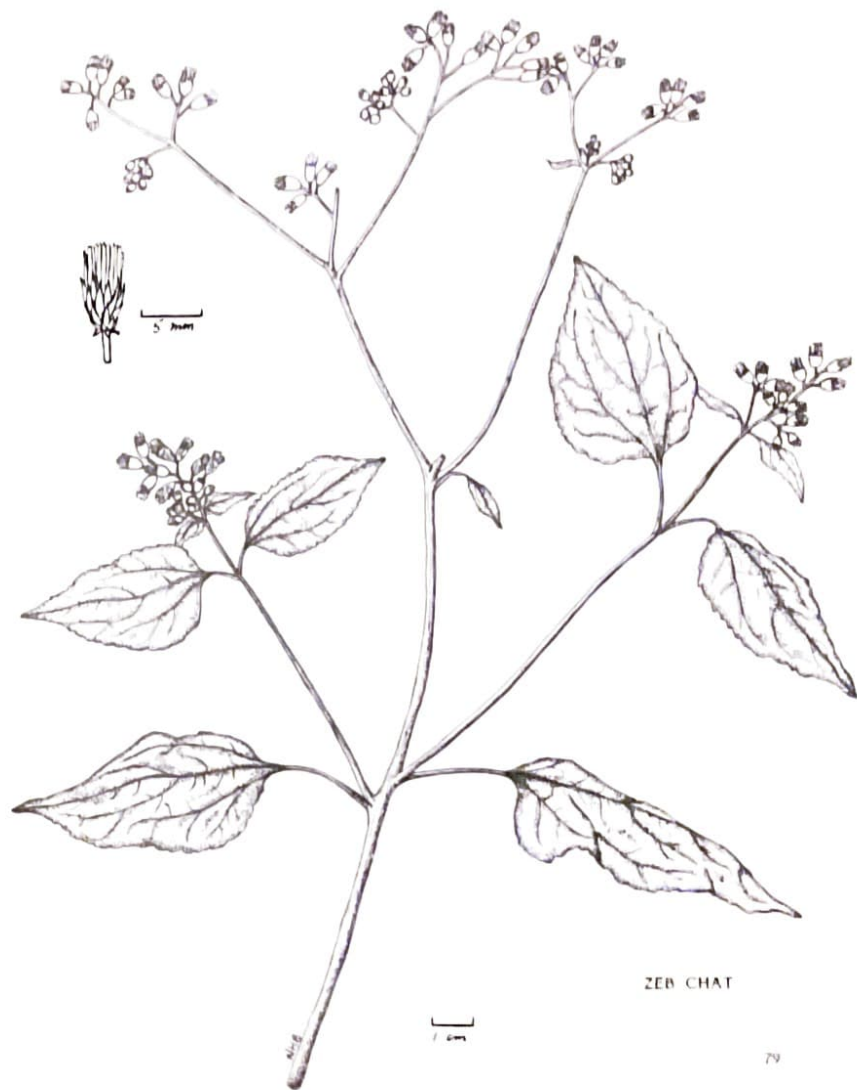
Habitat and Distribution

Generally distributed in moderately wet places throughout continental tropical America and the West Indies.

Medicinal Uses

A strong decoction is made from Zeb Chat and Coraili (*Momordica charantia*) and drunk for painful menstruation.

Wong (1976) states, "Root in tisanes for heat, oliguria, as postpartum depurants. Root and leaf infusion for fever. Leaf poultice as vaginal suppository for womb inflammation and prolapse".



ZEB CHAT

Eupatorium odoratum L.

(COMPOSITAE)

Description

Eupatorium odoratum is an erect or scrambling short-lived shrub up to about 2 m high. Leaves opposite in pairs, rhombic-ovate, abruptly narrowed at base, acute or acuminate at tip, three-nerved, coarsely toothed, odorous, gland-dotted beneath, up to about 8 cm long and 5 cm broad. Flower-heads numerous in corymbs. Involucre about 1 cm long, the bracts imbricate in 4-5 series. Florets 15-25, white to light mauve. Achenes 4-5 mm long, 3-angled, with numerous spreading bristles.

Habitat and distribution

Very common as a weed of waste places throughout the American subtropics and tropics. Recently introduced in Africa and Asia where it has become a pest.

Medicinal Uses

A flower decoction is used for coughs and colds with or without the addition of Santa Maria (*Lippia alba*).

Wong (1976) states, "Leaf infusions and decoctions for colds, flu, fever. Leaf poultice on lashes".

Biodynamic Notes

Extracts from the aerial parts have been tested and shown to give no significant cytotoxicity (Arene et al., 1978).

BABY BUSH
CHRISTMAS BUSH



CHRISTMAS BUSH

Eupatorium triplinerve

JAPANA

(COMPOSITAE)

Description

Perennial herb up to 1.5 m high. Leaves opposite in pairs, lanceolate to oblong-lanceolate, up to about 15 cm long and 3 cm broad, pointed at both ends, 3-nerved from well above the base. Heads few in loose inflorescences on slender hairy stalks 1 - 2 cm long. Involucres 4 - 5 mm long. Florets purple.

Habitat and Distribution

Introduced from continental tropical America and cultivated on several of the islands where in some of them it has escaped.

Medicinal Uses

A leaf decoction of Japana is taken twice daily as required for fever and colds.

Wong (1976) states, "Herb decoctions for flu, fever, cold in chest, pneumonia, yellow fever, constipation. Herb baths for flu and pneumonia".

Biodynamic Notes

Eupatorium triplinerve gave a positive test with the sodium picrate paper (for cyanide, or coumarin?). Perry and Metzger (1980) have reported an essential oil and also coumarin constituents which are non-toxic but possessing remarkable hemostatic properties. Detailed chemical analyses of the essential oils have been done (Morton, 1981).

JAPANA



Euphorbia spp.

MILKWEEDS

(EUPHORBIACEAE)

There are many species of *Euphorbia* displaying a range of life forms from small prostrate or creeping herbs to large shrubs. They have in common the small involucre cup-shaped inflorescence from which stamens project and these are followed by a single stalked capsule at maturity.

The milky sap of all the species can be considered to be irritant.

Euphorbia hirta

MALOMAY
MALOMEN

Description

A herb with more or less erect branches, spreading from near the base and bearing yellowish hairs. The plants usually grow to about 20 - 30 cm but may be shorter or taller. Leaves opposite in pairs from slightly swollen nodes, ovate to rhomboid, unequal-sided at base, serrulate, up to 4.5 cm long and 1.6 cm broad. Inflorescences - stalked globose clusters about 1 cm in diameter.

Habitat and Distribution

A very common weed, general throughout the subtropics and tropics.

Medicinal Uses

An infusion of this plant is used as a "cooling". Mixed with Seed-under-leaf (*Phyllanthus amarus*) the infusion is also used for oliguria. The latex from a freshly broken stem is used to treat ringworm by its application around the area to stop the spread of the infection.

Wong (1976) states, "Herb teas (of Malomay) drunk for flu, heat, fever, hypertension, measles".

MALOMAY



Description

Weak erect annual little-branched herb, the stem-internodes hollow, up to about 50 cm high. Leaves alternate below, opposite above, ovate to oblong-elliptic, acuminate, entire, up to about 10 cm long and 4.5 cm broad, usually smaller, often somewhat crowded towards the apex. Involucres few together on a stalk up to about 1.5 cm long, terminal, each about 2 - 3 mm long. Capsule with short hairs.

Habitat and Distribution

Fairly common on shaded roadsides and at the margins of thickets; sometimes under cocoa trees. Continental tropical America, Jamaica, the Lesser Antilles, Tobago and Trinidad.

Medicinal Uses

A tea from this species is used to treat cases of oliguria.

Wong (1976) states, "Decoctions of leaves for heat and oliguria".



URINE BUSH

Euphorbia prostrata

LIZARD GRASS

Description

Low herb with prostrate reddish branches spreading from a central taproot. Leaves opposite in pairs with regular-spaced disposition, elliptic to narrowly obovate-elliptic, obtuse and minutely toothed at tip, unequally rounded at base, up to 7 mm long and 3 mm broad, dark greyish-green. Involucres in short axillary racemes, small. Capsule with short bristly hairs on the sharper margins only.

Habitat and Distribution

A fairly common weed of sandy ground; general throughout the tropics.

Medicinal Uses

A decoction of the whole plant is taken for cases of gastroenteritis.

Biodynamic Notes

The *Euphorbia* species generally contain an irritant sap due to constituents which are co-carcinogenic esters of closely related diterpenoid polyols (Evans and Schmidt, 1980). Many other interesting chemical constituents have been found in these species (Morton, 1981; Tripathi and Tiwari, 1980; Baslas and Agarwal, 1980).

LIZARD GRASS



Gomphrena globosa

BACHELOR BUTTON
WHITE MARGUERITE

(AMARANTHACEAE)

Description

Annual bushy herb 50 to 80 cm high in flower. Leaves opposite, oblong-elliptical, 2 - 10 cm long and up to about 4 cm broad. Flower-heads subspherical, 2 - 3 cm long and 2 cm or more broad, usually magenta in colour but sometimes mauve or rarely white, the head often subtended by small leaves.

Habitat and Distribution

Cultivated in gardens for ornament and occasionally escaping on to waste ground. Native of tropical America but now grown in all warm parts of the world.

Medicinal Uses

A handful of the white flowers of this plant is boiled in about a litre of water and the water extract is taken for oliguria for as long as required. Also a tea is made for gripe in babies.

Wong (1976) states, "Tea or infusion of white flower head for children with oliguria, heat, empacho. Leaf tea for hypertension, cough, diabetes".

Biodynamic Notes

So far, only pigments of unknown biological activity have been found (Bouillant et al., 1978).



BACHELOR BUTTON

Gossypium spp.

(MALVACEAE)

Description

The classification of cottons is very difficult. The two main groups of native and fully naturalised plants belong to *G. barbadense* (Long Staple or Sea Island Cotton) and *G. hirsutum* (Short or Upland Cotton). They are shrubs up to about 5 m high, with broad distinctly lobed leaves and leafy stipules. Each flower is subtended by three broad leafy toothed bracteoles. The contorted corollas are usually light yellow turning pinkish. The capsules are ovoid and dehisce to expose the seeds embedded in copious white lint.

Habitat and Distribution

Native of tropical America, *G. barbadense* of the South American mainland and *G. hirsutum* of subtropical North and Central America and some of the Caribbean islands mostly in coastal areas.

Medicinal Uses

A decoction of the leaves is given to young children for constipation. In cases of earache, the young Cotton bud is warmed and its juice is squeezed into the ear.

Wong (1976) states, "Leaf decoctions for flu, fever, cough, consumption, cold in chest. Leaf juice for earache. Flower in teas for flu and colds".

Biodynamic Notes

Gossypol a toxic constituent of Cottonseed oil (Merck, 1976), has been associated with antifertility activity in men (Murthy et al., 1981; Qixian and Yingong, 1980) and also with antiviral activity (Dorsett et al., 1975). The pressed seedcake remaining after the oil is removed is a rich source of L-glutamic acid (Perry and Metzger, 1980).



COTTON

Hibiscus rosa-sinensis and cultivars

HIBISCUS

(MALVACEAE)

Description

A shrub with long slender branches up to about 6 m high. Leaves arranged spirally on the stem are ovate, have long stalks and measure up to about 15 cm long and 10 cm broad. Flowers are borne singly in the axils of the upper leaves, usually on rather long stalks. They have an epicalyx of 5 - 7 bracteoles about 1 cm long and a cupular calyx about 2.5 cm long. The corolla is short-lived of five very showy contorted-overlapping petals. Many varieties exist differing in size and colour of corolla, in single or double forms. The fruit (very rarely formed) is a capsule about 3 cm long.

Habitat and Distribution

Very common cultivated and relict by old habitations and cultivations in a wide range of situations. Native possibly of tropical Asia. Most ornamental varieties are hybrids, many of them resulting from crosses with the African *H. schizopetalus*.

Medicinal Uses

It is a useful constituent of "lochs" (syrups) for the treatment of coughs and colds. Twigs and stalks are used as DATWAN, a chewstick and toothbrush.

Wong (1976) states, "Decoctions of flowers for flu, cough, asthma. Infusions for colds amenorrhoea. Poultice of leaves for hernia".

Biodynamic Notes

Hibiscus flower anti-estrogens have been studied (Kholkute, 1977). Its red flower pigments include cyanidin glycosides (Shrivastava, 1976).

HIBISCUS



Hymenocallis tubiflora

COCOA ONION
SPIDER LILY
WILD ONION

(AMARYLLIDACEAE)

Description

Bulbiferous herb with soft fleshy lanceolate petiolate leaves in two rows. Leaf-blades up to about 30 cm long and 10 cm broad. Flowers in a scapose umbel, white, fragrant. Perianth segments linear, shorter than the tube, surrounding a corona formed from expanded bases of stamens. Fruit a membranous capsule containing one or a few fleshy seeds.

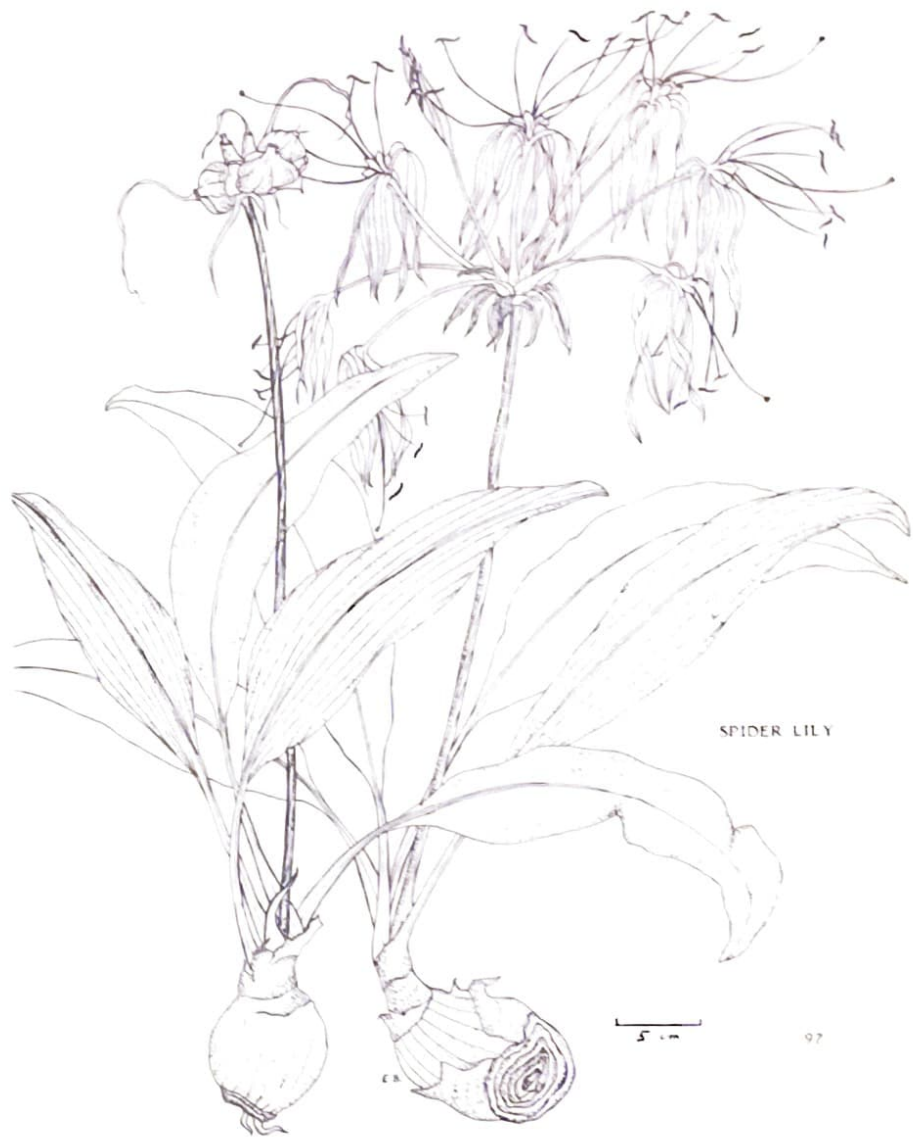
Habitat and Distribution

Occasional in sheltered places, mostly by streams. Native of Trinidad, Tobago and northern South America, cultivated as an ornamental elsewhere.

Medicinal Uses

In the treatment of asthma, a cup of tea made from the bulbous root of this plant is taken so as to induce vomiting. It is often recommended that only one-quarter of the bulb should be used to make the cup of tea.

Wong (1976) states, "Bulb in teas for asthma and vomiting. In poultice on boils".



Hyptis atrorubens

WILD MINT

(LABIATAE)

Description

Creeping perennial herb with long slender prostrate stems rooting at the nodes and ascending flowering branches up to 25 cm high. Leaves ovate to lanceolate in opposite pairs, 1.5 - 4.5 cm long and up to 2 cm broad. Heads about 1 cm across. Flowers white with mauve marks on lip, subtended by leafy bracts. Nutlets bright brown, rough.

Habitat and Distribution

In moist places, not uniformly common. General throughout the tropics.

Medicinal Uses

Leaf infusion is taken as a carminative.

Wong (1976) states, "Leaf juice for diarrhoea, dysentery, vomiting. Tea of leaves for colds, flu, intestinal worms. Leaf infusion for indigestion".

