***Metroxylon sagu* Rottb.**

***Metroxylon sagu* Rottb.** **Arecaceae**

Local Names : abia (Fergusson Island, Milne Bay); saksak (Pidgin); sengin epi-i (Kurti, Manus Province); piia (Siwai, Bougainville); nangu (East Sepik).

English Names : sago palm; smooth sago palm; true sago palm.

Description. A palm tree, 10 to 30 m tall, large underground rootstalk sprouts numerous suckers. Leaves pinnate, with large leaf-sheaths, 5-8 m long. Inflorescence terminal, 3 m long and 2 m wide, many-branched. Flowers polygamous, monoecious. Bisexual flowers with 6 stamens, and 1 pistil with 3 stigmas. Male and female flowers similar, but either the pistil or stamens rudimentary. Starch, called sago, is extracted from the trunk and is a common source of food. Leaflets are used as roofing material. Flowers and fruits are borne only once and then die.

Habitat. Found in swamps, wet and soft soil, riverbanks, and ponds.

Distribution. Widely distributed and abundantly found in the coastal areas of Papua New Guinea main land and the islands; also cultivated.

Constituents[1]. Catechin flavonoids.

Biological Activity. None reported.

Traditional Uses[2,3]. Stem sap is applied to forehead to ease headaches. Starch derived from the plant trunk is mixed with water and drunk to treat diarrhoea and stomach pains. Starch paste is also applied on to burns. Leaf is used to cover fresh or infected sores until they heal. Liquid starch is given to new born to treat enlarged spleen.

References:

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2) Holdsworth, D.K., *Medicinal Plants of Papua New Guinea,* (1977), South Pacific Commission Technical Paper No. 175, Noumea, New Caledonia, 43.
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***Mikania micrantha* Kunth**

***Mikania micrantha* Kunth** **Asteraceae**

Local Names : gepakuri (Kabiufa, Eastern Highlands); vaikana (Todura, Central Province); matapa (Siwai, Bougainville).

English Names : mile-a-minute, chinese creeper, bitter vine.

Description. A branched, slender-stemmed perennial, scrambling or climbing vine. Leaves in opposite pairs along the stem, heart-shaped or triangular with an acute tip and a broad cordate base. Flowers minute, each 3-5 mm long, white or cream coloured, borne in small densely packed heads or corymbous panicles; corollas white, 3 to 4 mm long; fruit an achene, linear-oblong, 1.5 to 2 mm long, black, five-angled, glabrous. The seed is black, linear-oblong, five-angled and about 2 mm long. Each seed has a terminal pappus of white bristles that facilitates dispersal by wind or on the hair of animals. Flowers and fruit available throughout the year.

Habitat. A smothering vine. A major weed in plantations, pastures and along roadsides, fence, forest edge clearings, and an intermediate weed in crops and forestry. It grows best where fertility, organic matter, and soil and air humidity are all high.

Distribution. Native to tropical America, and widely distributed throughout the Pacific Islands and in Papua New Guinea from near sea level to about 800 m as an often abundant weed.

Constituents[1-4]. Terpenoid constituents, alpha-amyrin, lupeol, taraxasterol acetate, micrantholide, mikanolide, dihydroscandenolide, anhydroscandenolide, scandenolide, miscandenin, dihydromikanolide, deoxymikanolide, alpinetin, mikanin, mikanin-3-*O*-sulphate, stigmasterol, coumarin.

Biological Activity[5,6]. Hypoglycemic (weak activity), antimicrobial, anticancer.

Traditional Uses[7,8]. The stem is squeezed, mixed with ginger rhizomes, baked in a bamboo stem and eaten with green vegetables, to give relief to colds, headache, or stomach-ache. Crushed leaves are mixed with water and applied onto dermal irritations, especially those associated with fungal infections. Young leaves are squeezed and placed on a fresh wound.

(continued on page 275)

***Morinda citrifolia* L.**

Morinda citrifolia* L.** ***Rubiaceae

Local Names : leki (Meramera, West New Britain); noku (Labai, Trobriand Islands); nono (Rigo, Central Province); oko (Darubia, Milne Bay); kotambul (Manus Island); wal (Kokopo, East New Britain); woko (Alotau, Milne Bay).

English Names : indian mulberry; awl tree.

Description. A shrub or compacted to twisted small tree of medium size, or much shorter, but up to 10 m high with square stems and large stipules between nodes and petioles or with conspicuous interpetiolar stipules. Young twigs angular, slightly compressed and grooved. Leaves opposite, petiolate, glossy, mostly ovate, or stipuliferous; shining green above, pale below; margins undulate. Inflorescence in dense ovoid head, opposite to the leaf. Flowers small and white, then yellow, borne on a globose syncarp or fuse at the base to form the head like inflorescence. Fruit ovoid, including many drupelets or a large fleshy syncarp up to 15 cm long, or somewhat cone shaped, compound (compose of the fused ovaries of the flowers), at first green but becoming white to yellow juicy, and pungent when mature. Seeds numerous, embedded in the pulp. Flowers and fruits available throughout the year.

Habitat. Occasional to common in coastal vegetation, littoral forest, fallow areas, wet areas, thickets and waste places, and house yards.

Distribution. Found in almost all coastal regions of Papua New Guinea.

Constituents[1-6]. Alizarin, anthraquinones and their glycosides, morindone, morindin, morindadiol, rubichloric acid, alizarin a-methyl ether, rubiadin 1-methyl ether, flavonoids, citrifolinin, iridoid glycosides, beta-sitosterol, ursolic acid, asperculoside, asperulosidic acid, caproic acid, hexanoic acid, octanoic and caprylic acids.

Biological Activity[7-13]. Analgesic, tranquilizing, antibacterial, insecticidal, antinematodal, antiascariasis, antitumour, hypotensive, uterine muscle relaxant.

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Musa paradisiaca L.

***Musa paradisiaca* L.** **Musaceae**

Local Names : umm (Nasingalatu, Morobe Province); udi (Sawa'edi, Fregusson Island, Milne Bay); bihia (Alotau, Milne Bay); pu'ei (Kurti-Andra, Manus); inidia (Rigo, Centra Province); tete na vudu (Kokopo, East New Britain).

English Name : cooking banana.

Description. There is a very large mixture of native and introduced cultivars of this species, so that an adequate description is difficult, as all characteristics such as stem-height, size and form of the leaf, form, colour and size of the fruit, are quite variable. Otherwise it can be best described as a clump or stand forming giant perennial herb, up to 6 m height, with large broad bladed, feather-shaped bright green leaves. Flowers on a curved hanging flower stalk. Fruit in large bunches, seedless, blunt-tipped, medium-thick-skinned, greenish-yellow, turning bright yellow on ripening. Flowering and fruiting throughout the year.

Habitat. This is the common banana found on tropical lowland areas where the soils are well drained and fertile.

Distribution. Widely cultivated in the tropics including all regions of Papua New Guinea.

Constituents[1-9]. Dopamine, norepinephrine, salsolinol, melatonin, tryptamine, 5-hydroxytryptamine, campesterol, daucosterol, sitoindoside I and II, sitoindosterol I to IV, beta-sitosterol, stigmasterol, alanine, phenylalanine, aspartic acid, arginine, banana lectin ban-lec-1, banlec-1, glutamic acid, glycine, histidine, leucine, isoleucine, lysine, methionine, alpha-glucanphosphorylase, proline, serine, threonine, tryptophan, tyrosine, valine, vanillic acid, syringic acid, syringin, 3-4-dihydroxybenzalehyde, benzyl alcohol glucoside, 3-4-benzopyrene, emenolone, iarenolone, delphinidin, triterpenes and sesquiterpenes, carbohydrates, vitamins, lipids.

Biological Activity[10-15]. Hypoglycemic, antihypertensive, antihemolytic, allergenic, clastogenic, antisecretory, antiulcer, antibacterial, anifungal, desmutagenic, cholesterol inhibition activity, dermatitis improvement activity, spasmolytic, anthelmintic, antiyeast, antilithic.

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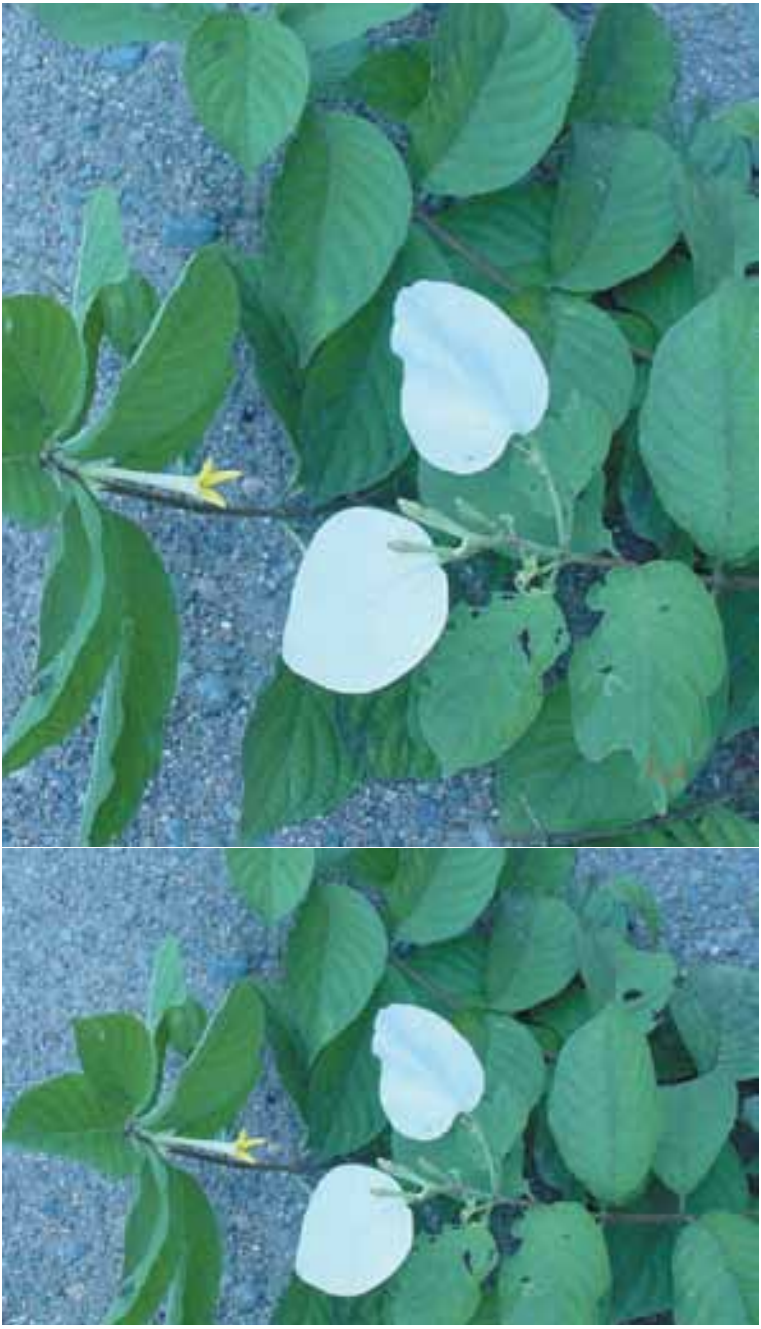

***Mussaenda ferruginea* K. Schum.**

***Mussaenda ferruginea* K. Schum.** **Rubiaceae**

Local Names : oliticne (Sosoningko, Morobe); aganapa (Awala, Northern Province); ngadral (Kurti, Manus Province).

Description. Scandent shrub, 3-6m high, sometimes forming dense masses around the tree trunks. Leaves elliptic, alternate, short-acuminate; base obtuse, margin entire. Twigs and flowers rust brown. Flowers in terminal, 3-branched cymes, corolla tube deep yellow; 4-5 petals with long stigma and styles within the petals. Found all year round in form of a weed.

Habitat. Rain forests, especially in clearings.

Distribution. From Celebes to Papua New Guinea.

Constituents. None reported.

Biological Activity. None reported.

Traditional Uses[1-3]. One cup of the diluted stem sap is drunk daily for the treatment of malaria and fever. The sap from a single leaf is swallowed to ease a cough. Fresh flower styles are chewed and swallowed to treat stomach pain and peptic disorders.

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***Nicotiana tabacum* L.**

***Nicotiana tabacum* L.** **Solanaceae**
(syn. *Nicotiana chinensis* Fisch. Ex Lehm.*; Nicotiana mexicana* Schltdl.*; Nicotiana mexicana* var. *rubriflora* Dunal*; Nicotiana pilosa* Dunal)

Local Names : brus (pidgin); kena (Wapenamanda, Enga); sok (Mendi, Southern Highlands); kuku siemu (Agehenembo, Northern Province); yaki (Kangananan, Sepik); sakue (Yangoru, East Sepik Province)

English Names : tobacco, flowering tobacco.

Description. A coarse stout annual herb to 2 m high with a long tapering root. Stem erect, unbranched, cylindrical, solid, green, thickly set with soft viscid hairs. Leaves large, alternate, simple, numerous, covered with sticky hairs, shortly stalked, ovate-lanceolate or ovate, acute, entire, bright green, paler beneath, mid-rib thick, lateral vein curved at the margins. Inflorescence a terminal, rounded or oval panicle, with a few short branches: Flowers not numerous, spreading horizontally, shortly stalked, cream, pink or green-white, bracts linear, trumpet shaped. Fruit a capsule with many minute seeds.

Habitat. Cultivated by intercropping in food gardens.

Distribution. Originating from South America, the plant is cultivated in most tropical and sub-tropical countries for its leaves.

Constituents[1]. More than 2500 compounds have been identified in tobacco. The main active ingredients are alkaloids of the pyridine group, especially nicotine, and in smaller amounts nornicotine and anabasine. Many essential oils are present in fresh tobacco leaves.

Biological Activity[2-7]. Mutagenic, bronchoconstrictor, abortifacient, insecticidal, carcinogenic, antiviral, convulsant, clastogenic, insect repellant, toxic effect (general), antibacterial, cardiovascular effects, blood pressure effect (biphasic), antifungal, larvicidal, anorexic, stimulant, narcotic.

Traditional Uses[8-10]. Leaves are heated and rubbed into the hair to kill lice. Young leaf tips are chewed and swallowed to relieve stomach ache. Leaf decoction is drunk to treat gonorrhea. Leaf sap is squeezed on to sores. The leaves are rolled and smoked. The juice from the leaves is extracted and drunk to treat snakebites.

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***Ocimum basilicum* L.**

***Ocimum basilicum* L.** **Lamiaceae**
(syn. *O. americanum* L., *O. minimum* L.)

Local Names : herupi (Gaire, Central Province); loka (Hula, Central Province); loga (Rigo, Central Province); kewei (Murti, Manus Province).

English Names : basil, sweet basil, holy or sacred basil.

Description. An erect, low growing annual herb, 0.5 – 1 m tall. Leaves light green silky, oblong-ovate to oblong, opposite, acuminate, finely toothed to entire margins; base narrowed, cuneate, petiole up to 8 cm long. Flowers white or purple, zygomorphic, about 2 cm across, in whorls borne in the angles of the leaves. Fruit formed of 4 small nutlets covered by the dry calyx. The plant has a distinctive smell and flavor of camphor. Flowers and fruit usually available throughout the year.
Habitat. Grows best in warm climates, requires light and well-drained, rich soil or compost.

Distribution. Native to tropical Asia, it is widely distributed in the South Pacific. It is mostly cultivated in Papua New Guinea.

Constituents[1-6]. Essential oils, fat and fatty acids, apigenin, apigenin-7-0-glucuronide, luteolin, luteolin-7-*O*-glucuronide, orientin, gratissimin, sugars, aesculin, aesculetin, caffeic acid, 1,8-cineole, *p*-coumaric acid, *p*-cymene, limonene, linalool, methylchaviol, methyl cinnamate, myrcene, alpha- and beta-pinene, quercetin, quercetin-3-*O*-diglucoside, rutin, safrole, alpha-terpinene, trytophan, beta-sitosterol, phenyl propanoids, tannins.

Biological Activity[7-16]. Antibacterial, antiyeast, insecticidal, antifungal, insect repellant activity, larvicidal, antimutagenic, antiulcer, gastric secretory inhibition, ulcerogenic, anthelmintic, acid neutralization, antimycobacterial, antihepatotoxic, antiamebic, smooth muscle relaxant, antioxidant, antiedema, anti-inflammatory, hypotensive, analgesic, anticonvulsant, CNS depressant, antitumour, molluscicidal, antidiarrhoeal, antiascariasis.

Traditional Uses[17,18]. The whole plant is boiled in a pot and a patient with fever held over the steam and covered in blankets. Sweating is induced and afterwards the condition usually improves. The fresh young leaves of the following four plants: *Ocimum basilicum, Acalypha wilkesiana*, *Hibiscus rosa-sinensis*, and *Euodia hortensis* are mixed together and boiled in a pot. The patient suffering from either pneumonia, malaria, pain, or fever is steamed in a similar manner. The leaves are chewed to give temporary relief to toothache. A twig with the leaves is gently rubbed over the injured ligaments, injury of the bones, fractures, or sprains.

