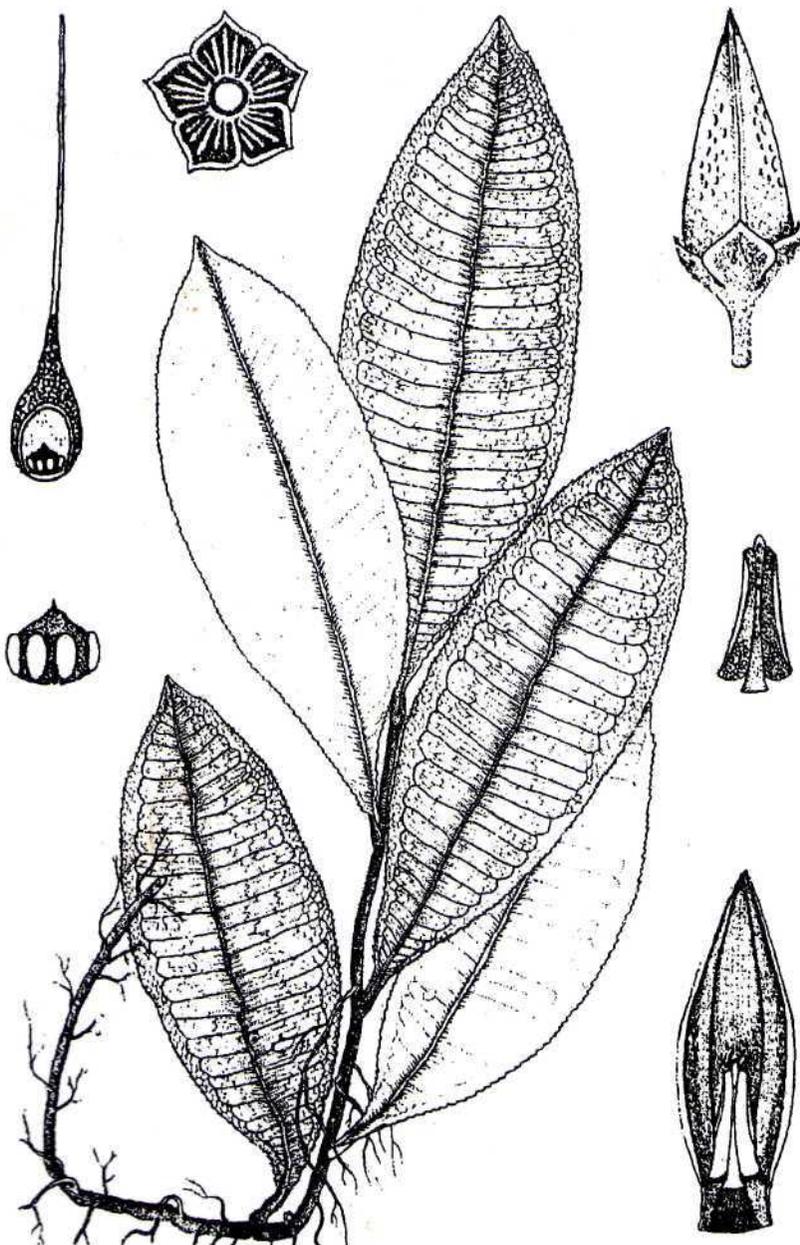




A JOURNAL ON TAXONOMIC BOTANY,
PLANT SOCIOLOGY AND ECOLOGY



REINWARDTIA

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HERBARIUM BOGORIENSE, BIDANG BOTANI, PUSAT PENELITIAN BIOLOGI - LIPI,
BOGOR, INDONESIA

NEW SPECIES OF LABISIA (MYRSINACEAE) FROM SUMATRA

BAMBANG SUNARNO

Herbarium Bogoriense-Puslit Biologi, LIPI, Bogor

ABSTRACT

SUNARNO, BAMBANG. 2002. New species of *Labisia* (Myrsinaceae) From Sumatra. *Reinwardtia* 12(1): 121–124. — Three new species *L. posthumusiana*, *L. steenisiana* and *L. sumatrensis* are described.

