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A revision of Beilschmiedia (Lauraceae) for Thailand and Indochina

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ABSTRACT

A revision of the genus *Beilschmiedia* (Lauraceae) from Thailand and Indochina is presented with a summary of its taxonomic history, plus keys, full descriptions of each species, distribution maps, conservation assessments, ecological information, ethno-botanical notes and a discussion of its morphology. In this treatment, 21 species are recognized; 14 names are lectotypified (*B. argentata*, *B. balansae*, *B. balansae* var. *muticarpa*, *B. clarkei*, *B. elegantissima*, *B. ferruginea*, *B. globularia*, *B. glomerata* var. *tonkinensis*, *B. lucidula*, *B. obovalifoliosa*, *B. palembanica*, *B. poilanei*, *B. sphaerocarpa* and *B. wightii*), five names are placed into synonymy for the first time, and *B. laotica* Kosterm. ex de Kok is validly published here for the first time. In addition, one new variety (*B. percoriacea* var. *percoriacea* de Kok) is proposed and one new combination (*B. percoriacea* var. *glaucoides* de Kok) is made. Nine species are considered to be Least Concern, one is Critically Endangered, five are Endangered, and five are listed as Vulnerable.

KEYWORDS: *Beilschmiedia*, Cambodia, Laos, taxonomy, Thailand, Vietnam.

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INTRODUCTION

The genus *Beilschmiedia* Nees was first described by Nees von Esenbeck (1831) in his treatment of the Lauraceae for Wallich's Plantae Asiaticae Rariores. It was named after Karl Traugott Beilschmied (1793–1848), a chemist and botanist who wrote mainly about plant geography. The genus is pantropical, with currently about 200–300 species being recognised. *Beilschmiedia*, together with *Cryptocarya* R.Br., *Endiandra* R.Br and others, is placed in the *Cryptocarya* group, which is an early divergent clade within the family (Rohwer, 2000; Liu *et al.*, 2013; Rohwer *et al.*, 2014). The genus has never been revised in full, but a few important modern regional revisions exist for Australia (Le Cussan & Hyland, 2007), China (Li *et al.*, 2008), Peninsular Malaysia (de Kok, 2016a) and Borneo (Nishida, 2008). For Thailand, the genus was revised by Tetsana (2005), who recognised 16 species, of which two were new to science, eight were newly recorded for the country, but only four (25%) were considered endemic. Most of the non-endemics that occur in Thailand have distributions that extend to China, India and Myanmar rather than to Peninsular Malaysia. For the countries of Indochina, the first revision was done by Lecomte (1914) in his Flore Générale de L'Indo-Chine, where he recognised only four species for all three countries (Vietnam, Laos, Cambodia). The second revision for the genus for Indochina was done by Liu (1932) in his PhD thesis on the Lauraceae of Indochina and China, and he recognised 13 species and two varieties for Indochina. In addition, several botanists have subsequently worked on the species from the region, most notably Merrill (1938), Allen (1942) and Kostermans (1955, 1957a, 1957b, 1960, 1961, 1973). This has resulted in many more taxa being described and/or recognised as occurring in the region; for example, the most recent checklist for Vietnam lists 27 species (Lê, 2003: 67–71).

Several names are occasionally found on herbarium sheets (*Beilschmiedia frondosa*, *B. laotica* and *B. micranthopsis*), annotated by or attributed to Kostermans. However, I have not found any evidence that these names were ever published, and this phenomenon of unpublished herbarium names is common with this author (see de Kok, 2015, 2016a). One of these names, *B. laotica* Kosterm. ex de Kok, is validated in this paper.

The Chinese species *Beilschmiedia yunnanensis* H.H.Hu, which occurs in southern China on the

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border with Vietnam (in Guangdong, South Guangxi and southern Yunnan, possible Hainan) may also occur in Indochina, but no specimens proving this could be found.

MORPHOLOGY

The morphology of this genus was extensively discussed in my account of the species of Peninsular Malaysia (de Kok, 2016a) and in Nishida's (2008) paper on the species of Borneo. I will only comment here on any additional topics that concern the species of Thailand and Indochina.

Inflorescences

The inflorescences in this genus are almost always axillary or very rarely terminal. This latter state only occurs in *Beilschmiedia elegantissima* Kosterm. and *B. lanatella* Kosterm. Most species have type 3 inflorescences as defined by van der Werff (2001), which are paniculate-cymose and repeatedly branched, with the lateral flowers of the ultimately cymes not strictly opposite. In the case of *B. roxburghiana* Nees, the terminal cymes are strictly opposite, which might make this a type 2 inflorescence; however, the inflorescences of this species are small and compact, and its appearance may be caused by a series of reductions (see discussion in van der Werff, 2001). In *B. elegantissima*, the open, lax inflorescence clearly corresponds to a type 2 inflorescence, making it the second unequivocal record of this inflorescence type for *Beilschmiedia* (see also discussion under *B. lumutensis* Gamble in de Kok, 2016a). A small number of species (*B. argentata* (Kurz) Kosterm., *B. laotica*, *B. membranacea* Gamble, *B. penangiana* Gamble, *B. wallichiana* (G.Don) Kosterm. and *B. villosa* Kosterm.) have an inflorescence which is enclosed at the base by a series of orbicular bracts. This type of structure was also reported in some species from Peninsular Malaysia (de Kok, 2016a) and in one Bornean taxon (Nishida, 2008).

Fruits

The size of the fruits is very variable, ranging from relatively large (72 mm long in *Beilschmiedia vidalii* Kosterm.) to small (1.9–4.5 mm long in *B. percoriacea* C.K.Allen), and fruit size is an important character in species identification. The same is true for the fruit stalk, which can swell up to 18 mm diam. in *B. vidalii*, but which does not swell up at all in species like *B. palembanica* (Miq.) Kosterm. In addition, some species have a small constriction at the apex of the fruit stalk (see Nishida, 2008), a feature that is absent in *Cryptocarya* (de Kok, 2015, 2016b).

MATERIALS & METHODS

This study is based mainly on observations of specimens from the following herbaria: A, BK, BM, BO, BR, BKF, K, KEP, L, M, MO, P, PE, QBG and SING. In the following descriptions:

i) all measurements and colour descriptions are from mature herbarium material unless stated otherwise;

ii) all measurements and all claims about the position of the veins relative to the remainder of the leaf are taken from dried material;

iii) all collections of *Beilschmiedia* from Thailand, Vietnam, Cambodia and Laos seen by the author are cited;

iv) all synonyms of *Beilschmiedia* taxa with types from Thailand and Indochina are included. Synonyms based on types from outside the area are included only in those cases where type material has been seen by the author;

v) Bornean distribution data are taken from Nishida (2008) and for Peninsular Malaysia, distribution data are taken from de Kok (2016a);

vi) scans of type material were viewed on http://plants.jstor.org on 30 Mar. 2019;

vii) for the IUCN conservation assessments, all areas of occupancy and extent of occurrence metrics were calculated using the default setings at http://geocat.kew.org on 30 Mar. 2019;

viii) the forests and other natural vegetations of this region have been under great stress during the last century and many areas are now deforestsed while the remaining forests often have declined in biodiversity and intergrity (see Pattanavibool *et al.* (2004) and WWF Greater Mekong (2013)).

TAXONOMIC TREATMENT

BEILSCHMIEDIA

Beilschmiedia Nees in Wall., Pl. Asiat. Rar. 2: 61, 69–70. 1831; Gamble, Bull. Misc. Inform. Kew

1910: 142. 1910; Lecomte, Nouv. Arch. Mus. Hist. Nat. sér. 5, 5: 44.1913; Lecomte, Notul. Syst. (Paris) 2: 329. 1913; Lecomte, Fl. Indo-Chine 5: 148. 1914; H.Liu, Laurac. Chine & Indo-Chine: 102. 1932; Ridl., Fl. Malay Penins. 3: 82. 1924; Kosterm., Reinwardtia 4: 229. 1957; Kochummen, Tree Fl. Mal. 4: 117. 1989; Rohwer in Kubitzki *et al.*, Fam. Gen. Vasc. Pl. 2: 385. 1993; van der Werff, Blumea 46: 125. 2001; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 1. 2005; Sach.Nishida, Blumea 53: 345. 2008; de Kok, Blumea 61: 147. 2016. Lectotype: *Beilschmiedia roxburghiana* Nees (designated by Kostermans, 1938: 839).

— *Lauromerrillia* C.K.Allen, J. Arnold Arbor. 23: 460. 1942; Kosterm., Reinwardtia 4: 229. 1957; S.K.Lee *et al.*, Acta Phytotax. Sin. 17: 65. 1979; H.W.Li *et al.*, Fl. China 7: 238 (2008). Type: *Lauromerrillia appendiculata* C.K.Allen [= *Beilschmiedia appendiculata* (C.K.Allen) S.K.Lee & Y.T.Wei].

Shrubs to trees. *Terminal leaf buds* conspicuous. *Leaves* arranged alternate to opposite or spirally and crowded at the ends of twigs, pinninerved. *Inflorescences* axillary panicles, very rarely terminal, usually type 3 (of van der Werff, 2001) (i.e. paniculate-cymose, repeatedly branched, with the lateral flowers of the ultimately cymes not strictly opposite), or rarely type 2 (with the lateral flowers of the ultimate cymes strictly opposite); orbicular bracts usually absent, rarely present. *Flowers* bisexual, perianth tube short or absent; perianth lobes 6, sub-equal, deciduous; stamens and staminodes together forming 4 whorls each of 3 stamens/staminodes: either 3 whorls of stamens (total of 9 stamens) plus 1 whorl of staminodes, or (rarely in Thailand and Indochina) 2 whorls of stamens (total of 6 stamens) plus 2 whorls of staminodes; stamens with filaments hairy; anthers 2-celled, in the 1st and 2nd whorls introrse, in the 3rd whorl extrorse to almost introrse, with 2 glands on each filament of the stamens in the 3rd whorl; staminodes of the 4th whorl cordate or ovoid, shortly stalked or sessile; ovary sessile, narrowing into a style; stigma obtuse. *Fruits* globose to ellipsoid; perianth deciduous, leaving a narrow ring; fruit stalk often not or only slightly thickened, but sometimes much thickened, sometimes with a small constriction at the apex.

A genus of about 200–300 species distributed throughout the tropics but extending as far south as central Chile and New Zealand. Currently 15 species are recognised for Thailand (of which two are endemic), 11 species for Vietnam (of which two are endemic), five species for Laos and three for Cambodia.

KEY TO THE SPECIES OF *BEILSCHMIEDIA* IN THAILAND & INDOCHINA

1. Inflorescence with orbicular bracts at base; infructescence with a series of scars at base
  2. Mature leaf under-surface and petioles glabrous or with only a few hairs present
    3. Leaf apex acute, often with a distinct long tip (caudate), blade drying blackish; orbicular bracts at base of inflorescences glabrous to sparsely hairy; fruit (dried) ellipsoid **13. B. penangiana**
    3. Leaf apex broadly acute, blade drying yellowish brown; orbicular bracts at base of inflorescences densely hairy; fruit (dried) globose **7. B. laotica**
  2. Mature leaf under-surface and petioles sparsely but regularly hairy to velutinous
    4. Petioles 5–10 mm long; tertiary veins scalariform to reticulate **11. B. membranacea**
    4. Petioles > 9 mm long; tertiary veins reticulate
      5. Tepals glabrous on inner surface and densely to sparsely hairy on outer surface; leaves elliptic to obovate, 13–30 × 4.3–10 cm, leathery; apex acute to acuminate **21. B. wallichiana**
      5. Tepals pubescent on both surfaces
        6. Leaves elliptic-obovate or oblanceolate, 7–18 × 3–7 cm, apex broadly acute to acuminate, membranous to chartaceous **1. B. argentata**
        6. Leave elliptic, 7.5–12.7 × 2.8–6 cm, apex rounded to acute, coriaceous **20. B. villosa**
1. Inflorescence without orbicular bracts at base; infructescence without a series of scars at base
  7. Terminal leaf buds glabrous to sparsely hairy; fruit stalks swollen
    8. Tertiary veins on upper leaf surface indistinct; terminal leaf bud lanceolate, 3–8.9 mm long, perianth lobes hairy outside; fruit (dried) ellipsoid, 10–48 × 4–22 mm **15. B. pergamentacea**
    8. Tertiary veins on upper leaf surface distinct; terminal leaf bud ovoid to lanceolate, 4.8–12.6 mm long, perianth lobes glabrous to hairy outside; fruit (dried) ellipsoid, globose to obovoid, 13.5–62 × 13.5–55 mm
      9. Leaves alternate **14.1 B. percoriacea** var. **percoriacea**
      9. Leaves (sub) opposite, sometimes one or two leaves alternate
        10. Leaves apex obtuse or broadly acute; fruit (dried) ovoid, c. 62 ×46 mm; fruit stalk c. 12 mm diam. when mature; only known from Vietnam **9. B. macrocarpa**

10. Leaves apex rounded to acute, often with a distinct short tip; fruit (dried) globose to obovoid, 13.5–52 × 13.5–55 mm; fruit stalk 2.4–4.4 mm diam. when mature
11. Leaf base cuneate; tertiary veins reticulate. Inflorescences 25–80 mm long, bracteoles linear, ca 1.4 mm long. Fruits (dried) globose to obovoid, 13.5–45 × 13.5–55 mm. Fruit stalk (slightly) swollen when mature, 2.4–3 mm diam., constricted below apex **8. B. lucidula**
11. Leaf base rounded or broadly cuneate; tertiary veins areolate-reticulate to scalariform. Inflorescences 15–100 mm long; bracteoles elliptic to linear, ca 0.4–1.7 mm long. Fruits (dried) ellipsoid, 25–52 × 14–23 mm; fruit stalk swollen when mature, 3–4.4 mm diam., not constricted at apex **14. B. percoriacea**

7. Terminal leaf buds velutinous; fruit stalks slender to swollen
12. Mature leaves with lower surface sparsely hairy, hairs erect or appressed (sometimes only present on midrib)
13. Hairs on lower surface of mature leaves appressed
14. Fruit (dried) (sub) globose, 7–21 × 4.7–20 mm; fruit stalk slightly swollen when mature **12. B. palembanica**
14. Fruit (dried) ovoid to globose or turbinate, 25–82 × 15–72 mm; fruit stalk strongly swollen when mature
15. Leaf blade 4–9 × 2.8–4.2 cm, midrib sunken to raised and tertiary veins raised on upper surface; lower surface densely hairy when young, glabrescent; fruits (dried) 37–82 × 40–72 mm **2. B. balansae**
15. Leaf blade 6.5–20 × 2.2–7.8 cm, midrib raised and tertiary veins sunken on upper surface; lower surface sparsely hairy when young; fruits (dried) 25–72 × 15–46 mm **19. B. vidalii**
13. Hairs on lower surface of mature leaves erect
16. Inflorescences with the terminal cymes strictly opposite, 3.7–20 cm long **4. B. elegantissima**
16. Inflorescences with the terminal cymes not strictly opposite,1–9.5 cm long
17. Terminal leaf bud ovoid, 2.4–3.5 mm long; leaf apex acute to acuminate with a short tip; fruits ellipsoid, 15–20 × 8.5–15 mm, surface warty **18. B. tsangii**
17. Terminal leaf bud elliptic, 5–7 mm long; leaf apex rounded to acute; fruits ellipsoid or clavate, 30–40 × 18–20 mm, surface smooth **6. B. lanatella**
12. Mature leaves with lower surface glabrous or with a few appressed hairs present at base or on midrib
18. Twigs stout [(5.5–)15–20 mm diam.], sparsely hairy; leaves spirally arranged and crowded at ends of twigs, blades oblanceolate, 21–37 × 6–14 cm; terminal leaf bud 6.2–11.5 mm long **5. B. kunstleri**
18. Twigs slender [1.6–4(–7.5) mm diam.], sparsely hairy to velutinous; leaves alternate to (sub)opposite, rarely spiral and crowded at the ends of twigs, blades elliptic to elliptic-(ob)lanceolate, 5.5–38 × 1.5–12.5 cm; terminal leaf bud 1.5–5(–10) mm long
19. Leaf blades lanceolate, apex long acuminate; midrib and secondary veins raised on upper surface; fruit (dried) ellipsoid to clavoid **16. B. poilanei**
19. Leaf blades elliptic to (ob)lanceolate, apex acute to (shortly) acuminate; midrib sunken to flatted, secondary veins raised to sunken on upper surface; fruit (dried) globose to ellipsoid or oblong
20. Leaves (thickly) leathery, bracteoles orbicular, 2.5–3 mm long **17. B. roxburghiana**
20. Leaves membranous to leathery, bracteoles orbicular to lanceolate 3–6 mm long or linear 1–1.4 mm long
21. Twigs 3.4–7.5 mm diam., velutinous when young; leaf blades 12–38 × 3.5–12.5 cm, secondary veins often sunken above, base attenuate **10. B. maingayi**
21. Twigs 2–3.4 mm diam., sparsely to densely hairy when young; leaf blades 6–18 × 1.5–7 cm, secondary veins sunken to raised above, base cuneate to rounded
22. Leaf base cuneate, bracteoles orbicular, 3–4 mm long **3. B. clarkei**
22. Leaf base cuneate to rounded; bracteoles linear, 1–1.4 mm long **18. B. tsangii**

1. Beilschmiedia argentata (Kurz) Kosterm., Reinwardtia 6: 284. 1962.— *Daphnidium argenteum* Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 42: 103. 1873; Forest Fl. Burma 2: 307. 1877; Hook.f., Fl. Brit. India 5: 187. 1886.— *Benzoin argenteum* (Kurz) Kuntze, Rev. Gen. Pl. 2: 569. 1891; Kosterm., Reinwardtia 6: 284. 1962. Type: Myanmar, Pegu, without date, *Kurz 951* (lectotype **M** [M0147418!], designated here; isolectotype **K** [K000768657!]).— *Beilschmiedia argentea* Kosterm., Reinwardtia 4: 20. 1955; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 17. 2005. Type: Myanmar, Insein, Myanklaing, date unknown, *Pokhant 149* (holotype **DD**).

