Merrillia caloxylon

Scientific Name

***Merrillia caloxylon* (Ridley) Swingle.**

Synonyms

Murraya caloxylon Ridley.

Family

Rutaceae

Common/English Names

Flowering Merrillia, Katinga, Malay lemon.

Vernacular Names

Malaysia: Katinga, Ketenggah, Kemuning gajah.

Origin/Distribution

The species is indigenous to Malaysia (Peninsular, Sabah), Thailand (Southern Thailand) and Indonesia (Sumatra).

Agroecology

In its native range, the tree is found scattered in lowland moist primary and secondary tropical forest on stream banks and hill sides and ridges up to 400 m altitude. It is able to grow in on various well-drained soils.

Edible Plant Parts and Uses

The rind has a bitter turpentine flavour and the scanty pulp is quite tasteless (Swingle 1918). The potential of the thick rind, fresh or dried for culinary purposes has not been investigated.

Botany

An evergreen upright, unarmed small to medium sized tree up to 20 (–30) m high and a short bole of 50 cm diameter, bushy multi-branched crown and pale greyish-brownish, flaky bark (Plate 1). Leaves imparipinnate, with 5–13 leaflets, rachis narrowly-winged, leaflets sub-opposite, entire, unequal sized, deep green, basal pairs smaller (Plates 2, 3 and 5) , much reduced suborbicular, 5–10 mm across, and resembling stipules, lateral leaflets gradually increase in size to 7.6–10 cm long, oblanceolate, sub-acuminate and cuneate

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Plate 1 Small to medium sized tree with a thin multi-branched crown

Plate 2 Leaves and immature fruit

Plate 3 Imparipinnate leaf

Plate 4 Large, oval-oblong immature fruit

Plate 5 Large subglobse near ripe fruit

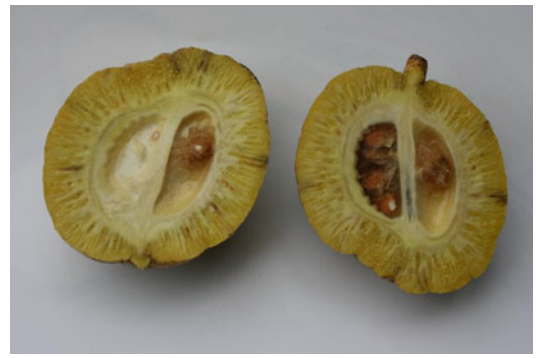

Plate 6 Fruit with thick rind and scanty pulp

base, margin wavy and obscurely serrated, petiolule subsessile. Flowers axillary single or in pair, bisexual, pentamerous; calyx cupulate, petals, 1.8 cm long free, trumpet shaped but with free petals, greenish-white to white; stamens 10 unequal, slender; ovary superior on a gynophore, 5(-6) fused carpels, each with 8–10 ovules, style long slender, hairy and stigma capitate. Fruit subglobose, ovoid to oblong, green ripening to dull yellow, up to 11 cm long and 7.5 cm wide, pericarp gland dotted, rough to warty, 1.25 cm thick and full of long resin cells (Plates 3, 4, 5 and 6).

Seeds numerous, ovate, flattened, olive-grey covered with fimbriate scales and embedded in scanty olive coloured, mucilaginous pulp (Plate 6).

Nutritive/Medicinal Properties

The fruit juice of *Merrillia caloxylon* was found to contain at least 0.1% of the cytotoxic flavone eupatorin (Adams and Lewis 1976). One pentaoxygenated chalcone, 2-hydroxy-3,4,4′,5,6′-pentamethoxychalcone and two oxygenated chalcones, 2′- hydroxy-3,4,4′,6′-tetramethoxychalcone and 2′,3-dihydroxy-4,4′,6′- trimethoxychalcone together with 3 flavones: 3′,4′,5,7-tetramethoxyflavone, 3′,4′,5,5′,7-pentamethoxyflavone and 5-hydroxy-3′,4′,6,7-tetramethoxyfiavone were isolated from fruit of *Merrillia caloxylon* (Zakaria et al. 1989).

The root and stem bark of *Merrillia caloxylon* contained the anti-implantation indole alkaloid, yuehchukene, and the 8-prenylated coumarins, sibiricin and phebalosin, as well as 3-(3-methylbuta-1,3-diene) indole and eupatorin (But et al. 1988; Kong et al. 1988); Zakaria et al. (1989) isolated five isoprenylcoumarins (−)-sibiricin, (−)-phebalosin, (−)-murrangatin, (−)-mexoticin and merillin from the roots of *Merrillia caloxylon*.

An infusion of the wood is applied medicinally for stomach-ache, whereas powder wood is rubbed on the skin against aches and pain.

Other Uses

The tree is valued for its handsome, light yellow coloured wood with dark brown streaks and stains, fairly hard wood that takes a good polish. The wood is highly prized for making walking sticks, kris handles and sheaths, furniture, boxes, and other small objects like pipes, amulets and rings.

Comments

The species is categorised as vulnerable by the World Conservation Monitoring Centre.

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