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***Oenanthe javanica* (Blume) DC.**

***Oenanthe javanica* (Blume) DC.** **Apiaceae**
(syn. *Oenanthe stolonifera* (Roxb.) DC.)

Local Names : igundaurautu (Taunade, Central Province); takae (Wapenamanda, Enga).

English Names : water dropwort, indian pennywort, water celery, water parsley.

Description. A perennial, glabrous, often aquatic herb. Stems erect or ascending from a creeping base, hollow, 10-100 cm long, much branched, sometimes tinged with red. Leaves alternate; petiole up to 12 cm, with membranous margin. Leaf-blade oblong to ovate in out line, above dark green and dull, beneath light colour with transparent nerves. Inflorescence compound, many flowered umbel, terminal and opposite the leaves, flowers small, white. Fruit schizocarp, glabrous; mericarps 2-3mm x 0.5-1mm, with swollen ribs, marginal ones are more prominent than the dorsal ones.

Habitat. Occurs wild in swampy localities, along streams and in wet grasslands and clearing, at sea level to 2800 m altitude. It thrives in warm wet areas.

Distribution. Common in the highland region of Papua New Guinea.

Constituents[1-4]. Alkaloids, apiol, para-coumaric acid, arachic acid, behenic acid, camphene, carvacrol, cerotic acid, daucosterol, eugenol, eugenol-beta-D-glucoside, falcarindiol, falcarinol, ferulic acid, glucose, hyperoside, lignoceric acid, linoleic acid, linolenic acid, myristicin, oenanthoside A, persicarin, neophytadiene, phytol, phytol acetate, betapinene, pinoresinol-beta-D-glucoside, isorhamnetin, betasitosterol, stearic acid, stigmasterol, stigmasterol-3-*O*-beta-D-glucoside.

Biological Activity[5-7]. Antimutagenic (weak), analgesic, antifungal, antihyperglycemic, insulin release stimulation.

Traditional Uses[8]. Leaves are chewed with wild ginger and traditional ash salt as a poison antidote. Stem is chewed and swallowed to treat a cough. The leaves are rubbed on forehead to cure headaches.

References:

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2) Sato, T., *et al., Yakugaku Zasshi*, (1977), *97*, 698-.
3) Fujita, T., *et al., Biosci. Biotech. Biochem.*, (1995), *59*, 526-528.
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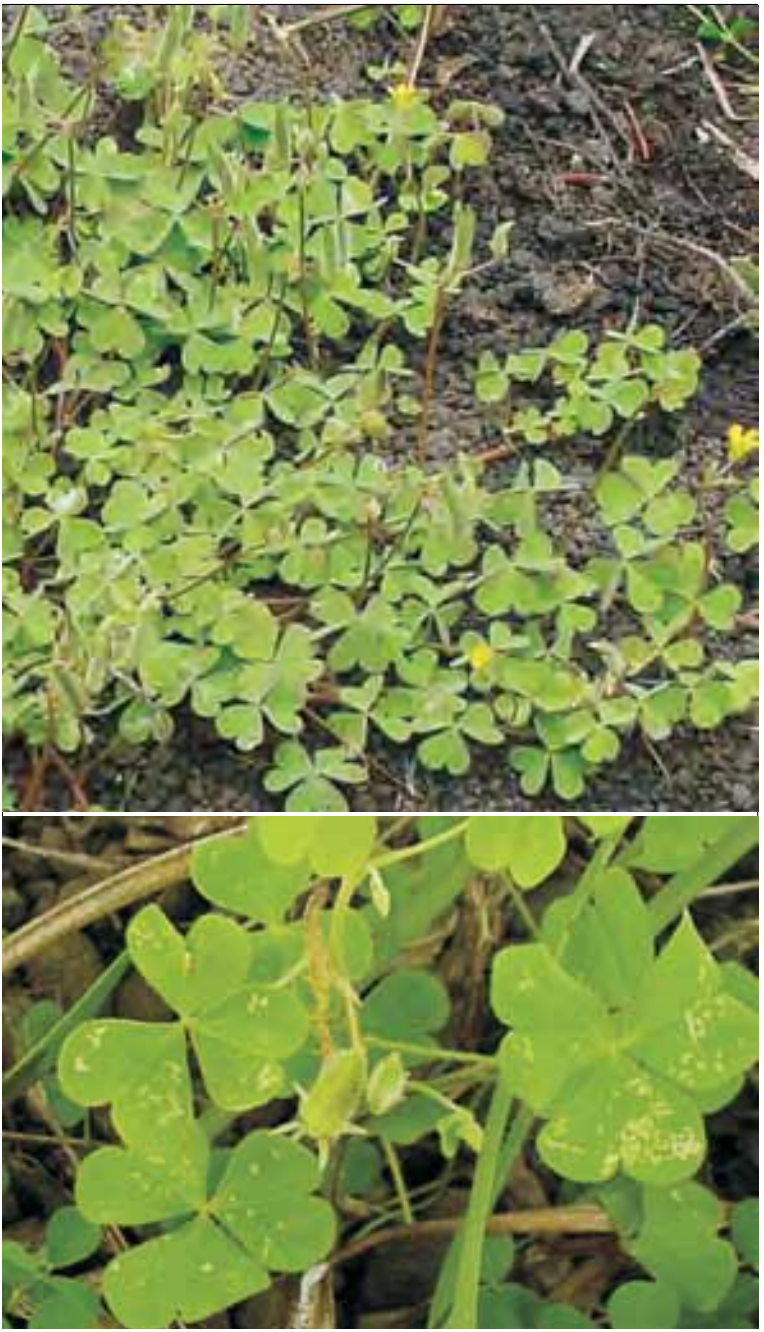

***Oxalis corniculata* L.**

***Oxalis corniculata* L.** **Oxalidaceae**

Local Names : kokavu (Kami, Eastern Highlands); zafosri (Kumano/Kafe, Eastern Highlands).

English Name : wood sorrel, yellow sorrel.

Description. Small creeping perennial herb, 10-20 cm high, rooting at nodes when in contact with the soil. Leaves alternate, long-petiolate, trifoliate (clover-like in appearance), the leaflets obcordate with a conspicuous notched apex, each leaflet up to 2 cm long. Flowers yellow, 5-merous, borne in axillary few-flowered inflorescences. Fruit a subcylindrical capsule up to 20 cm long containing numerous black seeds. Flowers and fruit available thoughout the year.

Habitat. Common in lawns, grassland and enclosures, damp shady areas, roadsides, pastures, and plantations.

Distribution. Found everywhere in Papua New Guinea but most commonly in the Highlands.

Constituents[1-3]. Ascorbic acid, dehydroascorbic acid, fatty acid esters, oxalic acid, glyoxylic acid, octacosan-1-ol, pyruvic acid, beta-sitosterol, vitexin, isovitexin, vitexin-2"-0-beta-d-glucopyranosid E.

Biological Activity[4-7]. Antihypertensive, chronotropic effect, inotropic effect, smooth muscle relaxant, estrogenic (weak activity), antibacterial, hypoglycaemic.

Traditional Uses[8,9]. The whole plant is pulped, sap extracted and drunk to treat syphilis and prostrate cancer. The leaves are used to clean wounds. The whole plant is crushed, chewed and spat onto a burn.

References:

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Pandanus tectorius **Solms**

***Pandanus tectorius* Solms** **Pandanaceae**

Local Names : marita (Kokopo, East New Britain); marite (Pala language); foram (Lamekot language); masap, vap-masap (Ugana language); halewa bonebonei (Alotau, Milne Bay).

Description. Tree-like plant; leaves 1-2 m long, 7-12 cm wide, long-acuminate. Male inflorescence contracted, pendulous; axis, bracts and heads white. Lower bract ending in a long whip like point 1-1.2 m long. Upper bract acuminate but not whip like, 50-30-20 cm long. In the axil of each bract is a catkin-like head, 7-10 cm long. Stamens 15-40, in stalked bundles. Composite fruit globose-ellipsoid, when ripe greenish-yellow. Fingers 6-8 cm long, 4-5 cm wide, each formed of 8-17 adnate achenes (nuts). Old fingers lying on the ground do not divide into their separate nuts. The lower parts of the fingers are chewed for their sugar content; the leaves serve as rain-hoods. Plant flowers in May.

Habitat. Mainly on the fore shore on sandy soil and in grassland.

Distribution. Distributed throughout the Pacific Island, and common in Papua New Guinea coasts.

Constituents[1-4]. Isolariciresinol, (-) lyoniresinol, (+) pinoresinol, (+) pinoresinol-4'-0-beta-D-glucopyranoside, (+) syringaresinol, campesterol, daucosterol, betasitostenone, beta-sitosterol, stigmast-4-ene-3-6-dione, stigmasterol, physcion, blumenol C glucoside, betacaryophyllene, epoxycaryophyllene, farnesol acetate, alphahumulene, (+) dearabinosyl pneumonanthoside, (6S-9R) roseoside, vomifoliol, borneol acetate, camphene, geraniol, geraniol acetate, linalool, cis- and trans-betaocimene, alphaterpineol, cirsilineol, benzyl acetate, phenyl acetonitrile, cinnamic acid ethyl ester, cinnamyl acetate, eugenol, palmitic acid, stearic acid.

Biological Activity[5,6]. Diuretic, radical scavenging effect, uterine stimulant (weak activity).

Traditional Uses[7,8]. Bark is scraped in *Zingiber* leaf, and juice is extracted into a cup and drunk to sedate mental patients. Small portion of young root of the plant is cut and heated over a fire and crushed using a smooth stone; the juice is extracted on to the prick from the stonefish, or a bite or wound caused by any other fish to stop the pain as well as healing the wounds.

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***Pangium edule* Reinw.**

***Pangium edule* Reinw.** **Flacourtiaceae**

Local Names : puga (Agenehembo, Northern Province); maing (Yangoru, East Sepik Province); murok (Kurti, Manus Province); tobo, mapak (Kuanua, East New Britain).

English Name : football fruit.

Description. Tree, 25-30 m tall, trunk to 1 m in diameter, with 3-5 m triangular buttresses. Twigs thick, with distinct leaf scars. Leaves alternate, crowded at the twig-tips, ovate, acute or acuminate, others ovate in outline but 3-5 lobed, or roundish ovate, entire or lobed, 10-30 x 8-25 cm cordate, glossy when the tree is mature; base roundish or codate; petiole about as long as the blade, 10-45 cm. Flowers large and greenish, unisexual, incompletely dioeciously, axillary, 3-4 cm across; calyx almost globose, closed, at flowering disrupted into 2-3(-4) segments, deciduous; petals usually 5, rarely 4 or 6, with a large scale within each. Fruit oval and about the size of a large husked coconut, brown and rough-surfaced. Seed flat and grayish-brown, 5 cm long. Flowering and fruiting at the end of January and in February, and again in July and in August.

Habitat. Abundant on limestone areas, especially beside riverbanks. It grows in high altitude areas of about 2000-3000 m above sea level and lower altitude too.

Distribution. Widely distributed and abundantly found in all parts of Papua New Guinea.

Constituents[1]. Lipids, phenolics, oleic acid, linoleic acid, chlorophyll, tocol.

Biological Activity[1]. Antioxidant.

Traditional Uses[2,3]. The mature fruit is edible; however, the seeds are extremely poisonous. The fruit is sliced and juice applied to sores and cuts. Leaves are heated on a fire and placed around the head and covered with a piece of cloth as a treatment for head lice. An inflamed knee, swollen and painful joints are treated by exposing the affected part to hot vapour produced by heating the inner portion of bark over a hot stone. The crushed bark of a mature tree is cooked together with a soup and is given to the mothers with new born babies so that when the mother breast-feeds the child, the child will grow healthier and stronger. It is believed to prevent all kinds of illnesses at an earlier stage.

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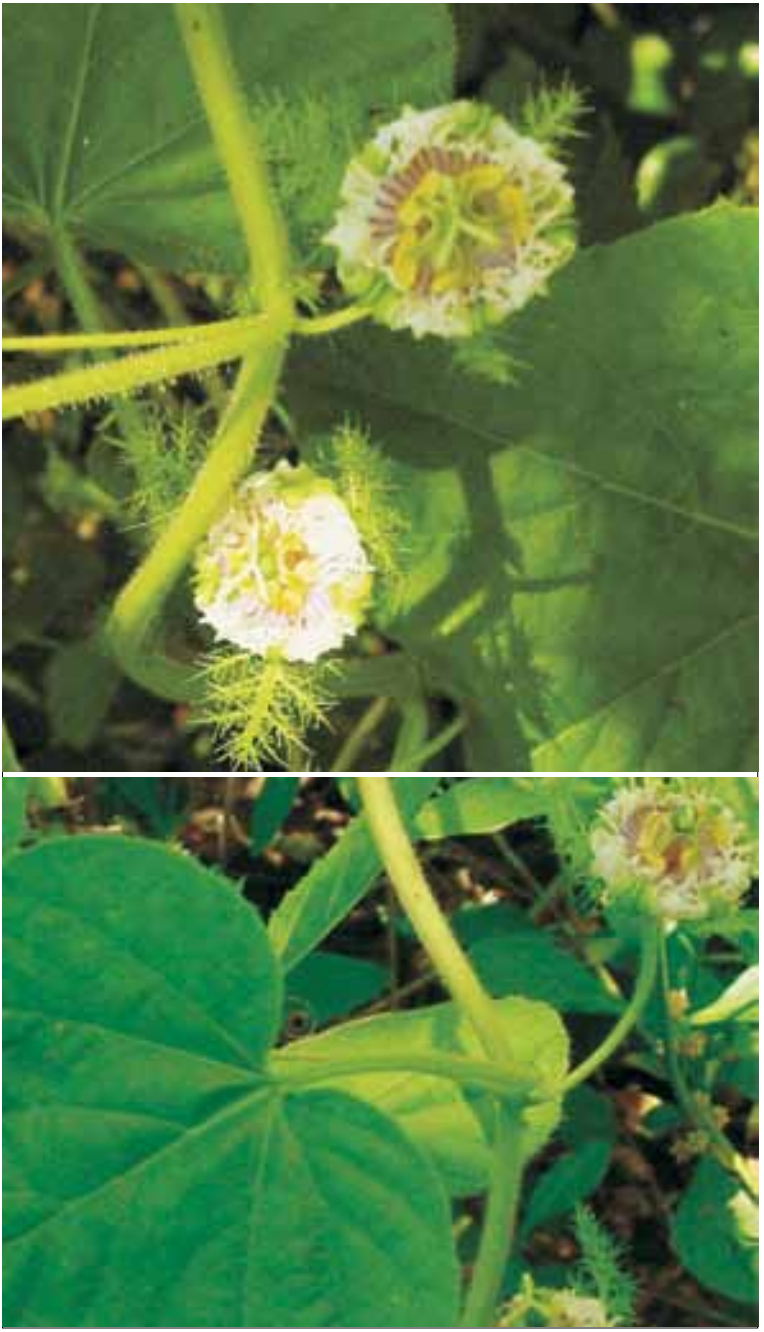

***Passiflora foetida* L.**

***Passiflora foetida* L.** **Passifloraceae**

Local Names : kifa (Vanapa, Central Province); pasikolo (Rigo, Central Province); dumdum (Kokopo, East New Britain); lopi (Meramera, West New Britain Province).

English Names : passion-flower, love-in-a-mist, wild passion fruit, stinking passion-flower.

Description. A herbaceous plant with slender vine, with tereted stems, covered with prominently villous hairs. Leaves ovate to oblong-ovate, 6 to 9 cm long, thin, shallowly three-lobed or often only sinuate, ciliate, acute or acuminate and with cordate base. Flower solitary, white or pinkish, about 3 cm in diameter, subtended by a prominent involucre of 3 bracts which are 1- to 3- pinnately divided into numerous segments, the ultimate segments glandular. Sepals about 1.5cm long, pale, petals about as long as the sepals, white or pinkish. Corona 3-seriated, with slender segments. Fruit dry, inflated, ovoid, and 3 to 5 cm long, with many seeds. All parts of the plant have a strong disagreeable odour. Flowers and fruits available throughout the year.

Habitat. Found in secondary forest types, in thickets, roadsides, plantation margins, rough pastures, and in logged over opened areas.

Distribution. Native to Brazil. Found in low altitude areas throughout Papua New Guinea in well-drained and fertile soil.

Constituents[1-7]. Linoleic acid, linolenic acid, beta-sitosterol, stigmasterol, passiflorin A, passiflorin B, passiflorin C, cosmosiin, cynaroside, schaftoside, isoschaftoside, vitexin, isovitexin, 2”-xylosylvitexin, 2”-xylosylisovitexin, vicenin 2, apigenin, 4’-7-dimethoxyapigenin, 4-7-di-O-methylapigenin, chrysoeriol, cynaroside, kaempferol, luteolin, pachypodol, ermanin, deidaclin, tetraphyllin A, tetraphyllin B, tetraphyllin B sulphate, volkenin, linamarinthyl, 5-hydroxytryptamine, sucrose, galactose, glucose.

Biological Activity [5]. Insect feeding deterrent (leaves).

Traditional Uses[8]. Leaves are crushed into water and solution drunk as an antidote when bitten by a Papuan Black Snake. Alternatively, fresh young leaves are mashed and massaged on the snakebite wound soon after the bite. Leaves of *Passiflora foetida* and *Erythrina variegata* are mashed together and squeezed; the resulting juice is drunk to induce sleep or treat sleeping disorders.