Trees 8–30 m high; bark smooth, white; twigs slender, 2.3–2.6 mm thick, round in cross-section, greyish-brown, pubescent when young; hairs appressed, yellowish; terminal leaf buds ovoid, 4–6 mm long, velutinous. *Leaves* alternate or subopposite; blades elliptic-obovate or oblanceolate, 7–18 × 3–7 cm, membranous to chartaceous; apex broadly acute to acuminate; base attenuate or acute; secondary veins 6–8(–10) pairs, arching toward margins, tertiary veins prominent, areolate; upper surface glabrous excepts for hairs on midrib, midrib and secondary veins raised; lower surface sparsely hairy, midrib and secondary veins raised, tertiary veins distinct; hairs appressed, yellowish; petioles 7–12 mm long,

half-terete, slender, velutinous. *Inflorescences* axillary, 1.5–3 cm long, enclosed at base by bracts; bracts orbicular, 3–6 × 3–5 mm, velutinous; bracteoles lanceolate, 3–6 × 2–4 mm, velutinous. *Flowers* yellowish-green; perianth cup very shallow; perianth lobes 6(–7), oblong, 2.5–4.5 × 0.7–1.1 mm, apex acute, sparsely to densely hairy on both surfaces; stamens 9, 2.1–2.8 mm long, sparsely hairy; anthers 0.7–0.8 mm long; ovary ovoid-oblong, 0.5–0.6 mm diam., glabrous; style 3–3.5 mm long, stigma recurved. *Fruits* unknown.

Thailand.— Northern Thailand (Fig. 1).

Distribution.— Myanmar and Vietnam.

Ecology.— Growing in dry evergreen forest, sometimes on volcanic soils; 200–1,000 m alt. Flowering: January, February; fruiting unknown.

Preliminary conservation assessment.— Vulnerable (VU B2ab(i,ii,iii)). This species is only known from six localities in eastern Myanmar, northern Thailand and southern Vietnam. It has a relatively large extent of occurrence (EOO of 630,2607 km^2), but its area of occupancy (AOO of 24 km^2) is small. Like many Lauraceae species it is likely to be under-collected. The dry evergreen forests in which it grows have been in decline in the region. Given the small number of localities from which it is known, the small AOO, and the habitat loss in the region, it is considered as Vulnerable.

Notes.— In the original description of Daphnidium argentata Kurz (1873: 103) two gatherings are mentioned: one at Pegu and one in Martaban, of which two specimens (K000768657, M0147418) could be found. The specimen from Pegu at **M** is designated here as the lectotype.

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Pa Kia, 21 May 1990, *Smitinand 90-214* (**BKF**)]; Phrae [26 May 1913, *Vanpruk 437* (**K**)].

VIETNAM.— Bien Hoa [Mount de Níu, 10 Jan. 1914, *Fleury 29924* (**P**-5 sheets)].

2. Beilschmiedia balansae Lecomte, Nouv. Arch. Mus. Hist. Nat. sér. 5, 5: 108. 1913. Type: Vietnam, Tonkin, Mont Bavi, July 1887, *Balansa 2395* (lectotype **P** [P00745635!], designated here; isolectotypes **BR** [BR0000005175543!], **K** [K000768683!], **L**-3 sheets [L0035577!, L0035578!, L0035579!]), **P**-3 sheets [P00745636!, P00745637!, P05209125!].— *Beilschmiedia balansae* Lecomte var. *muticarpa* H.Liu, Laurac. Chine & Indo-Chine: 107. 1932. Type: Vietnam, Tonkin, Massif de Nui-bien, près Chobo, 6 Sept. 1926, *Poilane 13176* (lectotype **P** [P00745633!], designated here; isolectotypes **K** [K000350899!], **P** [P00745634!]).

Tree 15–28 m tall, dbh up to 70 cm. *Twigs* slender, 2.5–3.7 mm thick, angled to rounded in cross-section, velutinous when young, soon glabrescent, covered with lenticels; hairs yellowish, appressed; terminal leaf buds ovate, 3.6–3.9 mm long, velutinous, apex acute. *Leaves* alternate to subopposite; blades elliptic, 4–9 × 2.8–4.2 cm, coriaceous; apex rounded to acuminate; base cuneate, sometimes asymmetric; secondary veins 3–6 pairs, curved near margin and brochidodromous, tertiary veins scalariform to reticulate; upper surface shining, glabrous apart from midrib which can be densely to sparsely hairy, midrib sunken to raised, secondary veins sunken, tertiary veins indistinct; lower surface densely hairy when young, glabrescent, midrib raised, secondary veins raised, tertiary veins raised and distinct; hairs yellowish, appressed; petioles 10–16 mm long, half-terete, not swollen, velutinous. *Inflorescences* axillary, 3–6 cm long, not covered by orbicular bracts at base, densely hairy; hairs appressed, yellowish; bracteoles decussate, lanceolate, 1.2–1.4 mm long, apex acute, velutinous. *Flowers*: perianth cup 0.6–1 mm deep; perianth lobes ovoid, 0.5–1.6 × 0.6–1.2 mm, apex acute, velutinous on both surfaces; stamens 9, 0.8–1.5 mm long, filaments sparsely hairy; anthers 0.5 mm long; ovary ca 0.5 mm diam., glabrous; style ca 0.5 mm long, stigma small. *Fruits* globose, 37–82 × 40–72 mm, apex rounded, base rounded, surface smooth, glabrous; fruit stalk strongly swollen, ca 3 × 11 mm, not constricted below apex.

Distribution.— Vietnam: Mt. Bavi (Fig. 1).

Preliminary conservation assessment.— Endangered (EN B1ab(i,ii,iii)+2ab(i,ii,iii)). This species is only known from three localities, all on Mt. Bavi (AOO = 12, EOO = 1708 km^2). This protected area is rather small and surrounded by urban and agricultural areas. These forests are under threat of deforestation and habitat destruction. Given these threats and the fact that it is only known from a few localities in a small area it is considered as Endangered.

Ecology.— Growing in forests at 500–900 m alt. Flowering: July; fruiting: July–September.

Local name.— Cây chô gang (Vietnamese).

Notes.— In the original description of *Beilschmiedia balansae*, Lecomte (1913: 108–109) mentioned one gathering (*Balansa 2395*) with four specimens in **P.** The specimen with an original label [P00745635] is designated here as the lectotype.

In the original description of *Beilschmiedia balansae* Lecomte var. *muticarpa*, Liu (1932: 107) mentions one gathering (Poilane 13176) with two specimens in **P**. The specimen with an original label [P00745633] is designated here as the lectotype.

Specimens seen.

VIETNAM.— Hoa binh [Massif de Hui Biêu, près Cho-Bo, 6 Sept. 1926, *Poilane 13166* (**P**-2 sheets)].

3. Beilschmiedia clarkei Hook.f., Fl. Brit. India 5: 122. 1886; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 27. 2005. Type: India, Sikkim, Reinak, 13 May 1875, *Clarke 27925* (lectotype **K** [K000768632!], designated here; isolectotype **K** [K000768631!]).

Tree 8–28 m high; bark brown, smooth to slightly fissured, inner bark reddish-pink. *Twigs* slender, 2–3.2 mm thick, round in cross-section, sparsely to densely hairy when young, glabrescent; hairs yellowish, appressed; terminal leaf buds ovate-lanceolate, 4–7.2 mm long, velutinous; hairs appressed, yellowish. *Leaves* alternate or (sub) opposite; blades elliptic-lanceolate, 6–18 × 2.2–7 cm, membranous; apex acute to acuminate; base cuneate; secondary veins 9–12 pairs, curved near margin and brochidodromous, tertiary veins reticulate; upper surface glabrous, midrib sunken to raised, secondary veins raised, tertiary veins distinct; lower surface glabrous, midrib raised, secondary veins raised, tertiary veins distinct; petioles slender, 10–15 mm long, channelled, sparsely hairy; hairs yellowish, appressed. *Inflorescences* axillary, 15–95 mm long, densely to sparsely hairy (hairs appressed, yellowish), not enclosed at base by orbicular bracts; bracteoles orbicular, 3–4 mm long, apex rounded, caducous. *Flowers* green; perianth tube not distinct; perianth lobes orbicular to elliptic, 2.4–3.3 × 1–1.8 mm, apex acute, sparsely hairy outside, pubescent inside, margins not ciliate, lobes almost equal or inner three slightly smaller; stamens 9, 1.4–2.2 mm long; filaments longer than anthers, sparsely hairy; anthers glabrous, obtuse at apex; ovary ca 0.6 mm diam., a few hairs present; style ca 1.6 mm long, a few hairs present. *Fruits* ellipsoid, 20–45 × 11–22 mm, apex rounded, surface smooth, glabrous, turning purplish-black when mature, glaucous; fruit stalk enlarged, 3–3.5 × 2.3–2.4 mm, brown, constricted at apex.

Thailand.— Northern Thailand.

Distribution.— Nepal, Bhutan, Sikkim (India) and probably Bengal and Myanmar, and Laos (Fig. 1).

Ecology.— Growing in dry forests or shrubland, often near streams, at 50–2,200 m alt. Flowering: March–July; fruiting: July–April.

Local name.— Bong nang (Laos).

Preliminary conservation assessment.— Vulnerable (VU B2ab(i,ii,iii)). This species is only known from seven localities from India (Sikkim and Bengal), Bhutan, Myanmar, northern Thailand and Laos. Its habitat is generally under threat of deforestation and destruction, although it does occur in several well protected areas (Doi Inthanon National Park and Lan Sang National Park). It has a relatively large extent of occurrence (EOO of 272,211 km^2), but its area of occupancy (44 km^2) is relatively small. Given the threats to its habitat, its small AOO and few known localities, it is considered as Vulnerable.

Notes.— Two morphologically very similar specimens of the type gathering, *Clarke 27925*, are at **K**. The one designated here as the lectotype (K000768632) has a set of drawings of the flower dissections.

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Doi Inthanon National Park, 11 July 2003, *Tetsana 31* (**BKF**); ibid., 7 Dec. 1998, *Kanzaki et al. C 597* (**BKF**); Mae Cham, 10 May 1921, *Kerr 5410* (**K**)], Tak [Lan Sang National Park, 21 Apr. 1985, *Niyomdham 909* (**BKF**)].

LAOS.— Sainyabuli [Chieng Kan, Doi, 23 Mar. 1924, *Kerr 8802* (**BM**, **K**)].

4. Beilschmiedia elegantissima Kosterm., Reinwardtia 5: 392, fig. 7. 1961; Tetsana, Taxon Revis. Gen. *Beilschmiedia* Thailand: 30. 2005. Type: Myanmar, Amherst, Mekhrein Chaungkya, Dawna Range, 14 Feb. 1927, *Parkinson 5261* (lectotype **K** [K000768660!], designated here; isolectotype **K** [K000768661!]).

Tree 7–12 m high. *Twigs* slender, 1.6–6 mm thick, angular in cross-section, densely to sparsely hairy; hairs erect, yellowish; terminal leaf buds linear, 2.8–8 mm long, apex acute, velutinous. *Leaves* alternate to (sub)opposite; blades elliptic to slightly obovate, 6–17 × 2.3–11 cm, coriaceous; apex round to acuminate; base acute to cuneate; secondary veins 8–13 pairs; tertiary veins densely reticulate; upper surface glabrous, dark green, shining, midrib sunken, secondary veins raised, tertiary veins distinct; lower surface pale green, glabrous apart from midrib and few hairs at base, midrib raised, secondary vein raised, tertiary veins distinct; petioles 9–27 mm long, channelled, slightly swollen, longitudinally grooved, densely hairy; hairs erect, yellowish. *Inflorescences* axillary, lax, 3.7–20 cm long, not enclosed at base by orbicular bracts, glabrous; bracteoles linear, 0.9–2 mm long, apex acute, sparsely hairy, caducous. *Flowers* greenish; perianth tube distinct; perianth lobes orbicular to elliptic, 1.5–2 × 1.3–2 mm, apex acute, glabrous outside, sparsely to densely hairy inside, lobes almost equal or inner three slightly smaller; stamens 9, 0.9–1.6 mm long, filaments sparsely hairy; anthers glabrous, obtuse at apex; staminodes 3; ovary 1.6–2.3 mm diam., glabrous; style 1–1.4 mm long, stigma inconspicuous. *Fruits* ellipsoid, 30–34 × 19–22 mm, apex rounded, surface glabrous, smooth, purplish-black when mature, glaucous; fruit stalk ca 30 mm long, slightly swollen, up to 3 mm thick, with a circular constriction at apex, red when mature.

Thailand. — Northern and South-Western Thailand (Fig. 1).

Distribution.— Myanmar.

Ecology.— Growing in dry and evergreen hill forests, at 1,000–1,500 m alt. Flowering: October; fruiting: January–May.

Preliminary conservation assessment.— Endangered (EN B2ab(i,ii,iii)). This species is only known from only three localities from Myanmar and Thailand, where its habitat is under threat of deforestation, athrough one locality is in the well protected Doi Phu Kha National Park. It has a relatively large extent of occurrence (EOO of 86,100 km^2), but its area of occupancy (AOO of 20 km^2) is relatively small. Given the threats to its habitat and the facts that its AOO is small and it is only known from a few localities, it is considered Endangered.

Notes.— The inflorescences of this species are atypical for this genus. Normally *Beilschmiedia* has type 3 inflorescences, as defined by van der Werff (2001), which are paniculate-cymose and repeatedly branched, with the lateral flowers of the ultimately cymes not strictly opposite. In this species, the terminal cymes are strictly opposite, which make this a type 2 inflorescence. This is sometimes difficult to see as one of terminal cymes often drop off. This is similar to *B. lumutensis* Gamble, from Peninsular Malaysia, which has the same inflorescences type (de Kok, 2016a).

There are two morphological very similar specimens of the gathering *Parkinson 5261* at **K.** One is designated here as the lectotype (K000768660).

Specimens seen.

THAILAND.— NORTHERN: Nan [Doi Phu Kha National Park, 13 Jan. 2001, *Srisanga 1292* (**BKF**, **QBG**)]; SOUTH-WESTERN: Kanchanaburi [Khao Yai, 30 Mar. 1968, *van Beusekom & Phengkhlai 220* (**BKF**, **K**, **L**, **P**)].