WILD MINT



Jatropha curcas

PHYSIC NUT

(ELIPHORBIACEAE)

Description

Shrub or small tree up to 4 m or more high with viscid milky or reddish sap. Leaves broadly ovate, entire or shallowly lobed, up to 15 cm long and broad, openly cordate at base. Flowers green, the male and female borne at different times in the same inflorescence; petals 6 - 7 mm long; capsule subspherical, 2.5 - 4 cm long; seeds blackish, about 2 cm long.

Habitat and Distribution

Rather common, particularly near habitations. Native of tropical America, now widespread.

Medicinal Uses

In the treatment of toothache the latex of the plant is rubbed on the gums. In the treatment of bruises, the leaves are applied in sequence until one sticks onto the skin. This is allowed to dry and then replaced with another leaf until the bruise is healed. Physic Nut leaves are boiled with Coraili leaves (*Momordica charantia*) and Lime juice (*Citrus aurantifolia*), then Epsom salts are added, and this liquid used to wash skin sores.

Wong (1976) states, "Leaf (of Physic nut) decoctions for heat, diarrhoea, empacho, fever. Leaf baths for sores, sprains, rash, bewitchment; poultices for sores and pain".

Biodynamic Notes

This seed contains a toxic protein, Curcin. Anti-cancer and co-carcinogenic constituents have also been found in various parts of the plant (Morton, 1981).

PHYSIC NUT



Justicia pectoralis

CARPENTER GRASS
GARDEN BALSAM

(ACANTHACEAE)

Description

Perennial low herb with slender branches rooting sparingly from the nodes. Plant pleasantly aromatic when crushed. Leaves linear to lanceolate, mostly long-acute, 3 - 8 cm long, 5 - 30 mm broad in opposite pairs. Flowering branches ascending up to 60 cm high. Flowers rather small, bright pink with white markings resembling a rib-cage, the corolla 7 - 8 mm long.

Habitat and Distribution

In low thickets and grassy places. Mexico to northern South America and the West Indies.

Medicinal Uses

This plant is used to make teas for coughs, colds and as a cooling. An infusion made from four or five leaves per litre of water is used as a "cooling". A stronger brew is used for hypertension. For cuts the juice of this plant together with some salt is applied to the area.

Wong (1976) states, "Herb decoctions for flu, fever, cold in chest, pneumonia, cough, vomiting. Leaf poultice on bleeding wounds".

Biodynamic Notes

This plant is a major ingredient in South American hallucinogenic snuff, but with unidentified active principles (Schultes, 1975).



Justicia secunda

ST. JOHN BUSH

(ACANTHACEAE)

Description

Shrubby herb up to about 3 m high. Leaves opposite in pairs on slender petioles, ovate-lanceolate, obtuse at base, acuminate at tip, thin, up to 15 cm long and 5 cm broad. Flowers in narrow terminal panicles on short stalks, subtended by small bracts. Corolla about 4 cm long, deeply two-lipped, the lower slightly longer, dull purplish-red. Capsule about 1 cm long.

Habitat and Distribution

On roadside banks and in thickets in moderately wet places; Lesser Antilles and northern South American.

Medicinal Uses

A tea made from this plant is taken in the treatment of dysmenorrhoea and is also taken as a "cooling". St. John bush may be mixed into baby's bathwater to treat skin rashes.

Biodynamic Notes

Tests for cyanide were weakly positive to the sodium picrate paper.



ST. JOHN BUSH

Lantana camara

GRATER WOOD
KAYAKEET
KAYAKIT
RAMONGSI

(VERBENACEAE)

Description

Loosely erect or scrambling aromatic shrub with rough angular or sometimes prickly stems, up to 6 m or more high. The leaves are ovate, acuminate and toothed, up to about 12 cm long and 5 cm broad. Inflorescences stalked in the axils of upper leaves, the flowers yellow, turning orange or red, in compact heads. Fruit greyish-blue or blackish drupe about 4 mm in diameter.

Habitat and Distribution

Very common in hedges, rough pastures and thickets. General in the tropics.

Medicinal Uses

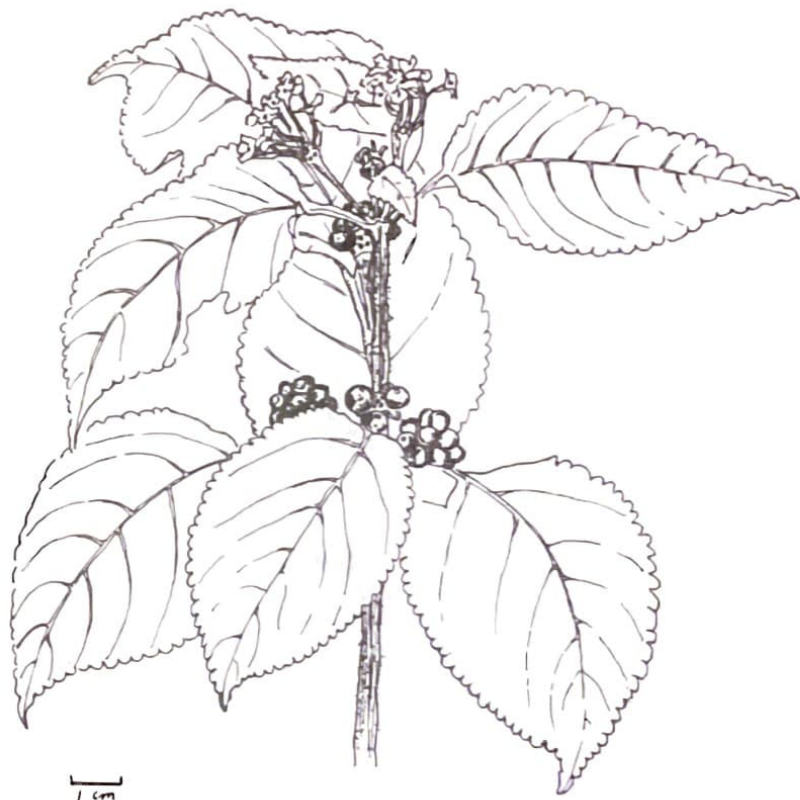
For coughs, colds and fevers, teas are taken which are made from the young tops of this plant. Sometimes these teas are also made from a mixture of Kayakeet, Bamboo leaves (*Bambusa vulgaris*), Black Sage (*Cordia curassavica*), and Christmas Bush (*Eupatorium odoratum*).

Wong (1976) states "Leaf juice for dysentery, jaundice. Flower heads or young leaves in loch for cough, cold in chest, consumption".

Biodynamic Notes

Lantana camara leaves contain the toxic terpenoids called Lantadenes which are also skin photosensitizers (Sharma et al., 1980). The flowers contain an anthelmintic oil (Manaralam et al., 1980; Avadhoot et al., 1980).

Young Kayakeet plants sometimes are confused with *Asclepias curassavica*, which contains cardioactive glycosides, and is known to kill cows (Adams et al., 1963). This situation increases the risk of poisoning in young children through accidental treatment by the less experienced "healers".



KAYAKEET

Laportea aestuans (Syn. *Fleurya aestuans*)

STINGING NETTLE
WARITOTE
ZOOTI

STINGING NETTLE

(URTICACEAE)

Description

Erect annual branched herb up to about 120 cm high. Leaves spirally arranged, stalked, ovate, toothed, up to 15 cm or more long and 12 cm or more broad with bristly pungent hairs. (Some people experience a stinging effect after touching this plant, while others do not.) Flowers very small and numerous in often flat-topped divaricately branched axillary paniculate cymes. Fruit about 1 mm long with a residual hooked stigma.

Habitat and Distribution

A rather common weed. General in the tropics.

Medicinal Uses

Using about 200 g of the plant tops to a litre of water, an infusion is taken in cases of oliguria. For venereal disease, the tea is taken from a mixture of the following plants -- Stinging Nettle, Wild Pinder leaves (*Desmodium incanum*), male Pawpaw (*Carica papaya*), Running Picka (*Smilax cumanensis*), Mayoc Chapelle (*Entada polystachya*), Mazay Marie (*Mimosa pudica*), Payapul (*Eleusine indica*), Gully root (*Petiveria alliacea*), Coconut root (*Cocos nucifera*), Roukou root (*Bixa orellana*).

Biodynamic Notes

The stinging action of this plant may be due to certain amine bases (Evans and Schmidt, 1980).



Leonotis nepetifolia

BALL BUSH
BALLHEAD BUSH
CARTWRIGHT BUMP
SHANDILAY

(LABIATAE)

Description

Erect annual herb 1 m or more high. Leaves broadly ovate, toothed, hairy, opposite in pairs. Flowers in globose clusters at the upper nodes. Calyces green, rather prickly; corollas dark orange.

Habitat and Distribution

Rather common as a weed of fields, roadsides and waste ground, evident mostly during the period October to March. Native of tropical Africa, now widespread in warm countries.

Medicinal Uses

The leaf decoction is used for coughs and fevers. Alternatively, crush and squeeze leaves, collect one tablespoon of the juice and take with a little salt.

Wong (1976) states, "Leaves in teas for fever; in vaginal suppository for womb prolapse, as abortifacient. Inflorescence infused in puncheon rum for fever; tea for malaria fever".

Biodynamic Notes

Antimalarial activity is not established (Watt and Breyer-Brandwijk, 1962). "Although ethanol extracts of *L. nepetifolia* in Porto Rico exhibited confirmed antitumour activity the biologically active constituents of the plant have yet to be identified" (Manchand and Blount, 1980).



Lippia alba

SANTA MARIA

(VERBENACEAE)

Description

Aromatic shrub with long straggling slender branches, up to about 1.5 m high. Leaves opposite in pairs or threes the blades oblong-elliptical, wedge-shaped at base, blunt or pointed at tip, finely serrate, usually up to about 3 cm long, sometimes longer, greyish pubescent beneath. Flower-heads in the leaf-axils, 1-2 cm long on stalks about the same length, often accompanied by additional axillary stipule-like leaves. Flowers very small, white, or pinkish or light purple.

Habitat and Distribution

Widely distributed in the American subtropics and tropics, in thickets and on stony ground mostly near the sea.

Medicinal Uses

An infusion is made from Bene Bush (*Sesamum indicum*), Sugar Apple bush (*Annona squamosa*), Man-better-man (*Achyranthes indica*), Basil (*Ocimum sp.*), Pop Bush (*Passiflora foetida*), Nickaracka (*Gliricidia sepium*) and Santa Maria, then some Mint Oil (*Mentha sp.*) is added. A tablespoonful is given to treat asthma in children.

Wong (1976) states, "Decoctions of (Santa Maria) leaves for flu, fever and cold in chest. Crushed (Santa Maria) leaves inhaled to promote sleep".

Biodynamic Notes

The essential oils of South American species of *L. alba* have been analysed in detail (Craviero et al., 1981).



SANTA MARIA

Lygodium venustum

CORD VIOLAN
CORDE VIOLIN
FIDDLE BUSH

(FILICES)

Description

Fern with climbing and twining indeterminate fronds, each short branch with a pair of compound primary pinnae, the whole plant more or less softly hairy. Pinnae 5 - 40 cm long, again branched into 5 - 20 or more secondary pinnae and these, especially proximally, sometimes further branched or at least palmately lobed. Fertile segments of pinna-branches finger-like, 5 - 15 mm long, with cup-like hairy marginal flaps protecting the sporangia in two rows.

Habitat and Distribution

In thickets and secondary woodlands; scattered through the American tropics, Greater Antilles, Guadeloupe, Grenada, Trinidad and Tobago.

Medicinal Uses

For hypertension, a cup of an infusion of about 150 g Fiddle Bush in water is taken. Great care and constant monitoring are required as the blood pressure might fall to too low a level.

Wong (1976) states, "Rhizome decoctions for heat and venereal diseases", under the name *L. volubile*, a distinct species, with simple, usually larger segments distributed over more or less the same geographical range.

FIDDLE BUSH



Malachra alceifolia

GIMAUVE

(MALVACEAE)

Description

Robust herb or undershrub up to about 3 m high. The stem is beset with large stiff mostly persistent pungent hairs each with 2 or 3 arms or simple. The leaves are ovate to suborbicular and lightly angled or lobed, serrate-dentate margined, up to about 10 cm long and broad. Flowers yellow, sessile or short-stalked in clusters subtended by broad leafy bracts; petals about 15 mm long.

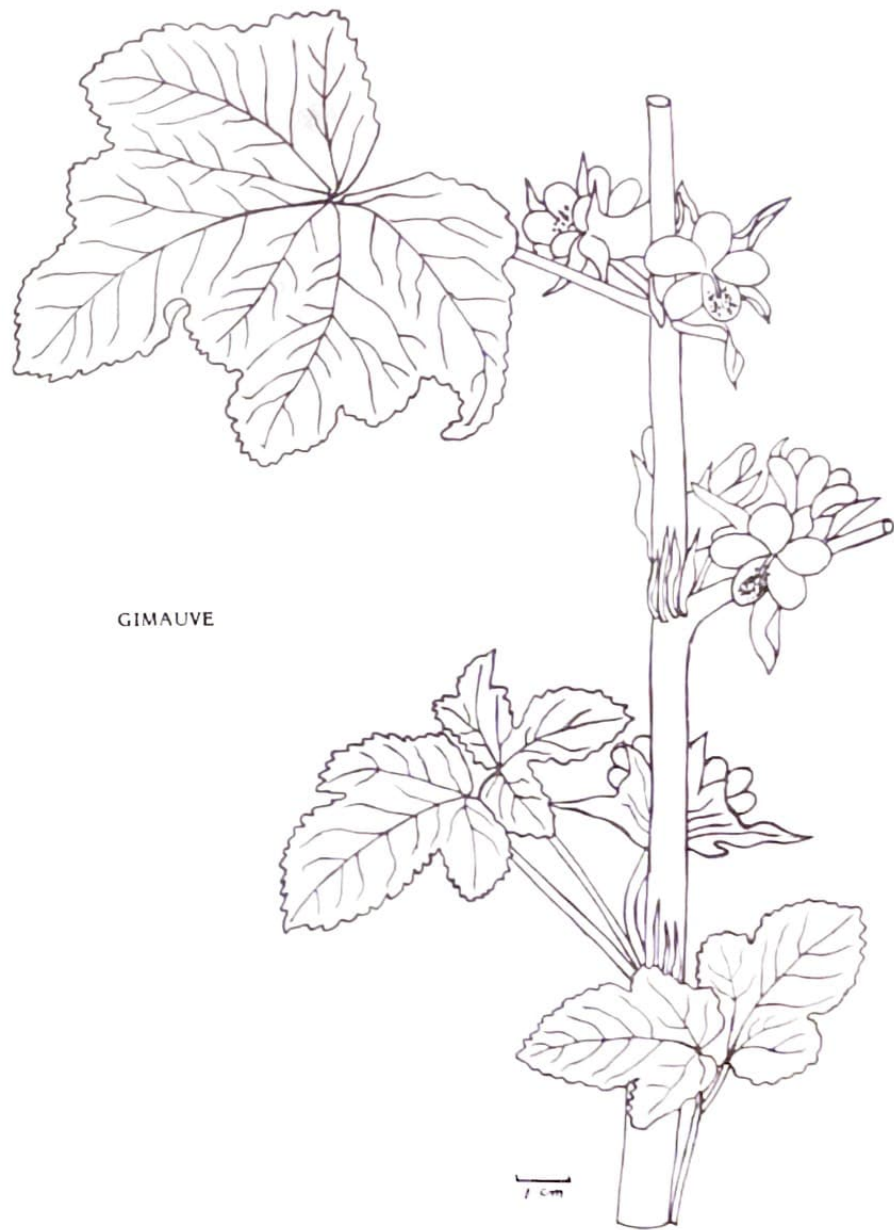
Habitat and Distribution

Throughout the region from Mexico to South America and in most of the islands; sparsely naturalized in the Old World tropics.

Medicinal Uses

An infusion of the flowers is used for coughs and colds.

Wong (1976) states, "Leaves in poultice and bath for sores, lashes; in gargle for sore throat; in loch for cough. Tea of flowers for heat".



Malpighia coccigera

MYRTLE

(MALPIGHIACEAE)

Description

Shrub up to about 1 m high, diffusely branched and somewhat straggling. Leaves opposite in pairs, the blade ovate or rounded, the margin sinuate-dentate with spines, subsessile, glossy above, glabrous. Flowers solitary or few together in the leaf-axils; sepals with six glands; petals clawed, pink or white, the largest about 1 cm long. Drupe subglobose, red, with three stones, 9-10 mm in diameter.

Habitat

Native of rocky places in the West Indies, now probably known only in cultivation, introduced into many warm countries as an ornamental.

Medical Uses

A decoction of the plant tops is used in the treatment of tumours.

MYRTLE



1 cm

Mammea americana

MAMMEY APPLE
MAMMY APPLE

(CLUSIACEAE)

Description

Tree up to about 18 m high. Leaves opposite in pairs, elliptic or obovate up to 25 cm long and 10 cm broad, dark green, pellucid-dotted, exuding milky sap when broken. Flowers solitary or few together, fragrant, with 4 - 6 obovate white petals up to about 20 mm long. Fruit drupaceous with 1 - 4 fibrous-coated stones, the skin is rough, brown and rather thick, the flesh is yellow and pulpy; up to about 15 cm in diameter.

Habitat and Distribution

Probably wild in most of the West Indian islands but so frequent in cultivation that it is difficult to determine the natural habitat; also through continental America from Mexico to Brazil and introduced into the Old World tropics.

Medicinal Uses

The seeds are grated and mixed in rum or in Coconut oil (*Cocos nucifera*) and applied to the scalp for head lice. This treatment is applied just before bed time and repeated as required. The same treatment is used for "chiggers" in the feet.