Keywords: *Labisia*, *Myrsinaceae*, Indonesia

ABSTRAK

SUNARNO, BAMBANG. 2002. Jenis baru *Labisia* (Myrsinaceae) dari Sumatra. *Reinwardtia* 12(1): 121–124. — Dipertelakan tiga jenis baru *Labisia posthumusiana*, *L. steenisiana* dan *L. sumatrensis*.

Kata kunci: *Labisia*, *Myrsinaceae*, Indonesia.

Since the monograph of *Myrsinaceae* was published in 1902 some local treatments of the genera, e.g. *Ardisia* (Sleumer, 1988; Stone, 1982, 1989) for New Guinea and Borneo, *Conandrium*, *Discocalyx*, *Embelia*, *Fittingia*, *Grenacheria* and *Maesa* had been revised for New Guinea (Sleumer 1986, 1987, 1988), and *Labisia* was reviewed for Peninsular Malaysia by Stone (1988). This paper concerns with the latter, the genus *Labisia* Lindl. with special references to Indonesia.

The plant resembles *Ardisia*, especially to that of subgen. *Bladhia*. The type species is *Labisia pothoina* Lindl. The correct name for this type species, *L. pumila* was formerly named as *Ardisia pumila*. However its induplicato-valvate petals and imbrication in the margin provide good features distinguishable from *Ardisia*. Mez (1902) placed *Labisia* in the tribe *Myrsineae* on the basis of its monoseriate ovules, while *Ardisia* belongs to *Ardisieae*. Those the two genera were separated at tribal levels. Beside the venation of the leaf which shows numerous lateral main nerves and almost parallel to each other, the reddish brown peltate trichome which is distributed throughout young stem, petiole, midrib, lamina and also peduncle, pedicel, ovary and stamen was also mentioned as a good character for the genus (Stone, 1988).

Morphology of flowers shows a clue to specific distinction, especially on the shape and size of the almost mature corolla bud (flower bud nearly to anthesis). The shape and size of petals, sepals, stamens and styles are here considered as diagnostic characters for specific distinction. In a certain limit, a correlation of flower and leaf characters is considered diagnostic for infra-

specific distinction within *L. pumila* complex. Sterile or fruiting specimens may be identifiable to some extent, but satisfactory identification is mostly achieved by flowering specimens.

After a thorough study of the genus *Labisia* at Herbarium Bogoriense, K (Royal Botanical Garden Kew Herbarium), L (Rijksherbarium Leiden) to include specimens from Java, Sumatra, Kalimantan (Indonesian Borneo), Moluccas, Sulawesi and Irian Jaya (West New Guinea), I examine some species which are not match to the known species, therefore they are to be proposed here as new:

1. *Labisia posthumusiana* Sunarno, *spec. nov.* – Fig. 1

A *Labisia* acuto alabastris obclavatis; stamenibus duplo brevioribus ca. 1.2 mm longis, antheris duplo brevioribus ca. 1 mm longis, folia magna, oblonga vel obovata subcoriacea differt. – Typus: Sumatra, Prov. Jambi, Selemuku, fl. & young fr. Aug., 1925. *Posthumus* 777 (L–Holo; BO–Iso).

Erect or decumbent undershrub, up to 60 cm high. *Stem* rather stout. *Leaves* many, vaguely alternate, broadly oblong or or broadly obovate, usually large, 16–22 by 6–12 cm, very rarely smaller, subcoriaceous; margin dentate; base acuminate, decurrent; apex acute to obtusely acuminate or rounded, emarginate; midrib sunken above, prominent; lateral main nerves numerous, c. 2 cm, jointed at 5–7 mm margin; petiole 0.5–1 cm, superficially sub-sessile, slightly winged. *Inflorescences* axillar, paniculate or raceme of corymbose fascicles of 2–5 flowers each, 10–15 cm long, not branched; bracts and bracteoles

nearly equal, deltoid, c. 1 mm long; peduncle 4–5 cm long; corymbose peduncles 4–5 mm long. *Flower* white or pinkish white; pedicels c. 2 mm long. *Sepal* 5, connated just only at base; segment valvate; lobes imbricate in mature flower buds, deltoid, slightly cupidate at apex, c. 1 mm long. *Corola* 5, obclavate in mature buds, 4–4.5 mm long; lobes somewhat narrowly ovate or lanceolate, 4.5–5 by 1–1.5 mm. *Stamens* 5, c. 1.2 mm long; filaments c. 0.1 mm long; anthers elliptic, c. 1 mm long, connective appendage c. 0.1 mm long. *Ovary* ovoid; placenta broadly ellipsoid, ovules 6. *Style* filiforms, 4–5 mm long, rarely slightly shorter. *Fruits* drupaceous, young fruit subglobose.