5. Beilschmiedia kunstleri Gamble, Bull. Misc. Inform. Kew 1910: 147. 1910; Ridl., Fl. Malay Penin. 3: 83. 1924; Kochummen, Tree Fl. Mal. 4: 120. 1989; Sach.Nishida, Blumea 53: 362. 2008; de Kok, Blumea 61: 155. 2016. Type: Malaysia, Peninsular Malaysia, Perak, near Larut, Nov. 1884, *King's Collector 6854* (lectotype **K** [K000768665!], designated by de Kok 2016a: 155).

Trees or shrubs 5–35 m tall, dbh 15–30 cm; bark greyish or black to brownish, smooth to scaly, lenticellate; inner bark pinkish to yellowish-brown; sapwood whitish or pale yellow to creamy. *Twigs* stout, (5.5–)15–20 mm diam., sparsely hairy, with prominent lenticels and leaf scars; terminal leaf buds ovoid to lanceolate, 6.2–11.5 mm long, velutinous; hairs both short, erect and curly, and long and straight, dark brown. *Leaves* spirally arranged and crowded at the ends of twigs; blades oblanceolate, 21–37 × 6–14 cm, thickly leathery; apex blunt or acute; base cuneate; secondary veins 9–16 pairs, tertiary veins reticulate to scalariform; upper surface glabrous, glossy, light to dark green, midrib raised or flattened, secondary veins sunken to raised, tertiary veins distinct; lower surface glabrous, midrib raised and very sparsely appressed hairy, secondary veins raised, tertiary veins distinct; petioles 10–33 mm

long, slightly swollen, sparsely hairy. *Inflorescences* 110–190 mm long, not enclosed at base by orbicular bracts, sparsely hairy to velutinous; bracteoles linear, 1.7–3 mm long, apex acute. *Flowers* sparsely hairy, dark red; perianth tube not distinct; perianth lobes sparsely hairy outside, 3.3–3.5 × 1.3–1.6 mm, apices rounded, margins not ciliate; stamens 9, 2–3 mm long; ovary ca 1 mm diam., glabrous; style ca 1.6 mm long. *Fruits* (dried) ovoid to ellipsoid, 1.5–25 × 8–20 mm, apex acute to blunt, base attenuate, surface smooth to ribbed, red to purple or black when mature, shiny; fruit stalk (slightly) swollen, bright red, 2.7–5 mm diam., with a constriction at the apex.

Thailand.— Northern and Peninsular Thailand.

Distribution.— Laos, Peninsular Malaysia, Borneo and Sumatra.

Ecology.— Growing in primary and secondary forests, sometimes in swamp forest or along streams, at 10–1,300 m alt. Flowering: February–September; fruiting: March–September.

Preliminary conservation assessment.— Least Concern (LC). This species is known from ca 30 localities in Laos, Thailand, Peninsular Malaysia and Borneo, and has also been reported from Sumatra. It has a large extent of occurrence (EOO of 2,583,376 km^2) and area of occupancy (AOO of 94 km^2). There has been a decline in the forests where it grows, both in their quality and in their extent. However, given the large extent of occurrence and the number of known localities, it is considered as Least Concern.

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Doi Inthanon National Park, 5 Sept. 1991, *Pooma 538* (**BKF**)]. PENINSULAR: Phangnga [Koh Bon, Andamam, 7 Apr. 1999, *Wongprasert s.n.* (**BKF**)]; Songkhla [Rattaphum, Boriphat Falls Park, 6 Mar. 1985, *Maxwell 85-258* (**P**)]; Narathiwat [without further locality, 8 Mar. 1974, *Larsen & Larsen 33066* (**BKF**, **K**, **L**); Waeng, Bala-Hala, 27 May 2007, *Niyomdham & Puudjaa 8048* (**BKF**); Waeng, Lo Jud, 28 May 2006, *Poopath & Thanaros 455* (**BKF**)].

LAOS.— Haut Laos [15 km après Phoug, 8 May 1936, *Poilane 26020* (**P**)].

6. Beilschmiedia lanatella Kosterm., Reinwardtia 5: 392. 1961. *Beilschmiedia velutinosa* Kosterm., Nat. Hist. Bull, Siam Soc. 25 (3–4): 30. 1975 ('1974'); Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 54. 2005. Type: Thailand, Lampang, Me Peng, 21 June 1926, *Winit 1711* (holotype **BK** [BK257955!]; isotypes **BO** [sheet nr. 1263179], **K** [no barcode!])

Tree 7–22 m tall; bark greyish-brown, smooth to rough. *Twigs* slender, 2.2–2.3 mm thick, grey, velutinous when young, glabrescent; hairs erect, yellowish; terminal leaf buds elliptic, 5–7 mm long, velutinous; hairs erect, yellowish. *Leaves* alternate; blades obovate-elliptic, 8–15 × 3–7 cm, chartaceous; apex rounded to acute; base cuneate; secondary veins 8–10 pairs, curved near margin, tertiary veins reticular; upper surface glossy, glabrous except densely hairy on midrib, midrib sunken, secondary veins raised, tertiary veins distinct; lower surface sparsely hairy, midrib and secondary veins raised, tertiary veins distinct; hairs erect, yellowish; petioles 10–15 mm long, half-terete in cross-section, densely hairy; hairs erect, yellowish. *Inflorescences* axillary, 10–30 mm long, lax, velutinous, without orbicular bracts at base; hairs erect, yellowish; bracteoles unknown. *Flowers* pale yellow, ca 3 mm in diam., densely hairy, perianth tube shallow; perianth lobes 6, ovate, 1.5–2.0 × 1–1.5 mm, apex acute, densely hairy outside; stamens 9, anthers ovate-acute, ca 1.5 mm long, filaments as long as the anthers, glabrous; staminodes 3, ca 0.8 mm long; ovary subglobose, ca 1 mm diam.; style ca 1 mm long, glabrous, stigma inconspicuous. *Fruits* ellipsoid or clavate, 30–40 × 18–20 mm, surface smooth, dark purple to black when ripe, seed red in cross-section; fruit stalk 25–45 mm long, not swollen, hairy, red when ripe.

Distribution.— Presumably endemic to Northern Thailand (Chiang Mai, Lampang) (Fig. 6).

Ecology.— Growing in evergreen forest at 120–1,150 m alt. Flowering: May, June; fruiting: September–January.

Preliminary conservation assessment.— Endangered (EN B1ab(i,ii,iii)+2ab(i,ii,iii)). This species is only known from two localities in the provinces of Chiang Mai and Lampang in northern Thailand These collections where made in the 1920s and more fieldwork is needed to confirm whether these subpopulations are still extant. Although one locatie is in the well protected area of Doi Chiang Dao wildlife scatuary, the forests in this area are under threat of deforestation and habitat destruction.

Its area of occupancy (AOO of 8 km^2) is small and given the threats to its habitat and the fact that it is only known from two localities, it is considered Endangered.

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Chiang Dao, 31 May 1921, *Kerr 5532* (**BK**, **K**)].

7. Beilschmiedia laotica Kosterm. ex de Kok, **sp. nov.**

Beilschmiedia laotica differs from the morphologically very similar *Beilschmiedia penangiana* Gamble in having leaves with a broadly acute apex (acute in *B. penangiana*), which dry yellowish-brown (drying blackish in *B. penangiana*), an inflorescence with densely hairy orbicular bracts at its base (bracts glabrous to sparsely hairy in *B. penangiana*) and a fruit which is globose when dried (ellipsoid in *B. penangiana*). Type: Laos, près de Bangthat, à 12 km de Savannakhet, 26 June 1929, *Poilane 16325* (holotype **P** [P01990437!]; isotype **P** [P01990438!]).

— *Beilschmiedia laotica* Kosterm., **nom. nud.**: P.H.HÔ, Ill. Fl. Vietnam: 383. 1991; T.C.Lê, Checklist Pl. Sp. Vietnam: 69. 2003.

Trees 5–22 m tall, dbh 9–50 cm, bark grey, smooth. *Twigs* slender, 1.7–4.9 mm diam., longitudinally ridged, glabrous, whitish; terminal leaf buds ovate, 2.7–3.8 mm long, apex acute, velutinous; hairs appressed, light brown. *Leaves* alternate to (sub) opposite, blades elliptic, 5.2–10 × 3–5.4 cm, thinly leathery, drying yellowish-brown; apex broadly acute; base cuneate to attenuate; secondary veins 6–7 pairs, brochidodromous, tertiary veins reticulate; upper surface glabrous, midrib sunken, secondary veins raised, tertiary veins distinct; lower surface glabrous, midrib and secondary veins raised, tertiary veins distinct; petioles 7.4–8.4 mm long, slender, half terete, channelled. *Inflorescences* 5–10 mm long, enclosed at base by orbicular bracts 1.4–1.5 × 1.2–1.7 mm, sparsely hairy to velutinous; bracteoles lanceolate, 1–1.2 mm long, velutinous, caducous. *Flowers* light yellow to white, slightly fragrant; perianth tube absent; perianth lobes elliptic, 1.4–1.5 × 1.2–1.7 mm, apex acute, glabrous to sparsely hairy outside; stamens 9, 0.6–1.2 mm long, filaments glabrous; ovary 0.4–0.6 mm diam., glabrous; style ca 0.5 mm long. *Fruits* (dried) globose, 10–12 × 6–9 mm, apex rounded, base rounded, surface smooth, glabrous; fruit stalk slightly swollen when mature, up to 3 mm thick, constricted at apex.

Thailand.— Peninsular, Central and Northern Thailand (Fig. 3).

Distribution.— Laos and Vietnam.

Ecology.— Growing in evergreen forests, sometimes over sandstone, at 50–750 m alt. Flowering: June–February; fruiting unknown.

Preliminary conservation assessment.— Vulnerable (VU B2ab(i,ii,iii)). This species is known from six localities from Thailand, Laos and Vietnam. It has a large extent of occurrence (EOO of 783,963 km^2) and area of occupancy (AOO of 24 km^2). The forests in these areas are under threat of deforestation and habitat destruction, although it does occur in the well protected areas of Doi Chiang Dao wildlife sactuary and Khao Yai National Park. Given these threats and that it is known from so few localities in a small area, it is considered as Vulnerable.

Local name.— Gay sang gie (Vietnamese).

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Doi Chiang Dao, above Pha Plong Cave, 18 Feb. 1989, *Maxwell 89-215* (**BKF**)]; CENTRAL: Nakhon Nayok [Muang District, Khao Yai National Park, 9 July 2002, *Maxwell 02-181* (**BKF**)]; PENINSULAR: Phangnga [Khuraburi, 5 Apr. 2003, *Phengklai et al. 13748* (**BKF**)].

VIETNAM.— Phan Rang [Ka Rom, 5 Mar. 1924, *Poilane 9898* (**P**-2 sheets)]; Hòa Bien [Station experimentale de Giaraï, Nov.–Dec. 1918, *Chevalier 39645* (**P**)].

8. Beilschmiedia lucidula (Miq.) Kosterm., Reinwardtia 5: 395. 1961, Reinwardtia 8: 23. 1970; Kochummen, Tree Fl. Mal. 4: 120. 1989; Sach. Nishida, Blumea 53: 363.2008; de Kok, Blumea 61: 156. 2016.— *Cryptocarya lucidula* Miq., Fl. Ind. Bat. 1: 922. 1858. Type: Indonesia, Java, Banjoemas, without date, *Horsfield s.n.* (lectotype **U** [U0002629!], designated here; isolectotypes **BM**-2 sheets [BM000799340!, BM000799343!], **K**-2 sheets [K000575303!, K000768701!]).

— *Beilschmiedia globularia* Kurz, Prelim. Rep. Forest Pegu App. B. 73. 1875. Type: Myanmar, Pegu, without date, *Kurz 2420* (lectotype **K** [K000768655!]), designated here).

— *Beilschmiedia sphaerocarpa* Lecomte, Nouv. Arch. Mus. Hist. Nat. 5: 110. 1913, **nom. illeg.** [non *Beilschmiedia sphaerocarpa* H.J.P.Winkl., 1909]. Type: Vietnam, Bà Rịa-Vũng Tàu, Mont Dinh, près de Baria, Feb. 1866, *Pierre 5156* (lectotype **P** [P00745515!], designated here; isolectotypes **A** [A00062469!], **BKF** [SN 206540!], **BM** [BM000950892!], **K** [K000768685!], **NY** [NY00354903!], **P** 8x [P00745512!, P00745513!, P00745514!, P02132557!, P02001284!, P02001294!, P02194646!]), **syn. nov.**

Trees 3–30 m tall, dbh 5–70 cm; bark greenish or grey to brown, smooth or scaly; inner bark pink to reddish; wood white, strongly aromatic. *Twigs* slender, 1.3–5 mm diam., round or slightly angled in cross-section, smooth, glabrous; terminal leaf buds ovoid to lanceolate, 4.8–12 mm long, apex acute to acuminate, glabrous. *Leaves* (sub) opposite; blades elliptic, oblong or oblong-lanceolate, 6.2–16 × 1.5–8 cm, thinly leathery, shiny; apex rounded or shortly acuminate; base cuneate; secondary veins 6–12 pairs, curving and joining near margins, tertiary veins reticulate; upper surface glabrous, midrib raised to sunken, secondary veins raised, tertiary veins distinct; lower surface glabrous, midrib and secondary veins raised, tertiary veins distinct; petioles 6–30 mm long, channelled, slender, glabrous. *Inflorescences* 25–80 mm long, not enclosed at base by orbicular bracts, glabrous; bracteoles linear, ca 1.4 mm long, caducous. *Flowers* white to pale green, glabrous on the outside; perianth tube ca 1 mm long; perianth lobes ovate-elliptic, 1.7–3.5 × 1–1.2 mm, apices rounded to acute; stamens 9, 1.2–2 mm long, glabrous; ovary 0.6–2.3 mm diam., glabrous; style 0.7–2.3 mm long. *Fruits* (dried) globose to obovoid, 13.5–45 × 13.5–55 mm, apex rounded, base tapering, surface smooth to striate, glabrous, glaucous, purplish-black or blue when mature; fruit stalk (slightly) swollen when mature, 2.4–3 mm diam., dark brown to reddish, constricted below apex.

Thailand.— Throughout the country.

Distribution.— Nepal, Bhutan, India (Sikkim and Assam), Myanmar, Vietnam, Laos, Cambodia, Malaysia, Indonesia (Kalimantan, Sumatra, Java and Bali) and the Philippines (Fig. 3).

Ecology.— Growing in primary and secondary evergreen lowland to montane forests, often in seasonally wet areas, sometimes in savannahs or open vegetation, sometimes over sandstone, granite, limestone or on poor sandy soils, at 0–2,150 m alt. Flowering: August–April; fruiting: February–December.

Preliminary conservation assessment.— Least Concern (LC). This species is known from at least 100–150 localities. It has a very large extent of occurrence (EOO of 8,978,818 km^2), an area of occupancy (AOO) of 188 km2, and it is reported to be common where it occurs. Although there is likely to be a decline in its distribution, as well as loss of its habitat, given the large extent of occurrence and the number of localities from which it is known, it can be considered as Least Concern.

Local names.— Thailand: Nuai nok ngum (หน่วยนกงุม)(Chiang Mai, Loei), chan dong (จันทร์ดง), tit (ตีด)(Trang); makhua khuen (มะเขือขื่น)(Nakhon Si Thammarat). Vietnam: Chap choa.

Notes.— The original description of *Cryptocarya lucidula* Miq. (Miquel, 1858: 922) mentioned one gathering: Java in Banjoemas (Horsf.); I found five specimens of this gathering and the one at U is designated here as the lectotype.

The original description of *Beilschmiedia globularia* Kurz (1875: App. B. 73) mentioned one gathering: Myanmar, Pegu, *Kurz 2420*. I could only find one specimen of this gathering and this specimen is designated here as the lectotype.

Specimens seen.

