Baccaurea macrocarpa

Scientific Name

***Baccaurea macrocarpa* (Miq.) Müll.Arg.**

Synonyms

Baccaurea borneensis (Müll.Arg.) Müll.Arg., *Baccaurea griffithii* Hook. F., *Mappa borneensis* Müll.Arg., *Pierardia macrocarpa* Miq. (basionym).

Family

Phyllanthaceae, also placed in Euphorbiaceae

Common/English Names

Greater Tampoi, Tampui

Vernacular Names

Borneo: Pasin, Pasim Salai, (Bassap Dyak), Pegak, Pekang, (Dayak Tunjung), Puak, Tampoi (Iban); Setai (Kenyah, Kalimantan), Djentikan (Malay, Kutei, Kalimantan), Tampoi, Tampoi Laki, Tampoi Hutan, (Malay, Kedayan), Bua'Abu (Punam, Malinau, Kalimantan), Bua Lifoh (Lun Daye, Mentarang, Kalimantan), Teraie (Merap, Malinau, Kalimantan), Tetai (Kenyah Uma' Lung, Kalimantan), Buah Setei, Embah cerila, Empak Kapur, Embak kapur, Jantikan, Kapul, Pasim salai, Pasin, Pegak, Pekang, Puak tampoi, Setai, Tampoi, Tampoi hutan, Tampoi laki, Terai;
Indonesia: Medang, Tampui (Bangka), Tampoei Daoen, Tampoei Benez (Sumatra);
Peninsular Malaysia: Merkeh (Kelantan), Ngeke (Malay), Lara (Temuan), Rambai, Tampoi Batang, Tampoi, Tampoi Kuning, Tampoi Putih, Tampui, Medang Kelawar.

Origin/Distribution

The species is native to Peninsular Malaysia, Sumatra, Borneo (Sarawak, Brunei, Sabah, West-, Central-, South- and East-Kalimantan).

Agroecology

A tropical species that thrives in a hot, wet and humid areas. It occurs in the wild in primary rain forest (undisturbed mixed dipterocarp forests), riverine rain forest and peat swamp forest, submontane and keranga forests from sea level up to 1,600 m altitude. In secondary forests it is usually present as a pre-disturbance remnant tree. It is found on alluvial sites and hillsides on soils with red clay, sandy clay and granitic sand. It is also and cultivated in gardens.

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Edible Plant Parts and Uses

The arillode is edible, sweet to acid sweet; eaten fresh or made into conserve. The fruit is commonly sold in local markets and roadside stalls.

Botany

Small to medium-sized, sub-canopy, evergreen tree (Plate 1), 5–18 (–27) m tall with a girth of 120 cm, buttressed with greyish brown bark. Leaves are spirally arranged on glabrous, 22–145 mm long petioles with glabrous, 2–9 mm by 1–5 mm stipules. Lamina is large, ovate to obovate , averaging 20 cm by 13 cm, leathery to papery; base attenuate to cuneate (to rounded); apex (obtuse to) acuminate to cuspidate, upper surface glabrous, lower subglabrous with 6–10 secondary veins per side. Staminate inflorescences are ramiflorous to cauline, axillary, solitary to few clustered together, 50–130 mm long, pubescent, branched, with flowers scattered along inflorescence and 1–3 bracts per branchlet. Staminate flowers are small, 0.7–2 mm across, greenish to yellowish-white, pedicel 1–2 mm, sepals 5 elliptic, stamens 5, glabrous, yellowish disc absent. Pistillate inflorescences are ramiflorous to cauline, solitary to 3 clustered together, 3.5–18 cm by 2–3 mm thick, subglabrous to densely hairy, 8–many-flowered on 3–7.5 mm long pedicel with 1–3 bracts per branchlet. Pistillate flowers are small 2–4.5 mm across; sepals 4–6, ovate, pubescent, persistent; ovary globose to cylindrical, 3- or 4-locular, tomentose; style sparsely hairy; stigmas cleft, persistent to caducous. Fruits are depressed globose to subglobose (Plates 2–3), (2- or) 3–6-seeded, fleshy capsules, 3–6.5 cm by 3.4–7.5 cm by 3.4–7.5 cm, glabrous, raised glands present, brown to yellow to orange to dull red to dark green; pericarp 4–11 mm thick (Plate 3); column 16–32 mm long, straight, pedicel 7–30 mm long. Seeds are brown, globose to ellipsoid, laterally flattened, 13–23 by 11–18.5 mm, arillode white (Plate 3) to yellow to sometimes orange.

Plate 1 Vertical branches with inflorescence primordia and young leaves

Plate 2 Cluster of 2–3 oblate fruit of *Baccaurea macrocarpa*

Plate 3 Fruit of *Baccaurea macrocarpa* halved to show the edible white arillode and thick rind

Nutritive/Medicinal Properties

Proximate nutrient composition of the fruit arillode per 100 g edible portion was reported as: 127 kcal, moisture 66.6%, protein 1.5 g, fat 4.4 g, carbohydrates 27.9, dietary fibre 2.2 g, ash 0.9 g, P 54 mg, K 293 mg, Ca 10 mg, Mg 20 mg, Fe 20 µg, Mn 3 µg, Cu 7.3 µg, Zn 18.3 µg and vitamin C 0.1 mg. (Voon and Kueh, 1999).

In a recent study conducted in Malaysia by Khoo et al. (2008), the total carotene content (mg/100 g) of selected underutilized tropical fruit in decreasing order was jentik-jentik (*Baccaurea polyneura*) 19.83 mg>Cerapu 2 (*Garcinia prainiana*) 15.81 mg>durian nyekak 2 (*Durio kutejensis)* 14.97 mg>tampoi kuning (*Baccaurea reticulata*) 13.71 mg>durian nyekak (1) 11.16 mg >cerapu 1 6.89 mg>bacang 1 (*Mangifera foetida*) 4.81>kuini (*Mangifera odorata*) 3.95 mg>jambu susu (*Syzygium malaccense*) 3.35 mg>bacang (2) 3.25 mg>durian daun (*Durio lowianus*) 3.04 mg>bacang (3) 2.58 mg>tampoi putih (*Baccaurea macrocarpa*) 1.47 mg>jambu mawar (*Syzygium jambos*) 1.41 mg. β-carotene content was determined by HPLC to be the highest in jentik-jentik 17,46 mg followed by cerapu (2) 14.59 mg, durian nyekak (2) 10.99 mg, tampoi kuning 10.72 mg, durian nyekak (1) 7.57 mg and cerapu (1) 5.58 mg. These underutilized fruits were found to have acceptable amounts of carotenoids and to be potential antioxidant fruits.

Other Uses

It provides a strong timber.

Comments

The tree is easily established from seeds.

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