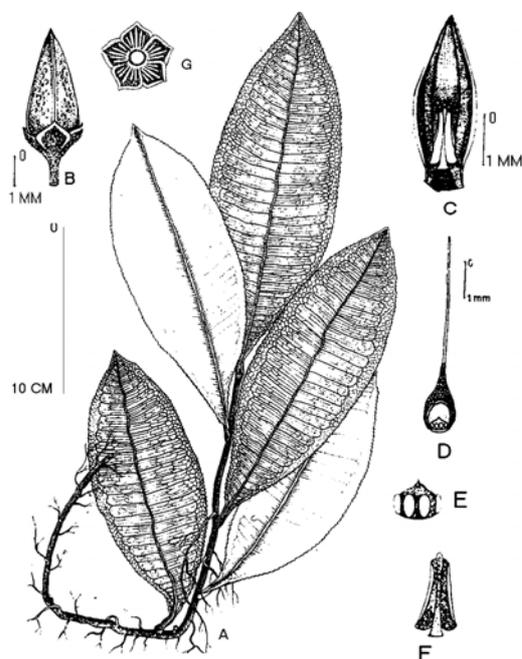


Fig. 1. *Labisia posthumusiana* Sunarno. A. Habit. B. Flower bud; C. frontside view of a detached petal with enclosed stamen; D. Opened ovary; E. Enlarged placenta and ovules; F. Stamen, backside view; G. Calyx shape, projection of inside view (after Posthumus 777)

DISTRIBUTION. Sumatra: Jambi in Selemuku and Pasir Mayang. Probably also in Bukit Cengkeembun, Inderagiri highland.

HABITAT. Primary forest, swampy forest, at 50–300 m alt., probably higher up to 700 m alt. Flowering: August and December; fruiting: October, December and February.

FIELD NOTES. Leaf dark green, venation red, peduncle red, fruits light green.

NOTES. It is allied to *L. acuta* which is common in Sumatra e.g. Riau, Jambi, Bangka Isl. and Borneo e.g. Sarawak and Central Kalimantan. However, the new species can be easily distinguished by the shape and size of leaves and stamens. The fruiting specimen *Buwalda* 7081 from Bukit Cengkeembun at 700 m alt. has smaller leaves and slightly shorter style. It is perhaps a variant of the species due to altitudinal factor. The epithet is after Dr. Oane Posthumus (1898–1945), Director of General Experimental Station for Agriculture and Professor of Agricultural college at Bogor in 1939–1941.

SPECIMENS EXAMINED: SUMATRA. Jambi: Kab. Muara Bungo–Tebo, Pesisip river, near dusun Pasir Mayang, Primary swampy forest 50 m alt., fl. & fr. Dec. 1980, *Franken & Roos* 351 (L); Kab. Muara Bungo–Tebo, PT. IFA Concession, Pasir Mayang, Primary forest 100–300 m alt., young. fr. Feb. 2, 1982. (Leaf dark green, venation red, peduncle red, fruits light green.), *Vreeken-Buijs* 6 (L); Kab. Sarolangun, Selemuku, 180 m alt., fl. Aug. 25, 1925, *Posthumus* 777 (BO–Iso, L–Holo); Kab. Muara Bungo–Tebo, Bukit Cengkeembun, ca. 700 m alt., young. fr., *Buwalda* 7081 (BO).

2. *Labisia steenisiana* Sunarno, *sp. nov.* – Fig. 2

Labisia pumilo alabstris angusto ovoidea ad aliquanta conica, petalis, sepalis, stylis et antheris differt. – Typus: Sumatra, Aceh, Lintang, 1800 m alt., fl. Sept., 1937. *van Steenis* 6310. (BO–Holo; L–Iso).