THAILAND.— NORTHERN: Mae Hong Son [Pai District, east of Ban Ma Pin, 21 Oct. 1979, *Shimizu et al. T-20130* (**BKF**)]; Chiang Mai [Ang Khang, 8 July 2003, *Tetsana 56* (**BKF**); Bo Luang, 13 Apr. 1970, *Smitinand & Cheke 10793* (**BKF**); Doi Chiang Dao Wildlife Sanctuary, 10 Nov. 1962, *Smitinand & Moore 7777* (36784) (**BKF**, **K**, **P**); ibid., 5 June 1921, Kerr 5617 (**BM**, **K**); ibid., 10 Nov. 1996, *Maxwell 96-1514* (**BKF**); ibid., 16 Dec. 2001, *Tetsana et al. 1–1* (**BKF**); ibid., 16 Dec. 2001, Tetsana et al. 1–2 (**BKF**); ibid., Doi Luang, 5 Dec. 2001, *Chamchunroon et al. V.C. 1682* (**BKF**); ibid, 5 Feb. 1999, *Phattarahirankanok 19G* (**BKF**); ibid., 8 Feb. 1983, *Koyama et al. T-33266* (**BKF**); Doi Suthep-Pui National Park, 24 Mar. 1995, *Maxwell 95-249* (**BKF**); ibid., 10 July 2003, *Tetsana et al. 27* (**BKF**); ibid., without date, *Khoonkhuntod et al. 215* (**BKF**); ibid.,16 June 1968, *van Beusekom & Phengkhlai 1265* (**K**, **P**); Mae Taeng, 4 Dec. 1977,

Santisuk 1474 (K); ibid., 28 Nov. 1991, *Pooma 599* (**BKF**)]; Chiang Rai [Doi Tung, 22 June 2002, *Tetsana et al. 2* (**BKF**); ibid., 6 July 2003, *Tetsana et al. 54* (**BKF**); ibid., 22 June 2002, *Chamchumroon et al. V.C. 1597* (**BKF**)]; Nan [Doi Phu Kha National Park, 22 Sept. 1996, *Pooma 1363* (**BKF**)]; NORTH-EASTERN: Loei [Phu Luang, 3 Feb. 1983, *Niyomdham & Vidal 518* (**BKF**, P); ibid., 18 Jan. 1970, *van Beusekom & Phengklai 3087* (**BKF**, **P**); ibid., 14 Mar. 1980, *Smitinand s.n*. (**BKF**); ibid., 12 Aug. 2004, *Nielsen et al 1668* (**BKF**); ibid., 21 Dec. 2001, *Chamchunroon et al. V.C. 1247* (**BKF**); ibid, 25 June 2003, *Tetsana et al. 16* (**BKF**); ibid, 13 May 1998, *Chayamarit et al. 1372* (**BKF**); ibid., 13 May 1998, *Wongprasert et al. s.n.* (**BKF**); ibid., 15 May 1998, *Wongprasert et al. s.n.* (B**K**F); ibid., 19 Dec. 1981, Smitinand s.n. (**BKF**)]; SOUTH-WESTERN: Uthai Thani [Huai Kha Khaeng, 2 May 1992, *Santisuk 102* (**BKF**)]; PENINSULAR: Surat Thani [11 Aug. 1927, *Kerr 13299* (**BM**, **K**)]; Nakhon Si Thammarat [Khao Luang, 23 Oct. 1951, *Smitinand 998* (**BKF**)]; Trang [Khao Chong, 10 Oct. 1949, *Nakkhan 342* (**BKF**)].

CAMBODIA.— Phnom Penh [Forêt de Phnom Penh, 4 Feb. 1935, *Bejaud s.n.* (**P**)]; Kampot [Mont de Elephant, 15 Aug. 1919, *Poilane 334* (**P**)].

LAOS.— Salavan [Dania et Zateug, 25 Oct. 1928, *Poilane 16076* (**P**)]; Houaphan [Tam La, 21 Oct. 1920, *Chevalier 2156* (**P**)].

VIETNAM.— Haut Douai [Massif du Be Douf, 10–20 Oct. 1940, *Poilane s.n.* (**P**)]; Đà Nẵng [Lien chieu, près Tourane, 19 Aug. 1923, *Poilane 7633* (**P**)].

9. Beilschmiedia macrocarpa A.Chev. ex H.Liu, Laurac. Chine & Indo-Chine 106. 1932. Type: Vietnam, Sud-Annam, Prov. Nha-trang, Massif du Hon-ba, 12 July 1918, *Chevalier 38838* (holotype **P** [P01990442!]).

Trees. *Twigs* slender to stout, 2.8–7.7 mm diam., rounded to flattened in cross-section, glabrous; terminal leaf buds ovate, ca 8 mm long, apex acuminate, glabrous. *Leaves* (sub)opposite; blades elliptic, 7.4–9 × 2.7–3.5 cm; apex obtuse or broadly acute; base cuneate; secondary veins 6–8 pairs, curving near veins, tertiary veins reticulate; upper surface glabrous, shiny, midrib sunken, secondary veins raised, tertiary veins distinct; lower surface glabrous, midrib and secondary veins raised, tertiary veins distinct; petioles 11–14 mm long, half-terete, glabrous. *Inflorescences*, bracteoles and flowers unknown. *Fruits* (dried) ovoid, 62 × 46 mm; fruit stalk ca 14 mm long, swollen, ca 12 mm thick, not constricted at apex.

Distribution.— Vietnam, only known from the type specimen (Fig. 3).

Ecology.— Growing in forest, at 1,000–1,500 m alt. Flowering time unknown; fruiting: July.

Preliminary conservation assessment.— Critically Endangered (CR B2ab(i,ii,iii)). This species is only known from one collection, from the Massif du Hon-ba in Nha-Trang Province in Vietnam. Most of this area is now part of the Hon Ba Nature Reserve. The sole collection was made in 1918 and more fieldwork is needed to confirm whether the population still exists. Given that the species is only known from one collection, it is considered as Critically Endangered.

Notes.— This species is very close to *Beilschmiedia erythrophloia* Hayata from Taiwan and the Ryukyu Islands, from which it differs by its ovoid fruit, reaching 62 × 46 mm (versus fruit ellipsoid, 15–20 × 10–12 mm in *B. erythrophloia*) with a very thick fruit stalk when mature (versus only slightly thickened in *B. erythrophloia*).

10. Beilschmiedia maingayi Hook.f., Fl. Brit. Ind. 5: 123. 1886; Ridl., Fl. Malay Penin. 3: 84. 1924; Kochummen, Tree Fl. Mal. 4: 121. 1989; Sach. Nishida, Blumea 53: 365. 2008; de Kok, Blumea 61: 159. 2016. Type: Malaysia, Peninsular Malaysia, Malacca, without date, *Maingay 2662* [*Kew distribution nr. 1268*] (lectotype **K** [K000768674!], designated by de Kok 2016a: 159. 2016; isolectotype **K** [K001098123!]).

Trees 5–20 m tall, dbh 10–30 cm; bark brown to greyish-black, smooth to (finely) cracking; inner bark red or pale brown, fragrant; wood white to yellow. *Twigs* slender, 3.4–7.5 mm diam., velutinous when young, glabrescent; hairs straight, appressed, light brown; terminal leaf buds triangular, 3.5–10 mm long, densely hairy. *Leaves* alternate to rarely spiral and crowded at the ends of twigs; blades elliptic or oblong to oblanceolate, 12–38 × 3.5–12.5 cm, membranous to leathery, bright to dark green, drying reddish-brown to dark brown; apex acute to acuminate; base attenuate; secondary veins 7–13

pairs, tertiary veins reticulate; upper surface glabrous, midrib sunken to flattened, secondary veins often sunken, tertiary veins distinct or sometimes not visible; lower surface yellowish-green, glabrous, midrib raised, secondary veins raised, tertiary veins distinct; petioles slender, 10–30 mm long, sparsely hairy. *Inflorescences* 5–36 mm long, not enclosed at base by orbicular bracts, velutinous; bracteoles lanceolate, 5–6 × 2.7–3 mm, apex acute. *Flowers* white or (greenish-)yellow to dull yellow-brown, hairy outside, fragrant and smelling faintly of aniseed; perianth tube absent; perianth lobes ovate, 2.8–4 × 2–2.6 mm, apices rounded; stamens 9, 2–2.5 mm long, all filaments shorter than anthers, glabrous; anthers glabrous, obtuse to truncate at apex, red; ovary 0.9–1 × 0.9–1 mm, glabrous; style 1.3–1.5 mm long. *Fruits* (dried) ellipsoid, 35–45 × 17–25 mm, apex rounded to slightly pointed, base rounded to cuneate, surface smooth, turning dark when ripe; fruit stalk strongly swollen when mature, to 5.4 mm diam., brown, not constricted below apex.

Thailand.— Peninsular, Eastern and South-Western Thailand

Distribution.— Peninsular Malaysia, Borneo and Sumatra (Fig. 4).

Ecology.— Growing in lowland to montane forests, sometimes over granite or sandy loam, at 100–1,200 m alt. Flowering: June–November; fruiting: April–September.

Preliminary conservation assessment.— Least Concern (LC). This species is known from at least 17 localities in Peninsular Thailand, Peninsular Malaysia, Borneo and Sumatra. It has a very large extent of occurrence (EOO of 2,469,946 km^2), and area of occupancy (AOO) of 72 km^2. Throughout its range there has been a decline in the area and quality of the forests it grows in. However, given its large extent of occurrence and the number of known localities, it is considered as Least Concern.

Specimens seen.

THAILAND.— EASTERN: Ubon Ratchathani [Phu Chong Na Yoi, 8 Mar. 2019, *Norsingha s.n.* (**BKF**)]; SOUTH-WESTERN: Uthai Thani [Huai Kha Kaeng Wildlife Sanctuary, 27 July 2002, *Tetsana 17* (**BKF**); ibid., 27 July 2002, *van de Bult 592* (**BKF**)]; PENINSULAR: Yala [8 Feb. 1973, *BS & SP 1536* (**BKF**)]; Narathiwat [Tak Bai, 18 Jan. 1986, *Niyomdham 1141* (**BKF**)].

11. Beilschmiedia membranacea Gamble, Bull. Misc. Inform. Kew 1910: 150. 1910; Ridl., Fl. Malay Penin. 3: 86. 1924; Kochummen, Tree Fl. Mal. 4: 121. 1989; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand 44. 2005; de Kok, Blumea 61: 159. 2016. Type: Malaysia, Peninsular Malaysia, Perak, Sept. 1886, *King's collector 10928* (lectotype **K** [K000734864!], designated by de Kok, 2016a: 159; isolectotype **K** [K000768681!] & photograph at **KEP!**).

Trees 4.5–6.5 m tall, dbh 7.5–10 cm. *Twigs* slender, 1.4–1.5 mm diam., flattened in cross-section, whitish, densely hairy; terminal leaf buds elliptic to lanceolate, 2.3–3 mm long, densely hairy; hairs straight, appressed, light brown. *Leaves* alternate; blades elliptic or ovate, 8.5–20 × 5–8.5 cm, membranous, drying greenish, shiny; apex obtuse or acute to acuminate; base cuneate to rounded; secondary veins 8–11 pairs, tertiary veins scalariform to reticulate; upper surface glabrous, shiny, midrib sunken, densely hairy, secondary veins raised, tertiary veins distinct; lower surface sparsely hairy, midrib raised, secondary veins raised, tertiary veins distinct; hairs straight, appressed, light brown; petioles 5–10 mm long, half-terete, slender, densely hairy. *Inflorescences* 6–14 mm long, sparsely hairy, enclosed at base by orbicular bracts; bracteoles unknown. *Flowers* unknown. *Fruits* (dried) oblong, 11–25 × 5.8–15 mm, apex rounded, base rounded to acuminate, surface smooth, glabrous, red when mature; fruit stalk slightly swollen, 5–15 × 1.9–3.2 mm, constricted below apex.

Thailand.— Peninsular Thailand.

Distribution.— Peninsular Malaysia (Fig. 4).

Ecology.— Growing in evergreen forest, at 100–900 m alt. Flowering time unknown; fruiting: July–September.

Preliminary conservation assessment.— Vulnerable (VU B2ab(i,ii,iii)). This species is known from six localities in Peninsular Thailand and Peninsular Malaysia. The forests it grows in are under threat of deforestation and habitat destruction. Its area of occupancy (AOO of 24 km^2) are relatively small and given the threats, the low number of localities this species is assessed as Vulnerable.

Specimen seen.

THAILAND.— PENINSULAR: Pattani [16 July 1923, *Kerr 7220* (**K**)].

12. Beilschmiedia palembanica (Miq.) Kosterm., New Crit. Mal. Pl. 4: 31. 1955; Kochummen, Tree Fl. Mal. 4: 121. 1989; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 47. 2005; de Kok, Blumea 61: 159. 2016a).— *Cryptocarya palembanica* Miq., Fl. Ned. Ind., Eerste Bijv. 3: 359. 1861. Type: Indonesia, Sumatra, provincie Palembang, in Ogan-ulu, without date, *Teijsmann HB4050* (lectotype **U** [U0002630!], designated here; isolectotype **L** [L0035613!]).

— *Beilschmiedia longipes* Hook.f. Fl. Brit. Ind. 5: 123. 1886; Ridl., Fl. Malay Penin. 3: 85.1924; Kochummen, Tree Fl. Mal. 4: 121. 1989; Kostermans, New Crit. Mal. Pl. 4: 31.1955. Type: Malaysia, Peninsular Malaysia, Malacca, without date, *Maingay 2997* (holotype **K** [K000768675!] & photograph at **KEP!**).

Trees 10–30 m tall, dbh 5–30 cm; bark grey to brown or red-brown, smooth or flaking into small irregular flakes; inner bark red to yellowish-brown; sapwood (pale) yellow or cream. *Twigs* slender, 2.2–3 mm diam., brownish, velutinous; terminal leaf buds lanceolate, 5–9 mm long, densely hairy; hairs straight, appressed, light brown. *Leaves* alternate to sub-opposite; blades elliptic to lanceolate, (6.5–) 9–31 × (2–)3–13 cm, leathery, bright to dark green; apex blunt or acuminate; base cuneate; secondary veins 9–13 pairs, curving and joining up near margins, tertiary veins reticulate to scalariform; upper surface glabrous, shiny, (dark) green when fresh, midrib sunken and velutinous, secondary veins sunken, tertiary veins distinct; lower surface sparsely hairy, pale green when fresh, drying brownish, midrib raised, densely hairy; hairs straight, appressed; secondary veins raised, tertiary veins distinct; petioles 9–25 mm long, channelled to half-terete, slender to swollen, sparsely hairy to velutinous. *Inflorescences* 35–160 mm long, not enclosed at base by orbicular bracts, velutinous, red; bracteoles linear, 0.5–5 mm long. *Flowers* hairy, green, cream or white to deep yellow; perianth tube ca 1 mm long, densely hairy; perianth lobes elliptic, 1.5–2 × 0.9–1.3 mm, apices rounded to acute, densely hairy outside. *Stamens* 9, 0.7–1.7 mm long, glabrous; anthers about as long as filaments, yellow, glabrous; ovary ca 1 mm diam., glabrous; style ca 1 mm long. *Fruits* (dried) (sub)globose, 7–21 × 4.7–20 mm, apex rounded to pointed, base rounded, surface smooth, glabrous, brownish-red to red, maturing black; fruit stalk slightly swollen, 3–5.4 × 1.6–2.5 mm, not constricted below apex.

Thailand.— Peninsular Thailand.

Distribution.— Peninsular Malaysia, Indonesia (Sumatra)(Fig. 4).

Ecology.— Growing in primary and secondary lowland to montane forest, often near streams or in peat swamps, often on clay soils, at 0–1,400 m alt. Flowering: (September) December–July; fruiting: November–April.

Preliminary conservation assessment.— Least Concern (LC). This species is known from ca 20 localities from Peninsular Thailand, Peninsular Malaysia and Sumatra. It has a large extent of occurrence (EOO of 320,775 km^2), and area of occupancy (AOO of 64 km^2), and it is likely to be under-collected. Although there is likely to have been a decline in its distribution as well as loss of habitat, given the large extent of occurrence and the number of known localities, it is considered as Least Concern.

Notes.— In the original description of *Cryptocarya palembanica* Miquel (1861) only one gathering is mentioned: provincie Palembang, in Ogan-ulu, Teijsmann. There are two specimens of this gathering and the one at **U**, where Miquel mainly worked, is designated here as lectotype.

