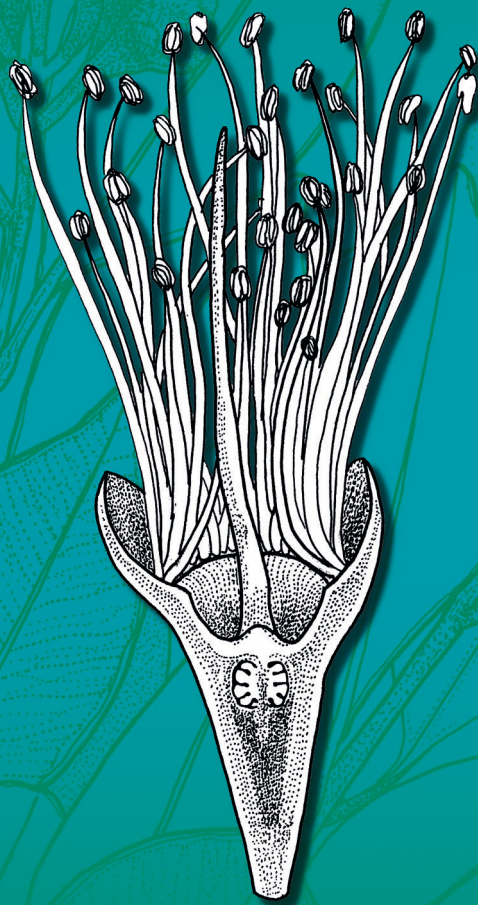


Three new species of *Syzygium* Gaertn. (Myrtaceae) from Cambodia and Vietnam

Wuu Kuang SOH,
Hoang Van SAM &
John A. N. PARNELL



DIRECTEUR DE LA PUBLICATION / *PUBLICATION DIRECTOR*: Gilles Bloch
Président du Muséum national d'Histoire naturelle

RÉDACTEUR EN CHEF / *EDITOR-IN-CHIEF*: Thierry Deroin

RÉDACTEURS / *EDITORS*: Porter P. Lowry II; Zachary S. Rogers

ASSISTANT DE RÉDACTION / *ASSISTANT EDITOR*: Emmanuel Côté (adanson@mnhn.fr)

MISE EN PAGE / *PAGE LAYOUT*: Emmanuel Côté

COMITÉ SCIENTIFIQUE / *SCIENTIFIC BOARD*:

P. Baas (Nationaal Herbarium Nederland, Wageningen)
F. Blasco (CNRS, Toulouse)
M. W. Callmänder (Conservatoire et Jardin botaniques de la Ville de Genève)
J. A. Doyle (University of California, Davis)
P. K. Endress (Institute of Systematic Botany, Zürich)
P. Feldmann (Cirad, Montpellier)
L. Gautier (Conservatoire et Jardins botaniques de la Ville de Genève)
F. Ghahremaninejad (Kharazmi University, Téhéran)
K. Iwatsuki (Museum of Nature and Human Activities, Hyogo)
A. A. Khapugin (Tyumen State University, Russia)
J.-Y. Lesouef (Conservatoire botanique de Brest)
P. Morat (Muséum national d'Histoire naturelle, Paris)
J. Munzinger (Institut de Recherche pour le Développement, Montpellier)
S. E. Rakotoarisoa (Millenium Seed Bank, Royal Botanic Gardens Kew, Madagascar Conservation Centre, Antananarivo)
P. H. Raven (Missouri Botanical Garden, St. Louis)
G. Tohmé (Conseil national de la Recherche scientifique Liban, Beyrouth)
J. G. West (Australian National Herbarium, Canberra)
J. R. Wood (Oxford)

COUVERTURE / *COVER*:

Réalisée à partir des Figures de l'article/*Made from the Figures of the article.*

Adansonia est indexé dans / *Adansonia is indexed in*:

- Science Citation Index Expanded (SciSearch®)
- ISI Alerting Services®
- Current Contents® / Agriculture, Biology, and Environmental Sciences®
- Scopus®

Adansonia est distribué en version électronique par / *Adansonia is distributed electronically by*:

- BioOne® (<http://www.bioone.org>)

Adansonia est une revue en flux continu publiée par les Publications scientifiques du Muséum, Paris
Adansonia is a fast track journal published by the Museum Science Press, Paris

Les Publications scientifiques du Muséum publient aussi / *The Museum Science Press also publish: Geodiversitas, Zoosystema, Anthropozoologica, European Journal of Taxonomy, Naturae, Cryptogamie* sous-sections *Algologie, Bryologie, Mycologie, Comptes Rendus Palevol*

Diffusion – Publications scientifiques Muséum national d'Histoire naturelle
CP 41 – 57 rue Cuvier F-75231 Paris cedex 05 (France)
Tél.: 33 (0)1 40 79 48 05 / Fax: 33 (0)1 40 79 38 40
diff.pub@mnhn.fr / <http://sciencepress.mnhn.fr>

© Publications scientifiques du Muséum national d'Histoire naturelle, Paris, 2024
ISSN (imprimé / *print*): 1280-8571/ ISSN (électronique / *electronic*): 1639-4798

Three new species of *Syzygium* Gaertn. (Myrtaceae) from Cambodia and Vietnam

Wuu Kuang SOH

National Botanic Gardens, Glasnevin, Dublin, D09 VY63 (Ireland)
wuu.soh@opw.ie (corresponding author)