Undershrubs, erect to 20–25 cm high or decumbent up to 50 cm long. *Stem* slender. *Leaves* spirally arranged or apparently alternate; lamina ovate, 5–12 by 2–6 cm, subcoriaceous; margin subentire to crenulate; base acute to obtuse, slightly decurrent or not; apex acute to acuminate; midrib sunken above, secondary nerves numerous, c. 4 cm, widely patent almost parallel, junction 4–5 mm from margin; petiole 3–5 cm long, terete or slightly winged base thickened. *Inflorescences* axillar, paniculate, 6–20 cm long, never branched; bracts and bracteoles narrowly triangular, 2–3 mm long; peduncles 3–9 cm long. *Flowers* white or pinkish white; pedicels 2–3 mm long. *Sepal* lobes narrowly ovate to narrowly triangular, c. 1.5 mm long, acuminate. *Corolla* ovoid to vaguely conical in mature buds, 3.5–4 mm long, top acuminate. Petals connected near the base; segments valvate; lobes ovate to narrowly ovate, 3.5–4 by 1.5–2 mm, apex acuminate. *Stamens* c. 2 mm long, filaments c. 0.2 mm long; anthers elliptic 0.9–1 mm long; connective appendages 0.9–1 mm long, backside glandular

pusticulate. Ovary ovate; placenta broadly ellipsoid; ovules 6. Style filiforms, 3.5–4 mm long. Fruit globose, c. 7–9 mm diam. Seed globose, 3.5–5 mm diam., ribbed.

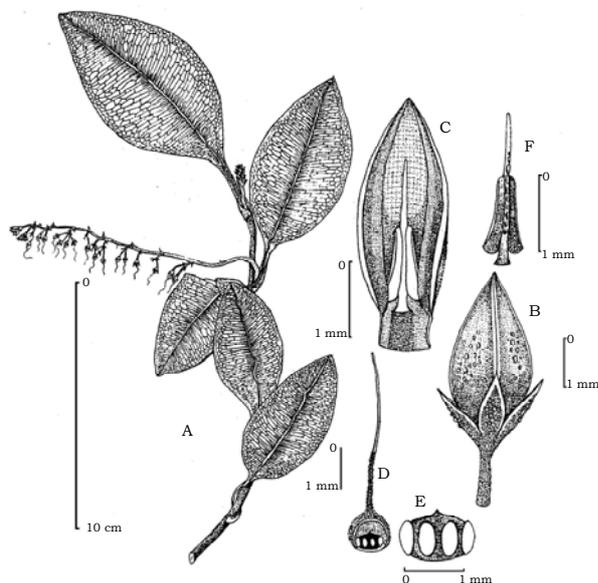


Fig. 2. *Labisia steenisiana* Sunarno. A. Habit; B. Flower bud; C. Frontside view of a detached petal with enclosed stamen; D. Opened ovary; E. Enlarged placenta with ovules; F. Stamen, back side view (after van Steenis 6310)

DISTRIBUTION. Sumatra.

HABITAT. Usually in moist shady primary forests or damp forests at 1500–2000 m alt. Flowering: February, March, and September.

NOTES. It is close to *L. pumila* in vegetative part, but easily distinguish by the narrowly ovoid corolla in flower buds, much longer styles and connective appendages. In some cases it resembles *L. paucifolia* but it has distinctive stamen and style. Ridley described *L. paucifolia* as having style c. 1 mm long, but 3.5–4 mm long in *L. steenisiana*. The former species also has so much longer anther with shorter connective appendage which is different from the latter new species.

SPECIMENS EXAMINED. SUMATRA. – Kab. Aceh Tenggara, Lau Alas river, 1000–2000 m alt., fl. Feb. 7, 1937, *Steenis* 8702 (BO, L); Kab. Aceh Tenggara, Lintang, 1800 m alt., damp forest, forested ridge, fl. March, 1937, *Steenis* 6310 (BO–Holo, L–Iso); Kab. Aceh Tenggara, Gayo land, Mt. Kemiri east slope, Camp 1 to 2, 1800 m alt., fl. March, 1937, *Steenis* 9564 (BO, K, L).

3. *Labisia sumatrensis* Sunarno, *spec. nov.* – Fig. 3.