Specimens seen.

THAILAND.— PENINSULAR: Pattani [7 July 1923, *Kerr 7096* (**BM**, **K**)].

13. Beilschmiedia penangiana Gamble, Bull. Misc. Inform. Kew 1910: 149. 1910; Ridl., Fl. Malay Penin. 3: 85. 1924; Kochummen, Tree Fl. Mal. 4: 122. 1989; de Kok, Blumea 61: 160. 2016. Type: Malaysia, Peninsular Malaysia, Penang, Penara Bukit, Nov. 1886, *Curtis 1098* (holotype **K** (K000768679!); isotypes **SING**-2 sheets!).

— *Beilschmiedia brevipes* Ridl., Fl. Malay Penin. 3: 86. 1924; Kochummen, Tree Fl. Mal. 4: 118. 1989; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 24. 2005. Type: Malaysia, Peninsular Malaysia, Pahang, Ulu Rompin, 21 Apr. 1919, *Foxworthy FMS 3181* (holotype **K** [K000768680!]; isotypes **SING** [SING0055162!, SING0055163!]).

— *Beilschmiedia inconspicua* Kosterm., Nat. Hist. Bull, Siam 25 (3–4): 30. 1975, **syn. nov.**; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 41. 2005. Type: Thailand, Nakhon Ratchasima, Pak

Thong Chai, 8 Aug. 1969, *Larsen*, *Santisuk & Warncke 3141* (holotype **L** [L0035606!]; isotypes **K** [no barcode!], **P** [P00745623!]).

— '*Beilschmiedia dyphonii*' Kosterm., **nom. nud.**

Trees or shrubs 2–22 m tall, dbh (2–)20–32 cm. *Bark* pale grey to greyish-white, smooth to (powdery) scaly, lenticellate; inner bark pale orange to dark brown, wood cream. *Twigs* slender, 2.2–2.6 mm diam., smooth or longitudinally ridged, sparsely hairy when young, glabrescent, whitish; hairs straight, appressed, light brown; terminal leaf buds linear, 1.5–5 mm long, densely hairy. *Leaves* alternate to (sub) opposite; blades elliptic to elliptic-lanceolate, 5.5–15 × 2–6 cm, thinly leathery, drying blackish; apex acute, often with a distinct long tip; base cuneate; margins flat to recurved; secondary veins 6–15 pairs, looping near margins, tertiary veins reticulate; upper surface glabrous, midrib sunken to raised, secondary veins (slightly) raised, tertiary veins distinct; lower surface glabrous or with a few appressed hairs, midrib raised, secondary veins raised, tertiary veins distinct; petioles 5–17 mm long, slender, half-terete, channelled, glabrous to sparsely hairy. *Inflorescences* 27–120 mm long, enclosed at base by orbicular bracts 1–3.3 × 0.8–3.3 mm with entire margins, sparsely hairy to velutinous; bracteoles lanceolate, ca 1 mm long, glabrous to sparsely hairy, caducous. *Flowers* pale yellowish-green, with no distinct perianth tube; perianth lobes elliptic, 1.1–2 × 0.8–1.3 mm, outer lobes wider than inner ones, apices rounded, glabrous outside, margins hairy; stamens 9, 0.7–1.2 mm long, filaments glabrous; ovary ca 0.6 mm diam., glabrous; style ca 0.5 mm long. *Fruits* (dried) ellipsoid, 8–37 × 5–20 mm, apex rounded, base cuneate, surface smooth, glabrous, shiny, purplish-black when mature; fruit stalk 4–5 × 1.2–3.6 mm, swollen and red when mature, constricted at apex.

Thailand.— Mainly in peninsular and southern Thailand, rarely in the north.

Distribution.— Vietnam, Cambodia, Peninsular Malaysia. In Cambodia it is known from Koh Kong and Kampot Provinces and in Vietnam from the Lào Cai Province (Fig. 4).

Ecology.— Growing in evergreen lowland or hill forests, often near streams or along forest edges, sometimes over sandstone or ironstone, at 100–1,700 m alt. Flowering: August–May; fruiting: January–October.

Preliminary conservation assessment.— Least Concern (LC). This species is known from ca 20 localities from northern Vietnam, Cambodia, Thailand and Peninsular Malaysia. It has a large extent of occurrence (EOO of 580,916 km^2), and area of occupancy (AOO of 80 km^2), and it is likely to be under-collected. In Thailand it is known to occur in several well protected areas (Doi Phu Kha National Park, Kui Buri National Park and Khao Pu Khao Yai National Park). Although there is likely to have been a decline in its distribution as well as loss of habitat, given the large extent of occurrence and the number of known localities, it is considered as Least Concern.

Notes.— The orbicular bracts at the base of the inflorescence are rather peculiar within the genus and are known only from a few other species (see also de Kok, 2016a). This species has been incorrectly named in Indochina as *B. glomerata* Merr., which is native to the Philippines. In some herbaria material of this species is housed under the unpublished Kostermans name '*B. dyphonii*'.

According to Tetsana (2005: 73), *Beilschmiedia penangiana* differs from *B. brevipes* by the latter having glabrous bracteoles. However, after studying the type material of *B. brevipes* at Kew, it was clear that the abundance of hairs on the bracteoles is more variable than she thought.

Specimens seen.

THAILAND.— NORTHERN: Nan [Doi Phu Kha National Park, 8 Apr. 1999, *Srisanga & Watthana 634* (**BKF**, **QBG**)]; EASTERN: Nakhon Ratchasima [Pak Thong Chai, 28 Feb. 1968, *Santisuk 3* (**BKF**)]; SOUTH-WESTERN: Phetchaburi [Kui Buri National Park, 16 Dec. 2006, *Pooma et al. 6349* (**BKF**)]; SOUTH-EASTERN: Trat [Koh Chang, 21 Feb. 1955, *Thaworn 16* (**BKF**, **C**)]; PENINSULAR: Nakhon Si Thammarat [Khao Luang, 17 May 1985, *Maxwell 85-492* (**BKF**); Wang Nam Kaeo, 28 Apr. 1967, *Praphat LP 49* (**BKF**)]; Phatthalung [Sri Bun Pot, Khao Pu Khao Yai National Park, 21 July 2013, *Chamchumroon et al. VC 5881* (**BKF**)]; Trang [Khao Chong, 31 Oct. 1984, *Maxwell 84-380* (**BKF**)]; Yala [Than To District, Ban Chulaphon Phatthana, 9 Feb. 2004, *Middleton et al. 2855* (**BKF**); Banglang, 12 Oct. 2003, *Niyomdham & Puudjaa 7173* (**BKF**)]; Narathiwat [Sukhirin, Khao Khad viewpoint, 13 May 2005, *Poopath 276* (**BKF**)].

CAMBODIA.— Koh Kong [Massif de Cardamoms, Thuâ Sekrut, 10 Feb. 1972, *Martin 1752* (**P**)]; Kampot [Kiricom, 29 Mar. 1968, *Dy Phon 2010B* (**P**); Kiricom, July 1968, *Dy Phon 2010A* (**P**); North de Kampot, 4 Feb. 1928, *Poilane 14634* (**P**)].

VIETNAM.— Lào Cai [Chapa, Route du col de Lo Qui Hô, 31 Dec. 1943, *Pételot 8386* (**P**)].

14. Beilschmiedia percoriacea C.K.Allen, J. Arnold Arbor. 23: 450. 1942; P.H.HÔ, Ill. Fl. Vietnam 384. 1991; T.C.Lê, Checklist Pl. Sp. Vietnam 70. 2003; H.W.Li, *et al.*, Fl. China, 7: 242. 2008. Type: China, Hainan, Po-ting, 21 June 1935, *How* [or *Hou*] *72964* (holotype **A** [A00041189!]; isotypes **BM** [no barcode!], **MO** [MO-247295!], **P** [P00745643!]).

Trees, 15–18 m tall. *Twigs* glabrous. *Terminal buds* glabrous. *Leaves* alternate to (sub) opposite; leaf blade elliptic to almost orbicular, 6–20 × 2.8–9.6 cm, shiny, apex rounded to acute, often with a distinct short tip; base rounded or broadly cuneate, sometimes asymmetric; secondary veins 4–11 pairs, tertiary veins areolate-reticulate to scalariform; upper surface glabrous, midrib raised to sunken; lower surface glabrous; petioles 12–27 mm long, half-terete to channelled, glabrous. *Inflorescences* 15–120 mm long, axillary, glabrous or sparsely hairy, lax or congested and narrow, not enclosed at base by orbicular bracts.*Flowers* perianth tube not distinct; perianth lobes orbicular to elliptic, 1.2–2.1 × 1.2–1.7 mm, glabrous to sparsely hairy outside, pubescent inside, apices rounded to acute, margins not sometimes ciliate, lobes almost equal or inner 3 slightly smaller; stamens (6–)9, 1–1.7 mm long, filaments almost as long as anthers, hairy or rarely glabrous; anthers glabrous, obtuse at apex; staminodes 3(–6); ovary 0.8–2 mm diam., glabrous; style 0.8–1 mm long. *Stamens* 9, 1.1–1.7 mm long, filaments almost as long as anthers, pubescent or rarely glabrous; anthers glabrous, obtuse at apex; ovary ca 0.9 diam., glabrous; style ca 0.8 mm long. *Fruit* ellipsoid to globose, 25–52 × 14–23 mm, apex rounded, surface smooth, glabrous, dark red or blackish-brown or blue when mature, smell resinous; fruit stalk swollen when mature, 7.5–13 × 3–5.6 mm, not constricted at apex.

Distribution.— Southern China (Guangxi, Hainan, Yunnan), Thailand, Vietnam, Peninsular Malaysia and Borneo and North Sumatra.

KEY TO THE VARIETIES

1. Inflorescence glabrous, congested and narrow, 15–120 mm long — **14.1** var. **percoriacea**
1. Inflorescence sparsely hairy, lax, 60–100 mm long — **14.2** var. **glaucoides**

14.1 var. **percoriacea**, T.C.Lê, Checklist Pl. Sp. Vietnam: 70. 2003; H.W.Li *et al.*, Fl. China 7: 242. 2008.

— *Beilschmiedia glauca* S.K.Lee & L.F.Lau in S.K.Lee, Acta Phytotax. Sin. 8: 193. 1963, **syn. nov.**; Kochummen, Tree Fl. Mal. 4: 119. 1989; P.H.HÔ, Ill. Fl. Vietnam 474. 1991; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 37. 2005; H.W.Li *et al.*, Fl. China, 7: 240. 2008; Sach. Nishida, Blumea 53: 356. 2008; de Kok, Blumea 61: 153. 2016.— *B. glauca* var. *glauca*: S.K.Lee *et al.*, Acta Phytotax. Sin. 17: 66. 1979. Type: China, Hainan, Peisha Hsien, Yingge, *Hainan Expedition 676* (holotype **HSNU**; isotype **PE** [00188583!]).

Trees or shrub, 3–25 m tall, dbh 15–42 cm; bark reddish to grey-brown, smooth to shallowly fissured; inner bark dark red with orange flecks; sapwood white. *Twigs* slender, 1.5–6 mm diam., round to flattened in cross-section, smooth to striate, glabrous; terminal leaf buds lanceolate, 7.6–12.6 mm long, apex acute, glabrous. *Leaves* alternate to (sub) opposite; blades elliptic to almost orbicular, 6–15(–19) × 2.8–9.6 cm, shiny, thick to thinly leathery; apex rounded to acute, often with a distinct short tip; base rounded or broadly cuneate, sometimes asymmetric; secondary veins 4–9 pairs, curved near margin, tertiary veins areolate-reticulate to scalariform; upper surface glabrous, shiny, dark green, midrib raised to sunken, secondary veins raised, tertiary veins distinct; lower surface glabrous, pale green, midrib raised, secondary veins raised, tertiary veins distinct; petioles 12–27 mm long, half-terete to channelled, glabrous. *Inflorescences* axillary, 15–120 mm long, glabrous, yellow-green, congested and narrow, not enclosed at base by orbicular bracts; bracteoles linear, ca 0.4 mm long, caducous. *Flowers* white to greenish-yellow, pungently fragrant; perianth tube

not distinct; perianth lobes orbicular to elliptic, 1.2–2 × 1.3–1.7 mm, glabrous outside, pubescent inside, apices rounded to acute, margins not ciliate, lobes almost equal or inner 3 slightly smaller; stamens (6–)9, 1–1.5 mm long, filaments almost as long as anthers, pubescent or rarely glabrous; anthers glabrous, obtuse at apex; staminodes 3(–6); ovary 0.8–2 mm diam., glabrous; style 0.8–1 mm long. *Fruits* (dried) ellipsoid, 25–52 × 14–23 mm, apex rounded, surface smooth, glabrous, dark red or blackish-brown or blue when mature, smell resinous; fruit stalk swollen when mature, 7.5–8.7 × 3–4.4 mm, not constricted at apex.

Thailand.— South-Eastern Thailand.

Distribution.— Southern China (Guangxi, Hainan, Yunnan), Vietnam, Peninsular Malaysia and Borneo and North Sumatra (Fig. 2).

Ecology.— Growing in primary and secondary, lowland to montane forests or in open vegetation, sometimes over sandstone, granitic or limestone, at 360–1,400 m alt. Flowering: February–December; fruiting: March–December.

Preliminary conservation assessment.— Least Concern (LC). This species is known from ca 30 localities from southern China, Vietnam, Thailand to Peninsular Malaysia. It has a large extent of occurrence (EOO of 1,652,916 km^2) and area of occupancy (AOO of 104 km^2), and is likely to be under-collected. Although there is a general decline in its distribution, as well as loss of habitat, given the large extent of occurrence and the number of known localities, it is considered as Least Concern.

Local name.— Tỏu-dẩu or Tỏu nghĕ (Vietnamese).

Specimens seen.

THAILAND.— SOUTH-EASTERN: Ranong [Khao Phota Luang Kaeo, 17 Mar. 1987, *Niyomdham et al. 1428* (**BKF**, **K**); ibid., 10 Dec. 1979, *Shimizu et al. 26898* (**BKF**); ibid., 29 Apr. 1974, *Larsen 33524* (**BKF**, **K**); ibid., 29 Nov. 1973, *Santisuk 737* (**BKF**); Suksamram District, Klong Na Kha Wildlife Sanctuary, 22 Feb. 2006, *Middleton et al. 3937* (**BKF**)].

VIETNAM.— Ninh Bình [Cuc Phuong National Park, 18 July 2000, *Loc et al. P 10372* (**P**)]; Kon-tum [Đắk Tô, 19 Dec. 1946, *Poilane 35533* (**P**)]; Quảng Trị [Col d'Ailao, 13 Mar. 1936, *Poilane 25353* (**P**)]; Han Noi [Valleé de Laukok (Mt. Bavi), 2 Dec. 1888, *Balansa 2397* (**P**-2 sheets)]; Đà Nẵng [Liên Chiêu, près de Tourane Forêt, 19 Aug. 1923, *Poilane 7661* (**P**)]; Lao Kay [Oust de Cha-pa, 12 Aug. 1926, *Poilane 12900* (**P**)]; Son La [Phiêng Luông, 7 Mar. 2005, *Averyanov et al. 6588* (**P**)]. Bắc Ninh [Chua Lùy, Coupe de Laug, 25 Aug. 1918, *Chevalier 38337* (**P**-2 sheets); Chua Lùy, 10 May 1918, *Chevalier 38336* (**P**-2 sheets)].

14.2 var. **glaucoides** (H.W.Li) de Kok, **comb. nov.**— *Beilschmiedia glauca* var. *glaucoides* H.W.Li in S.K.Lee *et al.*, Acta Phytotax. Sin. 17: 66. 1979. — *B. glaucoides* (H.W.Li) H.W.Li, Acta Bot. Yunnan. 18: 54. 1996. Type: China, Yunnan, Sichour, 5 Jan. 1956, *Wang 636* (holotype **HK**; isotypes **PE**-3 sheets [PE00188582!, PE00188584!, PE00935835!]).