Hoang Van SAM

Vietnam National University of Forestry, Xuan Mai, Hanoi (Vietnam)
samhv@vnuf.edu.vn

John A. N. PARNELL

Herbarium, Department of Botany, School of Natural Sciences,
and Trinity Centre for Biodiversity Research,
Trinity College Dublin, Dublin 2 (Ireland)
jparnell@tcd.ie

Submitted on 11 January 2023 | accepted on 14 September 2023 | published on 26 February 2024

Soh W. K., Sam H. V. & Parnell J. A. N. 2024. — Three new species of *Syzygium* Gaertn. (Myrtaceae) from Cambodia and Vietnam. *Adansonia*, sér. 3, 46 (4): 29-36. <https://doi.org/10.5252/adansonia2024v46a4>. <http://adansonia.com/46/4>

KEY WORDS

Myrtaceae,
Vietnam,
Cambodge,
Khánh Hòa,
Phnom Samkos Wildlife
Sanctuary,
Poilane,
new species.

ABSTRACT

Three new species of *Syzygium* Gaertn. (Myrtaceae) are described and illustrated for Indochina, two from Vietnam and one from Cambodia. *Syzygium quoctrianum* W.K. Soh, H.V.Sam & J.Parn., sp. nov. and *Syzygium samianum* W.K. Soh & J.Parn., sp. nov. are from Khánh Hòa province, Vietnam, and *Syzygium veal* W.K. Soh, H.V.Sam & J.Parn., sp. nov. was discovered in Phnom Samkos Wildlife Sanctuary, Cambodia.

MOTS CLÉS

Myrtaceae,
Vietnam,
Cambodia,
Khánh Hòa,
sanctuaire de vie sauvage
Phnom Samkos,
Poilane,
espèces nouvelles.

RÉSUMÉ

Trois espèces nouvelles de Syzygium Gaertn. (Myrtaceae) du Cambodge et du Vietnam.

Trois espèces nouvelles de *Syzygium* Gaertn. (Myrtaceae) sont décrites et illustrées pour l'Indochine, deux du Vietnam et une du Cambodge. *Syzygium quoctrianum* W.K. Soh, H.V. Sam & J.Parn., sp. nov. et *Syzygium samianum* W.K. Soh & J.Parn., sp. nov. sont originaires de la province de Khánh Hòa, Vietnam; *Syzygium veal* W.K. Soh, H.V. Sam & J.Parn., sp. nov. a été découverte dans le sanctuaire de faune de Phnom Samkos, au Cambodge.

INTRODUCTION

Syzygium Gaertn. is the largest genus in the Myrtaceae Juss. with *c.* 1200 species (Parnell *et al.* 2007; World Flora Online Plant List 2023) of mainly trees occurring in the tropics and subtropics from Africa to the Pacific Islands. The Southeast Asian region is the most species-rich for *Syzygium* with much morphological heterogeneity. *Syzygium* is also one of the most common tree genera in the Old World tropics and hence an important ecological component of many tropical forest ecosystems, e.g. food resources for wildlife from nectar, pollen and fleshy fruit (Parnell *et al.* 2007). In mainland Southeast Asia, *Syzygium* is found in diverse habitats ranging from lowland to highland, along flowing bodies of water and in various forest types (Chantaranothai & Parnell 2002; Soh & Parnell 2015).

The genus in Indochina was first revised by François Gagnepain for the *Flore Générale de l'Indochine* (Gagnepain 1921) as *Eugenia* L. *s.l.* In Gagnepain's (1921) revision, which covered the presently recognised political boundaries of Cambodia, Laos, Vietnam, part of the Mekong basin in Thailand and Zhanjiang in South China, 55 species were recognised. Merrill & Perry (1938) updated the Indochinese checklist under *Syzygium* based on original material supplied by Gagnepain and new collections by Paul Pételot. Thereafter, a substantial amount of herbarium material was collected following a revival of botanical activities in the region after the Second World War. After a gap of more than seven decades, Soh and Parnell published a revised account of the Indochinese *Syzygium* in 2015 which included specimens collected between the 1940s and 2010 (Soh & Parnell 2015). This research has facilitated subsequent discovery of new species in the region in other recent floristic studies, e.g. since then seven new species of *Syzygium* have been published (Tagane *et al.* 2015, 2018; Chantaranothai *et al.* 2016). This highlights the fact that much of the region's flora still awaits discovery and/or formal description. During our study of materials for the upcoming Flora of Cambodia, Laos and Vietnam (FCLV), we found over 200 specimens of *Syzygium* at the herbarium of the Muséum national d'Histoire naturelle (P) collected by Eugène Poilane that were not available at the time of the previous revision. Before the renovation of P and the reconditioning of its specimens between 2008 and 2012 (Le Bras *et al.* 2017), these specimens were likely not yet incorporated into the main collection and therefore were overlooked in our previous study. These *Syzygium* specimens were collected between 1919 and 1947, exist as a large number of duplicates and are unannotated. The herbarium labels bear a typical hallmark of Poilane's work ethic – as they are highly informative, complete with description of the plant, locality, ecological information, vernacular names, traditional uses and various comments arising from his observations (Burgos & Carré 2021). The wealth of information in this collection is important for the forthcoming FCLV because earlier works had relied largely on herbarium specimens with poor often scant label information.