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***Phyllanthus niruri* L.**

Phyllanthus niruri* L.** ***Euphorbiaceae
(syn. *Diasperus niruri* (L.) Kuntze; *Phyllanthus asperulatus* Hutch.; *Phyllanthus filiformis* Pavon ex Baillon; *Phyllanthus lathyroides* Kunth)

Local Names : ningi (Yangoru, East Sepik Province); ndron pei (Kurti, Manus Province).

English Names : eruption plant, common leaf-flower, necklace leaf-flower.

Description. An erect annual herb of about 30-50 cm high. Leaves are simple, distichous, elliptic-oblong, alternate in two rows with a narrow triangular stipules; petioles ca. 0.5 mm long; blade membranous or thin-papery, oblong or elliptic-oblong, green, 3-10 mm long, 2-5 mm wide, base rounded, apex obtuse or rounded and often apiculate. Flowers are small, with a greenish 6 lobed perianth, separately male and female, singly or 2-3 together from the axils, male flowers with 3 stamens, female flowers with a 3-celled ovary and 3 bifid styles. Fruit a 3-celled smooth globose capsule. Seed wedge shaped rounded and longitudinally ribbed on the back, light brown. Flowering and fruiting season is from January to October.

Habitat. Found on road sides, abandoned fields, grazing lands, waste places or forest edges.

Distribution. Originating in India, the plant usually occurs as a weed throughout the hotter parts. Now widespread throughout the tropics and subtropics including Papua New Guinea.

Constituents[1-4]. Astragalin, (+)-catechin, (-)-epi-catechin, (+)-gallocatechin, (-)-epi-catechin-3-gallate, (-)-epi-gallocatechin-3-*O*-gallate, (-)-limonene, (-)epi-gallocatechin, 4-hydroxy-lintetralin, 4-hydroxy-sesamin, 4-methoxy-nor-securinine, 2,3-dimethoxy-oxo-lintetralin, 24-isopropyl cholesterol, ascorbic acid, beta-sitosterol, corilagin, cymene, demethylenedioxy niranthin, dotriacontanoic acid, ellagic acid, eriodictyol-7-*O*-alpha-L-rhamnoside, estradiol, fisetin-4-*O*-beta-D-dlucoside, gallic acid, geranin, hinokinin, niranthin, hydroxy niranthin, hypophyllanthin, lintetralin, iso-lintetralin, iso-quercitrin, kaempferol-4-*O*-alpha-L-rhamnoside, linnanthin, linoleic acid, linolenic acid, lupeol acetate, lupeol, niranthin, nirphyllin, nirtetralin, nirurin, nirurine, nirurinetin, nor-securinine, phyllanthenol, phyllanthenone, phyllantheol, phyllanthin, phyllanthine, phyllester, phyllnirurin, phyllochrysine, phylletrin, phylltetralin, quercetin, quercetrin, repandusinic acid, ricinoleic acid, rutin, salicylic acid methyl ester, seco-4-hydroxy-lintetralin, *trans*-phytol, triacontan-1-ol.

(continued on page 279)

***Piper betle* L.**

***Piper betle* L.** **Piperaceae**

Local Names : daka (Pidgin); raurau (Gaire, Central Province); bala (Nasingalatu, Morobe); kimu (Rigo, Central Province); venge (Kokopo, East New Britain Province).

English Names : betel leaf vine, betel leaf pepper, betel pepper.

Description. Slender creeper with adventitious roots. Leaves palmately nerved, alternate, heart shaped, acuminate and shining on both sides, base obtuse or pointed. Stems glabrous, sulcate, thickened at the nodes. Inflorescence in drooping, dense axillary spike, consisting of male and female flowers. Fruit or berry is globose and hairy at the apex (rarely produced) or is cylindrical, fleshy composite of berries. All parts of plant exude a special aroma. Flowering period is during May to August.

Habitat. Wild in scrub; planted in gardens, and also found or grown wild in shrub and secondary forest.

Distribution. Found mostly in the lowland areas of Papua New Guinea where the soil is fertile and well drained.

Constituents[1-9]. Cadinene, alphaamorphene, alphacadinol, caryophyllene, betacaroyphyllene, germacrene D, ursolic acid, 3-beta-acetyl ursolic acid, camphene, carvacrol, cineol, paracymene, (+) limonene, myrcene, alpha- & beta-pinene, terpinene, terpineol, anethole, catechol and derivatives, chavibetol, chavibetol acetate, chavicol, estragole, terpineol acetate, eugenol and derivatives, phenylpyruvic acid, allylpyrocatechol, safrole, arecoline, cepharadione A, piperine, piperlongumine, ascorbic acid, betacarotene, dotriacontanoic acid, stearic acid, tocopherol, beta-sitosterol, stigmasterol, diosgenin.

Biological Activity[8, 10-15]. Cytotoxic, hypotensive, antimycobacterial, antioxidant, carcinogenic, carcinogenesis inhibition activity, antifertility, antibacterial, antifungal, antiyeast, clastogenic, testosterone level increase, antitumour, anthelmintic, embryotoxic, spermicidal, antispasmodic, respiratory depressant, uterine relaxant, skeletal muscle relaxant.

(continued on page 280)

Pipturus argenteus **(Forst.) Wedd.**

***Pipturus argenteus* (Forst.) Wedd. Urticaceae**

Local Names : ritsiring (Koheno, Buka Island, North Solomon); tsitsiring (Tohatsi, Buka Island, North Solomon); hulious (Kuhi, Buka Island, North Solomon); kwelakwela (Alotau, Milne Bay); kaligalamo (Rigo, Central Province).

English Name : native mulberry.

Description. Tree, 3-6 m tall. Leaves alternate, acuminate, up to about 12 cm long and about half as wide, oval in shape with toothed margins, dark green above and grayish-green beneath, base cordate to obtuse; flowers in small globose clusters grouped at interval along the slender stalks arising in the forks of the leaves. False-berry 5-9 mm across, whitish.

Habitat. One of most common trees of secondary forest; grows well in rainforest area and common in cool places along rivers and creeks.

Distribution. Widely distributed throughout Papua New Guinea.

Constituents. None reported.

Biological Activity[1]. Weak antibacterial.

Traditional Uses[2-6]. A woman in labour drinks infusion prepared from the fresh bark to aid birth. Leaf infusion is also used to induce labour. Dried entire plant is used to treat a variety of conditions including sores, boils, aching teeth, dysentery, cold, cough, asthma, stomachache, tuberculosis, malaria and headache. Plant is also used as an abortifacient. Fresh leaf juice is applied on sores, and drunk to treat a cough. Rainwater collected from the leaves is used in treatment of asthma. Fresh root juice is drunk to treat malaria and coughs. Scraped roots are chewed with betel nut and lime, and the red mixture rubbed into centipede bites. Alternatively leaves may be crushed and applied directly to the bite. Leaves of *Pipturus argenteus* are boiled together with the leaves of *Alstonia spectabilis*, solution cooled and drunk to treat cough, cold and flu. Young leaves of the plant are collected together with the leaves if *Hibiscus tiliaceus* and squeezed in little water. The solution is drunk immediately to treat urticaria and itchiness resulting from ingestion of the raw leaves or stalk of the taro (*Colocasia esculenta*) plant.

References:

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5) Nick, A., *et al*., *J. Ethnopharmacol*., (1995), *49* (3), 147-156.
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***Pittosporum ferrugineum* Dryand. ex Aiton**

***Pittosporum ferrugineum* Dryand. ex Aiton** **Pittospraceae**

Local Names : boedobu (Boku, Central Province); finamueta (Kami, Eastern Highlands Province).

English Names : rusty pittosporum.

Description. Tree to 8-15 m tall with densely hairy new growth. Leaves dark green, alternate, often close together and then apparently opposite or in whorls of 3-4; oblong to oblong-elliptic, acuminate, entire or curved teeth. Petiole 1.5-3 cm long. Terminal groups of white flowers followed by terminal groups of yellow capsules containing orange seeds; each florescence sub-tended by 3-4 whorled leaves. Calyx-lobes 5, narrow, acute, 1.5 mm long. Petals 5, white to cream coloured, the lower halves united to a tube, the upper spreading stamens 5, 4-5 mm long. Ovary 1, 2-5-celled, with 1 style. Capsule globose or elliptic, 2-celled, cells many-seeded. Flowers in April-May, and again in September-October.

Habitat. Commonly found in secondary forest. Grows in dry rain forest, preferred habitat is beach forest.

Distribution. Malesia to the Solomon Islands.

Constituents. None reported.

Biological Activity. None reported.

Traditional Uses[1,2]. The bark is used as a poison antidote; the bark is shredded, baked in bamboo and eaten with traditional ash salt and green vegetables to enable a victim to vomit poison. The root bark is pressed into the cavity of an aching tooth to give temporary relief. A mixture of chewed bark and traditional salt is dripped into nose to treat enlarged spleen caused by malaria, and also for stomach ache.

References:

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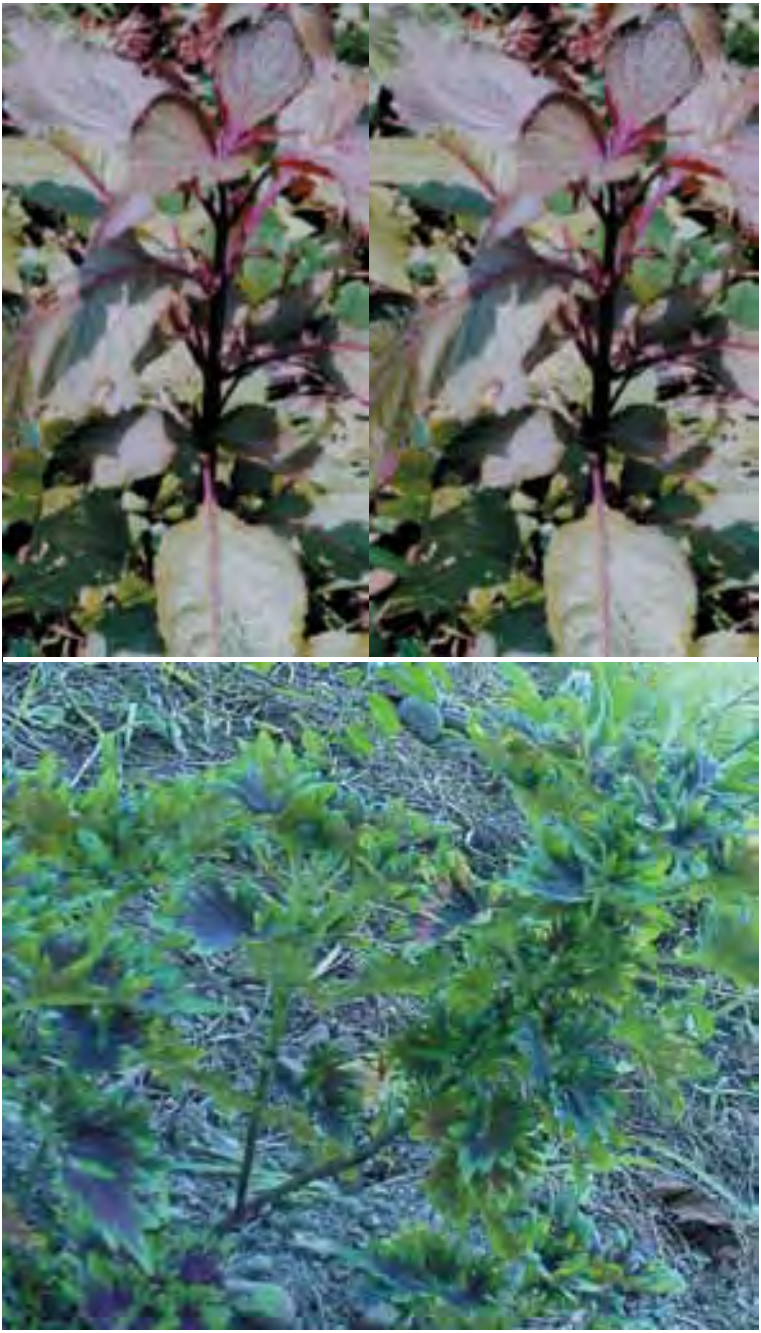
2) Holdsworth, D. and Sakulas, H., *Int. J. Crude Drug Res.*, (1986), *24* (1), 31-40.



***Plectranthus scutellarioides* (L.) R. Br.**

***Plectranthus scutellarioides* (L.) R. Br.** **Lamiaceae**
(syn. *Coleus scutellarioides* var. *scutellarioides*)

Local Names : ka (Kuanua language); mongko (Siwai, Bougainville); kamali (Kurti, Manus Province).

English Name : coleus

Description. A well-known foliage plant, which varies greatly in appearance. The wild plants are 1-1.2 m tall and have ovate, acute, toothed leaves, both sides smutty-green or black-purple, or only black-purple beneath; not markedly pubescent. The leaves of cultivated plants are very variable; the forms depend from circular to lanceolate and linear; the margin may be coarsely, often irregularly serrate, comb-like incised or pinnate-lobed. The colour is not easy to describe, including shades from black, through brown, orange and yellow, to white, the pubescent is usually thick, tomentose or woolly. Flowers sky-blue or white, in false-spikes 10-30 cm long; verticillasters many-flowered. Calyx 5-toothed, the upper tooth ovate, the other 4 much smaller. Corolla long-exserted; limb 2-lipped, upper lip 3(-4)-lobed, lower lip undivided, boat-shaped. Stamens 4: style with a bifid stigma, exerted.

Habitat. From lowlands to high altitude, forest margins, grasslands, and also cultivated in gardens.

Distribution. From India, Malesia to Polynesia.

Constituents. None reported.

Biological Activity. None reported.

Traditional Uses[1-3]. Juice squeezed from the new soft leaves are applied to the sores. Shoots and leaves from the purple-black variety are squeezed into a cup and taken with a pinch of salt to induce abortion and remove afterbirths. The plant is also reported to be used for abortion in Vanuatu. The leaf extracts are used to treat leprosy. The sap from the black-purple variety is used for tattooing.

References:

1) Traditional Medicine Database, (2002), National Department of Health, Govt. of Papua New Guinea, Waigani, N.C.D., Papua New Guinea.
2) Bourdy, G. and Walter, A., *J. Ethnopharmacol., (1992)*, 37 (3), 179-196.
3) Peekel, P.G., Flora of the Bismarck Archipelago for Naturalists, (1984), Kristen Press, Madang, Papua New Guinea, pp. 488.

***Plumeria rubra* L.**

***Plumeria rubra* L.** **Apocynaceae**
(syn. *Plumeria acutifolia* Poir.)

Local Names : frangipani (Gazelle Peninsula, East New Britain); prengipeni (Kurti, Manus Province); siale (Todura, Central Province); sale (Boku, Central Province); pegi-pegi (Kuanua, East New Britain).
English Names : plumeria, frangipani, temple tree.

Description. Tree, to 25 feet, all parts with abundant milky sap; twigs flesh, 2-3 cm thick. Leaves alternate, broadly elliptic to obovate or oblong-lanceolate, to 20 inches long, obtuse to acuminate, with prominent marginal connecting vein, glabrous to densely pubescent beneath, petioles to 4.5 inches long. Flowers showy, 5-petalled, inflorescence rather open, corolla salverform, to 4.5 inches across, white with yellow center to various shades of rose and yellow, tube to 1 inch long; follicles to 1 foot long. Flowers usually available throughout the year.

Habitat. Prefers partial shade or partial sun to full sun; soil should be dry. Commonly grown in yards for ornamental purposes.

Distribution. Native from Mexico to Panama, and widely cultivated in warm areas. Found throughout Papua New Guinea.

Constituents[1-7]. Monoterpenes, plumieride, paracymene, citral, fulvoplumierin, linalool, alpha- and beta-pinene, 1,8-cineol, geraniol, geranial, neral, plumericin, iso-plumericin, alpha-amyrin, benzoquinone derivatives, 4-hydroxyacetaphenone, iso-amylsalicylate, lupeol, rubrinol, oleanolic acid, plumenoside, plumeric acid, taraxasterol, taraxasterol acetate, plumerinine, cardinene, para-cymene, citral, liriodendrin, beta-ionol, stigmasterol, cardinene, beta-farnesene, *trans-trans*-farnesol, cinnamic acid, decanoic acid, lauric acid, nonanoic acid, octanoic acid, beta-ocimene, para-coumaric acid, kaempferol, melilotic acid, quercetin, syringic acid, vanillic acid, caproic acid, bornesitol, plumeruboside.

Biological Activity[5,8-13]. Uterine stimulant effect, antifungal, antiyeast, antiviral, antibacterial, cytotoxic, anticlastogenic, antitumour, analgesic, anesthetic, antispasmodic, hypoglycemic.

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Pometia pinnata **J.R. & G. Forster**

***Pometia pinnata* J.R. & G. Forster** **Sapindaceae**

Local Names : taun (Pidgin); ibula (West New Britain); ton (Taskul, New Hanover); lavakoko (Pinikidu, New Ireland).