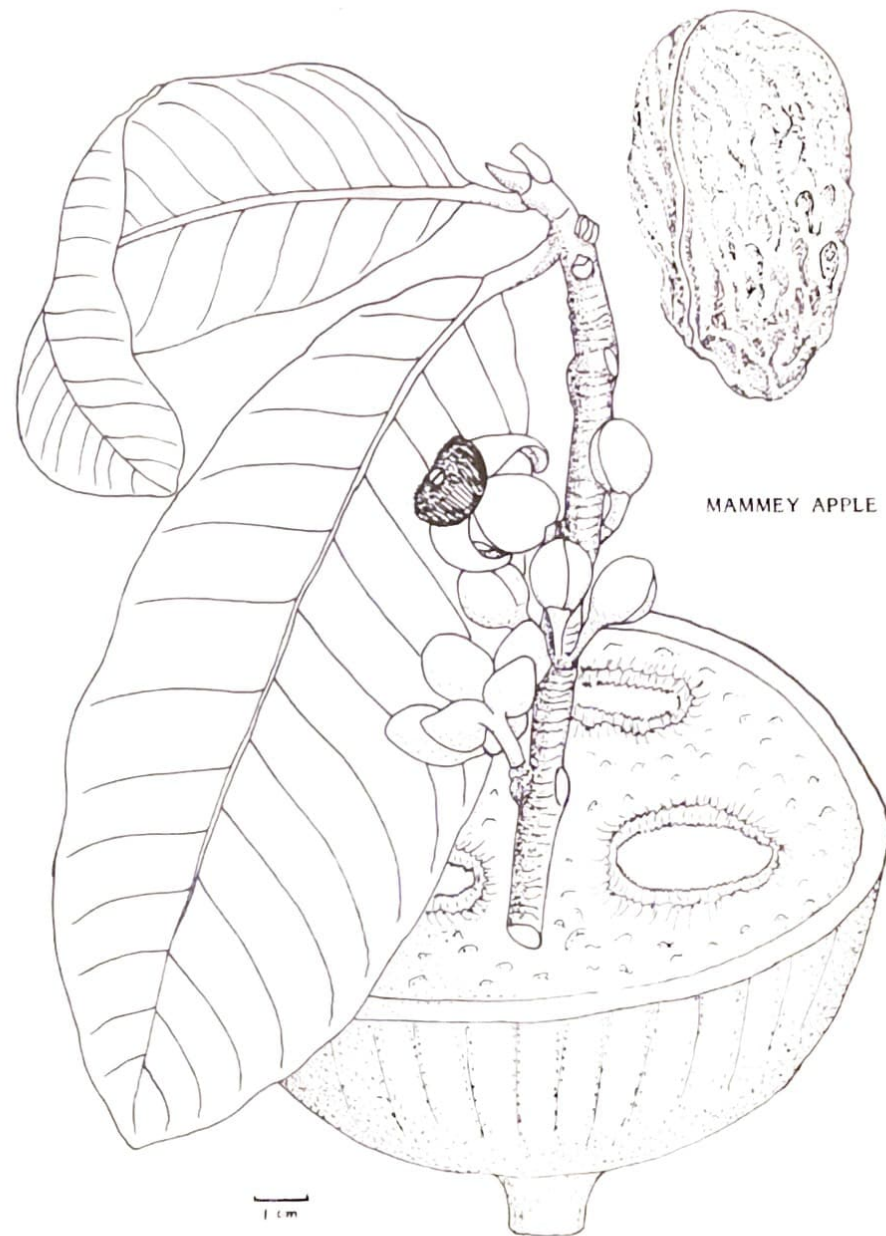
Wong (1976) states, "Grated seed in coconut oil against lice in hair. Fruit skin tea for indigestion. Tea of leaves for hypertension, of bark for cough".

Biodynamic Notes

Mammey apple seeds contain insecticidal coumarins which may be non-toxic to humans. (Crombie et al 1972).

FOOT NOTE

Not to be confused with the Mamey Sapote (*Pouteria sapota*) which has spirally arranged leaves and very smooth seeds with a broad hilum (SAPOTACEAE), related to Sapodilla.



Mangifera indica

MANGO

(ANACARDIACEAE)

Description

Tree up to 15 m or sometimes more high, typically heavy-branched from a stout trunk. Leaves spirally arranged on the branches, lanceolate-elliptical, pointed at both ends, the blades mostly up to about 25 cm long and 8 cm broad, sometimes much larger, reddish and thinly flaccid when first formed (new flush). Inflorescences are large terminal panicles of small polygamous, fragrant, yellow to pinkish flowers. Fruit a drupe variously shape, according to the variety, from ellipsoid to obliquely reniform, 5 -15 cm long.

Habitat and Distribution

Completely naturalised in many of the West Indian islands and here and there a component of mature secondary vegetation. Native of tropical Asia and introduced whenever the climate is sufficiently warm and damp.

Medicinal Uses

To treat ringworm apply the hot exudate from the burned woody tissue of the Mango tree.

Wong (1976) states, "Leaf teas for fever, diarrhoea, insomnia. Tea or infusions of bark for hypertension".

Biodynamic Notes

Particular care should be taken in using the shoots and flowers since they may be contaminated with fungal toxins (Ghosal et al., 1978). Mycotoxins are amongst the most important chemical hazards in the rural countryside (Schlatter, 1980).



Manihot esculenta

CASSAVA

(EUPHORBIACEAE)

Description

A perennial shrub with slender little-branched erect nodose glabrous stems arising from a stock bearing thick tuberous roots; usually growing to about 3 m high. Leaves spirally arranged, long-stalked to a blade deeply divided into 3 - 7 linear to elliptic-lanceolate lobes, exuding a milky sap when broken. Flowers not often formed because plants are harvested before flowering takes place; in loose panicles. Fruit a small capsule; seeds mottled about 12 mm long.

Habitat and Distribution

Native probably of Brazil, now widespread in the tropics. Cultivated and occasionally relict.

Medicinal Uses

Grated Bitter Cassava mixed with olive oil is applied to sores on the feet.

Wong (1976) states, "Freshly cut tuber on snake-bites; tuber flour in poultices on boils, sores; in water drunk for diarrhoea, dysentery. Bath of leaves for flu, marasmus. Grated tuber in poultice on abscesses".

Biodynamic Notes

Toxic cyanogenetic glycosides are found throughout the plant, but their concentrations vary greatly according to cultural and edaphic conditions. These glycosides are de toxified during traditional cooking processes (Nestel, 1973).

CASSAVA



Manilkara zapota

SAPODILLA

(SAPOTACEAE)

Description

Tree up to 15 m or rarely more high, the foliage usually rather dense and dark green; branchlets and young leaves beneath brownish-pubescent. Sap milky. Leaves spirally arranged in clusters at the branch-tips, elliptical, rather broad at tip and then shortly pointed, up to about 13 cm long and 5 cm broad. Flowers solitary in the axils, the calyx rusty-pubescent about 1 cm long, the corolla white, a little longer. Fruit subglobose, brown, rough-skinned, 5 - 8 cm diameter, the pulp sweet, the seeds rather flat.

Habitat and Distribution

Mostly cultivated, occasionally escaped. Native of tropical America, introduced into the Old World tropics.

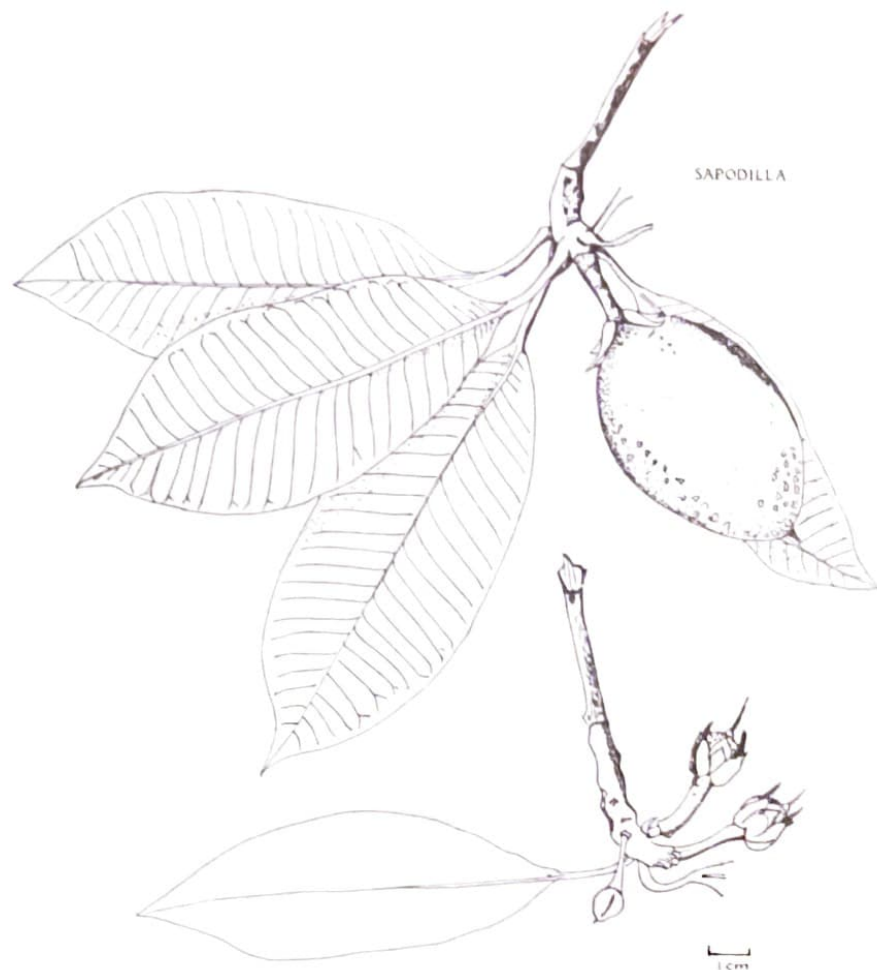
Medicinal Uses

A decoction of crushed Sapodilla seeds is drunk for oliguria. A decoction of Sapodilla leaves together with Portugal leaves (*Citrus reticulata*) is taken for hoarseness due to colds.

Wong (1976) states, "Decoctions of (Sapodilla) seed for oliguria; of yellow leaves for colds, flu, fever, cough, diarrhoea; of bark for diarrhoea; of root for amenorrhoea".

Biodynamic Notes

The bark of this tree provides chicle for use in chewing gums of commerce.



Microtea debilis

ALANTUKAI
ALLATUKAI

(PHYTOLACCACEAE)

Description

Annual herb 15 - 45 cm high with spirally arranged leaves. Leaves obovate to oblanceolate, acute or obtuse at tip, tapered at base, up to 7 cm long and 3-5 cm broad, thin, light green. Flowers small, white, in terminal spike-like racemes up to about 3 cm long. Perianth-members 5, 1.2 mm long, persistent and becoming greenish in fruit. Fruit 1.5 mm long, covered with spine-like tubercles in a network.

Habitat and Distribution

Common in some islands, rare in others, perhaps overlooked being usually a low weedy herb in pastures and lawns and in sandy places near the sea. Continental tropical America and the West Indies.

Medicinal Uses

An infusion of the leaves taken for colds and fever, for as long as required.

Wong (1976) states "Decoctions of herb for cough, colds, flu, fever, whooping cough".



Mimosa pudica

MAZAY MARIE
SENSITIVE PLANT
SHAME BUSH
TI MARIE

(LEGUMINOSAE-MIMOSOIDEAE)

Description

Strong-stemmed undershrub with erect or prostrate prickly branches, up to 50 cm or more long, the plant glabrous or hispid. Leaves responding to tactile or heat stimuli by collapsing, of usually two approximate pairs of pinnae each with narrow leaflets in 15 - 25 pairs, the leaflets 6 - 10 mm long. Flower-heads rounded, pink on solitary or clustered peduncles, 1.0 - 1.5 cm in diameter. Pods linear-oblong, constricted at the 2 - 5 joints, bristly-margined.

Habitat and Distribution

A weed of pastures and open uncultivated land. Native of tropical south America, now widespread.

Medicinal Uses

A tea from the whole plant is used for oliguria, for dysentery and as a "cooling". Ti Marie plus Man-better-man (*Achyranthes indica*) is made into a strong tea to be taken for three days for venereal disease.

Wong (1976) states, "Bush and root teas (of Ti Marie) for oliguria, heat, to promote sleep".

Biodynamic Notes

Mimosa pudica contains antispasmodic alkaloids (Abdul Quashem et al., 1977), and Mimosine, an amino acid which is an efficient depilatory agent (Merck, 1976), which has been implicated in the characteristic leaf movements of this plant (Baskin and Cooper, 1980). The leaf-movement factor is a glycoside of a phenolic carboxylic acid, (Schildnecht et al., 1980).

The sister species *M. hamata* contains phenolic antimicrobial agents, (Husain et al., 1979).

TI MARIE



1cm

yes

Momordica charantia

CARAILI
CORAILI
POPILOLO
POPOLOLA
POPOLOLO
SORROW SEED

(CUCURBITACEAE)

Description

Slender-stemmed tendril climber, the older stem often flattened and fluted, to 6 m or more long. Leaves alternate, cut into 5 - 7 narrow-based lobes, the lobes mostly blunt but with small marginal points, up to about 12 cm long, very thin-textured and characteristically pungent-aromatic. Flowers, yellow, on short (female) or long (male) peduncles, short-lived. Fruit narrowed to both ends, ribbed with prominent tubercles on the ribs, 8 - 15 cm long, orange when ripe and then becoming softly fleshy and opening to reveal pendulous seeds covered with red pulp.

Habitat and Distribution

Common on fences and shrubs and in hedgerows, in the subtropics and tropics of both hemispheres.

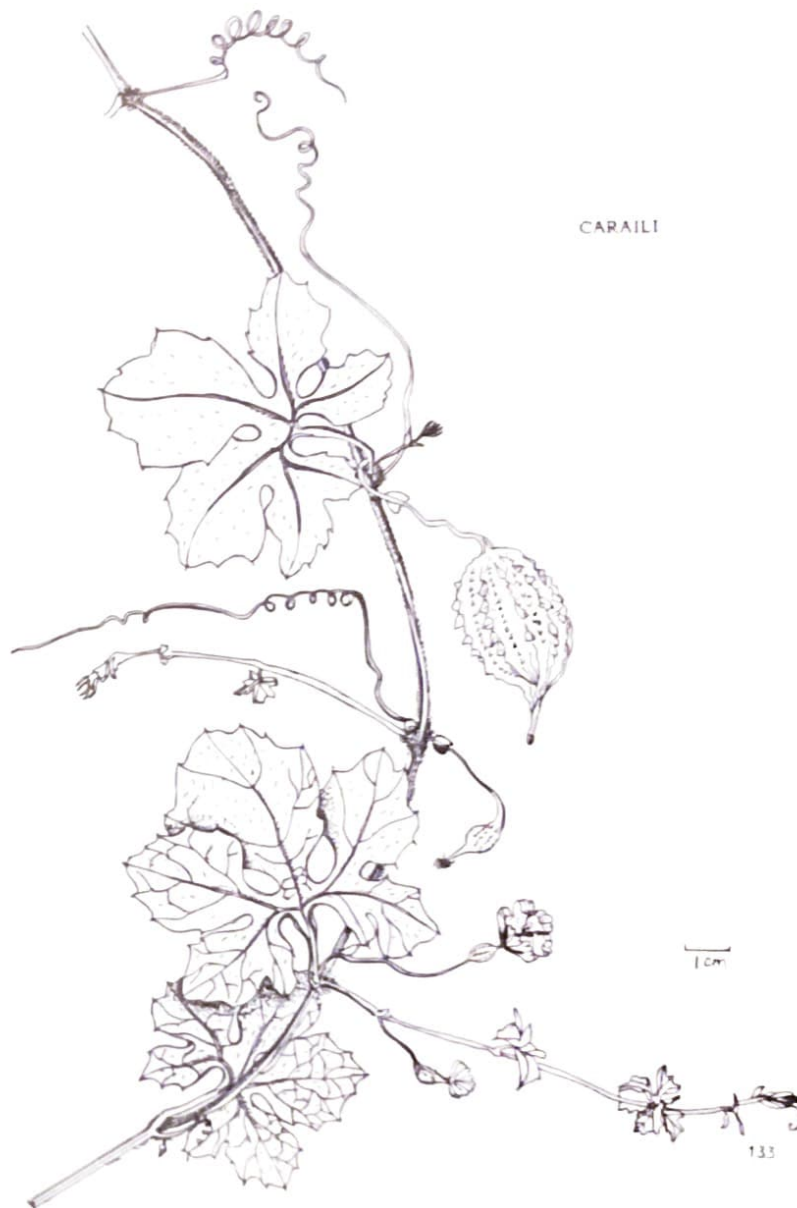
Medicinal Uses

Young girls suffering from painful menstruation are given half a cup of a decoction made from caraili leaves. Boiling is for two minutes, and often the mixture includes a piece of Malomay (*Euphorbia hirta*), a pinch of salt, and a strip of Orange peel (*Citrus aurantium*). Adults take a leaf tea for high blood pressure.

Wong (1976) states "Leaf decoctions for diabetes, hypertension, dysentery, worms, malarial fever; bath and poultice for rheumatism. Fruit juice for diabetes".

Biodynamic Notes

The fruits have been established as hypoglycaemic when ingested by rabbits (Akhtar et al., 1981); and also antifertility in action (Dixit et al., 1978). Anti-leukaemic agents have been found in *M. charantia* (Licastro et al., 1979).