Amongst Poilane's collections and other collections gathered after 2010, we discovered three morphologically distinct taxa

which did not bear a resemblance to any known species of *Syzygium* in Cambodia, Laos and Vietnam or the surrounding areas and are therefore described here as new to science. The descriptions and keys to all *Syzygium* species in Cambodia, Laos and Vietnam will be presented in the FCLV revision of Myrtaceae which is currently in preparation.

MATERIAL AND METHODS

Over 900 type specimens of *Syzygium* were compared with the specimens of the new species. The type specimens were either examined from the original materials (BK, BKF, BM, K, L, KEP, P, SING and TCD) or digital images (downloaded from *Global Plants* database, *Botanical Survey of India Phanerogams Type* database and individual herbaria from e.g. A, BM, GH, HITBC, K, KAG, KYO, L, P and TAIF). Additionally, non-type specimens were also examined as part of the ongoing FCLV revision of Myrtaceae and these were largely original materials from A, BK, BKF, BM, CPNP, E, GH, HN, K, KEP, L, NY, P, TCD, U and VFU. With the exception of floral parts, all macromorphological measurements were made from dried herbarium specimens. Floral measurements were made from rehydrated herbarium flowers. All other information was extracted from herbarium labels.

TAXONOMIC TREATMENT

Family MYRTACEAE Juss.

Genus *Syzygium* Gaertn.

Syzygium quoctrianum

W.K.Soh, H.V.Sam & J.Parn., sp. nov.

(Fig. 1)

Similar to *Syzygium lineatum* (DC.) Merr. & L.M.Perry in the narrowly spaced secondary veins, the straight and close to the margin intramarginal veins and the long conical hypanthium, but differs in having relatively small leaves (*S. quoctrianum* sp. nov.: 3–5.5 × 2–3 cm; *S. lineatum*: 6–9 × 2.2–4.5 cm), a revolute leaf margin (*S. lineatum*: flat margin), the first order branching inflorescence (*S. lineatum*: second order branching inflorescence) and the sessile flowers (*S. lineatum*: pedicellate flowers).

TYPE MATERIAL. — Vietnam • Khánh Hòa province [Nhattrang]; 1800 m a.s.l.; 21.V.1922; Poilane 3572; holo-, P[P04460694]!, iso-, P[P06666932]!).

ETYMOLOGY. — This species is named in recognition of Mr Nguyen Quoc Tri, Deputy Minister, Ministry of Agriculture and Rural Development Vietnam, who has done so much to promote sustainable forest management in the country.

DISTRIBUTION. — Endemic to Vietnam, so far known only from the type locality in Khánh Hòa province.

HABITAT. — A highland species, documented in shrubby vegetation on moist peaty soil, at 1800 m elevation hence on a dwarf montane forest.

PHENOLOGY. — Collected in flower in May.