Trees. *Twigs* slender, 2–3.5 mm diam., round to flattened in cross-section, smooth, glabrous; terminal leaf buds lanceolate, 6.5–7 mm long, apex acute, glabrous. *Leaves* (sub) opposite; blades elliptic, 9.8–20 × 4–9.3 cm, shiny, thinly leathery; apex acute, often with a distinct short tip; base rounded or broadly cuneate, sometimes asymmetric; secondary veins 8–11 pairs, curved near margin, tertiary veins areolate-reticulate to scalariform; upper surface glabrous, midrib sunken, secondary veins raised, tertiary veins distinct; lower surface glabrous, midrib raised, secondary veins raised, tertiary veins distinct; petioles 12–20 mm long, half-terete, glabrous. *Inflorescences* 60–100 mm long, sparsely hairy, lax, not enclosed at base by orbicular bracts, axillary; bracteoles elliptic, ca 1.7 mm long, caducous. *Flowers*: perianth tube not distinct; perianth lobes orbicular to elliptic, 1.7–2.1 × 1.2–1.3 mm, sparsely hairy outside, pubescent inside, apices rounded to acute, margins sometimes ciliate, lobes almost equal or inner 3 slightly smaller; stamens 9, 1.1–1.7 mm long, filaments almost as long as anthers, pubescent or rarely glabrous; anthers glabrous, obtuse at apex; ovary ca 0.9 diam., glabrous; style ca 0.8 mm long. *Fruits* globose, 25 × 20 mm, apex rounded, smooth, glabrous; fruit stalk swollen, 13 × 5.6 mm, brown, not constricted below apex.

Thailand.— Northern Thailand.

Distribution.— Southern China (Yunnan) (Fig. 2).

Ecology.— Growing in lowland to montane forests or open vegetation, sometimes over limestone. Flowering: May.

Preliminary conservation assessment.— Endangered (EN B1ab(i,ii,iii)+2ab(i,ii,iii)). This variety is only known from three localities from northern Thailand and Yunnan (China) (EOO = 18,544 km^2; AOO = 12 km^2). Although one localty is in the well protected Doi Loung National Park, in general the forests in these areas are under threat of deforestation and habitat destruction. Given these threats and the fact that it is only known from a few localities in a small area it is considered as Endangered.

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Pang Tawn, 1 May 1931, *Put 3849* (**BM**); ibid., 1 May 1931, *Put 3859* (**BM**)]; Phayao [Doi Luang National Park], 10 Feb. 2016, *Muangyen 713* (**QBG**)].

15. Beilschmiedia pergamentacea C.K.Allen, J. Arnold Arbor. 23: 449. 1942; H.W.Li *et al.*, Fl. China, 7: 240. 2008. Type: Hainan, Fan Yah, 1932, *Chun & Tso 44247* (holotype **A** [A00041190!]; isotypes **K** [K000768624!], **P** [P00745642!], **US** [US00099410!]).

— *Beilschmiedia atrata* C.K.Allen, J. Arnold Arbor. 23: 451. 1942; H.W.Li *et al.*, Fl. China, 7: 240. 2008. Type: China, Hainan, Hung Mo Shan, Lai (Loi) area, 12 Aug. 1929, *Tsang & Fung 693* [*L.U. 18227*] (lectotype **A** [A00041176!]; designated here; isolectotypes **A** [A00041177!], **BM** [BM000950886!], **E** [E00386452!], **K** [K000768620!], **L** [L0035576!], **MO** [MO-247063!], **P** [P00745641!]).

—*Beilschmiedia* sp. 1. fide Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 64, fig. 29. 2005.

Trees 3–20 m tall, dbh 12–50 cm; bark light or greenish-grey to yellowish-brown, nearly smooth. *Twigs* slender, 2.2–5 mm diam., round to angular in cross-section, glabrous; terminal leaf buds lanceolate, 3–8.9 mm long, apex acute, glabrous. *Leaves* (sub) opposite, papery; blades elliptic to lanceolate, 8–16 × 1.8–6.7 cm; apex acuminate, often with a long tip; base cuneate; margins flat; secondary veins 7–12 pairs, brochidodromous distally and curving near margins, tertiary veins reticulate; upper surface purple-black, glabrous, shiny, midrib flattened to sunken, secondary veins raised, tertiary veins indistinct; lower surface grey-brown, glabrous, midrib and secondary veins raised, tertiary veins distinct; petioles 8–23 mm long, channelled, slender, glabrous. *Inflorescences* axillary, 20–50 mm long, not enclosed at base by orbicular bracts; bracteoles unknown. *Flowers* yellow to pale yellowish-green; perianth tube absent; perianth lobes sub-orbicular, ca 1.5–2 mm long, hairy outside; stamens 9, 1–1.5 mm long, filaments glabrous; staminodes ca 0.5 mm long, usually pubescent; ovary globose; style ca 1.25 mm long, glabrous. *Fruits* (dried) ellipsoid, 10–48 × 4–22 mm, apex rounded, base rounded, surface smooth, glabrous, black or black-purple when mature; fruit stalk swollen, 7–17 × 3.6–5.7 mm, grey-brown, constricted below apex.

Thailand.— Northern Thailand.

Distribution.— China (Guangxi, Hainan, south-east Yunnan) and northern Vietnam (Fig. 5).

Ecology.— Growing in hill to montane forests or thickets, sometimes in dry sandy soil, sometimes over sandstone or along streams, at 150–1,300 m alt. Flowering: May–August; fruiting: July–April.

Preliminary conservation assessment.— Least Concern (LC). This species is known from at least 10–20 localities in China [Guangxi, Hainan, south-east Yunnan), northern Vietnam and north-east Thailand. It has a relatively large extent of occurrence (EOO of 356,873 km^2), but its known area of occupancy (AOO of 20 km^2) is small. However, it is likely to be under-collected in Vietnam and Thailand. Although there has probably been a decline in its distribution, as well as loss of habitat, given the large extent of occurrence and the number of known localities, it is considered as Least Concern.

Notes.— In the original description of *Beilschmiedia atrata* C.K.Allen (1942) only one gathering at A is mentioned as the type. However, there two specimens of this gathering at A, one which is a packet of loose leaves and a fruit, while the other one is a twig with leaves and a fruit; the second sheet is designated here as lectotype.

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Mae On District, Huai Kaeo subdistrict, Mae Lie Village, 20 Apr. 2005, *Maxwell 05-270* (**BKF**)].

VIETNAM.— Quảng Ninh [Mon-Cai, Pac-Si, 1–8 Oct. 1936, *Tsang 26928* (**P**)].

16. Beilschmiedia poilanei H.Liu, Laurac. Chine & Indo-Chine 109. 1932. Type: Vietnam, Phú Yên Province, Phu-qui et Do-luong, Song-cau, 27 July 1929, *Poilane 16742* (lectotype **P** [P00745640!], designated here).

Trees 5–8 m tall, dbh ca 20 cm. *Twigs* slender, 1.6–4 mm diam., angular to round in cross-section, sparsely hairy when young, glabrescent; hairs yellowish, appressed; terminal leaf buds lanceolate, 2–4.4 mm long, apex acuminate, densely hairy; hairs appressed, yellowish. *Leaves* alternate to (sub) opposite; blades lanceolate, 7.5–15 × 1.4–4 cm; apex long-acuminate; base cuneate, sometimes asymmetric; margins flat to slightly recurved; secondary veins 9–18 pairs, curving and joining up near margins, tertiary veins reticulate; upper surface glabrous, shiny, midrib and secondary veins raised, tertiary veins distinct; lower surface glabrous, midrib and secondary veins raised, tertiary veins distinct; petioles 9–25 mm long, channelled to half-terete, slender to swollen, sparsely hairy to velutinous. *Inflorescences* axillary, 12–23 mm long, not enclosed at base by orbicular bracts, sparsely hairy; bracteoles linear, 1.2–1.8 mm long, apex acute, velutinous. *Flowers* white; perianth tube ca 1 mm long; perianth lobes 1.5–2 × 1–1.3 mm, apex acute, sparsely to densely hairy outside; stamens 1–1.3 mm long, filaments sparsely hairy; anthers 0.5 mm long. *Fruits* (dried) ellipsoid to clavoid, 20–32 × 10–20 mm, apex rounded to acute, surface smooth to verrucose, glabrous; fruit stalk 8 × 2 mm, not or slightly swollen, constricted at apex.

Distribution.— Vietnam (Fig. 5).

Ecology.— Growing in forests at 0–1,800 m alt. Flowering: July–August; fruiting: August.

Preliminary conservation assessment.— Endangered (EN B2ab(i,ii,iii)). This species is known from two distinct areas; in northern Vietnam it occurs in four localities (in Lào Cai, Thanh Hóa and Thái Nguyên Provinces), while in central Vietnam, it is known from one locality (in Phú Yên Province). The forests it grows in are under threat of deforestation and habitat destruction. Given that this species has a disjunct distribution, it has a relatively large extent of occurrence (EOO of 99,270 km^2), with a small area of occupancy (AOO of 20 km^2). However, because it is only known from five localities, it has a small AOO, and its habitat is threatened, it is considered Endangered.

Local names.— Co muôung năui (Tay); cây bū nác (Munong).

Notes.— In the original description of *Beilschmiedia poilanei*, H.Liu (1932: 109–110) mentioned two gatherings, *Poilane 1756* and *16742*. The first has immature flowers while the second has mature fruits. As fruits are more important in species recognition in this genus, the specimen in P of the second gathering is designated here as the lectotype.

Specimens seen.

VIETNAM.— Lào Cai [Chapa, Aug. 1930, *Pételot 3806* (**P**); Chapa, Feb. 1931, *Pételot 5356* (**P**)]; Thanh Hóa [Hoï-xuan, 22 Aug. 1920, *Poilane 1756* (**A**, **K**, **L**, **P**)]; Thái Nguyên [Vallée du Sông Cong, 29 July 1929, *Poilane 16496* (**P**)]; Prov. unknown [Col de Lô qui hô et Chu Va, Apr. 1944, *Pételot 8624* (**P**); Beugalia, 1863, *Pierre s.n.* (**P**)].

17. Beilschmiedia roxburghiana Nees in Wallich, Pl. Asiat. Rar. 2: 69. 1831; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 50. 2005; H.W.Li *et al.*, Fl. China 7: 237. 2008; de Kok, Blumea 61: 161. 2016. Type: India, HBC [Botanical Garden Calcutta], without date, without collector [*Numer. List 2605*] (lectotype **K**-W [K001116547!], designated by de Kok 2016a: 161; isolectotypes **BM** [BM000880626!], **G** [G00368746], **K** [K000768626!], **P** [P00745639!]).

— *Beilschmiedia fagifolia* Nees in Wallich, Pl. Asiat. Rar. 2: 69. 1831; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 50. 2005.— *Tetranthera fagifolia* Wall., Wallich. Num. List. 2539. 1830, **nom. inval.**— *Beilschmiedia roxburghiana* var. *fagifolia* (Nees) Kosterm., Bibliogr. Laur. 147. 1964. Type: Bangladesh, Sillet, without date, *De Silva s.n.* [*Numer. List. 2539*] (lectotype **K**-W [K001116381!], designated here;; isolectotypes **BM** [BM000950890!], **E**-2 sheets [E00386410!, E00393178!], **K**-2 sheets [K000768628!, K000768627!], **P** [P00745629!]).

— *Laurus bilocularis* Roxb., [Hort. Beng. 30. 1814, **nom. inval.**] Fl. Ind. ed. 2: 311. 1832; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 50. 2005. Type: India, originally from Tippera, now growing in Calcutta Botanical Garden, without date, *Harris s.n.* (holotype: **BM** [no barcode!]).

— *Beilschmiedia pahangensis* Gamble, Bull. Misc. Inform. Kew 1910: 150. 1910; Ridl., Fl. Malay Penin. 3: 886. 1924; Kochummen, Tree Fl. Mal. 4: 121. 1989. Type: Malaysia, Peninsular Malaysia, Pahang, Kuala Teriang, 03 July 1891, *Ridley 2273* (holotype **K** [K000768682!]; isotypes **SING**-2 sheets [SING 0055161!, SING 0051160!]).

— *Beilschmiedia glomerata* Merr. var. *tonkinensis* Lecomte, Fl. Gen. Indo-Chine 149. 1914.— *Beilschmiedia tonkinensis* (Lecomte) Ridl., J. Straits Branch Roy. Asiat. Soc. 82: 190. 1920; Ridl., Fl. Malay Penin. 3: 85. 1924; Kochummen, Tree Fl. Mal. 4: 122. 1989. Type: Laos, Attepeu, d'Attopeu, 1875–1877, *Harmand 1235* (lectotype **P** [P02002556!], designated here; isolectotypes **BM** [no barcode!], **K** [no barcode!], **P**-2 sheets [P02002577!, P02002557!]).

— *Beilschmiedia obovalifoliosa* Lecomte, Nouv. Arch. Mus. Hist. Nat. 5: 109. 1913, **syn. nov.** Type: Vietnam, Thanh Hóa, But Son, 19 June 1892, *Bon 5472* (lectotype **P** [P00745646!], designated here; isolectotypes **L** [L0035638!], **P**-3 sheets [P00745647!, P00745648!, P02002453!]).

— *Beilschmiedia roxburghiana* f. *brevipetiolata* H.Liu, Laurac. Chine & Indo-Chine 111. 1932. Type: Vietnam, Annam, Lien chièu, près Tourane [= Da Nang], 17 Aug. 1923, *Poilane 7588* (holotype **P** [P00745632!]; isotype **K** [no barcode!]).

— *Beilschmiedia* sp. 2 fide Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 67. 2005.

Trees 3–25(–50) m tall, dbh (3–)10–60(–150) cm; bark scaly to smooth, greenish to greyish-black or light orange brown; wood white to yellow. *Twigs* slender, 1.5–3.2 mm diam., slightly flattened in cross-section, velutinous when young, internodes soon glabrescent, often remaining velutinous at nodes, whitish to brown; terminal leaf buds ovate to lanceolate, 1.4–5 mm long, densely hairy (sometimes only at apex); hairs straight, appressed, light to dark brown. *Leaves* alternate or opposite; blades elliptic to (elliptic-)lanceolate, 5–24 × 1.5–10 cm, (thickly) leathery, aromatic when crushed; apex rounded or acute to shortly acuminate; base cuneate to rounded, often asymmetric; secondary veins 5–19 pairs, brochidodromous at margin, tertiary veins reticulate; upper surface dark green, shiny, glabrous, some hairs on veins of young leaves and midrib, midrib sunken at base, secondary veins (slightly) raised, tertiary veins faint to distinct; lower surface light green, glabrous, some hairs on veins of young leaves, midrib and secondary veins raised, tertiary veins distinct; petioles 8–25 mm long, slender, channelled, velutinous when young. *Inflorescences* 14–40 mm long, without orbicular bracts at base, glabrous to velutinous when young, soon becoming sparsely hairy or glabrous; bracteoles orbicular, 2.5–3 mm long, caducous. *Flowers* pale yellowish-green to yellowish, sweetly scented; perianth tube not distinct; perianth lobes linear to oblong-acute, 2.5–4 × 1–1.2 mm, apices acute, pubescent on both surfaces; stamens 9, 1–2.5 mm long, filaments hairy; anthers ovoid, with obtuse apex; ovary globose, ca 1 mm diam., glabrous; style sparsely hairy, 2–2.5 mm long. *Fruits* ellipsoid to oblong, 12–44 × 7.8–18 mm, apex rounded, base rounded, surface smooth, glabrous, turning shiny purplish-black or dark blue and glaucous when mature; fruit stalk slender to slightly swollen, 3.5–35 × 2.2–3.5 mm, red when mature, constricted at apex.

Thailand.— Throughout the country.

Distribution.—India (Assam and Andaman Islands), Bhutan, Bangadesh, Myanmar, southern China, Laos, Cambodia, Vietnam and Peninsular Malaysia (Fig. 5).

Ecology.— Growing in primary and secondary dry to wet forests or in open vegetation, often along rivers, sometimes over limestone or granite, at 50–975 m alt. Flowering: January–June; fruiting: January–November.