Morinda citrifolia

PAIN BUSH

(RUBIACEAE)

Description

Shrub or small tree 3-4 m or more high. Leaves opposite in pairs with large rounded stipules on innovative branches, broadly elliptic to oblong-ovate, acute, cuspitate or obtuse at tip, cuneate to rounded at base, shiny, up to 65 cm long and 24 cm broad. Flowers in compact stalked heads, each giving rise to a compound fruit resembling a small breadfruit. Corolla white, the tube about 1 cm long. Ripe fruit oblong, up to 10 cm long and 6 cm broad, becoming white then semi-transparent, squashy and foetid.

Habitat and Distribution

Naturalized in the New World tropics in waste places especially near the sea, after introduction from tropical Asia and Australia.

Medicinal Uses

The leaf is heated and applied to painful areas on the body.



PAIN BUSH

Myristica fragrans

NUTMEG

(MYRISTICACEAE)

Description

A dense-crowned tree, up to 10 m or more high, with aromatic wood. Leaves simple, alternate, oblong-elliptic, acutely acuminate, pinnately veined, paler beneath, up to 13 cm long and 6.5 cm broad. Flowers small, cream-yellow. Fruit oval to subglobose, about 5 cm long, usually yellow, splitting to reveal a dark seed (Nutmeg) covered by a flattened, usually red (or yellow) branched aril (Mace).

Habitat and Distribution

Native of the Molucca Islands in the East Indies, now cultivated in the islands of the West Indies and elsewhere.

Medicinal Uses

Sufferers from "stroke" keep a piece of the Nutmeg seed in their mouths to ward off further attacks.

Wong (1976) states, "Decoctions and infusions of seed for asthma, malarial fever, dysmenorrhoea, in postpartum depurants. Grated seed in ointments for fever, flu, pneumonia".

Biodynamic Notes

The volatile oil contains Myristicin, Elemicin and Safrole together with a number of terpenoids. It produces hallucinations, and may be toxic (Weil, 1965). Myristicin is also a useful insecticide (Lichtenstein and Casida, 1963).

NUTMEG



Neurolaena lobata

ZEBAPIP
ZEBAPIQUE

(COMPOSITAE)

Description

Erect shrubby little-branched coarse herb up to 2.5 m high or rarely taller. The stem is ribbed and its leaves impart a yellow colour to the skin when handled. Leaves spirally arranged, pointed at both ends, toothed, sometimes 3-lobed, up to 30 cm long and 10 cm broad. Flower-heads on slender stalks, about 5 mm broad. Florets uniformly tubular, yellow, accompanied by receptacle-scales.

Habitat and Distribution

Rather common, especially on heavy soils in damp areas. Throughout the region except on the drier islands.

Medicinal Uses

This is used to make tea for fevers and malaria. A preparation of six leaves of Zebapique per litre of boiling water makes a bitter concoction, which is taken by the wine glass for belly-pains and painful menstruation.

Wong (1976) states, "Leaf tea for diabetes. Infusion of leaf in vermouth drunk for colds, bles, malaria fever, dysmenorrhoea, biliousness, as aperitive".

Biodynamic Notes

The bitter principles are terpenoid but inactive as anti-tumour agents in the dried leaf extracts of this plant (Manchand and Blount, 1970).



15

Nopalea cochenillifera

RACHETTE

(CACTACEAE)

Description

Shrubby much branched cactus with flattened elliptical segments with rounded margins, the plant up to 4 m or more high. Areoles are generally spineless, but clusters of minute prickles may develop here and there; minute leaves which fall off very early develop at these nodes on new branches. Flowers develop singly along the upper margins of the joints, they are 5.5 - 7 cm in overall length and have erect crimson petals, exceeded by the stamens.

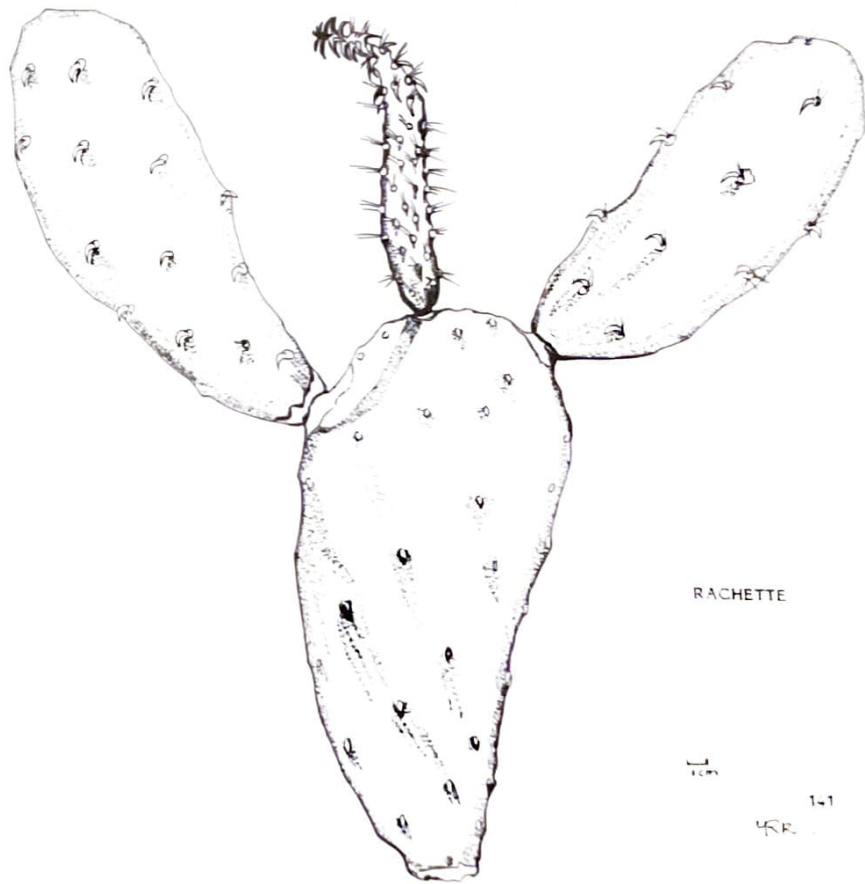
Habitat and Distribution

Probably a native of Mexico, now widespread in cultivation in the tropics. In dry weather the segments become infested with a gregarious mealy bug, the Cochineal Bug, which is the source of the natural cochineal dye.

Medicinal Uses

Used as a shampoo to treat dandruff. Rachette is boiled in water together with burnt bread and the strained extract is taken as a cooling. The roasted Rachette is also applied to inflamed and painful bruised areas.

Wong (1976) states, "Stem is poultice on erysipelas, boils, sores; placed on belly for diarrhoea. Stem juice drunk for heat".



RACHETTE

15

15

Ocimum gratissimum

AROBABA

(LABIATAE)

Description

Shrubby plant with square-sectioned thinly hairy branches, up to 2 m high. Leaves opposite in pairs, ovate to elliptic-lanceolate, up to 15 cm long and 5 cm broad, tapered at the base, acuminate at the tip, serrate-dentate, thinly hairy only on the veins, copiously translucent-punctate in the lamina. Panicles terminal with usually 3 pubescent branches up to about 15 cm long, the pedicels curved and about 2 mm long. Calyx campanulate, very irregular, up to about 5 mm long, the lower lip closing in fruit, the midlobes shorter. Corolla irregular, greenish. Nutlets subglobose, dark brown, lightly pitted, about 1 mm in diameter.

Habitat and Distribution

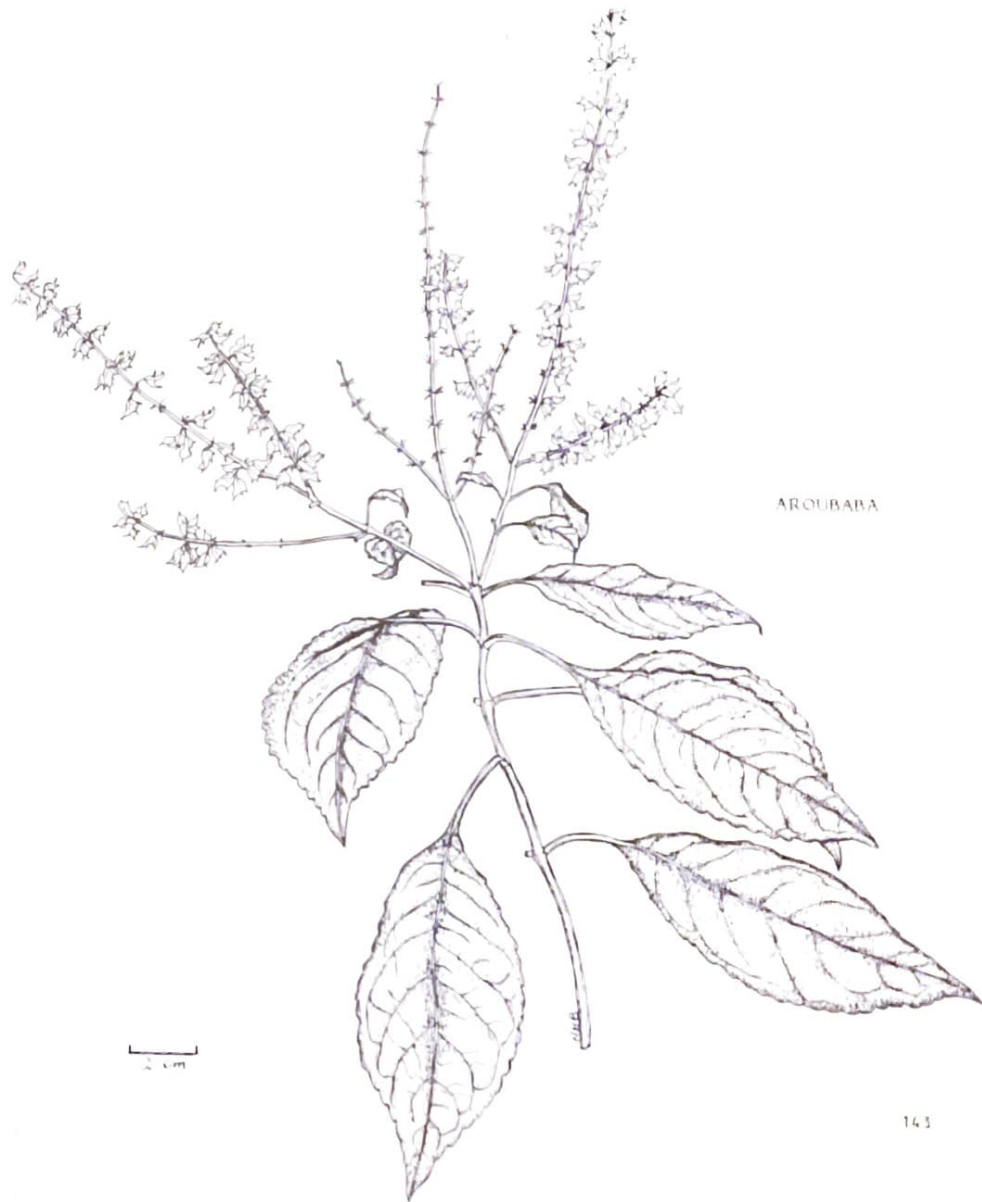
Known only in cultivation following introduction from the Old World tropics. *Ocimum sanctum*, known as Toolsie, is a sacred plant of Hindus, and is also introduced in Trinidad.

Medicinal Uses

A tea made from two or three leaves per cup is used for colds and high fever. This tea makes the patient perspire profusely and this is desirable for the cure. Sometimes, Bois cano (*Cecropia peltata*) is mixed with Aroubaba in making this tea.

Biodynamic Notes

Ocimum sanctum contains Methylchavicol, Eugenol and other volatile oils of commercial importance in India (Pareek et al., 1980).



Parthenium hysterophorus

WHITEHEAD BROOM

(COMPOSITAE)

Description

Annual diffusely branched taprooted aromatic herb up to about 120 cm high, usually about half that height. Leaves alternate, deeply cut to segments about 2 - 4 mm broad, overall up to about 15 cm long and nearly as broad, rather hairy. Flower-heads on slender stalks in loose panicles, about 5 mm in diameter, the florets white. Achenes black, flat, about 2 mm long.

Habitat and Distribution

Common along roadsides and in rough pastures and open waste places throughout the American subtropics and tropics. Introduced into the Old World.

Medicinal Uses

Teas for colds. A decoction is added to the bath water to treat skin rashes.

Biodynamic Notes

Parthenin is a terpenoid constituent which produces dermatitis in people in contact with the plant especially in parts of India and Australia (Picman et al., 1980; Mitchell, 1975).



Passiflora quadrangularis

BARBADINE

(PASSIFLORACEAE)

Description

A robust vine with 4-angled or 4-winged stem, broad alternate leaves and tendrils. Leaf-blades broadly ovate, up to 20 cm long, acuminate at tip, cordate to rounded at base, entire-margined and strongly veined. Leaf-stalk with 2 - 3 pairs of glands. Flowers showy, 8 - 10 cm diameter, the petals white or pinkish, the corona-filaments bluish-purple with white speckles. Fruit ovoid, 12 - 20 cm long and up to 15 cm broad.

Habitat and Distribution

Native of Central America, now widely cultivated in tropical countries.

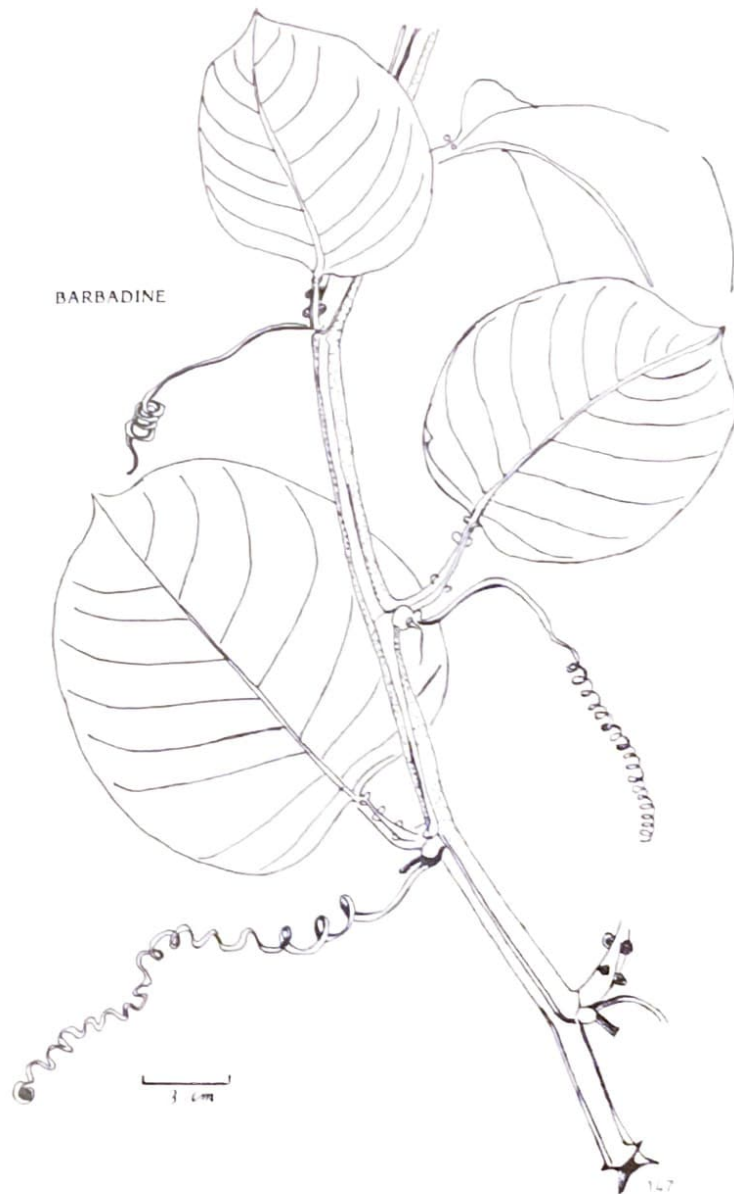
Medicinal Uses

Leaf teas are taken for high blood pressure.

Wong (1976) states, "Tea of leaves for heat, hypertension, diabetes".

Biodynamic Notes

The sedative and antihypertensive constituents of *P. quadrangularis* are under much study (Bombardelli et al., 1975).



Peperomia pellucida

SHINING BUSH
SHINY BUSH

(PIPERACEAE)

Description

Delicate, erect, succulent herb up to about 30 cm high. Leaves alternate heart-shaped, pellucid, palmately 5-nerved, up to about 25 mm long and wide. Spikes mostly leaf-opposed or terminal, rarely axillary, up to about 5 cm long, slender, simple. Fruit ovoid, ribbed, up to 1 mm long.

Habitat and Distribution

Common as a weed of damp shady places. General in the tropics.

Medicinal Uses

A decoction is used as a cooling

Wong (1976) states, "Herb decoctions for flu, cough, heat, diarrhoea, cold in chest. Eaten fresh for sore throat."

Biodynamic Notes

The volatile oils of *P. pellucida* contain Apiol and other terpenoids (Olivieros - Bellardo, 1967).