Labisia paucifoliolis antheris breviora, filamentis longiora, connectivo appendicis breviora, et stylis longiora differt. – Typus: Sumatra, Aceh, upper Mamas river valley, c. 15 km west of Kutacane, c. 1500 m alt., G. Leuser Nature Res., Camp central, fl. June 24, 1979. *de Willde & de Wilde-Duyffes* 19059 (BO–Holo; L–Iso)

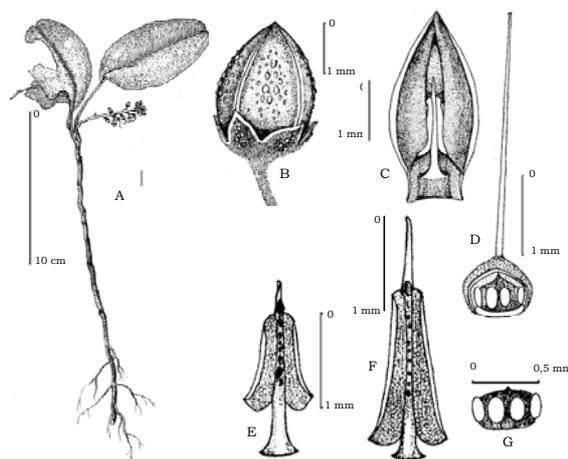


Fig. 3. *Labisia sumatrensis* Sunarno. A. Habit; B. Flower bud; C. Frontside view of a detached petal with enclosed stamen; D. Opened ovary with the shape of placenta (enlarged); E. Stamen, backside view (A–E) after *de Wilde & de Wilde-Duyffes* 19059); F & G Stamen and placenta of *Labisia paucifolia* Ridley (after *Md. Haniff & Nur* 7950).

Undershrubs, erect up to 25 cm tall. *Stem* slender, striates. *Leaves* spirally arranged; lamina subovate to ovate, 7–8 by 3.5–4 cm, subcoriaceous; margin crenulate; base obtuse, apex acute, rounded or emarginate; midrib sunken above, glandular punctates, prominent underneath; lateral nerves c. 6 cm, conjunction 1–3 mm from margin; petioles terete, 3–4 cm long or more, base thickened. *Inflorescences* axillar, paniculate, or raceme of corymb fascicles, c. 4 cm long; bracts narrowly triangular, c. 3 mm long; bracteoles triangular 1–2 mm long; peduncles c. 2 cm long, corymb peduncles c. 0.5 cm long to nearly sessile. *Flowers* pinkish white, pedicels 1–2 mm long. *Sepal* lobes ovate, c. 0.5 mm long, acuminate. *Corolla* subovoids in mature buds, 3 mm long, top acute. *Petal* lobes ovate, c. 3 by 1–1.5 mm long. *Stamens* 1.7–1.8 mm long; filaments 0.4–0.6 mm long; anthers c. 1 mm long; connective appendages c. 0.3 mm long, backside glandular punctulates. *Ovary* subglobose; placenta broadly ovoid, ovules 6–7. *Style* filiforms, c. 3 mm long, stigma notched. *Fruits* unknown.

DISTRIBUTION. Sumatra

HABITAT. Montane rainforests on humus rich soils, at 1200-1500 m alt.

SPECIMENS EXAMINED: SUMATRA. Kab. Aceh Tenggara, Gn. Leuser Nature Reserve, upper Mamas river valley, c. 15 km west of Kutacane, c. 1500 m alt., fl. June 24, 1979, *W.J.J.O de Wilde & B.E.E. de Wilde Duyffes* 19059 (BO-Holo, L-Iso); Kab. Aceh Tenggara, Gn. Leuser Nature Reserve, upper Mamas river valley, c. 15 km west of Kutacane, c. 1500 m alt., fl. June 24, 1979, *W.J.J.O de Wilde & B.E.E. de Wilde Duyffes* 18310 (BO, L). Kab. Asahan, East coast Sumatra, Aek Si Tamburak, Asahan (region southeast of Dolok Si Manuk Manuk, st., Oct. 28, 1936, *Rahmat Si Boeea & Bartlett* 10660 (L)); Kab. Asahan, Aek Si Tamburak, Asahan (region southeast of Dolok Si Manuk Manuk, st., Oct. 26, 1936, *Rahmat Si Boeea & Bartlett* 10633 (L)); Kab. Asahan. Vicinity of Talun na Uli, Toba (east of Dolok Si Manuk Manuk, near headwater of Aek Mandosi, fl., Oct., 1936, *Rahmat Si Boeea & Bartlett* 10202 (L).

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