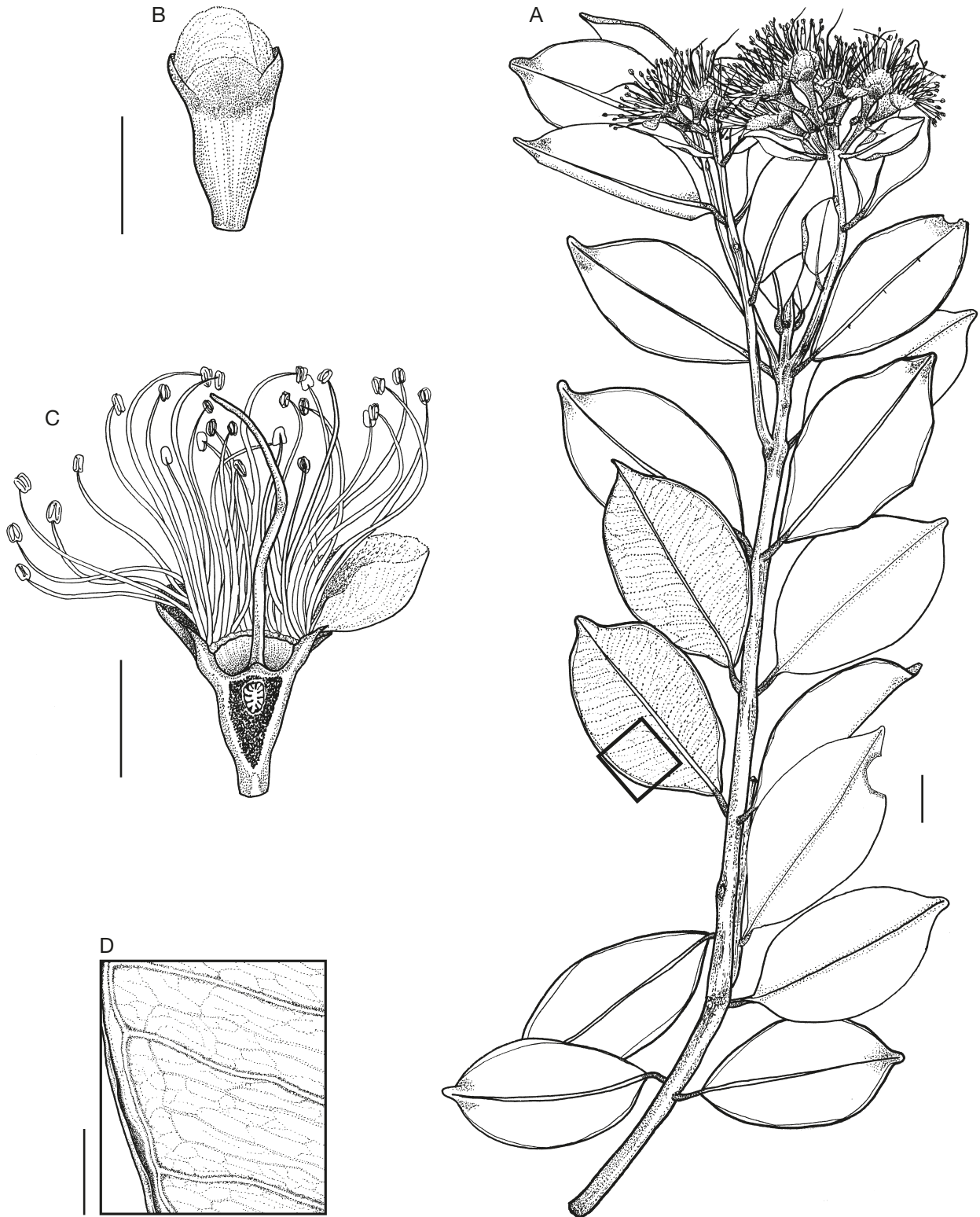


FIG. 1. — *Syzygium quoctrianum* W.K. Soh, H.V.Sam & J.Parn., sp. nov.: **A**, flowering branch; **B**, flower bud; **C**, longitudinal section of mature flower; **D**, leaf venation. *Poilane* 3572. Scale bars: A, 1 cm; B, C, 5 mm; D, 2 mm. Drawn by Wu Kuang Soh.

CONSERVATION STATUS. — DD (Data Deficient) (IUCN 2012). The locality in the herbarium label is stated as ‘Nhatrang’ which most probably refers to the province Khánh Hòa rather than the capital Nhatrang which is in the lowlands since the specimen was collected at 1800 m a.s.l. The landscape above 1000 m a.s.l. in

Khánh Hòa province appears to be forested on satellite imagery in Google Earth (images taken between 2018 and 2021). However an accurate location of the collection point is unknown. Further information on location, population size and habitat quality are needed.

DESCRIPTION

Tree, 4 m tall, trunk 7.9 cm diameter, glabrous. Twig terete, *c.* 3 mm diameter, stout, surface smooth, whitish to brownish, not contrasting to leaf colour, young twig angular. Leaves opposite, coriaceous to subcoriaceous, greenish-brown, dark green *in vivo*, 3-5.5 × 2-3 cm, 1.5-2 times as long as wide, elliptic, base cuneate, margin revolute, apex acuminate, acumen distinct, 0.2-0.4 cm long, $\frac{1}{10}$ - $\frac{1}{20}$ of blade length, recurved; midrib sunken above, raised below; secondary veins very slender, 11-16 per side, 2-4 mm apart, 65-70 degrees from midrib, faint, raised above and below; tertiaries faint, reticulate; intramarginal veins 0.5-1 mm from margin, straight, margin revolute; petiole 0.4-0.8 cm long, $\frac{1}{14}$ - $\frac{1}{5}$ of blade length, *c.* 1 mm diameter, slender, brownish, not contrasting to blade colour. Inflorescence terminal, 2-3 cm long (not including stamens), paniculate, first order branching, flowers to 15 flowers; main axes *c.* 8 mm long; bracts and bracteoles caducous, *c.* 1 mm long. Flower greenish white *in vivo*, fragrant *in vivo*, sessile, hypanthium not glaucous, not fibrous, 6-7.5 × 4.5-5 mm, conical, pseudostalk indistinct; sepals 4, free, 2-2.5 × 3-4 mm, semiorbicular; petals 4, free, 4.5 × 6 mm, not coherent, semiorbicular; outer stamens *c.* 1.5 cm long, anther sacs parallel, connective gland conspicuous; style *c.* 12.5 mm long, ovules 8 per locule, irregularly radiating. Fruit not seen.

Syzygium samianum

W.K.Soh & J.Parn., sp. nov.
(Fig. 2)

A species morphologically similar to *Syzygium sublaetum* (Craib) Byng & Christenh. in the distinct tertiary veins, the pyriform hypanthium with distinct pseudostalk, the racemose inflorescence and the pedicellate flowers but can be distinguished from this species by the relatively small leaves (*S. samianum*: 2.5-5 × [0.7-]1.2-2.5 cm; *S. sublaetum*: 5.5-12 × 2-4 cm), straight intramarginal veins (*S. sublaetum*: looped intramarginal veins), the relatively short pedicel (*S. samianum*: 1-2 mm long; *S. sublaetum*: 5-45 mm long) and the relatively small hypanthium (*S. samianum*: [5.5-]7-8 × [4-]5-6 mm; *S. sublaetum*: 8.8-11 × 5.5-6.7 mm).

TYPE MATERIAL. — Vietnam • Khánh Hòa province [Pro. Nha Trang], peninsula of Mt Hòn Hèo; 3.V.1923; *Poilane 6237*; holo-, P[P01065741], iso-, P[P01065739, P06871647, P00855380]!).