Description. Large, slightly buttressed tree about 20-30 m high, densely hairy when young, when older completely glabrous. Leaves large, alternate, pinnately compound, 18-30 cm long, with prominent veins and serrate margins. Leaflets in 6-8 pairs, opposite, elliptical and unequal, bright red when young, upper leaflets larger than lower ones. Flowers small, regular, 5 parted, whitish except for red stamens and arranged in dense panicles, inconspicuous and lack petals. Fruit spherical, somewhat green dull red to bright red, globose drupe to 4 cm broad containing whitish or white translucent pulp surrounding a large seed. Fruit available from March to May.

Habtat. Found in lowland forest, forest edges, on rocky soil, and often cultivated in village gardens.

Constituents[1-2]. Oleanolic acid, lignin, tannins, anthocyanidins.

Biological Activty[3-5]. Antiprotozoan, antimicrobial, cytotoxic (weak activity).

Traditional Uses[4,6]. Fresh stem bark is chewed and the juice swallowed to relieve asthma and alleviate abdominal pains. Dried entire plant is used for abdominal pains, dysentery and fever. Fresh sap squeezed from the bark and young leaves is drunk by women as an oral contraceptive. A decoction of the bark is used to treat mouth cancer.

References:

1) Chand, V.S., and Croft, K., *Fiji Agr. J*., (1980), *42*, 51-52.
2) Croft, K.D., and Tu'ipulota, R., *South Pacific J. Nat. Sci*., (1980), *1*, 45.
3) Bhakuni, D.S., *et al*., *Indian J. Exp. Biol*., (1988), *26* (11), 883-904.
4) Holdsworth, D., *et al*., *Int. J. Crude Drug Res*., (1989), *27* (1), 55-61.
5) Yang, L.L., *et al*., *Cancer Lett*., (2000), *157* (1), 65-75.
6) Holdsworth, D., *et al*., *Int. J. Crude Drug Res*., (1983), *21* (4), 161-168.

***Pongamia pinnata* (L.) Pierre**

***Pongamia pinnata* (L.) Pierre** **Fabaceae**
(syn. *Pongamia glabra* Vent.)

Local Names : poklen (Manus Island); vailail (Kuanua, East New Britain Province).

English Names : poonga-oil tree, pongam, karum tree, indian beech.

Description. Tree, 5-10 m high. Leaves imparipinnate, the upper leaves with 3 leaflets; leaflets generally in 2-3 pairs, elliptic, acuminate, 7-15 x 4-9 cm, glabrous, pointed at the tip. Racemes axillary, many-axis; standard silky-hairy on the back. Calyx campunulate, truncate, with obscure teeth; petals clawed; standard roundish, with downward point auricles at the base, wing oblong; stamens 10, all united to a tube; ovary 2-ovulate. Flowers pink, light purple or white. Pods oblong-ellipsoid, thick, compressed, and leathery to woody, indehiscent 1-2 seeded. Flowers bloom in September.

Habitat. Commonly found on the foreshores and waterways; grows on most soil types and prefers humid and subtropical environments.

Distribution. Native to the Asian subcontinent, this species has been introduced to humid tropical lowlands and is found along coasts and river banks in Papua New Guinea.

Constituents[1-8]. Betulinic acid, glabrosaponin, lupenone, lupeol, friedelin, friedlin, ponganone I-XI, fisetin tetramethylether, flavonoid derivatives, 3,7-dimethoxyflavone, glabrachromene I & II, glabone, glabra II, glabrachalcone, kaempferol, kanjone, kanugin, pongagallone A & B, quercimeritin, pongone, populnin, pinnatin, pongachalcone I & II, pongachromene, karamjachromene, karunjin, ovalichromene B, ovalifolin, ovalitenin B, arachidic acid, arachidonic acid, behenic acid, fatty acids, hiragonic acid, oleic acid, stearic acid, myristic acid, linoleic acid, visnaginone, ovaltenone,

Biological Activity[9-16]. Antimalarial, antiviral, antibacterial, insecticidal, antihyperglycemic, antinematodal, wound healing acceleration, antioxidant, antiulcer, analgesic, anti-inflammatory, growth inhibitor.

Traditional Uses[17-19]. Leaves are squeezed and mixed with water, the solution is drunk and used to bathe a patient with fever. A small amount of the cooled solution is given to a crying baby as a sedative. The young new leaves are squeezed in sea-water and drunk to relieve diarrhoea and dysentery. The plant is also used as an antifertility agent.

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***Premna integrifolia* L.**

***Premna integrifolia* L.** **Verbenaceae**
(syn. *P. serratifolia* L.)

Local Names : kalokalo (Sipupu, Normanby Island, Milne Bay); niggrp, ninggrp (Yenchimangua, Sepik); tsibo (Buka, North Solomons Province).

Description. Small tree, 4-8 m tall. Twigs, leaves and inflorescence glabrous, light green, shining. Leaves opposite, 9-19 x 6-12 cm, elliptic or elliptic-ovate, acute or acuminate, entire, base obtuse or somewhat cordate; petiole 2-7 cm long. Inflorescence in terminal corymb; flowers white, in terminal cymes, 10-20 cm across; corolla 4-5 mm across. Ripe berries 6-9 mm across, blue-black to black. Flowers and fruit available throughout the year.

Habitat. Common in secondary and sometimes primary forest, and on beach forests, edges of mangroves and lowland plantations.

Distribution. Widespread throughout the tropics including South Pacific. Sometimes cultivated as ornamental and shade tree.

Constituents[1-4]. Diterpenoids, premnenol, premenol, 6-deoxylycoxanthol, anhydronellionol, sesquiterpenoids, caryophyllen-3-one, premnaspirodiene, betunoline, flavonoids, luteoline, beta-sitosterol, daucosterol, aphelandrine, premnazole.

Biological Activity[5-9]. Myocardial depressant, skeletal muscle stimulant, smooth muscle stimulant, uterine stimulant, toxic effect, hypoglycaemic, hypotensive, hypolipemic.

Traditional Uses[10-13]. Dried leaf decoction is drunk to treat cough and headache. Leaves are squeezed into water together with leaves of *Morinda citrifolia*, and solution is drunk twice a day to treat severe malarial fevers. Fresh leaves and stem are boiled in water; patient directs the steam to his chest and breathes deeply to treat fevers. The cooled solution is used to bathe the body and the boiled leaf and stem are also rubbed into the skin. Later patient is washed in hot water. Fresh leaves are squeezed together and wrapped in a banana leaf and heated over a fire. Later a small opening is made into the banana leaf and steam is directed towards the forehead of the patent to treat a severe headache.

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***Premna obtusifolia* R. Br.**

***Premna obtusifolia* R. Br.** **Verbenaceae**
(syn. *Premna corymbosa* var. *obtusifolia* (R. Br.) H.R. Fletcher; *Premna integrifolia* var. *obtusifolia* (R. Br.) C. P'ei)

Local Names : tisibo (Tanamalo, Buka Island, North Solomon); kalokalo (Sipupu, Normanby Island, Milne Bay); karuwana (Siwai, Bougainville); kiyar (Kurti, Manus Province); ningriek (Yangouru, East Sepik Province); alowalo (Tawala, Milne Bay Province).

Description. Tree to 10-20 m high. Glabrous in the typical form, except a minute pubescence on the inflorescence, and sometimes a row of hairs along the principal veins on the underside of the leaves. Leaves broadly ovate obviate or almost orbicular; usually broadly obtuse, very rarely within a short obtuse point, cordate or very obtuse at the base, mostly 3-6 inch long and sometimes nearly as broad, the petiole vary from a ¼-1 inch in length; the leaf shape lanceolate; the leaf margin entire and the tip pointed. Flowers white or greenish, often numerous, in terminal corymbose panicles, sometimes shorter than the leaves, sometimes 6-8 inch in diameter. Bracts very small and narrow. Calyx rarely above one line long and usually rather shorter, obscurely and broader than the others and entire or obscurely 3-toothed, the two lower lobes entire, the whole calyx spreading open under the fruit, but not otherwise enlarged. Stamens inserted in the throat and nearly as long as the lobes. Style with very short stigmatic lobes. Seeds small, round and green when unripe; seeds becoming purple when mature. Flowers and fruits available throughout the year.

Habitat. Commonly found in the islands and the shores of the mainland.

Distribution. Widely distributed and abundantly found throughout the country.

Constituents. None reported.

Biological Activity[1]. CNS effects, spasmolytic effects.

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***Psidium guajava* L.**

***Psidium guajava* L.** **Myrtaceae**

Local Names : tuava (Hula, Central Province); kuava (Rigo, Central Province); guava (Kabakada, East New Britain); kopa (Bundralis, Manus); gwawa (Sipupu, Normanby Island, Milne Bay); koava (Buka, North Solomons Province).

English Name : guava

Description. Shrub or small tree, 3-10 m high, finely pubescent when young, later glabrous, with thin, smooth, patchy peeling bark; twigs 4-angled. Leaves opposite, oblong- elliptic, strongly prominent lateral to pinnate nerves or veins, short with oval blade. Flowers axillary, petals white and up to 2 cm. long. Stamens numerous. Fruit a fleshy yellow globose berry when ripe; contain numerous small hard white seeds. Bears fruit all year round

Habitat. Grown as ornamental shrub or fruit tree around the house yard, secondary forest or garden clearings.

Distribution. Native to Brazil, now introduced throughout the tropics; found almost every where in Papua New guinea in lower altitude to about 60 0m above sea level with well drained fertile soil and especially in disturbed areas.

Constituents[1-6]. Tannins, 47-sesquiterpenes, 16 monoterpenes, 13 triterpenes, vitamins B and C, amritoside, eugenol, quercetin, quaverin, gallic acid, lipids, asiatic acid, brahmic acid, lupeol, maslinic acid, lauric acid, oleanolic acid, ellagic acid derivatives, gentisic acid, amyrins, arjunolic acid, trans-cinnamic acid, benzaldehyde, butyl acetate, ethyl acetate, daucosterol, acetyl furan, furfural derivatives, ursolic acid derivatives, valeraldehyde, guaijavarin, humulenes, hyperoside, leucocyanidin, pinenes, squalene, lycopenes, limonene, beta-sitosterol, zeatin, zeatin nucleotide, zeatin riboside.

Biological Activity[6-14]. Antibacterial, antifungal, analgesic, antiedema, anti-inflammatory, anticholinergic, antispasmodic, smooth muscle relaxant, antimutagenic, hypoglycemic, vasorelaxation inhibition activity, intestinial motility inhibition activity, antiamebic, antiyeast, antilypolytic, spasmogenic, antimycobacterial, antimalarial, antitussive, allergic, CNS depressant, antidiabetic (pedunculagin, strictinin, and isostrictinin from leaves).

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***Pterocarpus indicus* Willd.**

***Pterocarpus indicus* Willd.** **Fabaceae**

Local Names : kinagi (Nauti, Morobe); marawa (Rigo, Central Province); harabea (Delena, Central Province); maradawa (Sipupu, Normanby Island, Milne Bay); buringai (Nangananga, East New Britain); sawari (Agenehembo, Northern Province).

English Names : new guinea rosewood.

Description. Large tree, 20-30 m tall, diameter 60-80 cm. Leaves imparipinnate, 20-45 cm long; leaflets alternate, 2-6 on each side of the rachis, elliptic to ovate, acuminate, glabrous; base obtuse; petiolules 3-6 mm long. Flowers small, flagrant, yolk-yellow, in many-flowered leafy panicles, 20-40 cm long, petals crinkled. Fruit flat, roundish, winged, indehiscent, 1-4-seeded. Sap red, resembling varnish (dragon's blood). Flowers and fruits all year round.

Habitat. Found on shoreline, forests, primary and secondary forests. Sometimes riverine, and also in plantations. Mostly grown wild by the beach forest and along tidal creeks and rivers by the coast, from sea-level up to 750(-900) m.

Distribution. Widely distributed in the tropics and most part or regions of Papua New Guinea where the soil is fertile.

Constituents[1-3]. Anoglensin, alphaeudesmol, betaeudesmol, and gammaeudesmol.

Biological Activity[1,4-6]. Antifungal, antibacterial, hemagglutinin activity, analgesic, spasmolytic, antitumour.

Traditional Uses[7-10]. Bark is chewed by girls with irregular periods to induce menstruation. Dried bark is boiled, filtered and solution drunk to treat pneumonia. Fresh bark juice is applied to sores and wounds. Dried leaf is mixed with water and drunk daily for headache. Fresh leaves are chewed with betel nut to ease a cough. Young leaves are boiled and solution drunk to treat constipation and stomach-pain. Leaves are boiled and the solution used to bathe a sore or wound. Leaves are also used orally to treat ulcer. Patient with fever is exposed to steam from hot water mixed with crushed leaves. Leaf decoction is given to patient with malarial fever to drink; treatment is continued by washing the patient in the solution and finally rubbing the body with soft wet leaves. Leaves are boiled, cooled and drunk to treat asthma.

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***Quisqualis indica* L.**

***Quisqualis indica* L.**

Combretaceae

Local Names : Not recorded

English Names : rangoon creeper, chinese honeysuckle.

Description. Climbing woody shrub, much branched, spreading. Leaves opposite, papery, round or ovate at the base, acuminate. Inflorescence in dense axillary and terminal spike, flowers with long corolla tube, white, turning red later, fragrant. Fruit rhomboidal, 5-angled, dark brown. The flowering period is between December to May.

Habitat. Found in disturbed areas or clearing or near household yards.

Distribution. Found in most lowland areas of Papua New Guinea.

Constituents[1-6]. Myristic, palmitic, stearic, oleic and linoleic acids, quisqualine A, quisqualine B, potassium salts of quisqualic acid, castalagin, casuarin, gallic acid, ellagic acid, eugeniin, eugeniin1-degalloyl, flavogallonic acid, brevifolin carboxylic acid, alanine and other proteid, rutin, flavonoids, trigonelline, pyridine, cyanidin monoglucocide.

Bilogical Acitvity[7-11]. Antinematodal, histamine release inhibitor, phosphodiesterase inhibitor, anticlastogenic, antifungal.

Traditional Uses[12]. Contraceptive, whole plant is eaten fresh daily both by male and female as a method of birth control.

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***Rubus moluccanus* L.**

***Rubus moluccanus* L.** **Rosaceae**

Local Name : si'imu (Siwai, Bougainville).

English Names : wild raspberries, queensland bramble, molucca raspberry, broad leafed bramble, molucca bramble.

Description. A tall scrambling shrub or climber reaching 2 to 3 m high. The leaves and stems are covered with medium sized spines. Leaves are rounded to elliptical, broadly 3-5 lobed and covered with rusty hair on the underside. The leaf has a crinkled surface and serrate margins, that is, edge with forward pointing teeth. The flowers are white or red. The pointed sepals are usually silky hairy. The fruit is a red, nearly globular, berry (about 12 mm in diameter), with little flavor. Flowers pinkish-red in irregular panicles in upper axils. Fruiting time is during summer.

Habitat. Commonly found in or near rainforests along the coast and in reforested areas.

Distribution. South East Asia, Malesia. Locally abundant from near sea level to an elevation of 1,100 m, on forest edges or in secondary forest or thickets.

Constituents[1-3]. Rubonic acid, rubusic acid, tormentic acid.

Biological Activity[4]. Antispasmodic, hypotensive.

Traditional Uses[5-8]. Leaves are chewed and juice swallowed to produce abortion in women. Water extract of the leaves is also drunk to induce abortion. Fresh leaves are chewed and sap swallowed with traditional salt to treat internal sores. Spines (thorns) are used to pierce the reddish spots on skin, which are believed to develop in leprosy. The piercing removes the 'bad blood' and promotes healing. The sweet red berries can be gathered and eaten raw. They can be used as substitutes for the exotic raspberries.

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***Saccharum officinarum* L.**

***Saccharum officinarum* L.** **Poaceae**

Local Names : suka (Pidgin); dru (Kurti-Andra, Manus); eve (Lufa, Goroka); iya, lopya (Anji, Enga Province); tovu (Ubili, West New Britain Province).

English : sugarcane

Description. Very tall, erect, stout perennial grass up to 15 feet high, with solid, sweet, juicy, purple-green canes 3-4 cm in diameter. Leaves sheathing and overlapping (deciduous on lower stems and clums), lance shaped, up to 2 m long and 6 cm broad. Culms 3–5 m tall, 2–3 cm thick, solid juicy, the lower internodes short, swollen; sheaths greatly overlapping, the lower usually falling from the culms; blades elongate, mostly 4–6 cm wide, with a very thick midrib; panicle plume like, 20–60 cm long, the slender racemes drooping; spikelets about 3 mm long. The mature plants bear erect, dense clusters of small, wind-pollinated flowers. Flowers available throughout the year.

Habitat. Mostly cultivated in gardens and around the house from sea level to 1000 m or more in elevation.

Distribution. Originated in the South Pacific Islands and New Guinea. Found throughout the tropics and subtropics, and well distributed in all regions of Papua New Guinea.