Preliminary conservation assessment.— Least Concern (LC). This species is known from 30–50 localities from northern India to Peninsular Malaysia and Vietnam. This gives it a large extent of occurrence (EOO of 3,980,657 km^2) and its area of occupancy (AOO) is 104 km^2. Because of the extent of occurrence and number of known localities, it is considered as Least Concern.

Uses.— In Thailand, the bark is used in a remedy for tuberculosis (Tetsana, 2005: 50).

Local names.— In Thailand: Fi mop (ฝีหมอบ) (Nonthaburi); ma duk (มะดูก)(Trat); ka sao (กะเส้า) (Nakhon Ratchasima); mai ma mum kok (ไม้มะมุมกอก) (Sa Kaeo); prom kot (พรมคต). In Vietnam: Châp choa (Annam).

Notes.— In the original description of *Beilschmiedia glomerata* var. *tonkinensis*, Lecomte (1914: 149) cited two gatherings: Harmand, Laos, d'Attopeu and Bon, Tonkin meridional. In **P** there are many specimens collected by Harmand from d'Attopeu and others collected by Bon with the very broad locality of Tonkin meridional. Among these, two have original labels and, of these, the one with the most inflorescence material (P02002556) is designated here as the lectotype.

In the original description of *Beilschmiedia obovalifoliosa*, Lecomte (1913) cited two gatherings: *Bon 1697* and *5472*. Three specimens of both gatherings are available at P for lectotypification. One sheet of *Bon 5472* (P00745646), is designated here as the lectotype.

The name *Beilschmiedia fagifolia* was based on the collection *De Silva s.n.* [*Wallich Numer. List 2539*] of which several specimens are available in several herbaria for lectotypification. The specimen *De Silva s.n.* [*Wallich Numer. List 2539*] at **K-W** is designated here as the lectotype.

In this study, it was found that *Beilschmiedia* sp. 2 of Tetsana (2005: 67) falls completely within the definition of *B. roxburghiana*.

Specimens seen.

THAILAND.— NORTHERN: Chiang Rai [Mae Sai, 27 Mar. 1983, *Winit 1682* (**BKF**, **K**)]; Nan [Thamphatoob Forest Park, 2 Sept. 1999, *Wongprasert 999-06* (**BKF**)]; Lampang [10 Mar. 1986, *Winit 1903* (**BKF**, **P**)]; Phrae [Song, without date, *Vanpruk 214* (**BKF**, **K**); ibid., 16 Mar. 1913, *Vanpruk 438* (**BKF**)]; Phitsanulok [Phu Hin Rong Kla National Park, Apr. 2000, *Promhitathorn s.n.* (**BKF**)];. Kamphaeng Phet [Mae Wong, 27 May 1922, *Kerr 6033* (**K**)]; NORTH-EASTERN: Phetchabun [Nam Nao National Park, 7 Aug. 2012, S*irimongkol et al. 390* (BKF)]; Loei [Na Haeo, 26 April 1994, *Nanakorn 3169* (**QBG**)]; Khon Kaen [Pu Wieng, 17 Mar. 1932, *Kerr 20677* (**BM**, **K**)]; EASTERN: Chaiyaphum [Muang, 30 June 1970, *B.S & K.B. 2483* (**BKF**)]; Nakhon Ratchasima [Korat, Jan. 1925, *Kerr 9858* (**BM**, **K**); Ko Chang, 19 Apr. 1955, *Sankhachand 423* (**BKF**)]; Si Sa Ket [Kanthalak, 25 Jan. 1965, *Phengkhlai 944* (**BKF**, **P**)]; Ubon Ratchathani [Buntharik, 13 Feb. 1954, *Niviset 8* (**BKF**)]; SOUTH-WESTERN: Kanchanaburi [Ban Pong Phuron, 25 Mar. 2007, *Wongprasert 073-33* (**BKF**); Mon Bala Ming, Tung Yai Naresuan West Wildlife Sanctuary, 25 Feb. 2005, *van de Bult 830* (**BKF**)]; Phetchaburi [Nongyapong District, Hub hooi, 10 Sept. 2002, *Puudjaa 1123* (**BKF**)]; CENTRAL: Saraburi [Sam Lan, 18 May 1974, *Geesink et al. 6828* (**BKF**, **K**)]; Nakhon Nayok [Muang District, Khao Yai National Park, 13 Mar. 2002, *Maxwell 02-95* (**BKF**)]; SOUTH-EASTERN: Sa Kaeo [22 Oct. 1932, *Put 57* (**BKF**)]; Chon Buri [Sriracha, 11 Jan. 1976, *Collins 1954* (**K**)]; Chanthaburi [Kamut, 3 Mar. 1931, *Kerr 20382* (**BM**, **K**); 18 Dec. 1924, *Kerr 9708* (**BM**, **K**)]; PENINSULAR: Satun [Kho Talibong, 10 Feb. 1966, *Hansen & Smitinand 12202* (**BKF**, **K**, **SING**)]; Surat Thani [Khao Saming, 2 Jan. 1930, *Kerr 17924* (**BM**, **K**); Khlong Phanom, 11 Apr. 2003, *Middleton et al. 2128* (**BKF**, **K**)]; Phangnga [Mê Pung, 17 Mar. 1921, *Kerr 5091* (**BM**, **K**)]; Krabi [20 Mar. 1930, *Kerr 18639* (**BK**, **C**, **K**, **P**)]; Trang [Thung Khai Botanic Gardens, 21 Mar. 2001, *Prapnuk et al. s.n.* (**BKF**)]; Songkhla [Suan Toon Falls, 24 May 1987, *Maxwell 87-488* (**BKF**, **P**); ibid., 11 Oct. 1984, *Maxwell 84-311* (**BKF**); Klong Rhang Hill, 22 Mar. 1985, *Maxwell 85-324* (**BKF**)]; Pattani [Koke Fo, Sai Khao Falls, 3 June 1985, *Maxwell 85-563* (**BKF**)].

VIETNAM.— Tây Ninh [Caỹ Côǹg, Apr. 1866, *Pierre 430* (**BM**, **P**-3 sheets)]; Binh Thuận [Song Lu, Jan. 1867, *Pierre 2868* (**BM**, **K**, **P**-3 sheets); Bien hoa, Gia lau me, Sept. 1869, *Pierre s.n.* (**P**); Mar. 1867, *Pierre 2868* (**P**-3 sheets); Gia Lau Me, Sep 18??, *Pierre 33* (**P**); Luang tri: Sept. 1877, *Harmand 1838* (**P**-2 sheets); Thua Thien Hue: Núi Bach Mai, station d'altitude un peu, près de Huê, 12 Dec. 1940, *Poilane 31109* (**P**-3 sheets); Núi Bach Mai, station d'altitude de Huê, 14 Dec. 1940, *Poilane 31172* (**P**-2 sheets); Núi Bach Ma, station d'altitude près de Huê, 17 Apr. 1939, *Poilane 29799* (**P**); Núi Bach Ma, station d'altitude près de Huê, 14 Dec. 1940, *Poilane 31141* (**P**-2 sheets); Thua Thiên-Huê, Bach Ma, 22 Jan. 1944, *Vidal 1028A* (**P**); Ho Chi Minh City: Saigon, Jardin Botanique, 2 May 1920, *Hiep 924* (**P**); Saigon, Thu` duc, Apr. 1868, *Pierre 341* (**P**-4 sheets); Kiên Giang: Nang Island, in gulf of Thailand, *Pierre 430* (**P**-2 sheets).

CAMBODIA.— Kompoug Cham, 28–30 Dec. 1917, *Chevalier 35997* (**P**-2 sheets); Forêt de Phnom Penh, June 1934, *Bejaud 267* (**P**-3 sheets). La Kone, 1866–1868, *Thorel s.n.* (**P**); Sam rong tong, Apr. 1870, *Pierre 430* (**P**).

LAOS.— Sainyabuli [Paklai, Me-kong, 1866–1868, *Thorel s.n.* (**P**)]; Attapeu [d'Attopeu, Aug. 1877, *Pierre 3174* (*Harmand 1182*)(**P**-4 sheets)]; 'Laos Meridional' [Bassin de Sè-Moun, 1875–1877, *Harmand 269* (**P**-2 sheets)]; Vientiane [Vieng Chang, 1866–1868, *Thorel s.n.* (**P**-3 sheets); La Khau, 1866–1868, *Thorel 2209* (**P**-4 sheets); Vientiane, 20 July 1948, *Vidal 607B* (**P**-2 sheets)]. COUNTRY UNKNOWN: Indochine, *Harmand s.n.* (**P**); Cochinchina, Jan. 1869, *Pierre 430* (**P**-4 sheets);

Tonkin meridional, 1883–1891, *Bon s.n.* (**P**); Tonkin meridional, 1883–1891, *Bon 4760* (**P**); July 1868, *Pierre 122* (**P**-4 sheets); July 1868, *Pierre 125* (**P**).

18. Beilschmiedia tsangii Merr., Lingnan Sci. J. 13: 27. 1934; H.W.Li *et al.*, Fl. China 7: 235. 2008. Type: China, Guangdong, Kwangtung, Sam Kok Shan, Tsungfa-lungmoon Districts, 27 May 1932, *Tsang 20412* (holotype **NY**; isotypes **K** [no barcode!], **MO** [MO-247119!], **P** [P02002538!]).

Trees 6–25 m tall, dbh ca 60 cm; bark grey-brown or grey-black. *Twigs* slender, 2–3.4 mm thick, angular or round in cross-section, densely hairy when young, glabrescent; hairs appressed, yellowish; terminal leaf buds ovoid, 2.4–3.5 mm long, apex acute, densely hairy; hairs appressed, yellow brown. *Leaves* alternate or (sub)opposite; blades elliptic to obovate, 6–10(–14) × 1.5–4.5 cm, leathery; apex acute to acuminate with a short tip; base cuneate to rounded; secondary veins 7–10 pairs, tertiary veins reticulate; upper surface shiny, glabrous, with a few hairs on the midrib, midrib sunken, secondary veins raised, tertiary veins obscure; lower surface glabrous to very sparsely hairy, midrib and secondary veins raised, tertiary veins distinct; hairs erect, yellow brown; petioles 5–14 mm long, half-terete, sparsely hairy, hairs yellowish, appressed. *Inflorescences* axillary, 20–50 m long, without orbicular bracts at base, sparsely hairy; bracteoles linear, 1–1.4 mm long, apex acute, sparsely hairy. *Flowers* white or yellow-green, fragrant; perianth tube ca 0.6 mm long; perianth lobes ovate, 1.6–2.9 × 1.4–1.7 mm, apex acute, sparsely hairy on both surfaces; stamens 1.6–2.2 mm long, filaments sparsely hairy; anthers 0.8 mm long; ovary ca 7 mm diam., glabrous; style 0.5 mm long, stigma small. *Fruits* ellipsoid, 15–20 × 8.5–15 mm, surface warty, black when mature; fruit stalk slightly swollen, 1.5–3.5 × 1.6–1.7 mm.

Distribution.— Southern China (Guangdong, Guangxi, Hainan, Taiwan, Yunnan) and northern Vietnam (Hai Phong and Quảng Ninh Provinces) (Fig. 5).

Ecology.— Growing in forest and thickets on mountains slopes, sometimes on sandy or clayey soils, at 700 m alt. Flowering: May–June; fruiting: July–December.

Preliminary conservation assessment.— Least Concern (LC). This species is known from ca 50 localities from southern China and north-east Vietnam. It has a relatively large extent of occurrence (EOO of 72,4431 km^2) and an area of occupancy (AOO) of 228 km^2. Although there is a decline in its distribution and loss of its habitat, given the large current extent of occurrence and the number of known localities, it is considered as Least Concern.

Specimens seen.

VIETNAM.— Hai Phong [Ha-coi, Chuk-phai, 3 May–22 June 1939, *Tsang 29122* (**P**, **SING**); Ha-coi, Chuk-phai, 16–22 Oct. 1936, *Tsang 27027* (**P**)]; Quảng Ninh [Dam-ha, 18 May–5 July 1940, *Tsang 29916* (**P**, **SING**)].

19. Beilschmiedia vidalii Kosterm., Adansonia, sér 2, 13: 336. 1973. Type: Vietnam, Thua Thiên, sommet du Núi Bach Mai, station d'altitude un peu au sud de Huê, 6 Sept. 1938, *Poilane 27625* (holotype **P** [P00745508!]; isotypes **BO**, **L**-3 sheets [L0035674!, L0035673!, L0279228!], **P**-3 sheets [P00745509!, P00745510!, P00745511!]).

Trees 10–25 m tall, dbh 15–100 cm; bark brownish-grey. *Twigs* slender, 1.6–5 mm thick, lenticellate, densely hairy when young, glabrescent; hairs appressed, yellowish to dark brown; terminal leaf buds ovoid, 4–5 mm long, apex acute, velutinous. *Leaves* alternate or subopposite; blades elliptic to elliptic-lanceolate, 6.5–20 × 2.2–7.8 cm; apex rounded to acuminate, sometimes with a long tip; base cuneate to obtuse, often asymmetric; secondary veins 4–7 pairs, tertiary veins reticular; upper surface glabrous with midrib and secondary veins densely hairy, soon glabrescent, midrib raised, secondary veins sunken; lower surface sparsely hairy, soon glabrescent, midrib and secondary veins raised; hairs appressed, yellowish to dark brown; petioles 8–20 mm long, densely hairy, half-terete, slightly swollen. *Inflorescences* axillary, 10–28 mm long, without orbicular bracts at base, sparsely hairy; hairs appressed, yellowish; bracteoles ovate to linear, 1–3 mm long, velutinous, caducous. *Flowers* yellow to yellowish-green; perianth tube not present; perianth lobes 6, ovate or broadly ovate, 0.8–1.2 × 0.6–1 mm, apex acute, sparsely hairy on both surfaces; stamens 9, 1–1.1 mm long, filaments densely pubescent; anthers 0.5 mm long, glabrous; ovary ca 0.7 mm diam., velutinous; style ca 0.3 mm long, stigma small. *Infructescence* usually bearing a single mature fruit.

Fruits maturing in two years; fruits of the first year ovoid, 25–30 × 15–18 mm. *Mature fruits* large and turbinate, 54–72 × 38–46 cm, apex obtuse, base attenuate, surface glabrous to densely hairy, having 16–20 irregular longitudinal ridges; fruit stalks thickened and robust, 13–18 mm diam., constricted at apex.

Distribution.— Northern and Central Vietnam (Ha Giang, Nha Trang and Hue Provinces) (Fig. 6).

Ecology.— Growing in primary forest on limestone or granite soils between 1,000 and 1,500 m alt. Flowering: September, October; fruiting: September–November; notes on herbarium specimens say that it takes two years for the fruits to mature.

Preliminary conservation assessment.— Endangered (EN B2ab(i,ii,iii)). This species is known from two distinct areas. The first comprises one locality in northern Vietnam (Ha Giang Province), and the second comprises of two localities, in the Bach Ma National Park in central Vietnam (Hue and Nha Trang Provinces). The forests where it occurs are under threat of deforestation and habitat destruction. Given it disjunct distribution, it has a relatively large extent of occurrence (EOO of 11,742 km^2), with a small area of occupancy (AOO of 12 km^2). However, given that it is only known from only three localities, has a small AOO and its habitat is threatened, it is considered as Endangered.

Notes.— The recently published species *Beilschmiedia turbinata* Bing Liu & Y.Yang has only a few minor morphological differences with *Beilschmiedia vidalii*. These are mainly in the density of the hairiness and the hair colour and in a geographical disjunction (China, Yunnan Province, Malipo County) (Liu *et al.*, 2013). I have not seen any material of this new species and it could be a synonym of *Beilschmiedia vidalii*.

Specimens seen.

VIETNAM.— Thừa Thiên Huế [Núi Bach Mai, station d'altitude près de Huê, 22 Apr. 1939, *Poilane 29905* (**P**); Bach Ma, Thua Thiên, Huê, 28 July 1943, *Vidal 781A* (**P**)]; Khánh Hòa [Nha Trang, June 1909, *d'Alleiztte s.n.* (**P**)].