ADDITIONAL SPECIMENS EXAMINED. — Vietnam • West of Nhatrang, between [Song -tan] and [D'out]; 1500 m a.s.l.; 27.V.1922; *Poilane 3781*; P[P04884449]!).

ETYMOLOGY. — This particular species is named in honour of Dr Hoang Van Sam, a botanist affiliated with the Vietnam National University of Forestry, who has significantly contributed to advancing our knowledge of the Vietnamese flora and to train emerging botanists in the country.

DISTRIBUTION. — Endemic to Vietnam, so far known only in the South-central Vietnam in the Khánh Hòa province including the Hòn Hèo peninsula.

HABITAT. — This species occurs in both lowland and highland habitats: one gathering was collected at the peninsula of Mt Hòn Hèo between 350 and 500 m elevation, which habitat would likely be hill evergreen forest. Another specimen was collected in the same province at 1500 m elevation on rocky, peaty and acidic soil, which altitude would infer a habitat dominated by montane forest.

PHENOLOGY. — Flowers were collected in May.

CONSERVATION STATUS. — Near Threatened (NT) (IUCN 2012). On the satellite imager in Google Earth (images taken between 2018 and 2021), the landscape at Mt Hòn Hèo and the areas above 1000 m elevation in Khánh Hòa province appear to be arboraceous. The forest at Mt Hòn Hèo is protected. The estimated Extent of Occurrence which ranges from Mt Hòn Hèo to the west of Khánh Hòa province is approximately 3600 km². However information on the exact location and habitat quality is not available to satisfy either the Critically Endangered, Endangered or Vulnerable criteria. Therefore the species is provisionally evaluated as Near Threatened (NT).

DESCRIPTION

Shrub, 2.5 m tall, trunk 6 cm diameter, glabrous. Twig terete, 1.5-2.5 mm diameter, slender, surface smooth, pale brownish, not contrasting to leaf colour. Leaves opposite, coriaceous, brownish, 2.5-5 × (0.7-)1.2-2.5 cm, 1.5 to 3.5 times as long as wide, elliptic, obovate, oblong-elliptic, oblong-obovate, base cuneate, slightly attenuate, margin revolute, apex acute, blunt, acumen indistinct; midrib sunken above, raised below; secondary veins very slender, 11-15 per side, narrowly spaced, 1.5-3 mm apart, 40-55 degrees from midrib, prominent, raised above and below; tertiaries faint, reticulate; intramarginal veins *c.* 0.5 mm from margin, straight; petiole (1-)2.5-6 mm long, $\frac{1}{6}$ - $\frac{1}{15}$ of blade length, *c.* 1 mm diameter, slender or stout, brownish, not contrasting to blade colour. Inflorescence terminal, to 2 cm long, racemose or first order branching, flowers 3 to 17; axes 0.5-0.8 cm long; bracts and bracteoles caducous, not seen. Flower white (*in vivo*), sessile or pedicellate, pedicel 1-2 mm, hypanthium not glaucous, not fibrous, (5.5-)7-8 × (4-)5-6 mm, pyriform, pseudostalk distinct, 3-3.5 mm long; sepals 4, free, 3 × 5 mm, semiorbicular; petals 4, free, 6-7 × 6-7 mm, semiorbicular; outer stamens *c.* 1 cm long, anther sacs parallel, connective gland conspicuous; style *c.* 11 mm long, ovules *c.* 4 per locule, irregularly radiating. Fruit not seen.

REMARKS

The specimen collected at 1500 m elevation (*Poilane 3781*) displays smaller and narrower leaves (2.5-3.4 × 0.7-1.2 cm, 3 to 3.5 times as long as wide) and shorter petiole (1-2.5 mm long) than lowland specimen (*Poilane 6237*) which has larger and broader leaves (2.5-5 × 1.5-2.5 cm, 1.5 to 2 times as long as wide) and longer petiole (4-6 mm long). It is often the case that plants collected in the mountains along ridges are found in exposed habitats and therefore their leaves frequently reflect extreme environmental conditions in such features as the recurved leaf margin, reduced foliage, coriaceous leaf texture, and reduced petiole (Van Steenis 1948).