SHINY BUSH

Peperomia rotundifolia

COCOA MINT
MOWAN
MOWOR

Description

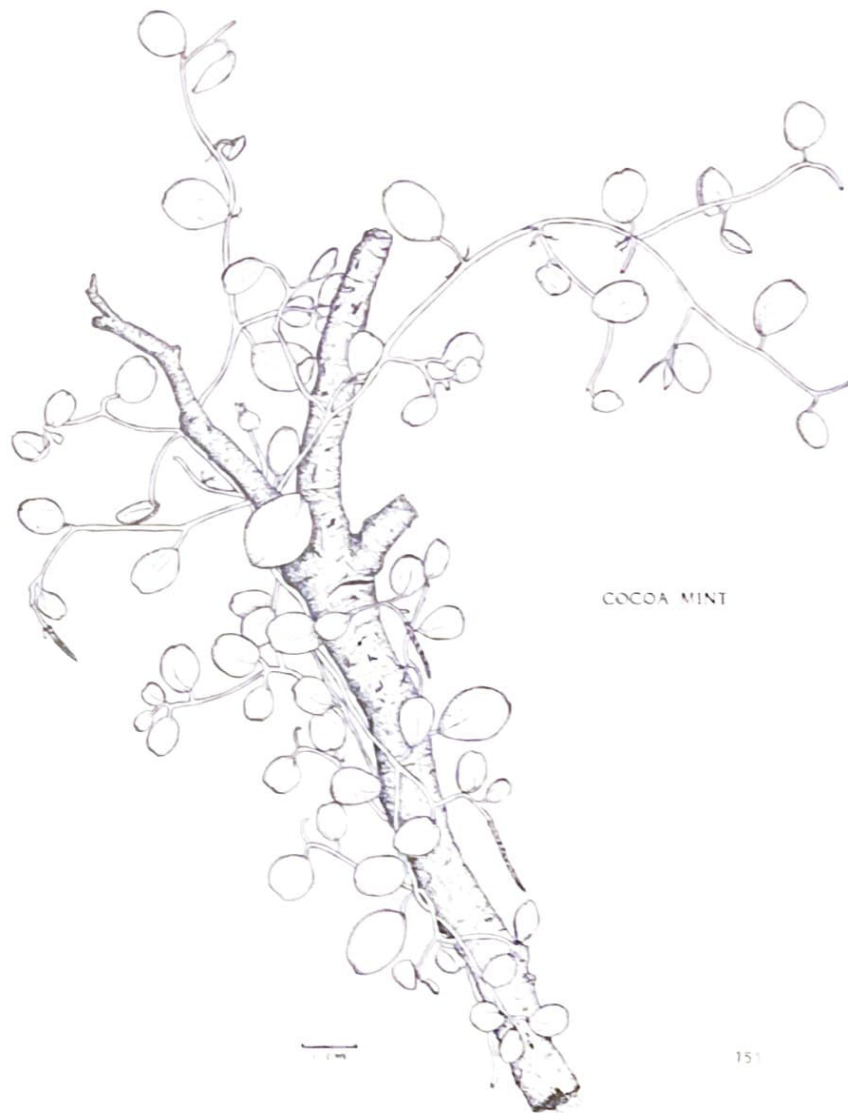
A small creeping epiphytic herb rooting frequently at the nodes. Leaves rounded in outline, nearly flat on one side, convex on the other, alternate, up to 16-18 mm long and broad, drying thin, usually slightly hairy, with 3 obscure nerves. Flower-spikes solitary, thinly rod-like, erect, mostly about 2 cm long.

Habitat and Distribution

Occasional in damp shady places on the trunk and branches of trees, sometimes locally common on the branches of Cocoa trees. Throughout tropical America and in tropical Africa and Madagascar.

Medicinal Uses

For colds and fevers, a tea is made using a small handful of the plant, all parts included, per cup of water.



Persea americana

AVOCADO
ZABOCA

(LAURACEAE)

Description

Tree with straggling-ascending branches, usually up to about 15 m high, sometimes much taller. Leaves spirally arranged, often clustered near the branch-ends, narrowly to broadly elliptical or obovate, usually pointed at the tip, up to 20 cm long and over 15 cm broad, with well developed petioles, glaucous beneath. Flowers in a much branched compact panicle shorter than the leaves, greenish-yellow. Fruit variable in size and shape according to the variety, usually shiny and green or purple when ripe, often pear-shaped, up to about 15 cm long; flesh soft, greenish or yellow, oily, surrounding one large loose round seed.

Habitat and Distribution

Cultivated and occasionally naturalized. Native of Mexico, now widespread in the subtropics and tropics.

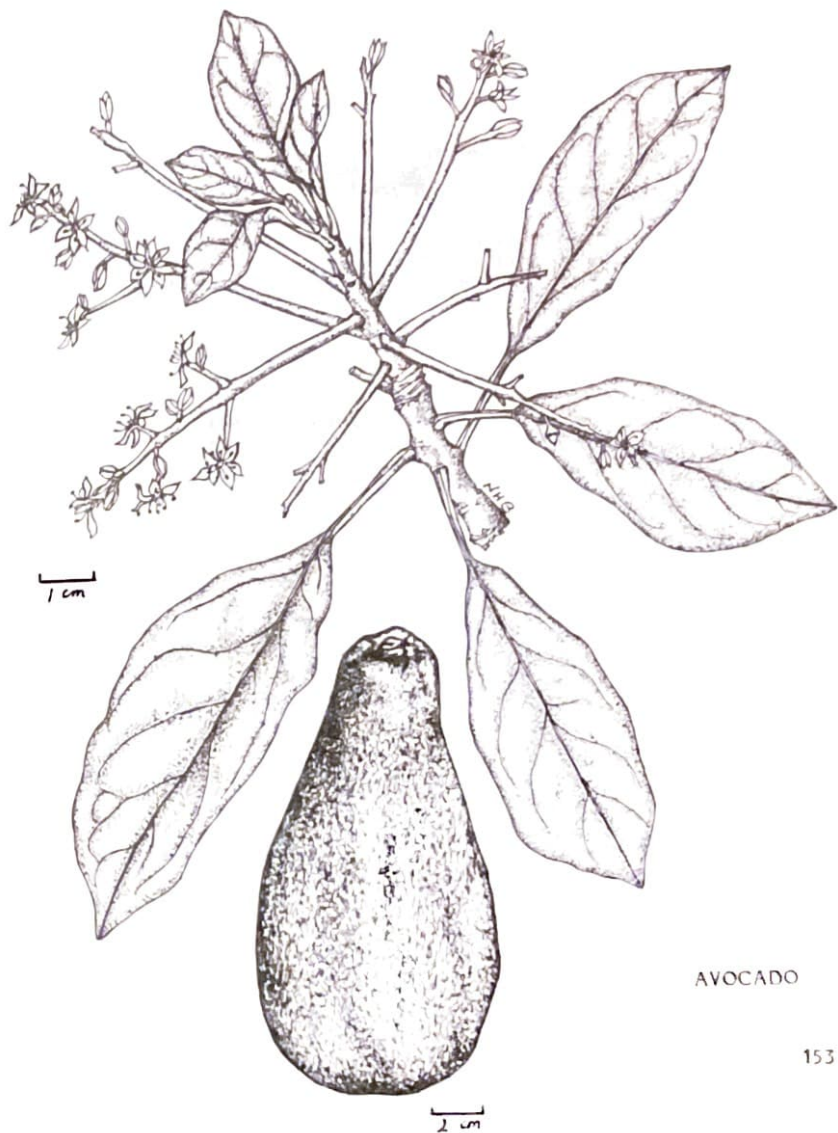
Medicinal Uses

A leaf decoction is taken for high blood pressure. The leaves are also used in baths for pains and fever. The grated seed may be used to treat jiggers (ground worms) in the feet.

Wong (1976) states, "Leaf and bark teas for diarrhoea, colds. Poultice of leaves for headache, rheumatism, sprains".

Biodynamic Notes

Chemical analyses have been done of the oils of Avocado (Montes et al., 1981). The leaf extracts are antihypertensive in rats (Feng et al., 1961). The fruit oil is "stimulant phagocyttaire" (Delaveau et al., 1980); and cyanide has been found in the seeds and leaves (Morton, 1981).



AVOCADO

Petiveria alliacea

GULLY ROOT
KOJO ROOT
MAPIURITE

(PHYTOLACCACEAE)

Description

Deeply rooted perennial undershrub with tough stems up to over 1 m high in flower, the whole plant emitting an acrid garlic odour when broken. Leaves spirally arranged, elliptical, acuminate, up to 20 cm long and 7 cm wide. Flowers in long slender spikes up to 40 cm long; perianth 4-membered, white at first becoming green in fruit. Fruit about 6 - 8 mm long, appressed to the rachis of the inflorescence, developing two deflexed apical very sharply pointed bristles.

Habitat and Distribution

A weed of semi-shaded undisturbed ground from Florida and Mexico to Argentina and throughout the West Indies. Introduced and now established in some parts of tropical Asia and Africa.

Medicinal Uses

For early arthritis, boil the whole plant in water and to the aqueous extract add some urine and a little Epsom salts and apply lukewarm in a cloth to bandage the area.

Wong (1976) states, "Root teas and infusions for flu, venereal diseases, cystitis, bles, dysmenorrhoea, womb inflammation, in abortifacients. Root bath for heat; poultice for cold in head".

Biodynamic Notes

Antimicrobial activity has been ascribed to extractives of this plant (Segelman and Segelman, 1975); and, the milk of cows which eat this plant is said to be tainted with sulphur compounds (Segelman, 1975)

The leaf extracts of *P. alliacea* gave positive tests for alkaloids.



GULLY ROOT

155

U.S.P.

Phyllanthus amarus

GRAINE AMBA FEUILLE
GRENAMBAFEU
SEED-UNDER-LEAF

(EUPHORBIACEAE)

Description

Short-lived usually erect little-branched annual herb, often completely green including the flowers. Specialized determinate branches resemble compound leaves, but the true leaves are simple, very small, up to 14 mm long and 6 mm wide, but mostly much smaller, and bear the inconspicuous flowers in pairs in their axils. Each pair of flowers usually comprises one male and one female. Capsule flattened-globose, about 2 mm long. Seeds light brown, about 1 mm long, with 5 - 6 longitudinal ridges on the back.

Phyllanthus urinaria is known as Seed-under-leaf, and closely resembles *P. amarus*. It differs in having angled stems which are often slightly reddish and the plants and leaves are generally a little larger. The seed has coarse transverse, rather than longitudinal, ridges across the back. Plants of these species have been misidentified and referred to *P. niruri* which is, however, a different plant not reported from Trinidad and Tobago. *P. urinaria* is a native of tropical Asia, now widely established in the New World.

Habitat and Distribution

Common as a weed of disturbed and waste ground. Although first described from West Africa, this species is a native of tropical America which has subsequently become pantropical.

Medicinal Uses

Herbal infusion is taken for oliguria. Special precautions should be taken in its use as it is generally believed to be abortifacient.

Wong (1976) states, "Herb decoctions for oliguria and venereal diseases".

Biodynamic Notes

A number of chemical analyses have been done on *P. amarus*, but, so far, no connections have been made with the usage of this plant (Morton, 1981).



Pilea microphylla

DITE BETELMI
DITEN BETHELMY

(URTICACEAE)

Description

Small branched glabrous prostrate pendulous (on banks) or erect herb, with usually soft stems and numerous obovate opposite leaves; ranging from 1.5 - 7 mm long, these rounded at the tip, wedge-shaped at the base. Flowers unisexual, minute, in very shortly stalked inflorescences clustering at the nodes. Anthers of male flowers opening elastically.

Habitat and Description

Common as a weed of damp banks, stony pathways and flower-pots. Throughout all warm parts of the world and in hothouses in temperate countries.

Medicinal Uses

A tea is taken for oliguria.



Pimenta racemosa

BAY LEAF
BAYRUM TREE

(MYRTACEAE)

Description

A tree to 15 m high with smooth whitish bark variegated in large patches with light colours, the few major branches ascending. Young twigs 4-angled and slightly flattened, bearing rich green highly aromatic leaves in opposite pairs. Leaf-blades oblong to elliptical, (4-) 6-12 (-20) cm long, blunt at the tip, prominently net-veined. Inflorescence paniculate with many small flowers. Calyx with 5 spreading sepals, the lobes much wider than long and not clearly defined. Petals white, 3 mm long. Berries subglobose to ellipsoid, 8 - 10 mm long.

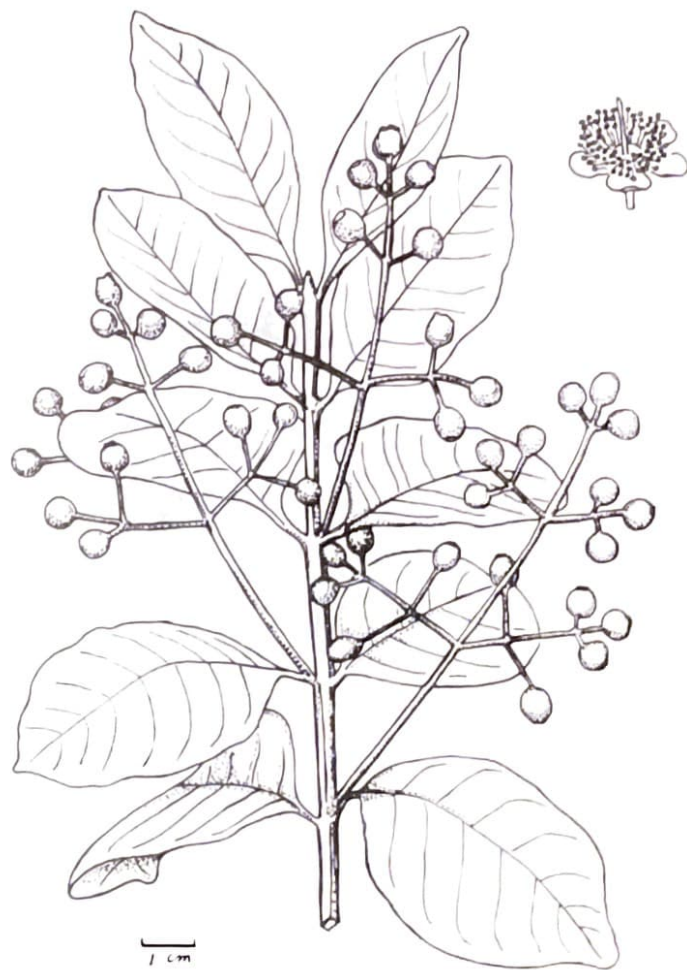
Habitat and Distribution

This species is native almost throughout the Caribbean region from Cuba to Tobago, as well as in Venezuela and the Guianas. It has been brought into cultivation in Florida, the Bahamas, Jamaica and Trinidad and, further afield in the East Indies and other parts of Asia and the Pacific. The tree is locally plentiful in Tobago where natural populations have been augmented by planting in the past and regeneration takes place vigorously.

Medicinal Uses

Leaf decoctions are sometimes used for colds.

Wong (1976) states, "Leaf decoctions for flu, cold in chest, pneumonia, fever, stroke. Leaf in shark oil for pleurisy".



BAY RUM TREE

Piper tuberculatum

CANDLE BUSH

(PIPERACEAE)

Description

Shrub to 3 m, or more rarely a tree to 7 m high, with stems conspicuously swollen at the nodes and the internodes often rough with numerous small warts. Leaves more or less elliptical, mostly 7- 14 cm long and 2 - 6 cm wide, unequal at the base, pinnately nerved, rather dark green and shiny. Flowers in erect spikes 10 - 12 cm long and up to about 3.5 mm thick.

Habitat and Distribution

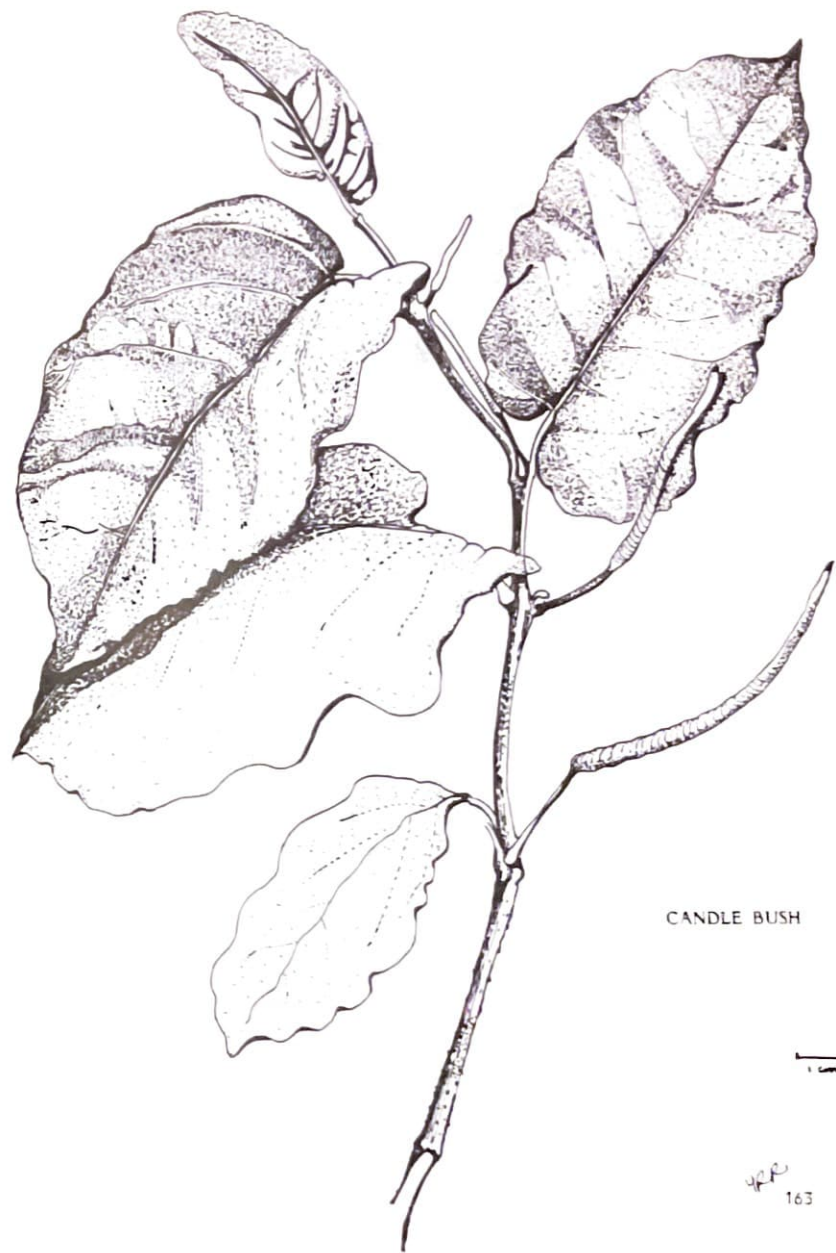
Native from Mexico to northern South America and in Jamaica (rare), Hispaniola and Trinidad. Very common in Trinidad where it is a regular component of secondary thickets, hedgerows and fence-lines.

