

PODOCARPUS LAUBENFELSII, A NEW SPECIES FROM BORNEO
(PODOCARPACEAE)

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Recent studies in Sabah and Sarawak have demonstrated the presence of an undescribed species of *Podocarpus*.

Podocarpus laubenfelsii Tiong, *spec. nov.*

Arbor ad 35 m alta. Cortex tenuis, mollis, fibrosus, fulvus. Alabastrum curtum, 2–3.5 mm longum, 2.5–4 mm latum, perulis triangularibus, acutis, apicibus divergentibus. *Folia* plantarum juvenilium 11–21 cm longa, 1.7–2.4 cm lata; folia plantarum adultarum 7–19 cm longa, 1.0–1.8 cm lata, lineara vel lineari-lanceolata, base plus minusve abrupto, apice anguste acuto ad acuminato, petiolo distincto 6–14 mm longo; costa supra obtusa 0.8–1.2 mm lata, subtus latior. *Strobili masculi* 3–5 (plerumque 4) in pedunculo lateralo ad 6 mm longo dispositi vel interdum sessiles, cylindracei, 2–4 cm longi, 2.5–3.5 mm lati, basis squamarum complurium sterilium triangularium 2 mm longorum, 1 mm latorum; microsporophyllae elongatae, partibus apicibus triangularibus, 0.2 mm longis. *Strobilus femineus* pedunculo 10–16 mm longo, basi foliolis duobus 1.5 mm longis, receptaculo ca. 9 mm longo, semen maturnum ignotum. — *T y p u s*: *de Laubenfels P715* (L; iso A, K, P, RSA, SAN, US), Mt Kinabalu, Bukit Burong, 1500 m alt.

SABAH. Kinabalu: Bukit Burong, 1500 m, de Laubenfels P643 (A, K, L, RSA, SAN, US), P715 ♂ (holo K; iso A, K, P, RSA, SAN, US); Bundu Tuhan Trail, 1350 m, Chew, Corner & Stainton RSNB 2657 (BO, K, L, SAN, SING), 1620 m, Gibot SAN 49409 ♀ (SAN), 56642 (SAN); Mesilau R., 1500 m, Chew & Corner RSNB 4350 (A, K, L, SAN, SING); Carson Trail, 1350 m, Lajangah SAN 44785 (SAN); Sosopodon For. Res., 1500 m, Gintus SAN 56374 ♂ (L, SAN). Mt Trusmadi: Trusmadi For. Res., 1500 m, Mikil SAN 32069 ♀ (K, L, KUCH, SAN), 1200–1500 m, Madani SAN 87415 ♀ (SAN). Tawau Dist.: Bukit Glass, 660 m, Lantoh SAN 67736.

SARAWAK. Lawas: Bumbong Rumah, 900 m, de Laubenfels P616 (A, K, L, RSA, SAR, US), P617 (A, K, L, RSA, SAR, US), 700 m, Brunig S12366 ♂ (L, SAR), S10663 ♀ (SAR).

INDONESIAN BORNEO. Eastern part, W. Kutei: Mt Palimasan, near Tabang, Belajan R., 700 m, Kostermans 12895 ♀ (BM, BO, K, L, SING).

Large tree in primary non-dipterocarp rainforest at moderate elevation and generally rather dispersed. The soft light brown bark is almost smooth. Its most distinctive trait is that the pollen cones are usually clustered on a peduncle unlike the most clo-

sely related species where peduncles do not occur. Although sessile clusters also occur in *P. laubenfelsii*, they are mingled with pedunculate clusters often on the same branch. The closest relative of the new species is *Podocarpus rumphii* with which it shares a number of traits. The leaves are quite similar in shape but those of *P. laubenfelsii* average somewhat shorter and tend to be more distinctly acuminate. The broad blunt midrib of the leaf is another similarity. Both species include clustered pollen cones with elongated pollen sacs and small triangular apices on the microsporophylls. The bracts (folioli) at the base of the female receptacle are also similar. On the other hand, the primary foliage bud scales of *P. laubenfelsii* are free and diverging at the tips whereas most or all of those of *P. rumphii* are imbricate. Furthermore, *P. rumphii* is mostly found near sea level, particularly in western Malesia and is widely distributed rather than limited to elevations well above sea level in the more northerly parts of Borneo. From *P. neriifolius*, a species with similar leaves, *P. laubenfelsii* differs in the blunter less prominent midrib of the leaf and the distinct and rather long petiole at the base of the leaf. In addition, *P. neriifolius* never has pollen cones in groups of more than three and these are always sessile with globular not elongated pollen sacs. Like *P. rumphii*, *P. neriifolius* is widely distributed, extending to low elevation rain-forest and, in fact, generally occurring in the vicinity of *P. laubenfelsii* but in that area at lower elevation.

KEY FOR THE MOST CLOSELY RELATED SPECIES

1. Pollen cones in clusters to more than three; pollen sacs elongated; foliola below the female receptacle no more than 1.5 mm long; upper midrib on leaves at least 0.8 mm wide with gradually sloping sides; leaf petiole mostly much more than 6 mm long (up to 16 mm).
2. Pollen cone clusters usually on a peduncle; microsporophylls no more than slightly crowded; female receptacle of two bracts; primary foliage bud scales with free and diverging tips; leaf upper midvein distinctly raised . . . *P. laubenfelsii*
2. Pollen cone clusters always sessile; microsporophylls strongly crowded; female receptacle more often with a third smaller and lateral bract than with two; primary foliage bud scales mostly or entirely imbricate in a pyramidal assemblage; leaf upper midvein usually indistinct *P. rumphii*
1. Pollen cones in clusters of no more than three; pollen sacs globular; foliola below the female receptacle about 2 mm long; upper midrib on leaves no more than 0.8 mm wide with abrupt nearly vertical sides; leaf petiole up to 0.6 mm long
P. neriifolius

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