Constituents[1-8]. Abscisic acid, aconitic acid, apigenin, 4'-*O*-beta-D -5,7-dimethyl apigenin, 5-*O*-methylapigeninglucoside, arabinose, xylose, beta-D-galactoside, saccharan A-F, giberellin A-1, giberellin A-3, giberellin A-19, giberellin A-20, giberellin A-29, arundoin, cylindrin, taraxerol methyl ether, tricin and tricin glycosides, vicenin, swertiajaponin, swertisin, syringaresinol, medioresinol, benzofuranyl-prop-2-enyl-beta-D-glucoside, orientin and isoorientin, schaftoside, neocarlinoside, palmitic acid, caffeic acid, ferulic acid, fructose, galactose, glucose, sucrose, invert sugar,lactic acid, *O*-methyl lupeol, luteolin, 6-methoxyluteolin, malic acid, beta-sitosterol, campesterol, stigmasterol, neocarlinoside, succinic acid, coumarin, para-coumaric acid, phenylpropanoids.

Biological Activity[9-13]. Abortifacient, antiimplantation, analgesic, diuretic, hypotensive, hypoglycemic, allergenic, antihepatotoxic, immunostimulant, hypolipemic, anticancer.

Traditional Uses[14]. Stem is chewed to stop diarrhoea and vomiting sickness. The stem is also chewed to treat body pains or general listlessness.

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Sansevieria trifasciata Hort. ex Prain

***Sansevieria trifasciata* Hort. ex Prain** **Agavaceae**
var. *laurentii* (De Wildem.) N. E. Brown

Local Name : not recorded.

English Names : bowstring hemp, mother-in-law's tongue.

Description. Perennial stemless herb with erect leaves arising from an underground rhizome. Leaves thick, flat, fibrous, and smooth in texture, up to 1 m long, with thin pointed apices, the blade of light green colour with small white lines

running perpendicular to the growth of the leaf. Flowers 6-parted, with green and white perianth parts, fragrant, bone on terminal racemes. Fruit a reddish berry with 1-3 seeds. Flowers and fruits usually available during most part of the year.

Habitat. A common ornamental garden plant.

Distribution. Widely cultivated throughout the warmer regions of the world.

Constituents[1-3]. N-butyl-4-ol-N-propylphthalate, pregnane glycosides, and steroidal sapogenins.

Biological Activity[4]. Very toxic.

Traditional Uses[5]. The leaf sap is applied directly to infected sores, cuts and grazes. It is also used to treat fungal and scabies infection.

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***Scaevola taccada* (Gaertner) Roxb.**

***Scaevola taccada* (Gaertner) Roxb.** **Goodeniaceae**
(syn. *Scaevola sericea* (Forst. F.) Vahl)

Local Names : akajok (Mabsiga, Morobe); gavagava (Kitava Island, Milne Bay); pahop (Kurti- Andra, Manus Island); kamakamahiyawa (Alotau, Milne Bay); azeze (Lauapol, New Ireland); dangarong (Koropak, Karkar Island, Madang).

English Names : sea lettuce; native cabbage

Description. Stiffly erect shrub with finger thick, fleshy green twigs, 2-4 m tall, glabrous. Leaves opposite, alternate, obovate, obtuse, petiole short or absent, glossy, variable in size, but usually about 15cm long and 5 cm wide, entire or slightly crenate at the apex, base cuneate. Flowers white, in axillary, repeatedly forked, zygomorphic, moderate-sized, 5-lobed, a short subulate bract at the base of each flower. Fruit a white, juicy, globose drupe containing 1-2 seeds that float in salt water. Flower all year round.

Habitat. Found mostly along sandy beaches and rocky shores often forming dense beach thickets.

Distribution. Widely distributed in the Pacific region and most common on coastal regions of Papua New Guinea, however may also grow at higher altitudes.

Constituents[1-3]. Alkaloids, phenols, saponins.

Biological Activity[4-6]. Spasmolytic, antiviral, antifungal (weak activity), radical scavenging effect, antibacterial, general CNS effect (weak activity).

Traditional Uses[1,7-9]. Crushed leaf extract or salt water-soaked leaves are taken as a contraceptive. Leaves are soaked in salt water and drunk as a precautionary dose before onset of fertility. Treatment may be taken regularly to induce infertility from the age of 10, and reported to induce 7 years of infertility with no side effect. The leaves are chewed and juice swallowed with little water to treat tuberculosis, severe coughs and asthma. Leaves are also used to treat eye infection. Leaves are rubbed between the hands in salt water and the eyes washed with the resulting green solution. Fruits, collected in the morning, are boiled in water and decoction used to gargle to relieve toothache.

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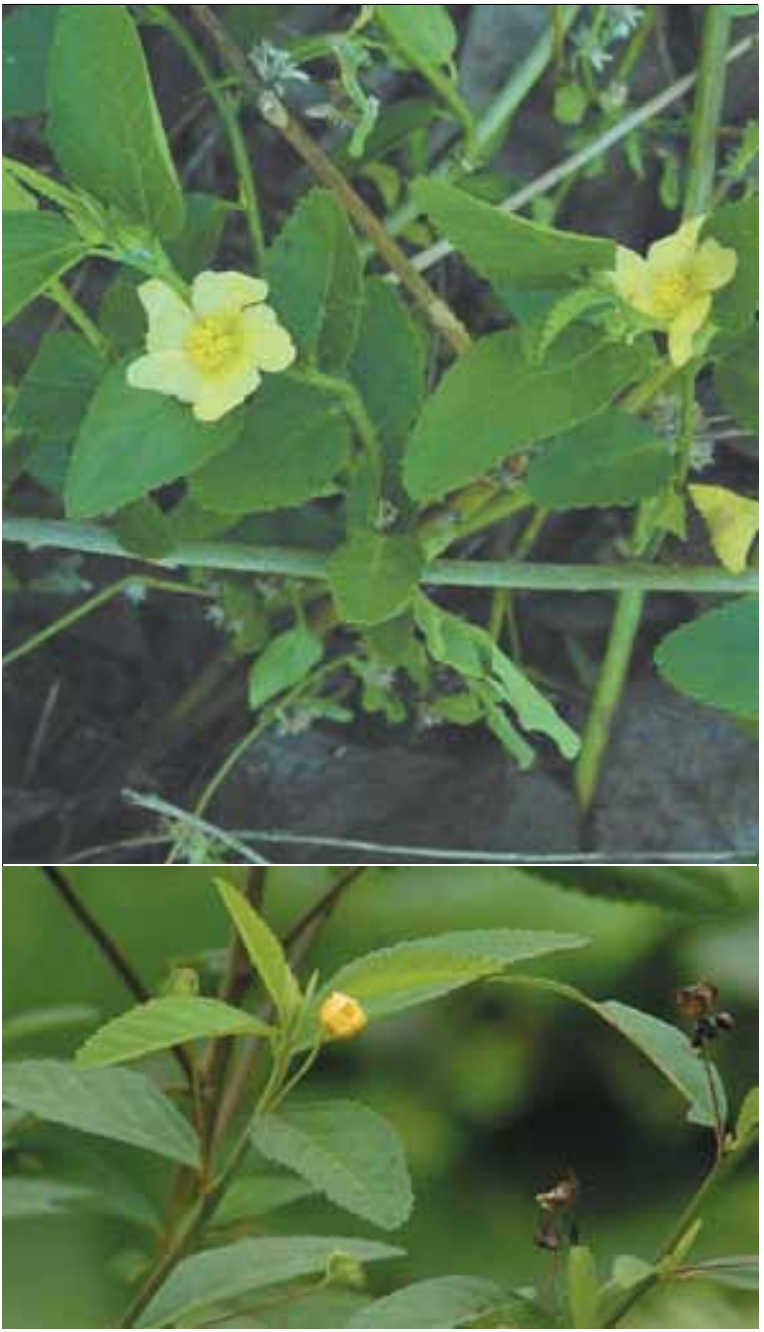


***Sida acuta* Burm. f.**

***Sida acuta* Burm. f.** **Malvaceae**
(syn. *Sida scoparia* Lour.)

Local Names : kuriakuria (Vanapa Bridge, Central Province); gotukamalele (Rigo, Central Province); mapatola (Ubili, West New Britain Province).

English Name : morning mallow, common wireweed, common fanpetals.

Description. Sub-shrub, 1-1.5 m tall, much branched. Leaves simple, short-stalked, lanceolate to linear, acute, prominently toothed margins from base to tip, sparsely hairy, and green underneath. Flowers yellow, singly or sometimes in pairs in the axils, on pedicels not much larger than the petioles. Fruit dark-brown, enclosed in the calyx; mericarps 5-6, 2-beaked. Reproduced by seed. Flowering season August/September.
Habitat. Common; an abundant and persistent weed of plantations, pastures, and roadsides.

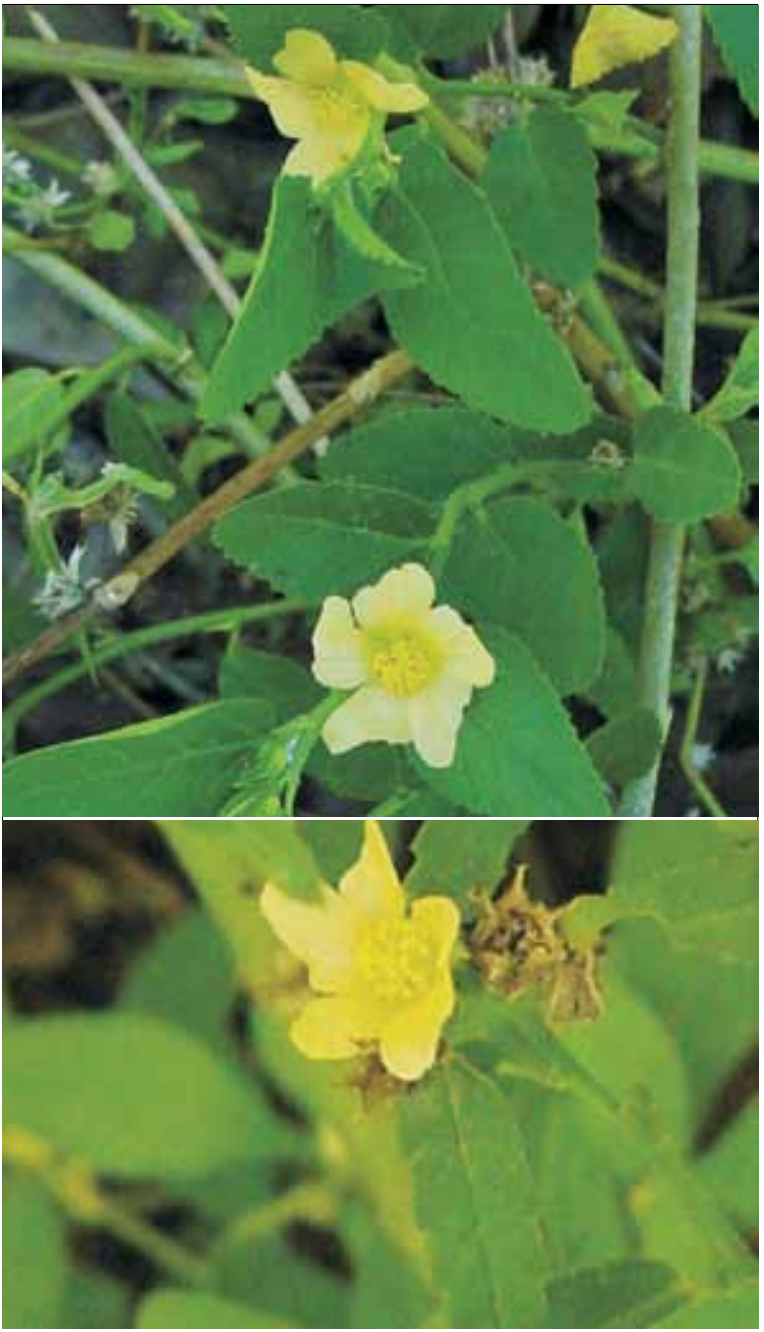
Distribution. Probably originating in America, sida is now found throughout the warm regions of the world, including Papua New Guinea.

Constituents[1-7]. Beta-amyrin, arachidic acid, linoleic acid, malvalic acid, myristic acid, oleic acid, palmitic acid, stearic acid, sterculic acid, betaine, campesterol, cholesterol, daucosterol, beta ecdysone, beta-sitosterol, stigmast-7-en-3-beta-ol, stigmasterol, choline, cryptolepine, ephedrine, pseudoephedrine, hypaphorine, beta-phenethylamine, vasicine, vasicinol, vasicinone, methylester *n*,*n*-dimethyl tryptophan, heraclenol, phytane, pristine, *n*-hentricontane, mucilage.

Biological Activity[8-12]. Antifertility, cardiotonic, embryotoxic, estrous cycle disruption effect, uterine stimulant, smooth muscle stimulant, anti-bacterial, antimycobacterial, angiotensin-converting enzyme inhibition.

Traditional Uses[13-15]. A tea is made by boiling the leaves in water and three cups a day are taken to relieve dysentery. Root preparations are also taken to treat dysentery. Root is chewed to relieve toothache. Leaves are reportedly used for stomach ache, pain and fever.

(continued on page 285)



***Sida rhombifolia* L.**

***Sida rhombifolia* L.** **Malvaceae**

Local Names : broomstick (Pidgin); sipuni (Kurereda, Northern Province); mapatola (Ubili, West New Britain Province).

Description. Perennial shrub to 1.5 m in height with spreading branches. Stems and leaves stellate hairy, bark tough and stringy. Leaves yellow or yellow-green, shining, pendulous, variable in form, alternate, shortly-stalked with serrate margins. Flowers solitary, axillary, on pedicles about 1.5 cm long which lengthens as the fruit develops. Corolla yellow. Seed dark brown, rounded wedge shaped. Flowers most part of the year.

Habitat. Found on the roadsides, cultivation and pastures.

Distribution. Common and widespread in Papua New Guinea from low altitudes to 2000 m.

Constituents[1-6]. Choline, ephedrine, pseudoephedrine, cryptolepine, hypaphorine, hypaphorinemethylester, betaphenethylamine, n-methyl-betaphenethylamine, vasicine, vasicinol, vasicinone, (-) vasicinone, (DL) vasicinone, campesterol, 22-dehydrocampesterol, cholesterol, 24-methylenecholesterol, stigmasterol, beta-sitosterol, 22-dihydrospinasterol, gossypol, hemigossypol, kaempherol, quercetin, linoleic acid, malvalic acid, myristic acid, oleic acid, palmitic acid, stearic acid, sterculic acid, alanine, phenylalanine, arginine, asparigine, aspartic acid, aurantiamide benzoate, betaine, glutamic acid, glutamine, glycine, histidine, leucine, lysine, serine, threonine, tyrosine, valine.

Biological Activity[7-13]. Antibacterial, antifungal, antispasmodic, antiyeast, cardiac depressant activity, smooth muscle relaxant, uterine stimulant, antiascariasis and taeniacide activity, antiinflammatory, cytotoxic, spasmolytic, antimalarial.

Traditional Uses[14-17]. Yellow flowers of *Sida rhombifolia* are eaten with wild ginger to ease labour. Root is scaped into seawater and mixture is drunk to treat diarrhoea, dysentery and abdominal upsets. Leaf is boiled in water and solution drunk to treat dysentery and diarrhoea in adult and children. Decoction prepared from dried root is taken orally to treat diarrhoea. Root is chewed with betel nut and lime by a patient with diarrhoea.

(continued on page 286)

***Smilax latifolia* R. Br.L.**

***Smilax latifolia* R. Br.L.** **Smilaceae**

Local Names : sare-e mundreu (Kurti, Manus Province); kowa'a (Siwai, Bougainville); tuaga (Ubili, West New Britain Province).

Description. A climber with tendrils, 5 to 15 m long. Leaves ovate, with 3-5 nerves, elliptic, base obtuse; apex aristae. Stem prickly. Male flowers with 6 stamens, Berries 8-11 mm in diameter, red, finally black, on stalks 12–15 mm long. Climbs on tree and shrubs.

Habitat. Rainforest.

Distribution. Frequent; widely distributed.

Constituents. None reported.

Biological Activity. None reported.

Traditional Uses[1]. The new soft leaves are squeezed and rubbed on the face to remove acne and pimples. A length of vine is cut and tied around fractures.

Reference:

1) Traditional Medicine Database, (2002), National Department of Health, Govt. of Papua New Guinea, Waigani, N.C.D., Papua New Guinea.

***Solanum torvum* Sw.**

***Solanum torvum* Sw.** **Solanaceae**
(syn. *tranum ferrugineum* Jacq.; *Solanum mayanum* Lundell; *Solanum verapazense* Standl. & Steyerm.)

Local Names : podapodo (Raluana, East New Britain).
English Names : prickly solanum, devil's fig, turkeyberry, terongan.

Description. Evergreen, widely branched, prickly shrub, to 3 m tall; twigs stellate tomentose; prickles scattered on stem, branches and leaves. Leaves simple, alternate; blade ovate to elliptic in shape with an acute tip and rounded to oblique base, and mostly 5-20 cm long. Leaf alternate, solitary or in pairs, variable margins shallowly and irregularly lobed, upper leaf surface scabrous, lower surface, petiole about one-quarter as long as the blade. Flowers many, in large branched clusters, borne at intervals on the stems. Calyx with five acute lobes, tomentose; corolla stellate, deeply divided into five acuminate lobes, white, and 12-18 mm long. Stamens five, yellow, epipetalous, and erect. Fruit an erect sub-globose berry, 10-15 mm in diameter, many-seeded, green, yellow when ripe, glabrous.