Medicinal Uses

Used for bathing hunting dogs to stimulate their senses. Tea used for high blood pressure.

Biodynamic Notes

The *Piper* species are under intense biological activity study (Atal et al., 1975).



CANDLE BUSH

Plantago major

PLANTEN

(PLANTAGINACEAE)

Description

Annual or short-lived perennial herb developing a basal rosette of leaves. Leaf-blade broadly ovate-elliptical, blunt at the tip, narrowing to a more or less distinct stalk at the base, longitudinally veined, up to about 18 cm long and 12 cm broad. Inflorescences central and scapose, the scape (stalk) often 20 cm or more long, the spike as long or longer. Flowers numerous, green. Sepals 4. Corolla-lobes about 1 mm long. Capsule 3 - 4 mm long with about 30 seeds nearly 1 mm long.

Habitat and Distribution

Common in damp sandy or gravelly places, occasionally cultivated. Native of the Old World now in most of the West Indian islands and otherwise cosmopolitan.

Medicinal Uses

The leaf juice is used as eyedrops. A leaf is placed over the mouth of a clean cup, a hot iron is placed on it and the juice is collected.

Wong (1976) states, "Leaf tea, dew on leaf, or leaf juice used as eyewashes for ophthalmia".

Biodynamic Notes

A variety of constituents of uncertain pharmacological significance have been identified in this plant (Morton, 1981).



Pluchea symphytifolia
(Syns. *P. caroliniana* and '*P. odorata*')

GERITOUT

(COMPOSITAE)

Description

Coarse faintly aromatic undershrub or shrub with downy branches up to about 3 m high. Leaves spirally arranged, elliptical, sometimes with a few shallow teeth, acute, roughish-puberulous above, softly woolly beneath, up to about 15 cm long and 6 cm broad. Inflorescences compact corymbs with numerous flower-heads. Capitula 5 - 6 mm long and broad, of many light pink or dull mauve florets, giving rise to minute achenes bearing a spreading silky pappus.

Habitat and Distribution

Common in open waste places in both inland and coastal localities. Native from Florida to Venezuela and in Bermuda and most of the West Indian islands.

Medicinal Uses

Two leaves per cup of tea is used alone or mixed with other plants for colds and fevers. The leaf warmed with soft candle is applied to the head for headaches.

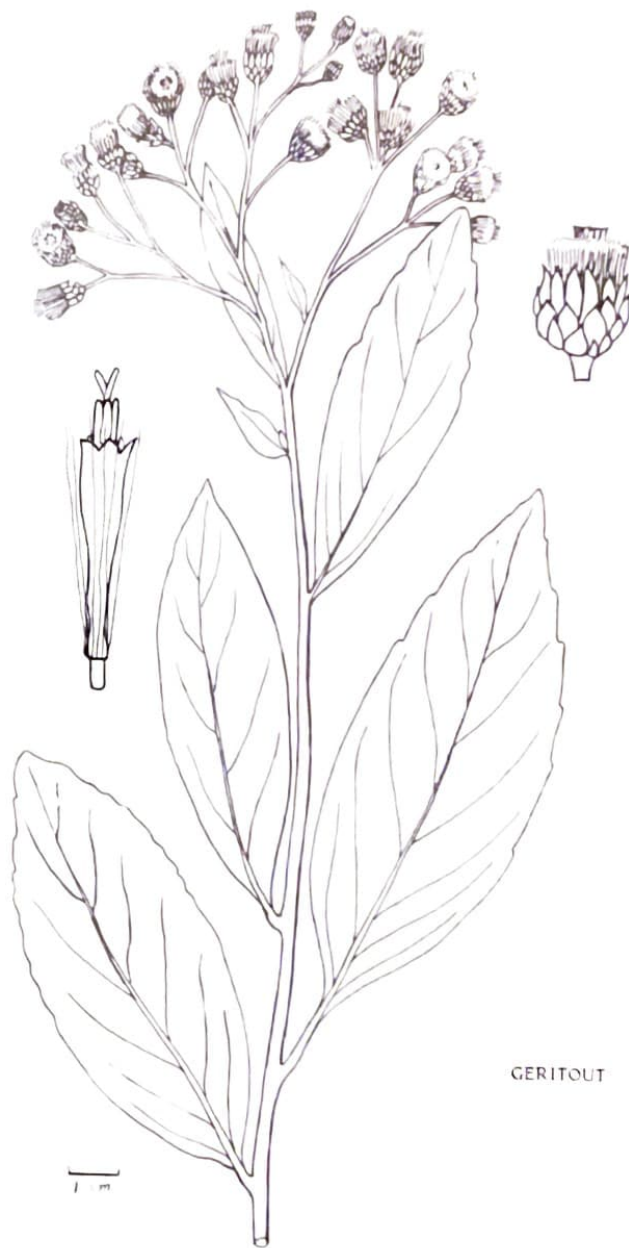
Wong (1976) states, under *Pluchea odorata*, "Leaves in decoctions for flu, fever, pneumonia, hypertension, headache; in eyewash for ophthalmia. Leaf poultice for cold in head".

Biodynamic Notes

Leaf extracts gave strongly positive tests for tannins.

Footnote

The use of the name *P. odorata*, common in the literature for this plant, was based on a misidentification.



SHINE BUSH

Porophyllum ruderale

(COMPOSITAE)

Description

An aromatic glaucous erect annual herb up to 1 m or more high. Leaves spirally arranged, elliptic or oblong, up to 6 cm long and 2.5 cm broad, narrowed at the base into a slender stalk, thin-textured. Flower-stalks swollen upwards, 2 - 4 cm long, solitary or few together, bearing heads up to 2.5 cm long and 5 mm broad with five involucre bracts and about 30 green, purple-tipped florets. Achenes about 8 mm long with numerous slender barbellate setae.

Habitat and Distribution

Occasional on waste ground; throughout tropical America.

Medicinal Uses

A quantity of the entire bush is boiled in water, and then left to stand overnight in the dew. The aqueous extract is then used as an eye-wash.

Biodynamic Notes

A positive test for alkaloids in the plant extracts of *P. ruderale* has been obtained.



Portulaca oleracea

PURSLEY
PUSLEY

(PORTULACACEAE)

Description

Diffusely branched short-lived herb with rather fleshy stems and leaves. Leaves obovate to spatulate, irregularly arranged on the stem, up to about 3 - 4 cm long and 2 cm broad. Flowers in terminal clusters subtended by fleshy bracts. Sepals keeled. Petals 4 - 6, deeply notched, light or dark yellow, about 5 mm long. Stamens 9 - 15. Capsule circumscissile. Seeds black.

Habitat and Distribution

A very common weed of cultivated and undisturbed land. Native of the Old World tropics now in all warm countries.

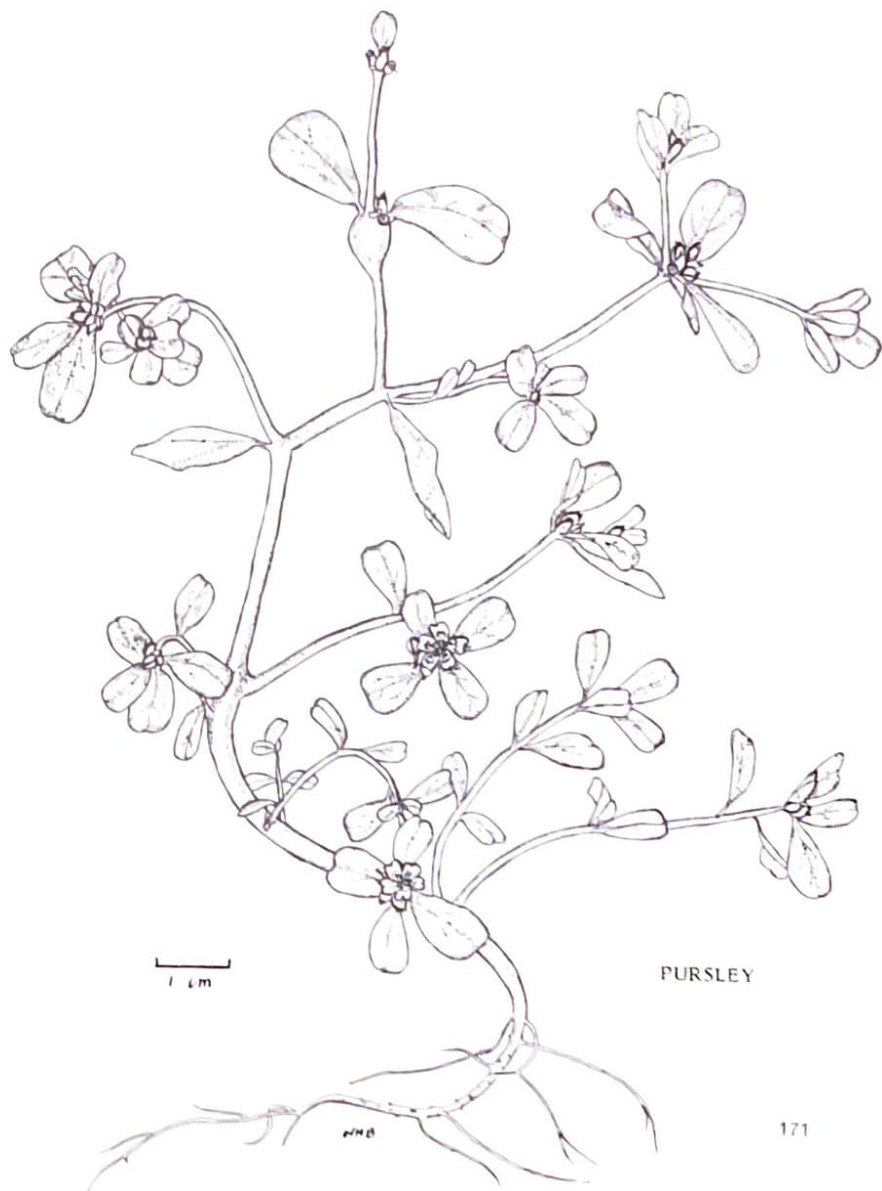
Medicinal Uses

For worms in children, the fresh leaves are eaten with a little salt. Also a tea is made from the leaves for the same purpose.

Wong (1976) states, "Herb teas for intestinal worms, palpitation, empacho".

Biodynamic Notes

Insecticidal activity has been attributed to this plant (Morton, 1981). Oxalates and nor-Adrenaline also have been isolated from *P. oleracea* indicating a possible hazard in the taking of its teas (Adams et al., 1963).



Psidium guajava

GUAVA

(MYRTACEAE)

Description

Shrub or small tree, rarely over 7 m high, with bark peeling in large smooth thin flakes. Leaves opposite in pairs on 4-angled twigs, elliptical or oblong, 7 - 14 cm long, appressed-hairy beneath, pellucid-dotted. Flowers usually solitary, the calyx closed in bud and splitting irregularly on opening into usually five lobes. Petals white. Stamens numerous. Fruit globose or pear-shaped, mostly up to about 6 cm long, ripening yellow with yellow or pinkish flesh, strongly aromatic.

Habitat and Distribution

Sometimes cultivated but also very common as an adventive in pastures (ruinate or lastro) and wayside thickets. Throughout the American tropics and introduced into the Old World.

Medicinal Uses

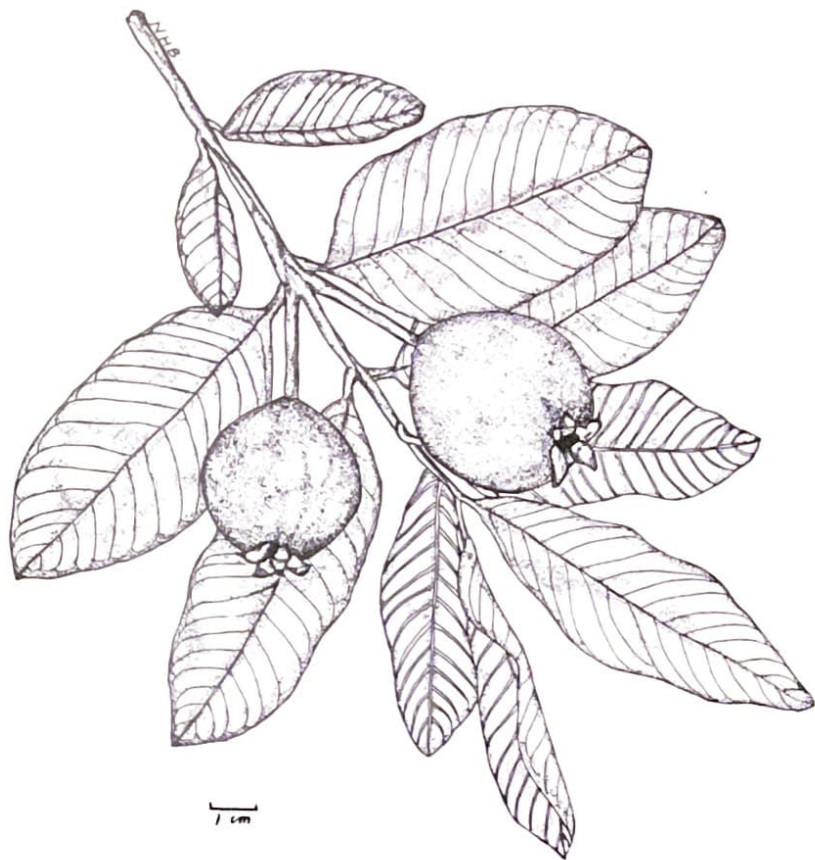
In the treatment of diarrhoea the young leaves, the bud or the bark are used in a tea. This tea is also used for feverish conditions.

Wong (1976) states "Tea of leaves for heat, diarrhoea, dysentery. Bark tea for diarrhoea, dysentery. Tea of fruit for dysentery."

Biodynamic Notes

High Vitamin C and high tannin levels are found in Guava leaves and fruit (Watt and Breyer-Brandwijk, 1962). Also the essential oils of Guava have been chemically analysed (Wilson and Shaw, 1978).

GUAVA



Ricinus communis

(EPHORBIACEAE)

Description

Short-lived shrub or small tree, usually up to about 3 or 4 m high. Leaves spirally arranged, long-stalked, the blade peltate and palmately lobed into 7 or more toothed lobes, up to 60 cm broad. Inflorescences terminal, the male more towards the base and the female towards the tip. Stamens numerous with branched filaments. Female calyx deciduous. Capsule oblong, spiny or rarely smooth, 3-valved, up to about 24 mm long. Seeds carunculate, variously mottled greyish or brown, 10 - 17 mm long.

Habitat and Distribution

Common as a casually cultivated plant and as an adventive in thickets and on waste ground. Native of the Old World tropics now widespread. There are many varieties of this species differing in stature, colour of foliage, size and shape of fruit and colour and size of seed.

Medicinal Uses

The seed oil is used as a purgative. The leaf is rubbed with soft candle, warmed over a fire and then tied on the forehead for headaches.

Wong (1976) states, "Leaf is poultice for stomachache, erysipelas, flu, inflammation of womb. Seed oil consumed during pregnancy, postpartum period, for empacho".

Biodynamic Notes

Ricin is a toxic glycoprotein in the seed of this plant (Adams et al., 1963) and it is currently under study in the chemotherapy of cancer (Lewis and Lewis, 1977).



CASTOR OIL

Roupala montana

BOIS BANDE
BWA BANDAY

(PROTEACEAE)

Description

A medium-sized tree with simple or pinnately compound alternate leaves. Leaf-blade (or leaflet-blade) ovate, oblong or lanceolate, shortly cordate-acuminate with an obtuse or mucronate apex, acutely tapered at base, dentate or serrate-margined. Inflorescences axillary, laxly flowered, up to 8 cm long. Flowers white, fragrant, the perianth-lobes 7 mm long, linear, twisted. The two-seeded capsular fruit up to 4 cm long.

Habitat and Distribution

Through continental tropical America to Trinidad in lowland and submontane forests. *R. tobagensis* is known from only the original gathering in Tobago; it differs in having simple entire leaves on shorter stalks and more open inflorescences.

Medicinal Uses

An infusion made of a thumb-sized piece of the bark of Bois Bande in a cup of hot water is taken as an aphrodisiac. The effects are said to last for three days or more depending on the dosage.

Footnote

Other species of trees in Trinidad and Tobago are known also as Bois Bande and presumed also to have aphrodisiac properties. In the Euphorbiaceae are *Richeria olivieri* and *Richeria grandis*, the former being endemic to Trinidad and Tobago and quite common in Trinidad. The latter is in the Lesser Antilles and northern South America but rare in Trinidad. In the Chrysobalanaceae (vice Rosaceae) is *Parinari campestris*, a tree found in forests of northern Trinidad and also the Guianas and Brazil.