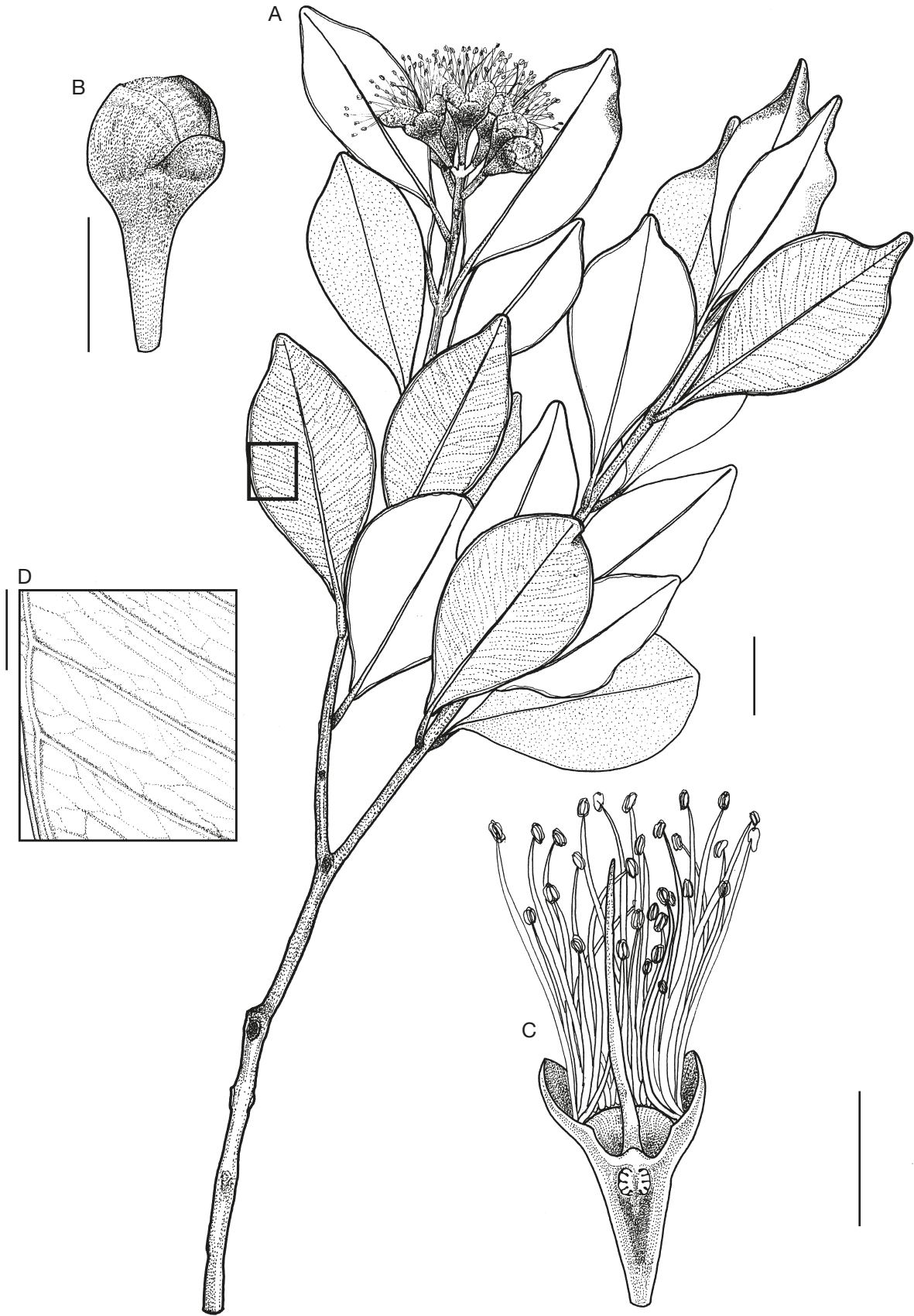


FIG. 2. — *Syzygium samianum* W.K. Soh & J.Parn., sp. nov.: **A**, flowering branch; **B**, flower bud; **C**, longitudinal section of mature flower; **D**, leaf venation. *Poilane* 6237. Scale bars: A, 1 cm; B, C, 5 mm; D, 2 mm. Drawn by Wu Kuang Soh.