Habitat. A major weed in pastures, roadsides, and wetlands, and also occurs in plantations, but not significantly in cultivated land. It prefers moist, fertile soil, but will tolerate drought.

Distribution. Native to tropical America. Commonly found everywhere from sea level to 2,000 m in Papua New Guinea.

Constituents[1-6]. Campesterol, stigmasterol, beta-sitosterol, solasodine, solasodiene, cuscohygrine, chlorogenin, imagines, neochlorogenin, chlorogenone, hecogenin, solasapigenin, neosolasapigenin, torvogenin, torvonin A & B, torvoside A-H, hexatriacontan-5-one, tetratriacontanoic acid, triacontan-1-ol, 2-3-4-trimethyltriacontane, tritriacontan-3-one, triacontanoic acid octacosanoate.

Biological Activity[7-10]. Antispasmodic, hypotensive, antibacterial, antifungal, antiyeast, anticonvulsant, CNS depressant activity, antiviral, anticoagulant, molluscicidal, clastogenic, mutagenic, insecticidal.

Traditional Uses[11,12]. Fresh leaves are heated over a wood fire, and the juices are squeezed into a cup. The solution is drunk by a patient with malaria.

(continued on page 286)

***Sphaerostephanos* J. Sm.**

***Sphaerostephanos* J. Sm.** **Polypodiaceae**

Local Names : munuba or bunum (Kuanua, East New Britain); lavelave (Balawaia, Rigo, Central Province); ningi (Yangoru, East Sepik Province); uwahaku (Siwai, Bougainville); laxi (Kurti, Manus Province).

Description. Erect fern growing up to 50 cm high. Leaves alternate, deltoid in shape, have attenuate base, subulate apex, pinnatifid margin. No flowers, but globose, tiny black pores lie underneath the leaves. The fresh fronds are fragrant. The new shoots are used by villagers as a form of green vegetable.

Habitat. Grows wild in primary or secondary forests, especially in cool, moist, shady places, on the riverside or beside creeks.

Distribution. Widely distributed and abundantly found throughout Papua New Guinea.

Constituents. None reported.

Biological Activity. None reported.

Traditional Uses[1]. The crushed young leaves are used to rub on scabies. Alternatively, the leaves are boiled and the juice is used to bathe the patient suffering from scabies. For skin conditions associated with measles, the new leaves and shoots are squeezed and the juice is rubbed on the affected area. The plant is also used in treating fever.

Reference:

1) Traditional Medicine Database, (2002), National Department of Health, Govt. of Papua New Guinea, Waigani, N.C.D., Papua New Guinea.

***Syzygium aqueum* (Burm. f.) Alston** **Myrtaceae**
(syn. *Eugenia aquea* Burm. f.)

Local Names : aruhi (Hisiu, Central Province); nokehawada (Yabiufa, Eastern Highlands); nas (Kurti, Manus Province); laulau (Pidgin).

English Name : water rose apple.

Description. Tree to 10 m high. Leaves opposite, obovate or elliptic-oblong, cordate at the base, acuminate, 10-16 cm long, 4-8 cm wide, dull, light-green above, yellowish-green beneath, leathery. Flowers yellowish-white, in terminal and axillary racemes of 3-7, shortly stalked or sessile. The 4-parted calyx and 4 petals are pale-yellow, yellowish-white or pinkish. Fruit thin-skinned and shining, rose-red or dark red, pear shaped with a narrow neck and broad apex. The flesh is white or pink, mildly fragrant, dry or juicy, crisp or spongy, and usually of sweetish but faint flavor. There may be 3 to 6 small seeds, frequently only 1 or 2, but generally the fruits are seedless. The fruit is edible.

Habitat. Particularly suited to low altitudes in the tropics and areas where there is fair rainfall.

Distribution. India, South East Asia, and Malesia. Abundant in the northern part of Papua New Guinea.

Constituents[1,2]. Acutissimin A, castalagin, casuarinin, eugenigrandin A, eugeniin, 4,6-hexahydroxy-diphenoylglucose, grandinin, pedunculagin, 1-beta-*O*-galloylpedunculagin, vescalagin, epi-(-)-gallocatechin, epi-(-)-gallocatechin-3-*O*-gallate, prodelphinidin B-2 3,3”-di-*O*-gallate, samarangenin A and B.

Biological Activity. None reported.

Traditional Uses[3,4]. Dry leaves are boiled with vegetables, or fresh leaves are eaten raw, to treat malaria and pneumonia. A tea is made by boiling the leaves and drunk to relieve stomach ache or dysentery. 4-6 new leaves are chewed and swallowed to treat stomachache.

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1) Nonaka, G.I., *et al., Chem. Pharm. Bull.,* (1992), *40* (10), 2671-2673.
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4) Traditional Medicine Database, (2002), National Department of Health, Govt. of Papua New Guinea, Waigani, N.C.D., Papua New Guinea.

***Syzygium malaccense* (L.) Merr.and Perry**

***Syzygium malaccense* (L.) Merr.and Perry** **Myrtaceae**

Local Names : nemuya (Fondengko, Morobe Province); sai (Baluan, Manus); laulau (Pidgin); gamata, tagia (Kokopo, East New Britain Province).

English Names: malay apple, mountain apple.

Description. Tree, 10-20 m tall with a short, flanged trunk, brown flaky bark. Laves opposite, elliptic, petiolate, acuminate, the blade oblong to ovate, upper surface shiny green. Flowers 4-5 parted, pink, dark red, or rarely white, with numerous conspicuous exerted stamens. Inflorescences in thick paniculate clusters often growing from the wood. Fruit a fleshy drupe, obovoid, or subglobose to oblong, varying in size, 4-9 cm long, fragrant, yellow to red with a large seed. Fruit edible and has a distinct turpentine flavour. Flowers and fruit only once in a year in March – May.

Habitat. Common at lower altitude, in primary forest, regrowth and often cultivated in villages or house yards as ornamental or esoterically for its edible fruit.

Distribution. Widely distributed and grown in all parts of Papua New Guinea.

Constituents[1-3]. Proteins, fibre, hemicellulose, cellulose, lignin, (+) catechin, mearnsitrin, myricitrin, quercitrin, alkaloids.

Biological Activity[1,4,5]. Antimicrobial, weak hypoglycaemic, antiinflammatory, spasmolytic.

Traditional Uses[6]. Decoction of the leaf is taken internally for cold and cough and for children who are listless with a rash. A decoction of the leaves is used to wash skin infections.

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5) Cox, P.A., *et al*., *Econ. Bot*., (1989), *43* (4), 487-497.
6) Woodley E.(ed.), *Medicinal Plants of Papua New Guinea, Part1*: *Morobe Province*, (1991), Wau Ecology Institute Handbook No.11, 106.

***Terminalia catappa* L.**

***Terminalia catappa* L.** **Combretaceae**

Local Names : talis (Pidgin); tali (Kokopo, East New Britain); sile (Ubili, West New Britain Province).

English Names : myrobalan, tropical or indian almond.

Description. A large spreading tree about 10-30 m, rarely to 40 m tall, with leaves mostly near ends of branches. Leaves alternate, margin entire, short-petiolate, the blades obovate, deciduous and turning orange to red before falling. Flowers small and in axillary raceme, unisexual, often white or cream coloured and borne in densely packed spikes. Fruit variable in size, reddish flattened ovoid drupe up to 6m long, usually surrounded by a stiff flange with a fibrous outer layer with single edible seed within. Fruits compressed in sharp angles or winged, green and turn yellow when ripe. It produces a fatty oil similar to almond oil. Flowers and fruits available throughout the year.

Habitat. Common on sandy or rocky beaches, usually confined to the tidal zones and along riverbanks.

Distribution. Found mostly along coastal regions and straight plains of Papua New Guinea.

Constituents[1-6]. Tannin and related compounds, ellagic acid, fatty acids, organic acids: palmitic, oleic, linoleic and myristic acid. Vitexin, isovitexin and other flavones and flavonoids, beta-sitosterol, daucosterol, essential oils, reducing sugars, amino acids, carotenoid.

Biological Activity[7-11]. Antiasthmatic, anti-bacterial, analgesic, anti-inflammatory, hypothermic, antimycobacterial, anticoagulant, antisickling, cytotoxic, molluscidal, antihepatotxic, radical scavenging and anticlastogenic.

Traditional Uses[12,13]. Leaves are chewed and contents swallowed to soothe a sore throat, or a solution prepared from the crushed leaves in water is taken for the same purpose. Heated leaves are applied to the affected area for treatment of yaws and pimples. The leaf juice is ingested for colic treatment. Fresh leaf juice is applied onto sores. An aqueous extract of the bark is applied to sores, cuts and wounds.

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***Thespesia populnea* (L.) Sol. ex Corrêa**

***Thespesia populnea* (L.) Sol. ex Corrêa** **Malvacveae**

Local Names : kunakunaba (Tawala, Milne Bay); banar (Kuanua, East New Britain).

English Names : seaside mahoe, thespesia, portia tree, pacific rosewood.

Description. Medium tree, up to 15 m high, evergreen, deliquisent branched, presence of mucilaginous latex.; tap roots well developed and much spreading into deep horizon of soil. Leaves alternate, simple, entire, acute, cordate, with petals 5-10 cm long, with usually 5 main veins from base. Flowers solitary, mature flower at base, bisexual, regular, complete, showy, hibiscus like simple at upper leaf axils, to 8 cm across; corolla yellow with a red center, turning maroon by nightfall; stamens united into a column shorter than petals. Fruit a leathery, flattened-globose, 5-parted capsule, 4 cm wide, yellow turning black bearing several brown hairy seeds. Fruits, flowers and young leaves are edible. Flowers and fruits are available throughout the year.

Habitat. Common on the foreshore; also found in the forest, and the margins of mangroves.

Distribution. Originating in India, and a common plant of coastal strands across old world tropics.

Constituents[1-6]. Beta carotene, ceryl alcohol, myricyl alcohol, cyanidin-3-0-beta-D-rutinoside, gossypetin, herbacetin, herbacetin-7-0-beta-glucoside, kaempferol, kaempferol-7-*O*-beta-D-rutinoside, 7-hydroxyisoflavone, pediflavone, populnin, quercetin, quercetin glucosides, tamarixetin-7-*O*-beta-D-glucoside, gossypol, (+)- gossypol, (-)-gossypol, manosonone C-H, thespesone, thespone, daucosterol, beta-sitosterol, lupenone, lupeol, linoleic acid, oleic acid, palmitic acid, fixed oil.

Biological Activity[7-12]. Antihepatotoxic, antiviral, antispasmodic, antitumor, wound healing acceleration, antibacterial, antifungal, antiyeast, antioxidant, cytotoxic, spasmolytic, CNS effects (general), antiimplantation.

Traditional Uses[13]. A mature *Thespesia* fruit is incised and the oozing sap is allowed to fall on the bud of red hibiscus (*Hibiscus rosa-sinensis*) flower just before it opens up. The hibiscus bud then is used as an applicator to apply the *Thespesia* fruit sap on the male and female genitalia just before sexual intercourse as a treatment of impotence in both sexes. The heartwood is very strong and used to make hand drums. The bast serves as binding material.

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***Timonius timon* (Spreng.) Merr.**

***Timonius timon* (Spreng.) Merr.** **Rubiaceae**

Local Names : lilet (Kurti, Manus Province); limbi (Yangoru, Esat Sepik); arapa (Kamali, Central Province); auhula (Hisiu, Central Province); girata (Goldie River, Central Province).

English Names : timon, timonius, timbu.

Description. Shrub or small tree, to 8 m, its young shoots, leaves and flowers are quite hairy; its leaves are thin with lateral veins visible on the underside. Leaves obovate to elliptic, apex acuminate to prominently so, tip blunt, base contracted, acute or very slightly decurrent, thin, entire, nerves prominent, main veins 5 to 8 on a side, petioles 1-1.5 cm long, slightly sericeous to villous; stipules linear-lanceolate attenuate, 1-4 cm long, sheathing terminal bud. Cymes 1.5-3 cm long, sericeous, pedunculate, few-flowered, compact, only buds seen, corolla in bud, calyx lobes 5, unequal, apices blunt; pistillate flowers solitary or very rarely 2-3 on axillary peduncles, bracts at summit minute, hypanthium and calyx not much swollen at anthesis, lobes slightly unequal, erect, ovate to oblong from an erect collar, corolla salviform, white, tube cylindrical, 3-4 cm long; fruit flattened globose, 3-4 cm wide, crowned by remains of calyx. Sweet smelling. Flowers in April.

Habitat. Commonly found in open forest in the coastal districts, and on the foreshore.

Distribution. Native to Northern Australia, Papua New Guinea, and Solomon Islands. It grows widely in old gardens, regrowth areas and is abundantly found.

Constituents[1,2]. Monoterpenes and triterpenes. 10-deoxysecogalioside, loganin, 3-beta-6-olean-12,28-dien-oic acid.

Biological Activity. None reported.

Traditional Uses[2,3-6]. Leaves are applied externally to treat snakebite. Infusion prepared from the dried leaf is taken orally as a contraceptive, and also to treat fever. To treat malaria, juice from squeezed heated fresh leaves is drunk. The patient often bathes in the solution of boiled leaves to assist the cure. Leaves can either be eaten raw or boiled until soft in water, solution drunk to treat malaria and to also provide relief of nausea and feeling of sickness. Leaf juice is applied on to aching muscles and to treat arthritis and rheumatism. Leaf juice is drunk to treat a cough. New shoots with leaves are chewed and swallowed for shortness of breath and whooping cough. The juice extracted from the bark is drunk to treat lung abscesses.

(continued on page 288)

***Tournefortia argentea* L. f.**

***Tournefortia argentea* L. f.** **Boraginaeaea**
(syn. *Messerschmidia argentea* (L. f.) I.M. Johnst.)

Local Names : parah (Kurti, Manus Province); ginewa (Alotau, Milne Bay).

English Names : tree heliotrope.

Description. Tree to 8 m high. Leaves simple, alternate, shiny, and appearing whorled at branch tips, densely silky pubescent on both sides. Blades fleshy, 10-20 cm long, acute or obtuse; base cuneate with no distinct petiole. Flowers sessile, widely branching. Calyx 5-partite; corolla slaviform, 5-lobed, tube glabrous; stamens 5; ovary 4-celled, cells 1-seeded; stigma 2-lobed. Fruits white to green, globose, 3-6 mm long, dividing into 4 nut lets.

Habitat. It grows in littoral forests on rocky and sandy coasts. Also found in foreshores.

Distribution. Native to tropical Asia, Madagascar, and tropical Australia, and most of the low and high islands of Micronesia and Polynesia. It is particularly common in sandy open habitats of atolls in Papua New Guinea.

Constituents[1]. Alkaloids.

Biological Activity[2]. Radical scavenging effect.

Traditional Uses[3] . The inner bark of the tree is scraped and mixed with the juice of a young green coconut and drunk daily for treatment of asthma until symptoms disappear. Leaves are heated in water and placed on eyes to treat blindness caused probably by gonococci. A hot water leaf extract is used to wash a red, sore or infected eye, and also as a mouthwash for painful and shaky tooth.

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***Tridax procumbens* L.**

***Tridax procumbens* L.** **Asteraceae**

Local Names : otikagena (Hula, Central Province); poamepoame (Roro, Central Province).

Description. Decumbent perennial herb. Leaves opposite, hairy, often deeply lobed; heads solitary, involucral bracts very hairy in 2 ranks, the outer shorter, receptacle convex, pileate. Flowers of 2 kinds, ray flowers 5 or 6, female, with narrow corolla tube and brown ligulate limb, white or pale yellow. Disc flowers many, the corolla narrow-campanulate, 8 mm long, bright yellow and hairy at the top, with spreading pappus of plumose hairs. Flowering and fruiting throughout the year.

Habitat. Weeds of gardens, pastures, often in short grasslands.

Distribution. Almost found in all regions of Papua New Guinea from sea level to about 700 m.

Constituents[1-5]. Alkanes, lipid, beta-amyrin, beta-amyrone, lup-12-en-3-one, lupeol, 3-methyl-nonadecylbenzene, 1-(2-2-dimethyl-3-hydroxypropyl)-2-iso-butyl phthalate, fucosterol, beta-sitosterol, 4'-5-7-trihydroxy-3'-6-dimethoxy flavone 5-0-alpha-l-rhamnopyranoside, procumbentin.

Biological Activity[6-14]. Antidiarrheal, antibacterial, antimicrobial, antimycobacterial, antifungal, diurectic, antihyperglycemic, antiinflammatory, antihepatotoxic, antitrypanosomal, insecticidal, insect repellent, wound healing acceleration, hair stimulant effect.

Traditional Uses[15]. Leaves are crushed and squeezed, with the sap applied to sores or ulcers. Smoke produced by burning the plant is used to repel mosquitoes.

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***Vigna marina* (Burm.) Merr.**

***Vigna marina* (Burm.) Merr.** **Fabaceae**

Local Names : kolitstopisa (Buka, North Solomons Province); klalakaleve (Kokopo, East New Britain Province).