Ruellia tuberosa

MINNY ROOT

(ACANTHACEAE)

Description

Perennial herb with thick elongated fusiform roots in a fascicle. Shoots erect, rarely as much as 60 cm high. Leaves opposite in pairs, elliptical, up to 12 cm long and 4.5 cm broad. Inflorescence of few showy flowers. Calyx segments long and 4.5 cm broad. Inflorescence of few showy flowers. Calyx segments narrow, about 2 cm long, reflexed in fruit. Corolla trumpet-shaped, 3 - 4.5 cm across the limb, mauve to bluish purple, rarely white. Capsule straight, 2 - 2.5 cm long, opening explosively in wet weather.

Habitat and Distribution

Common in pastures and other non-arable grassy places, mostly at low elevation. General through the New World subtropics and tropics and established sporadically in East and West Africa and Asia.

Medicinal Uses

Used for oliguria as follows: about 100 g roots are crushed, and boiling water is added to make up about one litre of extract, which is cooled and then drunk. Greasy bush (*Tournefortia hirsutissima*) is also added in making the infusion in cases of burning sensation during urination.

An infusion is also taken in cases of diabetes and hypertension made from Lime root (*Citrus aurantifolia*), Pawpaw root (*Carica papaya*), Gully root (*Petiveria alliacea*), Sapodilla bark (*Manilkara zapota*) and Minny Root. In cases of venereal disease, this mixture is followed by a dose of Epsom salts. Male sufferers take the female Pawpaw in this mixture whilst the female sufferers take the male Pawpaw root instead in this infusion. The dose of this infusion is one cocktail glassful in the morning.

Wong (1976) states, "Roots in tea for oliguria, heat, flu; in tisanes and infusions for venereal disease, constipation".



MINNY ROOT

Sambucus simpsonii (Syn. *S. intermedia*)

SIRRIO
SIRIYO
SYRIO

(CAPRIFOLIACEAE)

Description

Soft-wooded shrub or small tree up to about 6 m high. Leaves pinnately-compound, the lower leaflets often again divided into three; they are opposite with an interpetiolar stipular ridge; the leaflets elliptic-lanceolate, long-acuminate, serrate, up to about 11 cm long and 3.5 cm broad. The flowers are small, white and abundantly produced in a broad compound 4 - 5-rayed corymb. Corolla 5-lobed, 5 - 7 mm across the limb. Fruit a black or purplish-black berry 5 - 6 mm in diameter.

Habitat and Distribution

Native of the Southern United States and Central America, introduced and sometimes escaping from cultivation in other parts of the Caribbean.

Medicinal Uses

A syrup is made with the leaves and flowers for use against coughs and colds. Additional ingredients may include Hog Plum bark (*Spondias mombin*), old leaves of Bois Cano (*Cecropia peltata*), Kooze Maho (*Urena lobata*), Carpenter Grass (*Justicia pectoralis*), Double Hibiscus flowers (*Hibiscus rosa-sinensis*) and/or Water grass (*Commelina elegans*).



SWEET BROOM

Scoparia dulcis

(SCROPHULARIACEAE)

Description

Much branched erect annual taprooted herb up to 60 cm or rarely more high. Stems slender, glabrous, with opposite or whorled leaves. Leaves linear to oblong-elliptical, entire or serrate, up to 5 cm long and 1 cm broad. Flowers commonly paired in the upper axils, stalked. Corolla white, 3 - 4 mm across, the four equal lobes reflexed and densely bearded at the base. Capsule ovoid-globose.

Habitat and Distribution

Common weed of open ground, throughout the subtropics and tropics.

Medicinal Uses

Leaf juices are taken for worms and gastroenteritis in children.

Wong (1976) states, "Decoctions of root for dysmenorrhoea; of herb for diabetes, heat, diarrhoea, eczema. Leaf juice for jaundice, marasmus, as antidote; in eyewash for ophthalmia. Leaf infusions to bathe infants with rash, sores, mange, marasmus".

Biodynamic Notes

Amellin is an extractive of the Sweetbroom used as an antidiabetic principle in Indian medicine (Mahato et al., 1981). 6-methoxybenzoxazolinone has been isolated from Sweet Broom roots and shown to be hypotensive. (Chen and Ming-tyan, 1976).

SWEET BROOM



Solanum americanum

AGOUMA
AGUMA

(SOLANACEAE)

Description

Herb with slender spreading thinly hairy branches up to 60 cm or more high. Stems weak, usually smooth but sometimes with shallow soft prickles on the ridges of the upper stem-branches. Leaves ovate, the blade narrowed on to the stalk, acute, often sinuate-margined or shallowly toothed, up to 14 cm long and 7 cm broad. Inflorescences umbelliform on extra-axillary internodal stalks, the pedicels spreading in all directions. Corolla-lobes white, 5, 2 mm long. Anthers yellow. Fruit a berry, ripening black.

Habitat and Distribution

Common as a weed of cultivation and disturbed ground. Throughout the American subtropics and tropics.

Medicinal Uses

In the treatment of shingles, leaf infusion is drunk, and the crushed leaves placed on a cloth are applied to the affected areas.

Wong (1976) states, "Leaf teas for fatigue; heat; infusion for constipation; mouthwash for boils on lips and tongue. Leaf juice for asthma".

Biodynamic Notes

The alkaloids of the *Solanum* species of plants are not generally regarded as dangerous, because they are poorly absorbed and rapidly detoxified following ingestion (Mahmood and Thakur, 1980). However, *Solanum americanum* (as *S. nigrum*) has been described as a potential human health hazard (Osman et al., 1976).

AGOUMA



Spondias mombin L.

HOG PLUM
PLUM BUSH

(ANACARDIACEAE)

Description

Tree up to 20 m high. Leaves spirally arranged, pinnately compound with usually 4 - 9 pairs of oblique-based leaflets, the leaflets 5 - 9 cm or more long, subentire, glabrous, acuminate. Flowers small in terminal panicles up to about 30 cm long, greenish-white, fragrant, the petals about 3 mm long. Fruit a drupe, the hard stone with several loculi with one seed in each. The ripe fruit ovoid or oblong, 3 - 4 cm long, yellow, fleshy, strongly aromatic.

Habitat and Distribution

Widespread in many situations and at least fully naturalised if not native.

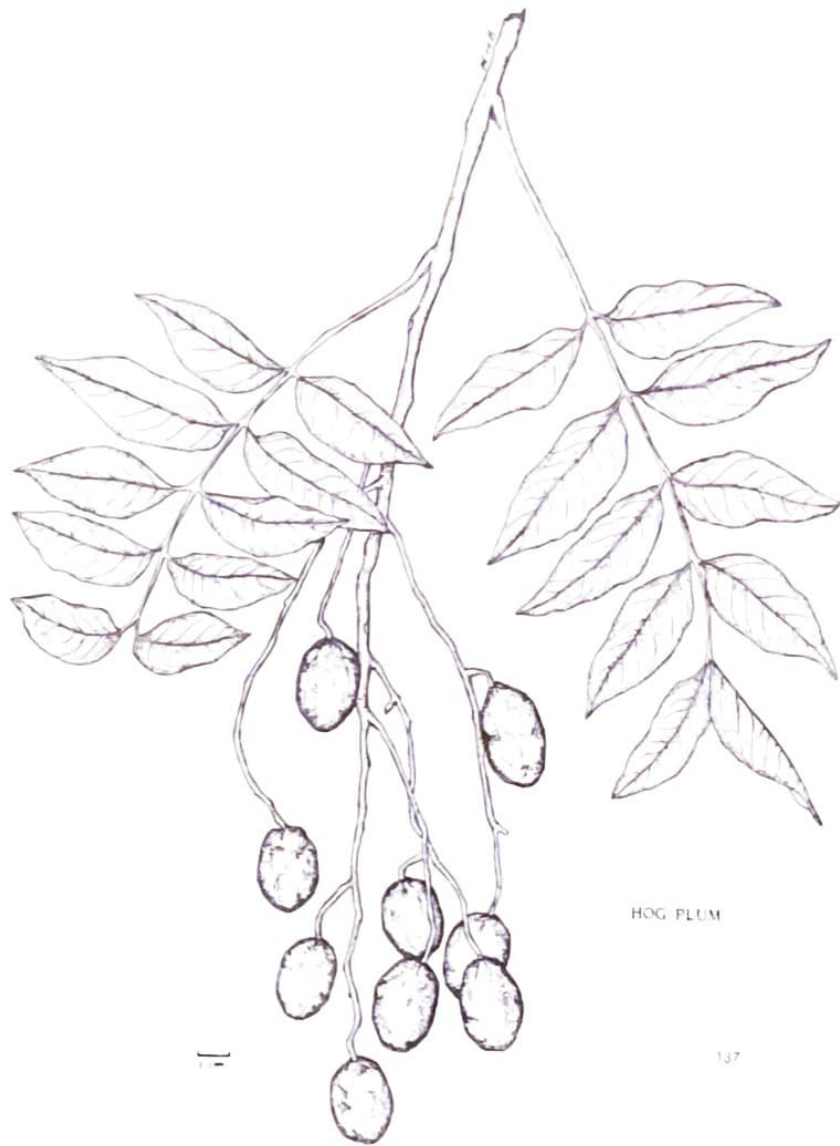
Medicinal Uses

The young leaves are boiled and the aqueous extract used as a gargle for sore throats.

Wong (1976) states, "Leaf decoctions are baths for sores, erysipelas; gargles for thrush, sore throat; drunk for colds, diarrhoea. Bark decoction bath for nephritis".

Biodynamic Notes

The tree bark contains tannins which may be responsible for the marked astringency (Morton, 1981).



HOG PLUM

137

Stachytarpheta jamaicensis

VERVINE
VORI-VINE

(VERBENACEAE)

Description

Herb or subshrub with ascending branches up to about 1 m high. Leaves, opposite in pairs, oblong-elliptical, long-tapered at base, blunt at tip, crenate-toothed, up to 9 cm long and 4.5 cm broad. Spikes up to about 0.5 m long, mostly about 2.5 mm thick, the flowers partly embedded. Corolla 8 - 10 mm long, bent, deep violet-blue. Fruit with 2 nutlets, about 7 mm long.

Habitat and Distribution

A common weed of pastures, especially in coastal or sandy situations. Subtropical and tropical America, introduced into the Pacific Islands.

Stachytarpheta cayennensis is a similar plant, often woodier but smaller in all its parts with a more slender spike and light blue-mauve or nearly white flowers.

Medicinal Uses

A tea is made from this plant for use as a lactagogue by nursing mothers. The tea is also taken as a cooling and to treat colds. The leaves are rubbed on the skin to treat "lotta" or "liver spot"

Wong (1976) states, "Leaf juice drunk for eczema, rash, vitiligo, boils, worms, as purgative".

Biodynamic Notes

Blood-pressure increasing action of the leaf extracts of Vervine is due to Gamma-aminobutyric acid (Durand et al., 1962).



VERVINE

Tagetes patula

MARIGOLD
STINKING SUZY
SUSI

(COMPOSITAE)

Description

An erect glandular-aromatic leafy herb up to about 40 cm high. Leaves opposite or alternate, deeply divided in a pinnate manner. Flower-heads about 4 cm across on erect stalks, with marginal ray-florets and central small tubular disk-florets, often orange with mixture of yellow or red.

Habitat and Distribution

Commonly grown from seeds in flower-beds or pots as an ornamental. Originally native of Mexico but now cultivated widely, especially in warm countries.

Medicinal Uses

An infusion of the flowers is prepared and then kept in the mouth to treat toothaches and also gum-boils.

Wong (1976) refers Stinking Suzy or Marigold to *Calendula officinalis*.

Biodynamic Notes

The flower extracts are antispasmodic and hypotensive (Dobrescu et al., 1970). Cercaricidal agents have been isolated from *T. patula* (Graham et al., 1980).



MARIGOLD

(LEGUMINOSAE-CAESALPINIOIDEAE)

Description

Tree up to 16 m or more high, often of great girth but rarely with very long or spreading branches. Bark with large hard brownish-grey flakes. Leaves pinnately compound up to about 12 cm long. Leaflets in 10 - 20 pairs, opposite, oblong, unequal at base, rounded at tip, mostly up to about 2 cm long and 6 mm wide. Racemes axillary and terminal, up to 4 cm long. Flowers yellow marked red, the three larger petals 13 - 15 mm long. Stamens three, united into a sheath. Pod light brown and corky outside, about 7 - 15 cm long and 2.5 - 3 cm thick. Seeds in a pulp, irregularly rounded, 11 - 13 mm in diameter.

Habitat and Distribution

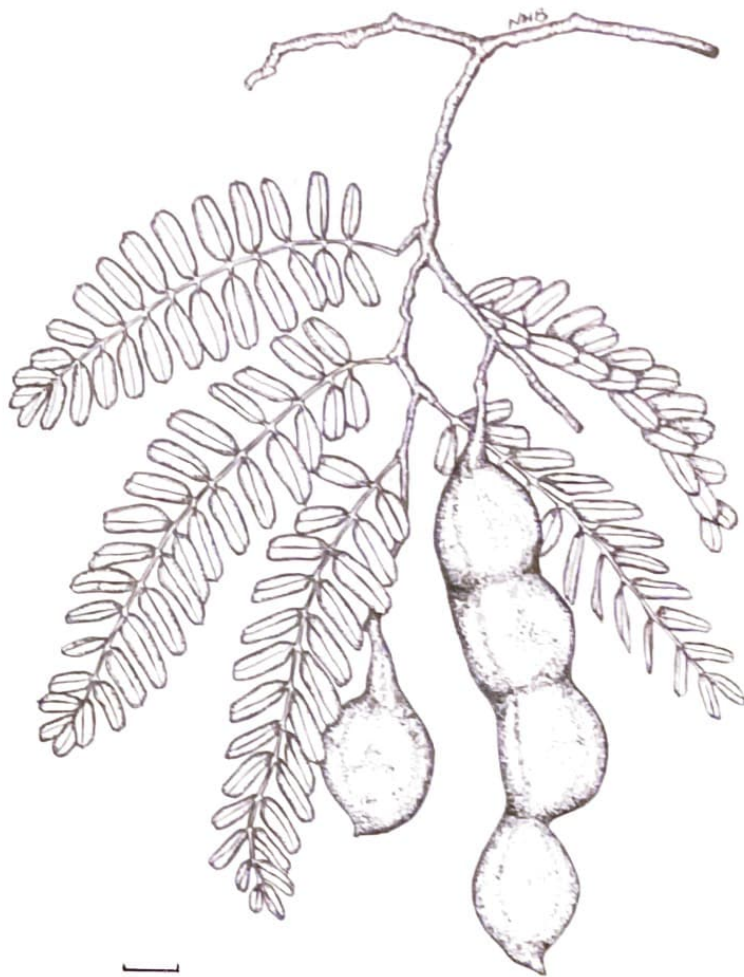
Native probably of tropical Africa, introduced and naturalized. Common near habitation in the subtropics and tropics of both hemispheres.

Medicinal Uses

The leaves are used to make a tea to treat hypertension.

Biodynamic Notes

The high tartaric acid content of the Tamarind pulp makes it a very useful laxative (Bezanger-Beauquesne et al., 1975)



TAMARIND

Tournefortia hirsutissima

GREASY BUSH
JIGGER BUSH
ROUGH BUSH

(BORAGINACEAE)

Description

Either an erect shrub to 2 m high or, more usually, a robust climber with stems up to 6 m or more long. The stem and leaves are hispid with coarse often brownish hairs. Leaves broadly elliptical to ovate, acutely acuminate at tip, mostly up to about 15 cm long and 8 cm broad, frequently larger. Inflorescence rather compact with branches about 4 cm long, uncoiling in development. Flowers along one side of the branch, about 7 mm long, white, fragrant. Fruit a soft white berry drying to two nutlets.

Habitat and Distribution

A common weedy shrub of thickets and woodland margins. Throughout tropical America.

Medicinal Uses

This plant is used to make a cooling drink for the bladder. For every litre of water use 150 g bush to make the infusion. To make a stimulating bath use Jiggerbush, Stinging Nettle (*Laportea aestuans*), Money Bush, Pigeon Pea leaves (*Cajanus cajan*) plus some Lime juice (*Citrus aurantifolia*).



GREASY BUSH

195

Urena lobata

KOOZE MAHO
KUZE MAHO

(MALVACEAE)

Description

Erect strong-stemmed shrubby herb up to 1.5 m high. Leaves spirally arranged, very variable, typically with more or less orbicular slightly angled blades up to 12 cm long and broad, otherwise more or less deeply divided into five lobes, covered with minute stellate hairs and fewer large simple hairs. Flowers axillary. Sepals 5 - 7 mm long. Petals pink, darker at base, about 15 mm long. Carpels 5, indehiscent, with numerous hooked spines on the outer surface.

Habitat and Distribution

Common along roadsides and in thickets and waste places. General in the tropics. The variants in the degree of lobing of the leaves are sometimes regarded as distinct species, but intermediates occur.

Medicinal Uses

The leaves are made into an infusion which is taken in the treatment of urinary burning and "inflamed kidneys".

Wong (1976) states, "leaf infusion for heat, hangover. Teas for flu and stomachache".