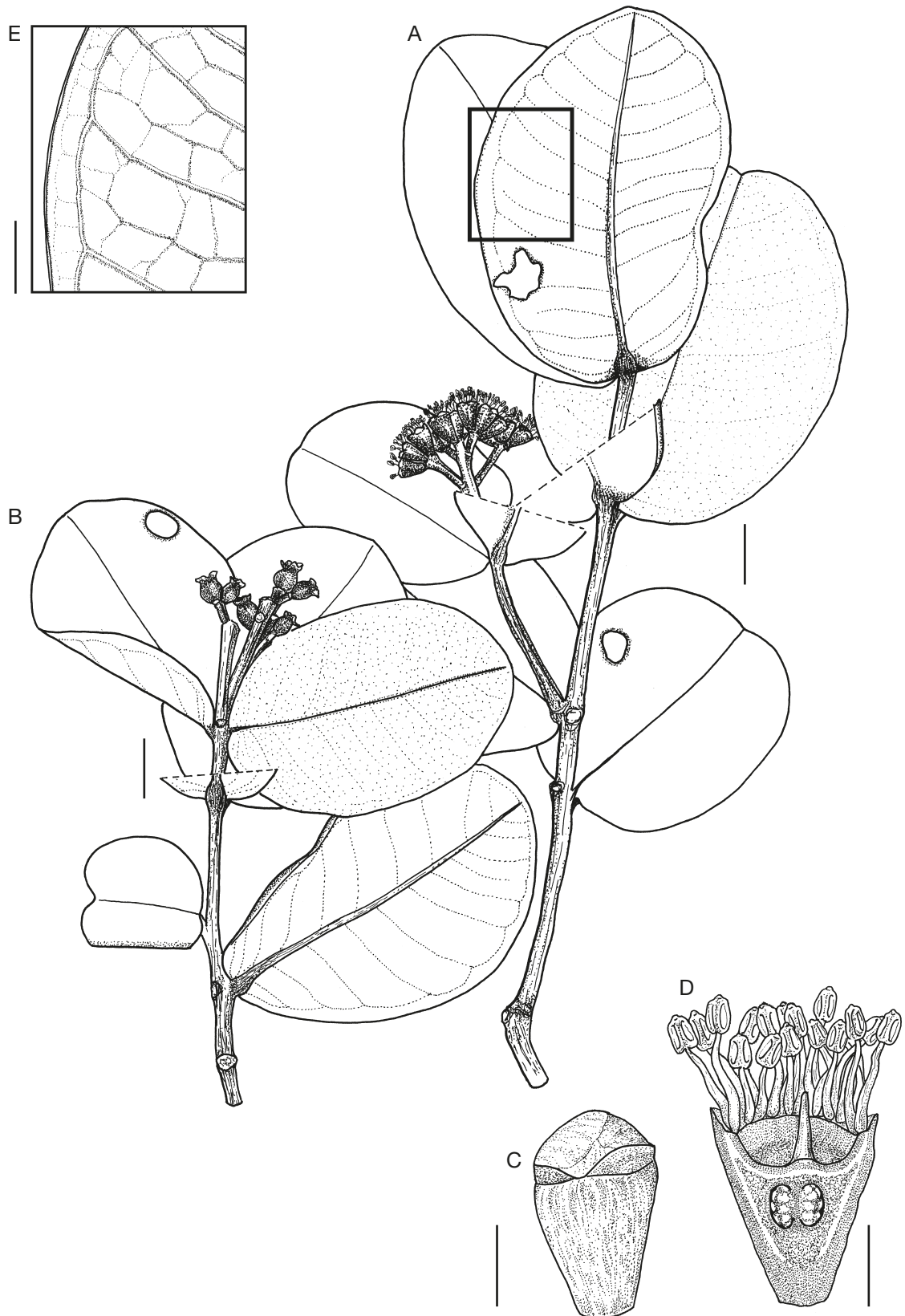


FIG. 3. — *Syzygium veal* W.K. Soh, H.V.Sam & J.Parn., sp. nov.: **A**, flowering branch; **B**, fruiting branch; **C**, flower bud; **D**, longitudinal section of mature flower; **E**, leaf venation. *Thomas et al.* 36. Scale bars: A, B, 1 cm; C, D, 2 mm; E, 5 mm. Drawn by Wu Kuang Soh.

Syzygium veal

W.K. Soh, H.V. Sam & J. Parnell, sp. nov.

(Fig. 3)

A species which is morphologically allied and similar to *Syzygium borneense* (Miq.) Miq. in the secondary veins which are widely spaced (5–15 mm apart), about 10 per side and sunken above, the inflorescence with a compact head of 7–9 flowers and the obconic hypanthium with indistinct pseudostalk but differs in the sessile leaf (*S. borneense*: petiole 7–10 mm long), cordate leaf base (*S. borneense*: leaf base attenuate) and relatively large hypanthium (*S. veal* sp. nov.: 3.5–4.5 × 3–4 mm; *S. borneense*: 1.5–2 × 1.5 mm).

TYPE MATERIAL. — Cambodia • Pursat, Phnom Samkos Wildlife Sanctuary, c. 5 km south-southwest of Phnom Krachau peak; 12°8'27.78"N, 102°54'31.46"E; 1200 m a.s.l.; 19.I. 2011 (Cardamoms Preliminary Dendroclimatological Expedition); Thomas, Ly, Siraat & Buckley 36; holo-, P[P00848517]!, iso-, E[E00726509]!

ETYMOLOGY. — Named after the habitat of the species 'veal' in Khmer which refers to seasonally dry and sandy savannah.

DISTRIBUTION. — Endemic to Cambodia, so far known only from the type locality in Phnom Samkos Wildlife Sanctuary.

HABITAT. — High elevation grassland, growing at the margin of thickets in open grassland area at 1200 m elevation.

PHENOLOGY. — Collected in flower and early fruiting in January.

CONSERVATION STATUS. — Data Deficient (DD) (IUCN 2012). The species is only known from one collection from Phnom Samkos Wildlife Sanctuary. Further field observations on the population size, the Extent of Occurrence and/or Area of Occupancy, and the quality of habitat are needed.

DESCRIPTION

Small tree, 3 m tall, glabrous. Twig terete, c. 3–4 mm diameter, stout, surface smooth, whitish to brownish, not contrasting to leaf colour. Leaves opposite, coriaceous, brownish, (1.5)4–8.8–10.5 × 3–6.8 cm, 1.3 to 1.7 times as long as wide, obovate, base cordate, apex rounded, retuse or shallowly emarginate; midrib sunken above, raised below; secondary veins 9–10 per side, widely spaced, (4–)5–15 mm apart, 45–70 degrees from midrib, prominent, sunken above, raised below; tertiaries prominent, reticulate; intramarginal veins (1.5–)2–5 mm from margin, slightly looped; leaf sessile, petiole indistinct, less than 1 mm long, keeled abaxially, leaf scar 3–4 mm diameter. Inflorescence terminal or axillary, 1.4–2 cm long, paniculate, first order branching; axes c. 1.4 cm long; bracts and bracteoles caducous; flowers sessile, hypanthium not glaucous, not fibrous, 3.5–4.5 × 3–4 mm, obconic, pseudostalk indistinct; sepals 4, free, 0.4 × 1 mm, broadly triangular; petals 4, coherent, 2 × 2.2 mm, orbicular; stamens white *in vivo*, outer stamens c. 3.5 mm long; anther sacs parallel, connective gland conspicuous; style 2.5–3 mm long, ovules c. 15 per locule, irregularly radiating. Fruit immature, 4.5 × 3.5 mm, ellipsoid.