English Name : beach bean.

Description. Herbaceous creeping vine, 2-5 m long, without tendrils. Stem glabrous. Leaves alternate and trifoliate, leaflets obovate, up to 10 cm long and somewhat fleshy. Flowers small, pea-like, yellow in colour. Fruit a black pod (legume), linear, almost cylindrical, 5-8 cm in length, glabrous, downward-pointing, with several to many pea-like seeds. Flowers and fruit available throughout the year.

Habitat. A common species found on sandy seashores and among coastal vegetation and plantations.

Distribution. Widely distributed species around Papua New Guinea and other tropical areas.

Constituents[1]. Alkaloids.

Biological Activity[2,3]. Spasmolytic, radical scavenging effect.

Traditional Uses[4,5]. Fresh leaves are crushed with lime and water, squeezed and the juice drunk to treat stomach-ache. Juice extracted from the crushed fresh leaves is drunk by children with asthma. Leaves are heated over fire and placed on sores.

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***Vitex trifolia* L.**

***Vitex trifolia* L.** **Verbenaceae**
(syn. *Vitex ovata* L.*; Vitex agnus-castus* var. *subtrisecta* Kuntze)

Local Names : dala (Nangananga, East New Britain); tari- raapito (Siwai, Bougainville).

English Names : vitex, three-leaved chaste tree, Indian wild pepper.

Description. A low sprawling aromatic shrub, 2-5 m tall. It has sprawling, radiating stems that are often covered by windblown sand. The stems produce adventitious roots at nodes along their length and this helps plant bind the sand. Twigs, leaves and inflorescences grey-white. Leaves very variable, simple or of 3 or 5 leaflets often white or pale blue, opposite, trifoliate, entire, oblong, pinnate, 2 to 4 inches high, lightly branched, the floral leaves reduced to short bracts. Calyx in the typical forms about 2 line long, very shortly 5-toothed, the corolla tube nearly twice as long as the calyx. Flowers small, bilateral, purple or blue. Fruit a small globose, 4-seeded capsule. Ovary 2-celled, with 2-ovules in each cell. Flowers and fruits available throughout the year.

Habitat. Common in coastal and reforested areas, and now cultivated as flowers.

Distribution. Widely distributed throughout the South Pacific and in Papua New Guinea.

Constituents[1-8]. Acubin, acuboside, alpha-pinene, sabinene, 1,8-cineol, terpineol acetate, abietatrien-3-beta-ol, rotundifuran, dihydrosolidagenone, vitetrifolin A-H, agnuside, caryophylline, friedelin, artemetin, 7-de-*O*-methylartemetin, 4-hydroxybenzoic acid, casticin, vitexin, isovitexin, isoorientin, 3,6,7-trimethylquercetagetin, daucosterol, beta-sitosterol, stigmasterol, linoleic acid, luteolin and luteolin glucosides, myristic acid, oleic acid, palmitic acid, palmitoleic acid, stearic acid, gamma-tocopherol, 4-hydroxybenzoic acid, vitricine.

Biological Activity[9-15]. Antispasmodic, diuretic, antiasthamatic, antioxidant, radical scavenging effect, antibacterial, antifungal, cytotoxic, insecticidal, antitumor, antihistamine, spasmolytic, insect feeding deterrent, anticrustacean.

Traditional Uses[16-18]. An aqueous extract is drunk to assist in childbirth. Fresh leaf juice is taken orally to provide relief from headache. A mashed leaf mixed with little water is taken for severe productive cough. The bark is removed from the stem and the secondary coating is scraped, chewed, and swallowed to treat dysentery.

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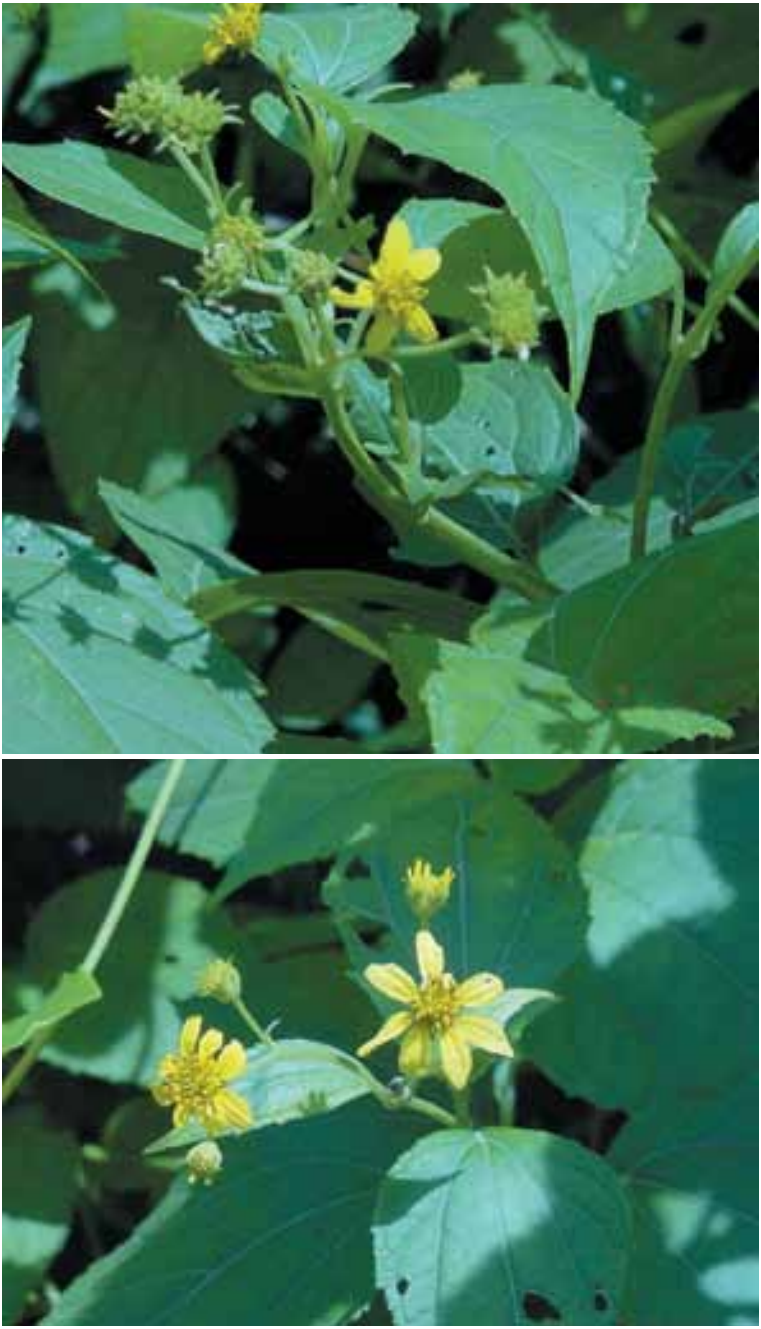

Wedelia biflora **(L.) DC.**

***Wedelia biflora* (L.) DC.** **Asteraceae**
(syn. *Wollastonia* biflora (L.) DC.)

Local Names : bambo (Maprik, Sepik); kawis (Lomeoi, Manus Island); abua (Rabagi, East New Britain); walapum, (Lontis, Buka Island, North Solomon); koliysriavena (Hahalis, Buka Island, North Solomon); pape (Buin, Bougainville Island, North Solomon).

English Name : beach sunflower, wedelia.

Description. Herbaceous or half-shrubby, usually 1.5-2.5 m tall, branching, up to 3 m high. Leaves opposite, ovate, acuminate, 8-20 x 5-15 cm, toothed; base sub-cordate, obtuse or cuneate; petiole 3-8 cm long. Head 18-38 mm across, in irregular panicles, often pair. Phyllaries in 2-3 ranks, the outer the largest, herbaceous, the inner shorter, cutaneous. Receptical slightly convex, covered with short pales. Flowers borne in dense sunflower-like heads in terminal clusters; the yellow florets are numereous. Grey flowers ligulate, females; ligule elliptic to oblong, incised or toothed at the apex, golden yellow. Disc-flowers tubular, 5-toothed, and bisexual. Flowers and fruit available throughout the year.

Habitat. Common in secondary forests, abandoned gardens, roadsides, waste places, and on the foreshore.

Distribution. Indigenous to Guam, and widespread in tropical Asia and the Pacific. Common throughout Papua New Guinea.

Constituents[1-3]. Bifloratoxin, grandifloric acid, 16-methylkaur-15-en-19-oic acid, entkauradienoic acid, 24-ethylcoprostanone, stigmast-7-en-3-beta-ol, stigmasterol, 4',5,7-trihydroxy-3,3'-dimethoxyflavone, 2,7-dihydroxy-3(3'-methoxy-4'-hydroxy)-5-methoxyisoflavone, veratrylidenehydrazide.

Biological Activity[1,4-6]. Hypotensive, general CNS effects, spasmolytic, convulsant, insect feeding deterrent, radical scavenging effect.

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***Xylocarpus rumphii (Kostel.)* Mabb.**

***Xylocarpus rumphii (Kostel.)* Mabb.** **Meliaceae**
(syn. *X. australasicus* Ridley; *X. mekongensis* Pierre; *X. moluccensis* (Lamk.) M. Roem; *Carapa rumphii* Kostel.)

Local Names : puarul (Kuanua, East New Britain); ndrou (Kurti, Manus Province).

English Names : cannonball tree, puzzlenut tree, cedar mangrove.

Description. Large tree up to 20 m tall; trunk 60 cm in diameter at base, buttressed. Leaves paripinnate, leaflets in 1-3 pairs, 7-12 x 3-6 cm, ovate, acute at apex, oblique at base. Bark red with thick flakes; wood red in colour; pneumatophores woody. Flowers in panicles, 2-3 cm across, white with red glands inside. Staminal teeth obscure, anthers exceeding the teeth. Stigma cup shaped. Fruit 10 - 15 cm across, globose, woody; seeds 5-8 cm across, several seeds enclosed in a single fruit; irregularly triangular-pyramidal, the outer side (base) convex.

Habitat. Usually found in the vicinity of mangrove swamps, foreshores, and coastal thickets.

Distribution. Distributed from India through Malaysia into the Pacific.

Constituents[1-5]. Angustidienolide, 2-hydroxyfissinolide, 7-deacetyl-7-oxogedunin, 7-oxodeacetyl-7-oxogedunin, phragmalin acetates, 2-hydroxy-detigloyl-6-deoxyacetateswietenin, detigloyl-6-deoxyacetateswietenin, xylocarpus limonoid B-3, xyloccensin G-J, xylomollin, acetonyldihydrochelerythrine, *n*-methylflindersine, beta-sitosterol, stigmasterol, 6-beta-hydroxystigmast-4-en-3-one, lipid.

Biological Activity. None reported.

Traditional Uses[6]. A large piece of the bark is stripped and heated on an open fire until very hot. The heated bark is then tied at the back of the patient with a piece of cloth before going to bed in night for treatment of backaches and inflammation of vertebrates. Soft leaves are chewed and swallowed for general well-being and strengthening of the body. Leaves are boiled in water, cooled, and the solution used to bathe the body to ease strong coughs.

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***Zingiber officinale* Rosc.**

***Zingiber officinale* Rosc.** **Zingiberaceae**

Local Names : kawarr (Pidgin); kavavar (Kokopo, East New Britain); sigova (Rigo, Central Province); sihoa (Vanapa, Central Province); toto (Buka, North Solomons Province); kanga (aseki, Morobe Province); lei (Baon, Manus Province).

English Name : ginger.

Description. Perennial herbaceous plant with a subterranean, digitately branched rhizome and erect leafy stems. Rhizome stout, thick, palmately branched, tuberous, showing longitudinal striations. Aerial parts growing annually in wet season about 0.5-1 m in height. Leaves linear, lanceolate, alternate, smooth, pale green, strap-shaped, sub-sessile, and distichous. Inflorescence in radical spike; flowers yellow, spotted with violet-blue (rarely produced). Fruit a capsule with small arillate seeds. Taste pungent. The flowering period is between May to August.

Habitat. Grows well in cool places, mostly found near homes, also grown as culinary and ornamental plants, and found in gardens or secondary to mature forests that has a well-drained fertile soil.

Distribution. Native to South-East Asia, but widely distributed and naturalized throughout the South Pacific.

Constituents[1-4]. Essential oils, oleoresin; sesquiterpene hydrocarbons: (-)-zingiberene, (+)-ar-curcumene, (-)-beta-sesquiphellandrene, beta-bisabolene; monoterpene aldehydes and alcohols; benzenoids: gingerols, gingerdiol glucosides, ginerdione, shogaols; proteid: arginine, asparigine, aspartic acid, valine, threoline, and others.

Biological Activity[1,5-11]. Choalogogic, antinausea, antiemetic, stomachic, anti-rheumatism, anti-inflammatory, antipyretic, antiviral, diuretic, hypoglycemic, antibacterial, antifungal, antitumour, antiulcer, hypocholesterolemic, antioxidant, immunostimulant, embryotoxic, nematocidal.

Traditional Uses[12-14]. Ginger rhizome is chewed and juice swallowed to ease a cough and stop vomiting. Juice from crushed rhizomes is drunk to treat cold, flu and backache. Juice of chewed rhizome is applied to forehead to treat migraine. Rhizome and leaf are chewed and spat out onto an aching knee. Juice from crushed rhizomes is applied onto cuts, sores, boils, stingray stings, snake, and centipede bites. Decoction of the dried root is drunk for stomach complaints. Rhizome is eaten raw for body pain, malarial fever and infections of the mouth and sore throats.

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MEDICINAL PLANTS IN PAPUA NEW GUINEA (continuation of descriptions...)

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Alstonia scholaris (L.) R. Br. Apocynaceae

(continued from page 19)

Traditional Uses[13-18].Milky sap obtained from the incised trunk is wrapped onto a ball of *Metroxylon sagu* (sago) powder, cooked on fire until charred, and ingested by a patient with tuberculosis. The inside portion of the bark is scraped, boiled in water and a decoction made; the decoction is drunk warm for shortness of breath, asthma, and pneumonia. Leaf decoction is taken to treat malaria, pneumonia, pain and fever.

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***Acorus calamus* L.** **Araceae**

(continued from page 7)

Biological Activity[6-15]. Platelet inhibition, antispasmodic, antifungal, psychotropic, antibacterial, antiyeast, anticonvulsant, spasmolytic, uterine relaxation effect, CNS depressant, insecticidal, antiulcer, antipyretic, analgesic, hypotensive, nematocidal, antihistamine, emetic, antiaggression effect, antidiarrhoeal, anti-inflammatory, mutagenic, hemotoxic, antiamebic, insecticidal, insect repellant, clastogenic, carcinogenic, hepatotoxic, cardiac depression activity, larvicidal, smooth muscle relaxant.

Traditional Uses[16-19]. The plant is used as a tonic. Young green leaves are crushed and mixed with coconut scrapings. The mixture is wrapped in banana leaves, heated over a fire and mixed with coconut water. The liquid is drunk by the patient and his body is bathed in the solution. Leaf is chewed with betel nut as a general tonic for chest complaints, and also to treat bad breath. Water extract is taken orally as an antifertility agent. An infusion of the dried rhizome or root is drunk to induce abortions. Crushed root is rubbed into the hair to kill lice, whilst the leaf is chewed to give relief to severe toothache. Dried leaf is mixed with sweet potato (*Ipomoea batatas*) and eaten to give relief to 'internal sores'.

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***Ageratum conyzoides* L.** **Asteraceae**

(continued from page 11)

and mixed with some lime, ginger and seeds of *Bixa orellana* is chewed for heart problems. To treat constipation betel nut is chewed with lime and leaves of *Piper betle* and the mixture swallowed.

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Artocarpus altillis (Parkinson) Fosb. — Moraceae

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Annona muricata L. — Annonaceae
(syn. *Annona macrocarpa Wercklé*)

(continued from page 27)

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Areca catechu L. — Arecaceae

(continued from page 31)

Traditional Uses[17-21]. Betel nut is chewed with lime and leaves of *Piper betle* as a mild stimulant. Fruits of *Areca catechu* and *Acorus calamus* are eaten together as a general tonic for chest complaints, and also to treat bad breath. Betel nut is chewed with a bit of lime and the root of *Synedrella nodifolia* and the mixture swallowed to treat diarrhoea. Decoction made from dried bark is drunk to relieve asthma. Juice extracted from the fresh bark is poured into the ear for earache. Betel nut is chewed with lime and *Piper betle* leaves slowly for hours to relieve tension and to provide a sense of well being, the red juice is spat out. The process also acts as a sedative to soothe a mad person. *Areca catechu* seed is chewed with leaves of *Cleome viscosa* to aid conception. A drink prepared from the dried seed is taken as a contraceptive. Red oral mixture of chewed betel nut, lime and *Piper betle* leaf is applied to tropical ulcers and to sores caused by venereal disease. Betel nut wrapped in *Piper betle* leaf

***Bixa orellana* var. *leiocarpa* (Kuntze) Standl. & L.O. Williams)**
(continued from page 41)

Traditional Uses[9]. Dried leaves are crushed and placed on skin burns to heal and prevent scars. Seeds are wrapped in *Piper betel* leaves and chewed by patients under the spell of supernatural powers. Seeds are also used as a body paint and food coloring.

