
Citrus inodora

Scientific Name

Citrus inodora F.M. Bailey (sensu Mabberley).

Synonyms

Citrus maideniana Domin, *Microcitrus inodora* (Bailey) Swingle, *Microcitrus maideniana* (Domin) Swingle, *Pleurocitrus inodora* (Bailey) T. Tanaka

Family

Rutaceae

Common/English Names

Queensland Wild Lime, Russell River Lime, Lime, Russell River Lime, Queensland Wild, Large Leaf Australian Wild Lime.

Vernacular Names

None

Origin/Distribution

The species is endemic to north-eastern Queensland and is known only from the eastern foothills of the Bellenden Ker Range – Mount

Bartle Frere area and also from the Cape Tribulation area.

Agroecology

It occurs as an understory plant in undisturbed well developed lowland tropical rain forest from near sea level to 120 m elevation. It is a fairly rare species from near coastal areas. The plant thrives in shady condition on organically rich, loamy soil and requires plenty of water.

Edible Plant Parts and Uses

The fruit can be used to make drinks or marmalade.

Botany

A bushy, evergreen, armed shrub to 1–3 m high with angular twigs and paired, sharp, 4–10 mm long axillary spines at the leaf axils. Leaf blades alternate, simple, entire, leathery, about 7–17 × 2.5–8.5 cm, diamond-shaped with acute to sub-acute apex tapering base with widely serrated margins, glossy deep green on a grooved petiole (Plates 1 and 2). Flowers odourless, white to pink flowers, 1 cm across, all parts gland-dotted, calyx tube short with short 1 mm lobes, petals 6–7 mm long. Fruit ellipsoid 3.5–4 cm by 2.5 cm wide, green ripening yellow (Plates 1, 2 and 3). Seeds numerous embedded in vesicular pulp.



Plate 1 Immature fruit and leaves (M. Smith)



Plate 2 Diamond-shaped, large simple leaves (M. Smith)



Plate 3 Near ripe wild lime fruit (M. Smith)

Nutritive/Medicinal Properties

Nutrient values of the fruit have not been published.

Fifty three volatiles were found in the juice of *M. inodora* extracted by dichloromethane (Shaw et al. 2000). The major components were limonene 68.5%, ethanol 14.6%, acetaldehyde 9.4%, myrcene 1.4%, hexanal 0.6%, (3Z)-3-hexanol 0.2%, linalool 0.1%. Components of the peel oil were not quantified and included besides the usual monoterpenes, linalool, nerol, geranyl, carvone and perillaldehyde. The leaf essential oil was found to be rich in germacrene D (23.7%) and bicyclogermacrene (17.3%) (Brophy et al. 2001).

The percentage and concentration of total phenolics in *Microcitrus inodora* leaf, peel and juice were reported by Berhow et al. (1998) as: leaf:- 12.5% (1.16 mg/g) flavone/flavonol, 67.2% (3.96 mg/g) flavanone, 11.9% psoralen, 0% coumarin; flavedo (outer pigmented layer of the peel): 81% (8.75 mg/g) flavone/flavonol, 5.7% (0.39 mg/g) flavanone, 0% psoralen, 0.7% (0.02 mg/g) coumarin; juice: 66% (3.28 mg/g), flavone/flavonol, 5.7% (0.18 mg/g) flavanone, 0% psoralen, 3.5% (0.05) coumarin.

The percentage and concentration of flavanones reported in *Microcitrus inodora* by Berhow et al. (1998) were as follows: leaf:- hesperidin 3% (0.1 mg/g), narirutin 16% (0.6 mg/g), naringin 3% (0.1 mg/g), neohesperidin 16% (0.7 mg/g); flavedo: naringin-6"-malonate (closed form) 100% (0.4 mg/g); juice naringin-6"-malonate (closed form) 100% (0.2 mg/g).

Other Uses

The species has potential to be used in citrus breeding and as rootstock for other *Citrus* species.

Comments

The species is propagated from seeds, by cuttings which are slow to take roots or by budding onto *Citrus* root-stock.

Selected References

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