KOOZE MAHO



Vernonia scorpioides

RUCTION
ROKSHAN
RUCKSHAN

(COMPOSITAE)

Description

Shrub with stems scandent, distantly branched. Leaves ovate to broadly elliptical, 5-12 cm wide, acute or acuminate at apex, entire or very shallowly toothed, sparsely pubescent or almost glabrous above, thinly or more densely hairy beneath, on petioles 1 - 2 cm long. Heads in leafless one-sided densely cymes curved, up to 10 cm long; involucre bell-shaped, 4 mm high. Corolla purple or mauve, 6 mm long. Achenes pubescent, 1 mm long; pappus white, the inner bristles 5 mm long, outer 1 mm long.

Habitat and Distribution

Thickets and hillsides in drier areas of Trinidad and Tobago. Found elsewhere in Central and South America.

Medicinal Uses

Used generously in the making of baths. Tea also taken for fevers.

Wong (1976) states, "Leaf baths for bewitchment. Tea of the root is aphrodisiac".



ROKSHAN

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GLOSSARY OF TECHNICAL TERMS

(a)	Terms used in the Botanical Descriptions
achene	- a small dry single-seeded fruit, not splitting when ripe, e.g. a Sunflower 'seed'.
acuminate	- of a leaf-margin concave-sided behind the tip, e.g. leaf of <i>Capsicum</i> .
acute	- sharply pointed.
alternate	- of leaves arranged successively in different positions as distinct from opposite or whorled.
annual	- plants having a life-cycle completed within one year, often used loosely for a short-lived plant propagating only by seed.
anther	- the part of the stamen which contains the pollen.
appressed	- of parts lying close by their surfaces.
arborescent	- of tree-like form.
areole	- a small area distinct on a larger surface; a portion of leaf-blade encircled by veins.
aril	- an appendage, usually fleshy or leathery, derived from the seed-stalk and partly or wholly enclosing the seed.
articulated	- jointed; separating cleanly at a certain position.
ascending	- of branches or veins directed forward and outwards.
awn, awned	- referring to a fine terminal bristle.
axil	- the angle between a leaf and the stem from which it arises on the upper side; axillary - positioned in or arising from the axil.
barb	- a backwardly directed bristle or spine.
barbellate	- with small barbs.
berry	- a soft fruit with several seeds embedded in pulp, e.g. tomato; the Avocado is a single-seeded berry.
bipinnate	- of a compound leaf with divisions of the second order of branching.
bisexual	- having both male and female reproductive parts in the same flower (or inflorescence) = hermaphrodite.

- bract - a leaf forming part of an inflorescence.
- bracteole - a bract closely associated with a single flower.
- bulb - a storage and perennating organ comprising a short stem bearing several appressed overlapping fleshy leaf-bases, e.g. onion.
- bulbil - a plantlet formed as a unit of vegetative multiplication from an axil, inflorescence, leaf-surface or leaf-margin.
- caducous - soon falling off.
- calyx - the outer floral envelope, consisting of, usually green, sepals.
- campanulate - bell-shaped.
- capitulum - the flower-head of Compositae, comprising several florets surrounded by an involucre of bracts.
- capsule - a fruit derived from an ovary of two or more carpels, opening when ripe by slits or pores or splitting by valves to release the seeds, e.g. *Gossypium* (Cotton).
- carpel - the unit of construction of the female part of a flower; the ovary may comprise one or more carpels.
- caruncle - an appendage to a seed formed as an outgrowth near the point of attachment, e.g. *Ricinus* (Castor Oil).
- caudate - of a leaf -tip drawn out into a tail.
- censer - a form of capsule which sheds its seeds as it swings to and fro.
- ciliate - with a fringe of uniform hairs along the margin.
- circumscissile - a form of capsule of which the top is shed like a lid from a pot.
- coma - a tuft of hairs at one end of a seed, e.g. *Asclepias* (Red Head).
- Compositae (or Asteraceae) - the Daisy family.
- compound - an organ of several similar parts, united or associated in a definite way; a compound (as opposed to a simple) leaf has several or many leaflets; a compound ovary comprises two or more carpels.
- contorted - with parts of a set, i.e. sepals or petals in a flower-bud, overlapping in the same direction, and sometimes also twisted.
- cordate - of a leaf-blade with a more or less deep notch at the base.

- corm - a storage and perennating organ formed from a shortened and thickened stem, e.g. *Xanthosoma* (Tannia).
- corolla - the inner floral envelope, consisting of, usually thin, showy, white or coloured, petals.
- corona - a circle of appendages within the flower between the corolla and the stamens, e.g. *Passiflora* (Passion flower), *Nerium* (Oleander) or *Asclepias* (Red Head).
- corymb - a flat-topped inflorescence in which flowers on stalks of different lengths are positioned more or less in the same plane.
- crenate - of a leaf-margin with blunt or rounded teeth; crenulate - with very small such teeth or crenation.
- culm - referring to the erect leafy shoot of a grass or sedge.
- cuneate - wedge-shaped.
- cuspidate - of a (leaf-) tip with an abrupt broad-based dagger-like point.
- cyme - an inflorescence in which each subsequent branch is terminated directly by a flower, the oldest flower lying in a central position and the development being centrifugal; or cymose; cymule - a cluster of flowers of similar determinate pattern.
- deciduous - of the recurrent, usually seasonal, shedding of leaves.
- decumbent - of shoots or branches lying along the ground.
- deflexed - bent downwards or backwards.
- dehiscent - opening spontaneously, usually as a function of drying out, e.g. capsules or anthers.
- dentate - of a leaf-margin with triangular pointed, usually more or less equal-sided teeth.
- determinate - ending abruptly, as of the branches in a cymose inflorescence.
- digitate - of a compound leaf in which the leaflets diverge from the the same point.
- dioecious - of a species of plant having unisexual flowers, the female on one individual and the male on another, e.g. *Carica* (Papaya).
- disk - the central tubular, usually hermaphrodite, florets in a capitulum of the Compositae.
- distal - the part of an organ farthest from its point of attachment; the opposite of proximal.

- divaricate - divergent; widely forked.
- drupe - a soft fruit containing a single hard 'stone', the 'stone' being part of the fruit-coat; if derived from one carpel, the 'stone' contains a single kernel, the seed, e.g. *Mangifera* (mango); if comprising several carpels, the stone may have several chambers with a seed or seeds in each, e.g. *Spondias* (Hog Plum).
- ellipsoid - a three-dimensional body of elliptical outline.
- elliptical, elliptic - of a flat organ, such as a leaf-blade, of elliptical outline.
- endemic - of a group of plants, or a species, known to occur only with a certain circumscribed area.
- entire - of a flat organ, i.e. leaf or petal, with a smooth margin uninterrupted by teeth or lobes.
- epicalyx - an involucre of bracteoles below a flower resembling an extra calyx, e.g. *Gossypium* (Cotton) or *Passiflora* (Passion flower).
- fern - a kind of flowerless plant with well developed stems, roots and leaves reproducing by spores rather than by seeds.
- filament - the stalk of a stamen supporting the anther.
- fimbriate - a margin divided into short tapering twisted lobes or hair-like outgrowths.
- floret - a small flower comprising with others the specialised inflorescence of such as the capitulum in *Compositae* or the spikelet in grasses or sedges.
- flower-head - an inflorescence of several or many closely associated flowers; cf. capitulum and floret.
- follicle - a pod-like fruit derived from a single carpel and opening by one suture only.
- frond - a term usually applied to the leaf of a fern, sometimes to those of palms.
- fruit - the product of a female or hermaphrodite flower, normally after fertilisation and accompanying the formation and maturation of seeds.
- glabrous - without hairs or other superficial appendages.
- gland - a secretory structure either superficial or embedded in tissue; a warty or fleshy outgrowth with or without a stalk and not necessarily performing a secreting role.
- glaucous - of a surface with a thin waxy, often pale or bluish, bloom.

- herb - a plant with a soft, non-woody, impermanent stem.
- hispid - referring to a covering of bristly hairs.
- indehiscent - not splitting open at maturity, cf. dehiscent.
- inflorescence - the part of a plant bearing flowers, and the way the flowers are arranged.
- internode - the portion of stem between adjacent nodes, q.v.
- interpetiolar - the position on the stem between the points of attachment of petioles at the same node, usually with reference to stipules.
- involucre - as cup-like structure usually protective of a flower or flowers in an inflorescence, cf. capitulum, epicalyx.
- kernel - the seed in a 'stone' fruit, cf. drupe.
- lanceolate - a shape (e.g. leaf-blade) about four or five times as long as broad and broader in the proximal half.
- leaf-axil - see axil.
- leaf-blade - the lamina or broad flat part of the leaf subtended by the petiole.
- leaflet - the laminar unit of a compound leaf.
- ligule - in the family *Compositae*, the outwardly directed corolla-limb of a ray-floret.
- limb - the distal, usually lobed, part of a tubular corolla or calyx.
- linear - long and narrow with parallel margins.
- lint - the mass of soft hairs developed on the seed-coat of Cotton.
- lip - the prominent upper or lower midlobe of the calyx or corolla of an irregular flower.
- lobe - the projecting portion of an indented surface or a cleft margin; of sinus.
- loculus - the cavity containing the seeds in an ovary or fruit, or the pollen in an anther.
- midrib - the central, usually thickened, vein of a leaf or leaflet blade.
- monoecious - of a species of plant having unisexual flowers borne on the same individual, e.g. *Ricinus* (Castor Oil) or *Zea* (Sweet Corn).

- mucronate - ending abruptly in a short stiff point.
- nerve - the principal veins of a leaf diverging directly from the midrib.
- node - the point on a stem where a leaf, scale-leaf, bract or bracteole is or has been borne; also the site of branch origins and sometimes of roots.
- nutlet - a small dry one-seeded indehiscent fruit with a hard fruit-coat.
- oblanceolate - of lanceolate shape but reversed, i.e. broader in the distal half.
- oblong - of a (leaf-) shape two or more times as long as broad with more or less parallel sides and usually rather blunt apex and base.
- obovate - of ovate shape reversed.
- obtuse - blunt, rounded or wide-angled.
- opposite - of leaves inserted two at the same node on opposite sides of the stem, also of branches; of organs positioned on the same radius, as of stamens in line with petals rather than alternating with them.
- orbicular - circular or nearly so in outline.
- ovary - that (female) part of the flower in which seeds are formed and will become part of the fruit.
- ovate - a shape of the outline of an egg, up to about twice as long as broad and broader in the proximal half.
- ovoid - a three-dimensional body of ovate outline.
- palmate - lobed like a hand with spread fingers.
- panicle - a many-flowered inflorescence in which the main axis is branched, each branch bearing several flowers or being again branched; paniculate (adj.).
- pappus - the scaly, bristly or hairy appendages surmounting the fruit (achene) of Compositae and serving as aids to dispersal.
- pedicel - the stalk of an individual flower in an inflorescence.
- peduncle - the stalk of a solitary flower or the main (unbranched) stalk of an inflorescence or of a distinct partial inflorescence.
- pellucid - translucent.
- peltate - of a leaf where the stalk is attached to the undersurface rather than at the margin, e.g. *Colocasia* (Dasheen).
- perennial - plants having a life-span of indefinite duration greater than two years; all woody plants and those herbaceous ones capable of perpetuating themselves by new growth.
- perianth - the floral envelopes, calyx or corolla, or both.
- petal - the unit of the corolla, q.v.
- petiole - the stalk of a leaf.
- pinna - a primary division of a compound leaf where these are arranged along each side of a common rachis; pinnate (adj.). A pinna may be a simple leaflet or it may be again divided, see bipinnate, tripinnate, etc.
- plaited - a form of folding lengthwise creating W or M sections or multiples thereof.
- pod - the typical fruit of leguminous plants, a capsule dehiscing along two sutures into two valves, sometimes explosively. Each valve bears a row of seeds positioned alternately with respect to the other valve.
- polygamous - of a species which has male, female and hermaphrodite flowers, on the same or different individual plants.
- proximal - the part of an organ nearest to its point of attachment; the opposite of distal.
- puberulous - covered with very short soft hairs.
- pubescent - covered with soft hairs.
- pulvinus - a swelling, usually at the base of a petiole, whereby leaf movements may be effected.
- quadripinnate - of a compound leaf divided to the fourth order of branching.
- raceme - a simple, often elongated, inflorescence in which each flower is stalked and the first to open is at the base; the development of the axis is indeterminate, of the flowers centripetal, cf. cyme; racemose (adj.).
- rachis - the main axis of a compound leaf, the continuation of the petiole to which pinnae or leaflets are attached; the main axis of an inflorescence (sometimes spelt rhachis).
- ray - of the marginal florets of a capitulum of a member of Compositae where these have ligulate corollas, hence ray-florets; cf. disk; of some kinds of inflorescence with long spreading branches.
- receptacle - the expanded top of the pedicel to which the flower-parts sepals, petals, stamens and ovary are attached; the modified top of the peduncle in Compositae to which involucre bracts, receptacle-scales and florets are attached in a flower-like inflorescence (capitulum) is also referred to as receptacle (or torus).

- receptacle-scale - a small chaffy bracteole accompanying the florets in the of some Compositae.
- reduplicate - folded backwards (inverted V), e.g. the leaflet of Coconut Palm in section.
- reniform - kidney-shaped.
- retrorse - directed backwards or downwards like a barb.
- rhizome - an underground, often horizontal, stem producing erect leafy shoots and roots, organised into nodes and internodes and thus distinguishable from a root.
- rhombic, rhomboid - approximating to the shape of a playing-card diamond.
- rosette - of leaves arranged in a radiating pattern at or near the base of the stem.
- rugose - rough-textured surface, usually in the form of transverse or parallel wrinkles.
- sap - fluid exuding from broken leaves or cut branches or roots from whatever internal source whether latex tubes, glands or conducting elements.
- scape - a leafless unbranched flower-stalk (peduncle), e.g. Hymenocallis (Spider Lily) or Allium (Onion); scapose (adj.).
- seed - the main feature of multiplication and perpetuation of species of flowering plants is seed production; seeds are formed in the ovary of the flower after pollination and fertilization; they mature in and are dispersed by fruits.
- sepal - the unit of the calyx, q.v.
- serrate - of a leaf-margin toothed like a saw.
- serrulate - serrate with very small teeth.
- sessile - without a stalk.
- seta - a stiff hair or bristle; setae (pl.): setose (adj.).
- sheath - a broad clasping or enclosing structure, usually applied to the proximal part of grass leaves and to protective bracts or bracteoles, cf. also spathe.
- shrub - a woody plant normally not more than 5 m tall and branching at or very near ground level.
- simple - undivided, the opposite of compound; of a leaf comprising only one blade, or of an ovary or fruit derived from only one carpel, e.g. a legume pod.

- sinuate - of a flat structure (leaf-margin) with a wavy edge.
- sinus - the recess in an indented surface or a cleft margin; complement of lobe.
- spathe - a specialised, often enlarged, leaf or bract enclosing an inflorescence or flower-cluster, cf. also sheath; spathaceous (adj.).
- spathulate - spoon-shaped with a long-tapering base.
- spicate - arranged in a spike.
- spike - as of a raceme but the flowers are not stalked.
- spikelet - the specialised partial inflorescence of grasses and sedges.
- spiral - in reference to the insertion of parts on an axis, e.g. carpels in a primitive flower, florets in a capitulum or leaves in Agave (Century Plant); leaves in a loose spiral arrangement are often referred to as alternate.
- sporangium - the minute capsule-like organ which produces and discharges spores in ferns.
- stamen - the male organ in a flower, producing pollen.
- stellate - of hairs with radiating branches.
- stigma - the structure on which pollen is received in the female part of the flower.
- stipe - the petiole of a fern leaf; the stalk of an ovary or carpel; stipitate (adj.).
- stipule - an appendage to the leaf at or near its base or attached at the same node, usually itself leaf-like; stipular or stipulate (adj.).
- stolon - a stem branch spreading and rooting across the surface of the ground; stoloniferous (adj.).
- stone - the hard inner layer of an otherwise soft fruit containing the seed; cf. drupe.
- striate - marked with parallel grooves and ridges.
- sub- - a prefix meaning 'rather' or 'almost'.
- suture - the line of junction in a carpel wall, often the same as a line of dehiscence.
- taproot - the main downward growing root derived from the radicle after germination and often persistent.
- tendrill - a slender outgrowth of a climbing plant serving to form an attachment to a support usually by curling around it.

- tomentose - densely covered with hairs.
- tree - a woody plant of indefinite height with a single main stem (trunk).
- tripinnate - of a compound leaf divided to the third order of branching.
- tubercle - a small outgrowth or swelling; tuberculate (adj.).
- umbel - an inflorescence in which all the flower-stalks arise from the same point.
- umbelliform - resembling an umbel.
- undershrub - a small shrub or herb with some woody characteristics.
- undulate - of a wavy surface.
- unilocular - of an organ with a single cavity.
- unisexual - a flower having stamens only (male or staminate) or ovary and stigma(s) only (female or pistillate).
- valve - one segment of a capsule after dehiscence.
- vein - a strand of vascular tissue; venation - the pattern of veins in a leaf.
- vine - a climbing plant.
- whorl - a cyclical arrangement of three or more structures (leaves) at the same node.

(b) Terms used under Medicinal Uses

- abortifacient - an agent which induces abortion.
- amenorrhoea - absence of the menstrual flow.
- aphrodisiac - an agent which excites sexually.
- carminative - a drug which relieves flatulence.
- dysmenorrhoea - painful menstruation.
- decoction - an aqueous solution of active principles prepared by boiling the plant or plant part.
- infusion - an aqueous or alcoholic solution of active principles made by pouring water or alcohol on the plant or plant part.
- lactagogue - an agent which increases milk production in nursing mothers.
- lohtah(lotta) - skin infection.
- oliguria - a condition of too little urine excretion.

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