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***Bryophyllum pinnatum* (Lam.) Kurz. Crassulaceae**
(syn. *Kalanchoe pinnata* (Lam.) Pers.
(continued from page 49)

Traditional Uses[18-20]. Young leaves are heated slowly over a fire and the soft pulp placed over the sore; dressing is replaced every two days until the sore is healed. Heated leaves are made into a poultice and applied on boils and swellings. To ease aches and sprains leaves are heated on a fire and placed on the affected parts of the body. For inflamed sores, boils and swollen bodies a few leaves are heated on a fire and juice squeezed onto the affected parts which then are covered by the same leaves. Heated leaves are rubbed onto broken bones, fractures, painful knee joints, arthritis, swollen muscles and bruised tissues.

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***Barringtonia asiatica* (L.) Kurz** **Barringtoniaceae**
(syn. *Barringtonia speciosa* J. R. Forst. & Forst.)
(continued from page 35)

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***Bidens pilosa* L.** **Asteraceae**
(continued from page 37)

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***Bixa orellana* L.** **Bixaceae**
***(*syn. *Bixa acuminata* Bojer, *B. Americana* Poiret in Lam, *Bixa odorata* Ruiz & Pav. ex G. Don, *Bixa platycarpa* Ruiz & Pav. ex G. Don, *Bixa tinctoria* Salisb., *Bixa upatensis* Ram. Goyena, *Bixa urucurana* Willd., *Orellana americana* Kuntze, *Orellana orellana* (L.) Kuntze,**

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***Carica papaya* (L)** **Caricaceae**

(continued from page 57)

Biological Activity[8,9,10-15]. Antibacterial, antifungal, antitumour, cardiac depressant, uterine stimulant, antiedema, antiinflammatory, antiburn, wound healing acceleration, abortifacient, antiscickling, anticoagulant, embryotoxic, insecticidal, oxytocic, amoebicidal, antihepatotoxic, antioxidant, anticlastogenic, antiyeast, antiascariasis, anticonvulsant, antiimplantation, radical scavenging effect, antiulcer, antihypertensive, anthelmintic, antimalarial, antiviral, spasmolytic, antiamebic, spermicidal, antifertility.

Traditional Uses[16-19]**.** The milky juice from the green unripe fruit is used for treatment of ringworm by applying onto affected area. The stem sap is used externally to treat *grille (Tinea imbricatum)*, a common skin fungus. Sap from any part of the plant is mixed with lime and rubbed into *Tinea imbricatum*. The sap is also drunk as an abortifacient. Sap from the leaf petiole is blown into the ear to relieve earache. The crushed leaves are used externally for headaches, cuts and swollen groin. Decoction made from fresh flowers is drunk to treat asthma, malaria and diabetes, and ripe fruit is eaten together with the seed to treat malaria. Juice extracted from fresh flowers is taken for diabetes. Dried seeds of

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Calophyllum inophyllum L. — Clusiaceae

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Capsicum frutescens L. — Solanaceae

(continued from page 55)

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Casuarina equisetifolia L.

Casuarinaceae

(syn. *Casuarina litorea L. ex Fosberg & Sachet*)

(continued from page 61)

Traditional Uses[12-14]. Fresh bark is used for dysentery. The roots are washed and scraped, then mixed with water and drunk to treat dysentery. The cambium beneath the bark of the trunk is squeezed and used to sedate a mentally disturbed or aggressive patient. The juice from the crushed barks is mixed with a small amount of coconut water, strained and is taken once a day to treat diarrhoea, dysentery and typhoid. Hot water extract prepared from a mixture of the inner portions of the bark of *Casuarina equisetifolia* and *Terminalia cattapa* is taken orally for asthma and shortness of breath.

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Centella asiatica (L.) Urban

Umbelliferae

(syn. *Hydrocotyle asiatica* L.)

(continued from page 65)

a ripe fruit are chewed for cough. Young leaves are squeezed to a pulp and plastered on the cut or wound. Fresh leaf juice is used for sore eyes. Decoction from shoots is drunk for diarrohea.

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***Cassia alata* L.** **Fabaceae (Caesalpiniaceae)**

(syn. *Herpetica alata*; *Senna alata* (L.) Roxb.)

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maintain a shiny skin.

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Codiaeum variegatum **(L.) Blume** **Euphorbiaceae**

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Colocasia esculenta **(L.) Schott** **Araceae**
(syn. *C. antiquorum* Schott)

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Traditional Uses[13-14]. The leaves are used to treat acute stomach ache when the patent coughs blood. For this the leaves are eaten each day for three consecutive days. Alternatively, leaves are squeezed into water and juice drunk once a day for three days. Leaves are also used with those of *Wendlandia paniculata* as a liniment for muscle and joint pains. A little lime is added to the crushed leaves and the mixture rubbed into the affected part. Heated leaf with little lime is rubbed on sore on babies' navel until it heals. Juice extracted from crushed fresh leaves is applied to ulcers and wounds. Crushed leaves are chewed and swallowed or juice drunk to treat diarrhoea and dysentery. Fresh leaves are chewed and juice swallowed to treat amnesia, diabetes, high blood pressure, anxiety and fatigue.

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***Cocos nucifera* L.** **Arecaceae**

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Traditional Uses[15-17]. The leaf of the plant is chewed with scraped flesh and applied to sores. Young leaves are chewed for diarrhoea. The inside jelly of the coconut is rubbed into the skin to treat scabies. The root of a young coconut is dug out, washed and chewed, but not swallowed, to relieve stomachache. The root is rubbed daily onto the teeth to keep them clean and prevent decay. Women in labour drink milk from young coconut to induce contractions, and after giving birth, to clear the uterus. Oil from the crushed kernel is used to treat stiff joints, swelling, and to

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Crinum asiaticum L. — Amaryllidaceae

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Curcuma longa L. — Zingiberaceae
(syn. *Curcuma domestica* Valeton.)

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Cordyline fruticosa (L.) Chev. (syn. *Cordyline terminalis* (L.) Kunth) — Agavaceae

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Costus speciosus (J. König) Sm. — Zingiberaceae

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***Dodonaea viscosa* (L.) Jacq.** **Sapindaceae**

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***Erythrina variegata* (L.)** **Fabaceae**

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Cymbopogon citratus (DC.) Stapf. (syn. *Andropogon citratus* DC.) — Gramineae

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Dioscorea bulbifera L. — Dioscoreaceae

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Hibiscus rosa-sinensis L.

Malvaceae

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Ipomoea batatas (L.) Lam. **Convolvulaceae**
(syn. *Ipomoea fastigiata* (Roxb.) Sweet)

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Euphorbia hirta L. Euphorbiaceae
(syn. *Euphorbia pilulifera* var. *hirta* (L.) Griseb.; *Chamaesyce hirta* (L.) Sm.)

(continued from page 115)

Traditional Uses[23-25]. A decoction prepared from the fresh whole plant is drunk to treat dysentery. Water extract of the plant is taken orally to promote fertility. A decoction of the herb is drunk to provide relief from asthma attacks. Leaf sap is used for red and inflamed eyes. The whole herb without roots is boiled in water, solution cooled, strained, and drunk to treat anaemia and bloody stool. Leaf or stem sap is applied on to centipede bites.

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***Mikania micrantha* Kunth** **Asteraceae**

(continued from page 165)

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Morinda citrifolia* L.** ***Rubiaceae

(continued from page 167)

Traditional Uses[14-17]**.** The plant is widely used throughout Papua New Guinea for variety of conditions. To treat aches and pains leaves are heated and applied to the affected body parts. Apical leaves are crushed, diluted in water and drunk to treat stomachaches. Boiled solution from crushed apical leaves is drunk for treatment of diarrhoea and dysentery. Infusion of the leaves is used in diabetes and tuberculosis. Heated mature leaves are used for treating leprosy sores by placing the leaves on them. A concoction prepared from the leaves of *M. citrifolia* and *Premna integrifolia* is drunk to treat a severe fever. Leaves are boiled with those of *Clerodendron* sp. and drunk for three consecutive days to treat pneu-

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***Ipomoea pes-caprae* L.** **Convolvulaceae**

(continued from page 147)

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***Luffa aegyptiaca* Mill.** **Cucurbitaceae**
(syn. *Luffa Cylindrica M. Roem.)*

(continued from page 155)

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***Mallotus philippensis* (Lam.) Müll. Arg.** **Euphorbiaceae**
(syn. *Croton philippensis* Lam.)

To treat oral thrush sap oozing from the incised bud is applied to lesions in the mouth or gum daily until it heals.

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***Nicotiana tabacum* L.** **Solanaceae**
(syn. *Nicotiana chinensis* Fisch. Ex Lehm.*; Nicotiana mexicana* Schltdl.*; Nicotiana mexicana* var. *rubriflora* Dunal*; Nicotiana pilosa* Dunal)
(continued from page 173)

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***Ocimum basilicum* L.** **Lamiaceae**

monia. Eyes are exposed to vapour from the heated leaves to prevent blurry vision and enhance vision at old age. The root decoction is dunk to treat stomachache, headache, pain and fever. Root is squeezed, and the juice drunk with water to treat malarial fever. Mature ripe fruits are eaten while fresh for cough, cold and fever. Oil extracted from the root is used for all types of body pain and applied onto scalp for headache. An aqueous extract of bark is drunk to induce labor.

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Musa paradisiaca L. Musaceae

(continued from page 169)

Traditional Uses[1,2,16]. The soft bark of the trunk is rubbed into the bite of multipede to give relief. Sap from sucker plants is pressed on to fresh cuts, sores and wounds. Young plant is cut and sap applied to affected part for fungal infections especially ringworm. Sap squeezed from the trunk is drunk to treat cold, cough and influenza. Decoction prepared from flowers is drunk by women to prevent excess blood loss during childbirth or miscarriage, and also in event of ruptured appendix.

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Phyllanthus niruri *L.* ***Euphorbiaceae***
(syn. *Diasperus niruri* (L.) Kuntze; *Phyllanthus asperulatus* Hutch.; *Phyllanthus filiformis* Pavon ex Baillon; *Phyllanthus lathyroides* Kunth)

(continued from page 187)

Biological Activity[2,5-10]. Antihepatotoxic, antiviral, antipyretic, analgesic, antibacterial, antidiarrheal, convulsant, hypotensive, smooth muscle relaxant, uterine relaxation effect, vasodilator, diuretic, antispasmodic, antitumour, antimalarial, anti-inflammatory, hepatitis B surface antigen inactivation (against HIV-1 virus), antiaging activity, reverse transcriptase inhibition, hypoglycemic, molluscidal.

Traditional Uses[11-14]. The leaf and stem are heated over a fire and rubbed onto the chest and neck to give relief to a cough. Hot water extract of dried entire plant administered orally is used for acute venereal diseases. Fresh leaf juice is taken orally for venereal diseases. Fresh root juice is also taken orally for venereal diseases. For malaria the decoction is drunk and used to bathe patient, and for tuberculosis, a single dose of decoction is taken orally. Decoction of dried leaf when taken orally is a treatment for diarrhoea. Hot water extract of the entire plant is drunk as a contraceptive. The whole herbs are uprooted, washed and boiled in water; the solution is cooled and a patient with measles rash is washed with this solution. A preparation prepared in similar manner is drunk to treat stomach pain and diarrhoea.

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(syn. *O. americanum* L., *O. minimum* L.)

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***Pandanus tectorius* Solms** **Pandanaceae**

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***Passiflora foetida* L.** **Passifloraceae**

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cally to treat conjunctivitis, scabies, cuts, and grazes. The sap is applied to a snakebite wound. The leaf sap mixed in a small quantity of water is drunk to treat persistent productive cough and for symptoms associated with respiratory infections. A few shoots and leaves are boiled in a liter of water, cooled, strained and drunk for three days to induce abortion in early pregnancy. A decoction prepared from flower petals is drunk to treat body pain and skin infections.

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Pongamia pinnata (L.) Pierre **Fabaceae**
(syn. *Pongamia glabra* Vent.)

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***Piper betle* L.** **Piperaceae**

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Traditional Uses[16-18]. Leaf is used as a masticatory in chewing betel nut (*Areca catechu*). Dried fruit is eaten with betel nut and lime as a mild stimulant. Sap from fresh leaf is used topically to stop bleeding and to treat sores, cuts and wounds. Pepper leaf and betel nuts are chewed with lime until red and the mixture spat out onto tropical ulcers. The chewing process is also said to relieve tension and act as a stimulant with a slight intoxicating effect. Fresh roots of *Piper betle* and *Litsea* sp. are chewed raw with betel nut, mustard and lime to treat diarrhoea and bloody stool. Pepper leaf and betel nuts are chewed together with ginger, lime and seeds of *Bixa orellana* and contents swallowed to correct any heart problems.

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***Plumeria rubra* L.** **Apocynaceae**
(syn. *Plumeria acutifolia* Poir.)

(continued from page 197)

Traditional Uses[14-16]. The milky sap from the leaf or bark is applied to a sore. Fresh sap is drunk to treat tuberculosis. The sap is also used topi-

sores. New shoots and leaves are gently heated over the fire and placed around the forehead to treat migraine and headache. Alternatively, shoots and leaves are boiled in water and the steam inhaled by the patient. The leaves are rubbed onto the affected area to relieve muscle pains and strains. Roots are crushed in water and juice drunk for stomachache. Aqueous extract of the bark is drunk for about two weeks to treat asthma. Juice from the young leaves is squeezed into the ear to relieve earaches.

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***Psidium guajava* L.** **Myrtaceae**

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Traditional Uses[15-17]. Decoction prepared from the leaves are drunk for variety of conditions in Papua New Guinea. These include malaria, headache, indigestion, diarrhoea, stomach ailments, and to stop vomiting of blood associated with bleeding from alimentary canal. Sap of chewed leaves is taken with traditional salt to treat influenza and colds. Fresh young leaves are boiled in water, solution cooled and drunk to treat stomach pain. Leaves and young shoots are chewed and contents swallowed to stop diarrhoea. Leaves are boiled and the steam inhaled or patient bathed with the solution when suffering from fever. Solution from the boiled leaves is used to wash scabies and other skin diseases.

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***Premna integrifolia* L.** **Verbenaceae**
(syn. *P. serratifolia* L.)

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***Premna obtusifolia* R. Br.** **Verbenaceae**
(syn. *Premna corymbosa* var. *obtusifolia* (R. Br.) H.R. Fletcher; *Premna integrifolia* var. *obtusifolia* (R. Br.) C. P'ei)

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Traditional Uses[2-5]. Dried leaves are boiled into medicinal tea and used for headaches in children. Fresh leaves are used to treat cold by squeezing the leaf juice into the nose. Hot water extract of the leaves is drunk to treat a cough. Freshly squeezed leaf juice is used for skin rash, and drunk for constipation. Dried flower buds are chewed with *Ficus hispidioides* for pneumonia and headache. Tree bark is applied on topical

Scaevola taccada (Gaertner) Roxb. Goodeniaceae
(syn. *Scaevola sericea* (Forst. F.) Vahl)

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Sida acuta Burm. f. Malvaceae
(syn. *Sida scoparia* Lour.)

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Sida rhombifolia L. Malvaceae

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***Pterocarpus indicus* Willd.** **Fabaceae**

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***Saccharum officinarum* L.** **Poaceae**

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Thespesia populnea **(L.) Sol. ex Corrêa** **Malvacveae**

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Timonius timon **(Spreng.) Merr.** **Rubiaceae**

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***Solanum torvum* Sw.** **Solanaceae**

(syn. *tranum ferrugineum* Jacq.; *Solanum mayanum* Lundell; *Solanum verapazense* Standl. & Steyerm.)

(continued from page 227)

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***Terminalia catappa* L.** **Combretaceae**

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is inhaled to relieve headache. Fresh leaves are crushed and mixed with lime and sea water; the solution is drunk daily to treat malaria fever. The stem is crushed with water to treat diarrhoea. Leaves are used to relieve dysentery and stomach-ache. Fresh leaf juice is applied on sores, wounds, cuts, and scabies. Crushed stem is mixed with a little water; two cupfuls of the concentrated solution are drunk, twice daily, to treat sore throat with coughing. Crushed leaves are applied on forehead to stop headache. Fresh root is chewed to relieve toothache. The soft stem of a new shoot is gently heated on fire and chewed for toothache and gum inflammation. A few new shoots and leaves are squeezed together; the juice is mixed with small quantity of salt water and the solution drunk to stop diarrhoea and vomiting. A piece of soft stem is scraped and placed on abscesses, boils, and infected sores. Two to three new shoots are chewed and swallowed to treat constipation.

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Zingiber officinale **Rosc.** **Zingiberaceae**

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Vitex trifolia L. Verbenaceae
(syn. *Vitex ovata* L.*; Vitex agnus-castus* var. *subtrisecta* Kuntze)

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Wedelia biflora (L.) DC. Asteraceae
(syn. *Wollastonia* biflora (L.) DC.)

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Traditional Uses[7-11]. The plant is used extensively for medicinal purposes in Papua New Guinea. The juice squeezed from the fresh leaves

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