

***Rhodoleia* (Hamamelidaceae), a new generic record for Thailand**

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ABSTRACT. The genus *Rhodoleia* with one species, *Rhodoleia championii* Hook.f., is newly recorded for Thailand. The genus and species are described and a new key to the Hamamelidaceae is presented.

The Hamamelidaceae has recently been published in the Flora of Thailand and included five genera with a total of six species (Phengklai 2001). Curiously, the genus *Rhodoleia* was not known from Thailand even though the single species, *Rhodoleia championii* Hook.f., has been recorded from Southern China, Burma, Vietnam, Sumatra and Peninsular Malaysia (Vink, 1957). As part of a joint collecting initiative between the Forest Herbarium in Bangkok and Harvard University Herbarium the authors found several trees of *Rhodoleia championii* in Kaeng Krachan National Park, Phetchaburi province. In addition a number of collections of this species have also recently been made from Sukhirin District, Narathiwat by P. Puudjaa and C. Niyomdham.

Exell (1933) distinguished seven species in *Rhodoleia*. Vink (1957), however, reduced these to one species and provided a discussion of the variation patterns in this polymorphous species. Endress (1993) notes that a revision is needed of the genus but in the meantime we will follow Vink's species concept.

RHODOLEIA

Champion ex Hook.f., Bot. Mag. III, 6: t. 4509. 1850; Exell, Sunyatsenia 1: 95. 1933; Vink, Fl. Malesiana ser. 1, 5: 371. 1957; Endress in Kubitzki, Fam. Gen. Vasc. Pl. 2: 329. 1993.

Bisexual shrubs or trees. *Leaves* simple, entire, secondary venation pinnate. *Stipules* mostly absent. *Flowers* bisexual, connate, in peduncled heads, surrounded by an involucre of bracts which are caducous after anthesis. *Sepals* rudimentary. *Petals* 0–4, only those along the outer margin of the head well developed, spatulate to obovate. *Stamens* 6–11, each with 4 pollen sacs, dehiscing by 2 septicidal slits to produce 4 narrow valves. *Ovary* half-inferior, 2-locular. *Ovules* 6–8; styles 2, long and slender. *Capsules* basally united, woody. *Seeds* narrowly winged.

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One species (but see note above) in Southern China, Indochina, Sumatra and Peninsular Malaysia. One species in Thailand.

Rhodoleia championii Hook.f., Bot. Mag. III, 6: t.4509. 1850; Exell, Sunyatsenia 1: 96. 1933; Vink, Fl. Malesiana ser. 1, 5: 372. 1957. Type: Hong Kong, *Champion* s.n. (holotype K; isotypes BM, E). For synonymy see Vink (1957). Fig. 1.

Evergreen tree to 40 m tall, dbh to 1 m. *Bark* rusty-brown, with large paler lenticels, inner bark pale salmon pink, wood white. *Leaves*: petioles red, 0.8–4 cm long; blades dark green above, glaucous beneath, ovate, 4.4–12.2 by 2–5.3 cm, apex acute to shortly acuminate, base acute to obtuse, midrib flat to slightly sunken above, prominent beneath, secondary veins flat above and beneath, in 7–9 pairs at a steep angle to the midrib, anastomosing before margin, tertiary venation laxly reticulate. *Flowers* recurved. *Bracts* shortly ovate to obovate-oblong, 3–15 by 4–10 mm, upper bracts largest, brownish-tomentose on abaxial side, glabrous on adaxial side. *Sepals* rudimentary, apically ciliate. *Petals* bright red, 12–18 by 1–3 mm, glabrous. *Filaments* 1–1.5 cm long, glabrous; anthers elliptic-oblong, 1–2 mm long. *Ovary* glabrous. *Fruit* heads green, ripening brown, 1.9–2.6 cm across. *Seeds* 3–4.5 by 2.5–3 mm, sterile seeds wingless, fertile seeds narrowly winged.

Thailand.— SOUTH-WESTERN: Phetchaburi [Kaeng Krachan District, Kaeng Krachan National Park, trail from Khao Phanoen Thung Ranger Substation to Than Thip Waterfall, 1000 m alt., 28 March 2003, David J. Middleton, Chandee Hemrat, Stuart Lindsay, Somran Suddee & Suwat Suwanachat 1780 (A, AAU, BKF, K, L, MO)]; PENINSULAR: Narathiwat [Sukhirin District, Khao Nakharach, 665 m alt., 20 Oct. 1996, Chawalit Niyomdham 4834 (BKF); idem., 8 August 1996, Pachok Puudjaa 254 (BKF); idem., 17 Feb. 1997, Pachok Puudjaa 385 (BKF)].

Distribution.— Southern China, Burma, Vietnam, Sumatra, Peninsular Malaysia.

Ecology.— Primary evergreen forest to 1000 m altitude.

Note.— With the addition of another genus to the Hamamelidaceae of Thailand a new key, adapted from Phengklai (2001), is presented.

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| 1. Sepals and petals absent. | |
| 2. Ovary semi-inferior. Capsules united into a globular or obpyramidal head. Seeds winged | Altingia |
| 2. Ovary superior. Capsules free, ellipsoid. Seeds not winged | Distylium |
| 1. Either sepals (sometimes minute) or petals or both present | |
| 3. Leaves palmately nerved | Symingtonia |
| 3. Leaves pinnately nerved | |
| 4. Stipules mostly absent. Sepals rudimentary | Rhodoleia |
| 4. Stipules present or, if caducous, leaving a scar. Sepals not rudimentary, sometimes caducous | |
| 5. Sepals 6. Petals absent. Lower half of capsule surrounded by a receptacle | Sycopsis |
| 5. Sepals 4. Petals present. Capsule not surrounded by receptacle | Loropetalum |

ACKNOWLEDGEMENTS

We would like to thank the *National Geographic Society* for financial support for this work. We would also like to thank Orathai Kerdkaw for the illustrations, Chandee Hemrat, Stuart Lindsay and Suwat Suwanachat for their assistance in the field, and the staff of Kaeng Krachan National Park.

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Figure 1. *Rhodoleia championii* Hook.f.: A. habit; B. inflorescence; C. capsules; D. seeds. A. from *D.J. Middleton et al.* 1780 (BKF), B–D from *P. Puudjaa* 385 (BKF). Drawn by O. Kerdkaew.