20. Beilschmiedia villosa Kosterm., Nat. Hist. Bull, Siam Soc. 25 (3–4): 31. 1975 ('1974'). Type: Thailand, Mae Hong Son, Pang Mapha, 28 Feb. 1968, *Hansen & Smitinand 12753* (holotype **AAU**; isotypes **BKF** [SN 030661!], **E** [E00386449!], **K** [no barcode!], **L**-2 sheets [L0279229!, L0035675!], **P** [P00745507!]).

Tree 5–15 m high; bark grey, furrowed, lenticellate, inner bark purplish-brown. *Twigs* slender, 2.5–4 mm thick, round or angular in cross-section, sparsely hairy when young, glabrescent; hairs appressed, yellowish; terminal leaf buds ovate, 5–7 mm long, apex acute, velutinous. *Leaves* (sub) opposite or alternate; blades elliptic, 7.5–12.7 × 2.8 –6 cm, coriaceous; apex rounded to acute; base rounded to attenuate; margins slightly enrolled; secondary veins 6–7 pairs, curving near the margins, tertiary venation reticulate; upper surface glabrous except sparsely hairy on midrib, midrib and secondary veins raised, tertiary veins distinct; lower surface sparsely hairy; hairs straight, appressed; midrib and secondary veins raised, tertiary veins distinct; petioles half-terete, 9–13 mm long, slightly swollen, sparsely to densely hairy. *Inflorescences* axillary or borne along the twigs, 10–40 mm long, enclosed at base by orbicular bracts, velutinous; bracteoles lanceolate, 10–25 mm long, caducous. *Flowers* (pale) yellow to yellowish-green, slightly scented; perianth tube absent; perianth lobes 6, equal, ovate-oblong, 2.5–3 × 0.8–1.5 mm, apex acute, sparsely hairy on both surfaces; stamens 9, 1.8–2.0 mm long, sparsely hairy; anthers ca 1 mm long; staminodes 3, heart-shaped, 0.8–1.5 mm long; ovary subglobose, ca 1 mm diam.; style ca 1 mm long. *Fruits* ellipsoid-clavate, 30–40 × 18–20 mm, surface smooth, dark purple to black when mature, seed pink; fruit stalk 2.5–4.5 cm long, swollen when mature, hairy, red when mature.

Distribution.— Thailand. Only known from few Northern and North-Eastern provinces (Fig. 6).

Ecology.— Growing in mixed deciduous to evergreen forest, sometimes over limestone, at 400–900 m alt. Flowering: November–February; fruiting: February–April.

Preliminary conservation assessment.— Vulnerable (EN B1ab(i,ii,iii)+2ab(i,ii,iii)). This species is only known from six locations in northern Thailand (EOO = 35,779 km^2; AOO = 28 km^2). Although it does occur in several well protected areas (Bo Pha Kaeng, Tham Sa Koen National Park, in general the forests here are under threat from

deforestation and habitat destruction. Given these threats and the fact that it is only known from six localities it is considered as Vulnerable.

Local name.— Phi phuan bai khon (พีพวนใบขน) (General).

Specimens seen.

THAILAND.— NORTHERN: Chiang Mai [Wieng Haeng District, Mueang Haeng Subdistrict, Pa Hai Temple, 3 Feb. 2012, *Anonymous s.n.* (**BKF**); Ban Huei Pha, 8 Feb. 2017, *Pongamornkul 5977* (**QBG**)]; Nan [Bo Pha Kaeng, Tham Sa Koen National Park, 4 Mar. 2010, *Norsaengsri 6565* (**QBG**); Song Kwae, Tham Sa Koen National Park, 12 Feb 2011, *Laongsri & Romkham 1473* (**QBG**); ibid., 3 Mar. 2010, *Norsaengsri 6545* (**QBG**)]; NORTH-EASTERN: Loei [Na Haeo, 26 April 1996, *Nanakorn 6270* (**QBG**)].

21. Beilschmiedia wallichiana (G.Don) Kosterm., Reinwardtia 5: 391 & fig. 6. 1960; Kochummen, Tree Fl. Mal. 4: 122. 1989; Tetsana, Taxon. Revis. Gen. *Beilschmiedia* Thailand: 60. 2005; Sach. Nishida, Blumea 53: 365. 2008; de Kok, Blumea 61: 162. 2016.— *Sideroxylon wallichiana* G.Don, Gen. Hist. 4: 28. 1838; Kurz, Flora 55: 172. 1872; Hook.f., Fl. Brit. Ind. 5: 180. 1886.— *Sideroxylon rugosum* Wall., Pl. Asiat. Rar. 2: 4158. 1831, **nom. inval.**].— *Litsea rugosa* Kurz, Flora 55: 172. 1872; Hook.f., Fl. Brit. Ind. 5: 180. 1886.— *Malapoenna rugosa* (Kurz) Kuntze, Rev. Gen. Pl. 2: 573. 1891. Type: Malaysia, Peninsula Malaysia, Penang, without date, *Porter s.n.* [*Wallich Numer. List 4158*] (holotype **K**-W [K001038280!]).

Trees 1.5–15 m tall, dbh 5–40 cm diam.; bark grey. *Twigs* slender, 3.7–7 mm diam., velutinous when young, soon becoming glabrous; terminal leaf buds lanceolate, 5.3–6.5 mm long, densely hairy; hairs straight, erect to appressed, light brown. *Leaves* alternate or arranged spirally, or rarely opposite; blades elliptic to obovate, 13–30 × 4.3–10 cm, leathery; apex acute to acuminate; base cuneate, sometimes asymmetric; secondary veins 7–12 pairs, tertiary veins reticulate; upper surface glabrous, midrib flattened to raised, secondary veins raised, tertiary veins distinct; lower surface sparsely hairy on and adjacent to midrib and along the margins, midrib and secondary veins raised, tertiary veins distinct, reticulate; hairs straight, erect to appressed, light brown; petioles 10–15 mm long, half-terete, velutinous to sparsely hairy. *Inflorescences* 10–20 mm long, velutinous, enclosed at base by orbicular bracts, bracts 2.5–2.8 mm long, hairy, margins entire; bracteoles orbicular, 1–2 mm long, persistent. *Flowers* greenish-yellow to white; perianth tube 0.8–0.9 mm long; perianth lobes lanceolate-oblong, 3–4 mm long, apices acute, glabrous on inner surface and densely to sparsely hairy on outer surface; stamens 9, 1–2.5 mm long, filaments longer than the anthers, glabrous; ovary ca 2 mm long, glabrous; style ca 2 mm long. *Fruits* (dried) ellipsoid, 16.5–17.2 × 11–15 mm, apex round, base attenuate, surface smooth, shiny; fruit stalk slightly swollen, 35–37 × 2.8–2.9 mm, not constricted at apex.

Thailand.— Peninsular Thailand.

Distribution.— Peninsular Malaysia (Fig. 6).

Ecology.— Growing in evergreen forests, sometimes among rocks or over shale, at 20–910 m alt. Flowering: January–February; fruiting: September.

Preliminary conservation assessment.— Vulnerable (VU B2ab (i,ii,iii)). This species is known from a total of seven localities in Peninsular Thailand and Peninsular Malaysia. It has a sizeable extent of occurrence (EOO of 75,557 km^2), but its area of occupancy (AOO of 28 km^2) is relatively small. However, this species, like most Lauraceae, is likely to be under-collected. It grows in lowland rain forests and in the region these forests have been in decline both in area and in quality of habitat, athough it occurs in at least one well protected area (Khao Luang National Park) in Thailand. Given the threats to its habitat, its small AOO and the small number of known localities, it is considered as Vulnerable.

Specimens seen.

THAILAND.— PENINSULAR: Nakhon Si Thammarat [Nop Phitum, Khao Luang National Park, 12 Feb. 2005, *Williams et al. 1447* (**BKF**)]; Satun [Kuan Po, 1 Jan. 1928, *Kerr 13820* (**BM**, **K**, **P**); Kuan Kalong, 10 Feb. 1961, *Smitinand 7139* (**BKF**)].

DOUBTFUL NAMES

Beilschmiedia chevalieri Kosterm., non Robyns & R.Wilczek, Bull. Jard. Bot. État Bruxelles 19: 486. 1949.

A species with the name *Beilschmiedia chevalieri* has been recorded for Vietnam since 1991 (see Lê, 2003). This is not *Beilschmiedia chevalieri* Robyns & R.Wilczek, which is a species only known from Africa, but an herbarium name used by Kostermans but not published by him. A specimen of this taxon (*Chevalier 38899*) which I have seen in **P** with a 1970 det slip by Kostermans has an inflorescence of type 2 (see van der Werff, 2001: 136) and is therefore better placed in the genus *Dehaasia* Blume.

Beilschmiedia longepetiolata C.K.Allen, J. Arnold Arbor. 23: 450. 1942; T.C.Lê, Checklist Pl. Sp. Vietnam 69. 2003. Type: China, Hainan, 16 Oct. 1933, *Wang 34640* (holotype **A**).

I could not find positive evidence for the inclusion of this species here. Two sterile specimens at **P** labelled as this taxon cannot in my view be identified even to generic level, and consequently its presences in Vietnam is doubtful.

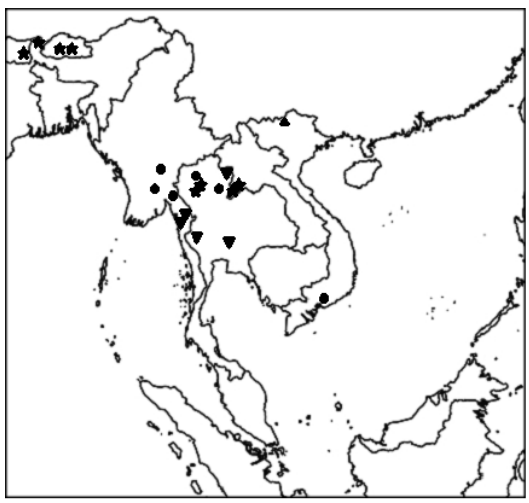

Figure 1. ● = *Beilschmiedia argentata*; ▲ = *B. balansae*; ★ = *B. clarkei*; ▼ = *B. elegantissima*.

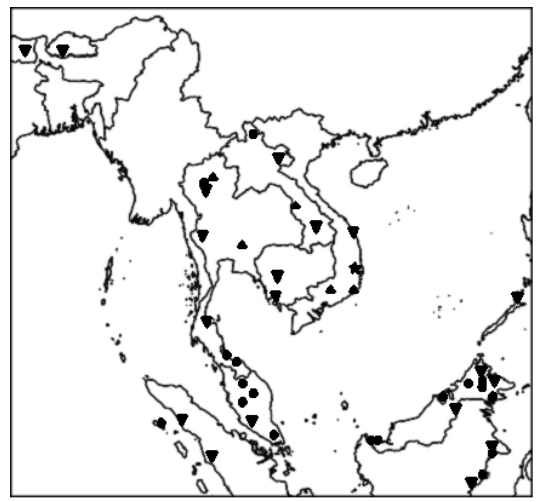

Figure 3. ● = *Beilschmiedia kunstleri*; ▲ = *B. laotica*; ▼ = *B. lucidula*; ★ = *B. macrocarpa*.

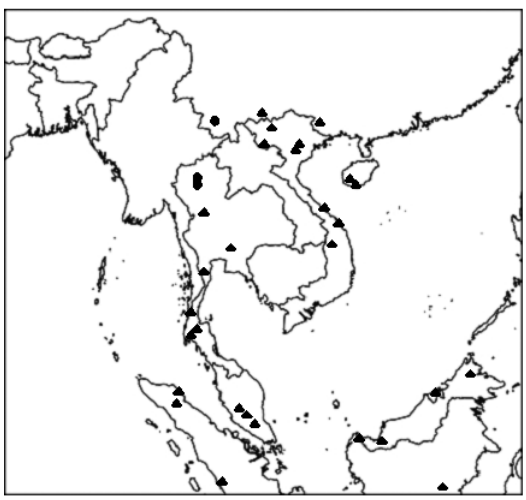

Figure 2. ▲ = *Beilschmiedia percoriacea* var. *percoriacea*; ● = *B. percoriacea* var. *glaucoides*

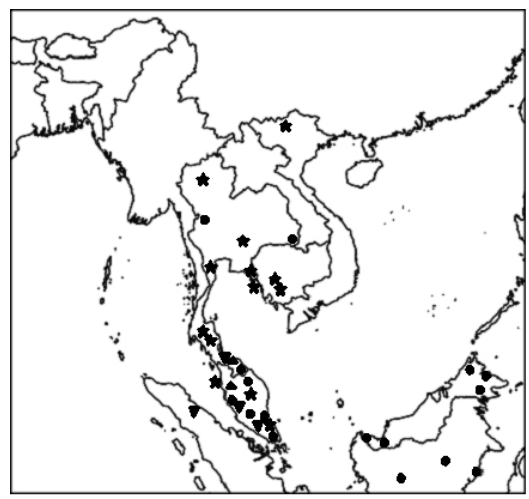

Figure 4. ● = *Beilschmiedia maingayi*; ▲ = *B. membranacea*; ▼ = *B. palembanica*; ★ = *B. penangiana*.

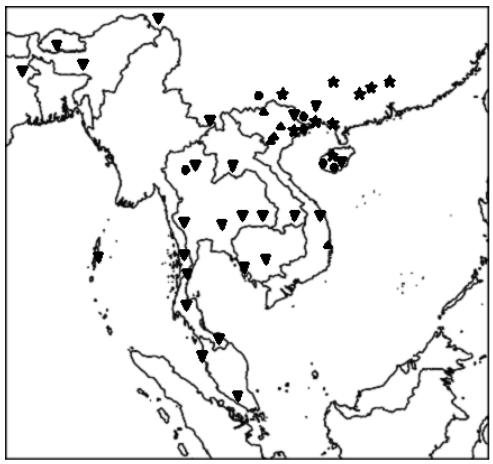

Figure 5. ● = *Beilschmiedia pergamentacea*; ▲ = *B. poilanei*; ▼ = *B. roxburghiana*; ★= *B. tsangii*.

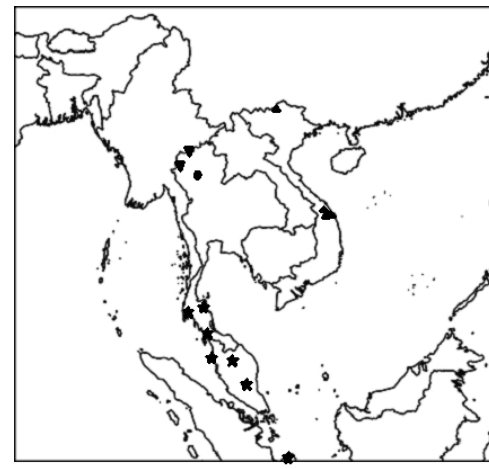

Figure 6. ● = *Beilschmiedia lanatella*; ▲ = *B. vidalii*; ▼ = *B. villosa*; ★ = *B. wallichiana*.

EXCLUDED NAMES

Beilschmiedia ferruginea H.Liu, Laurac. Chine & Indo-Chine 107. 1932. Type: Vietnam, Annam, Massif de Dông Tri, Prov. Quang Tri, 16 June 1924, *Poilane 10964* (lectotype **P** [P00745626!], designated here; isolectotypes **A** [A00041182!], **K** [K000768684!], **P**-2 sheets [P00745627!, P00745628!], **US** [US00099402!]).

The material of this species has an inflorescence typical for the genus *Dehaasia* (Type 2 of van der Werff, 2001: 136) and is therefore better placed in that genus.

There are three specimens at P of the gatherings cited in the original description of this species (Liu, 1932: 107). The specimen with the original label [P00745626] is designated here as the lectotype.

Beilschmiedia foveolata Merr., J. Arnold Arbor. 19: 30. 1938. Type: Vietnam, Tonkin, Chapa, Aug. 1930, *Pételot 5380* (holotype **A** [A00041196!]; isotypes **NY**-2 sheets [NY00354900!, NY00354901!], **P** [P00745506!], **US** [US00099403!]).—*Litsea f oveolata* (Merr.) Kosterm., Reinwardtia 8: 98. 1970.— *Cinnamomum foveolatum* (Merr.) H.W.Li & J.Li in H.W.Li *et al.*, Fl. China 7: 170. 2008.

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