REMARKS

Allied to *Syzygium borneense* (Miq.) Miq. The sanctuary is notable for its large diversity of habitats, including several types of forests. The interior of the sanctuary is largely un-

explored by scientists, but small-scale surveys suggest that many rare, unique and even endemic species are present.

Acknowledgements

We thank the curators and staff of A, BK, BKF, BM, CPNP, E, GH, HITBC, HN, K, KAG, KEP, KYO, L, NY, P, SING, TAIF, TCD and VFU for digital or physical access to herbarium materials. We are grateful to Odile Poncy and Mark Newman for facilitating our work in the Flora of Cambodia, Laos and Vietnam. Thierry Deroin and two anonymous referees are also thanked for their remarks on a previous version of the manuscript. We would like to thank and acknowledge the financial support of the Franklinia Foundation. A special thanks to Colin Kelleher for undertaking a molecular investigation on the herbarium specimens albeit no usable DNA were successfully extracted.

REFERENCES

- BURGOS A. & CARRÉ B. 2021. — Vie et oeuvre d'Eugène Poilane (1888–1964) (The Life, work and journey of Eugène Poilane in French Indochina (1888–1964)). *Revue d'Éthnoécologie* 20: 1–23. <https://doi.org/10.4000/ethnoecologie.7942>
- CHANTARANOTHAI P. & PARNELL J.A.N. 2002. — Myrtaceae, in CHANTARANOTHAI P., SUKSATHAN P. & WONGNAK M. (eds), *Flora of Thailand*. Vol. 7. The Forest Herbarium, Royal Forest Department, Bangkok: 778–914.
- CHANTARANOTHAI P., SUKSATHAN P. & WONGNAK M. 2016. — *Syzygium sirindhorniae* (Myrtaceae), a new species from Thailand. *Phytotaxa* 289: 193–196. <https://doi.org/10.11646/phytotaxa.289.2.10>
- GAGNEPAIN F. 1921. — Myrtaceae, in LECOMTE H. (ed.), *Flore générale de l'Indochine*. Vol. 2. Masson, Paris: 788–864.
- IUCN 2012. — *IUCN Red List Categories and Criteria: Version 3.1*. IUCN, Gland, Cambridge, iv + 32 p.
- LE BRAS G., PIGNAL M., JEANSON M. L., MULLER S., AUPIC C., CARRÉ B., FLAMENT G., GAUDEUL M., GONÇALVES C., INVERNÓN V. R., JABBOUR F., LERAT E., LOWRY P. P., OFFROY B., PIMPARÉ E. P., PONCY O., ROUHAN G. & HAEVERMANS T. 2017. — The French Muséum national d'histoire naturelle vascular plant herbarium collection dataset. *Scientific Data* 4 (1): 170016. <https://doi.org/10.1038/sdata.2017.16>
- MERRILL E. D. & PERRY L. M. 1938. — On the Indo-Chinese species of *Syzygium* Gaertner. *Journal of the Arnold Arboretum* 19 (2): 99–116. <https://doi.org/10.5962/p.185381>
- PARNELL J. A. N., CRAVEN L. A. & BIFFIN E. 2007. — Matters of scale: dealing with one of the largest genera of Angiosperms, in HODKINSON T. & PARNELL J. A. N. (eds), *Towards the Tree of Life: Systematics of Species Rich Groups*. Taylor and Francis, CRC Press, Boca Raton: 251–274 (Systematics Association Special Series; 72).
- SOH W. K. & PARNELL J. A. N. 2015. — A revision of *Syzygium* Gaertn. (Myrtaceae) in Indochina (Cambodia, Laos and Vietnam). *Adansonia*, sér. 3, 37 (2): 179–275. <https://doi.org/10.5252/a2015n2a1>
- TAGANE S., DANG V. S., SOULADETH P., NAGAMASU H., TOYAMA H., NAIKI A., FUSE K., TRAN H., YANG C. J., PRAJKASOOD A. & YAHARA T. 2018. — Five new species of *Syzygium* (Myrtaceae) from Indochina and Thailand. *Phytotaxa* 375 (4): 247–260. <https://doi.org/10.11646/phytotaxa.375.4.1>
- TAGANE S., TOYAMA H., CHHANG P., NAGAMASU H. & YAHARA T. 2015. — Flora of Bokor National Park, Cambodia I: Thirteen New Species and One Change in Status. *Acta Phytotaxonomica et Geobotanica* 66 (2): 95–135. <https://doi.org/10.18942/apg.KJ00010001424>

VAN STEENIS C. G. G. J. 1948. — General Chapters: General Considerations, in VAN STEENIS C. G. G. J. & NOORDHOFF P. (eds), *Flora Malesiana Series I Spermatophyta* 4. Noordhoff-Kolff, Djakarta: xiii-lxx.

WORLD FLORA ONLINE PLANT LIST 2023. — Available from <https://wfo-about.rbge.info/plant-list/taxon/wfo-4000037382-2022-12> [accessed 2 January 2023]

*Submitted on 11 January 2023;
accepted on 14 September 2023;
published on 26 February 2024.*