THAI FOREST BULL., BOT. 52(1): 1–4. 2024.
DOI https://doi.org/10.20531/tfb.2024.52.1.01

Diplospora siamica (Rubiaceae) - a new record for the Flora of Vietnam

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ABSTRACT

Diplospora siamica is newly recorded for the flora of Vietnam. It was found in Muong La Nature Reserve, Son La Province, northern Vietnam. A description and colour photos of the species are provided. A key to *Diplospora* species in Vietnam is also given.

KEYWORDS: Biodiversity, Indochina, northern Vietnam, taxonomy.

Accepted for publication: 3 October 2023. Published online: 8 January 2024

INTRODUCTION

Indochina is a part of the Indo-Burma region which is one of the biodiversity hotspots globally (Myers *et al*., 2000). This region is known for its incredibly diverse vegetation types and species richness (Averyanov *et al*., 2003). Recently, numerous botanical studies have been conducted in this region and, consequently, many new records and new species have been described from the region (e.g. Tagane *et al*., 2015, 2018; Truong *et al*., 2015, 2019; De Wilde & Duyfjes, 2016; Cho *et al*., 2017; Trang *et al*., 2017; The *et al*., 2019; Yang *et al*., 2020; Souladeth *et al*., 2021). However, the area is still being investigated with more new records and species are likely to be discovered.

Diplospora DC. (Rubiaceae) is a small genus of ca 23 species (WFO, 2023), distributed in tropical and subtropical Asia (Chen & Taylor, 2011; POWO, 2023). Three species of *Diplospora* are known from China (*Diplospora dubia* (Lindl.) Masam., *D. fruticosa* Hemsl. and *D. mollissima* Hutch.) (Chen & Taylor, 2011), three species from Thailand (*D. siamica* Craib, *D. schmidtii* (K.Schum.) Craib and *D. stylosa* Ridl.) (Puff *et al*., 2005), and four species from Myanmar (*D. griffithii* Hook.f., *D. bilocularis* (Kurz) M.Gangop. & Chakrab., *D. pubescens* Hook.f. and *D. siamica* Craib) (Kress *et al*., 2003). In eastern Indochina, there is one species in Cambodia (*D. stylosa*) and one species in Laos (*D. viridiflora* DC.) (Pitard, 1923; Cho *et al*., 2016; Newman *et al*., 2017–onwards). In Vietnam, two *Diplospora* species (*D. singularis* Korth. and *D. viridiflora* DC.) were mentioned in previous studies (Pitard, 1923; Ho, 2000; Ninh, 2005). *Diplospora viridiflora* is currently treated a synonym of *Diplospora dubia* (Lindl.) Masam, while the *D. singularis* is treated as a synonym of *Discospermum abnorme* (Korth.) S.J.Ali & Robbr. (POWO, 2023). Thus, currently, the genus has only one species known in Vietnam: *D. dubia*.

As part of a botanical investigation in 2019 in Muong La Nature Reserve, Son La Province, northern Vietnam, an interesting specimen of *Diplospora* was collected. To identify the specimen, we consulted the relevant taxonomic literature (Craib, 1911; Pitard, 1923; Ho, 2000; Puff *et al*., 2005; Chen & Taylor, 2011; Cho *et al*., 2016; Newman *et al*., 2017–onwards), and examined the digital specimen images of species of *Diplospora* from K (https//www.kew.org/), JSTOR Global Plants (https://plants.jstor.org/), and P (https://www.science.mnhn.fr/), as well as herbarium specimens in VNMN, HN, VNF, and VAFS. We conclude that the specimen is *Diplospora siamica* based on the pubescent branches and leaves, and greenish-white corolla. Since it was previously only known from Thailand and Myanmar (Craib, 1911; Kress *et al*., 2003; Puff *et al*., 2005), we here record it as a new record for the Flora of Vietnam.

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NEW RECORD

Diplospora siamica Craib, Bull. Misc. Inform. Kew: 393. 1911; Fl. Siam. En. 2(1): 128. 1932. Type: Thailand. Chiang Mai Province, Doi Sooten, in evergreen jungle, 1,650 m, *Kerr 1749* (syntypes **BM** [BM000797822 photo seen], **K** [K000763086, K000763087, K000763088 photos seen], **TCD** [TCD0017616 photo seen]). Fig. 1.

Small tree, up to 10 m tall; young branches densely pubescent, becoming glabrous. *Stipules* triangular, 6–8 mm long, densely pubescent outside when young. *Leaves* opposite; blades lanceolate or obovate-elliptic, 17–20 × 6.4–6.9 cm, base cuneate, apex acuminate, acumen 1–1.5 cm long, sometimes curved, lower surface densely hairy, upper surface glabrous or hairy along mid-veins and secondary veins; secondary veins 7–8 pairs; petioles 9–10 mm long, pubescent. *Inflorescences* axillary, cymose, few-to many-flowered; inflorescence axes and bracts hairy on both sides; peduncles 0.5 mm long. *Flowers* 4-merous, on pedicels 0.8–1.2 mm long. *Calyx* greenish and hairy, 0.9 mm long, with a short basal tubular part and 4 free lobes, tube 0.7 mm long, lobes triangular, 0.2 mm long. *Corolla* greenish-white, 4–5.5 mm long, 4-lobed, tube 2–2.5 mm long, lobes elliptic-oblong, 2–3 mm long, slightly hairy at throat. *Stamens* 4; filaments 0.3–0.5 mm long, glabrous; anthers 2–2.3 mm long. *Ovary* 0.8–1 mm long, hairy when young. *Fruit* drupaceous, subglobose, red, 6–7 mm in diam., with 2–3 seeds.

Specimens examined.— VIETNAM. Son La Province, Muong La District, Muong La Nature Reserve, 1,600 m a.s.l., 21°36′40.259″N 104°2′40.877″E, 10 May 2019, *Son et al. ML001* (**VAFS!**).

Distribution.— Myanmar, Thailand, Vietnam (Son La) (Fig. 2).

Ecology and phenology.— in evergreen forest at 1,600 m a.s.l. Flowering and fruiting specimens were observed from March to May.

Notes.— *Diplospora siamica* differs from *D. dubia*, the only other species of *Diplospora* currently known from Vietnam, in having pubescent branches and leaves, and greenish-white corolla (vs. branches and leaves glabrous, and corolla white or yellow in *D. dubia*).

KEY TO *DISPLOSPORA* SPECIES IN VIETNAM

1. Young branches pubescent; petioles pubescent, 9–10 mm long; leaf blades densely hairy on lower surface, glabrous on upper surface, secondary veins 7–8 pairs; stipules triangular, densely pubescent outside (when young); corolla greenish-white **1. D.siamica**
1. Branches glabrous; petioles glabrous, 4–15 mm long; leaf blades glabrous on both surfaces; secondary veins 5–11 pairs; stipules ovate to triangular, glabrous, densely white sericeous inside; corolla white or yellow **2. D.dubia**

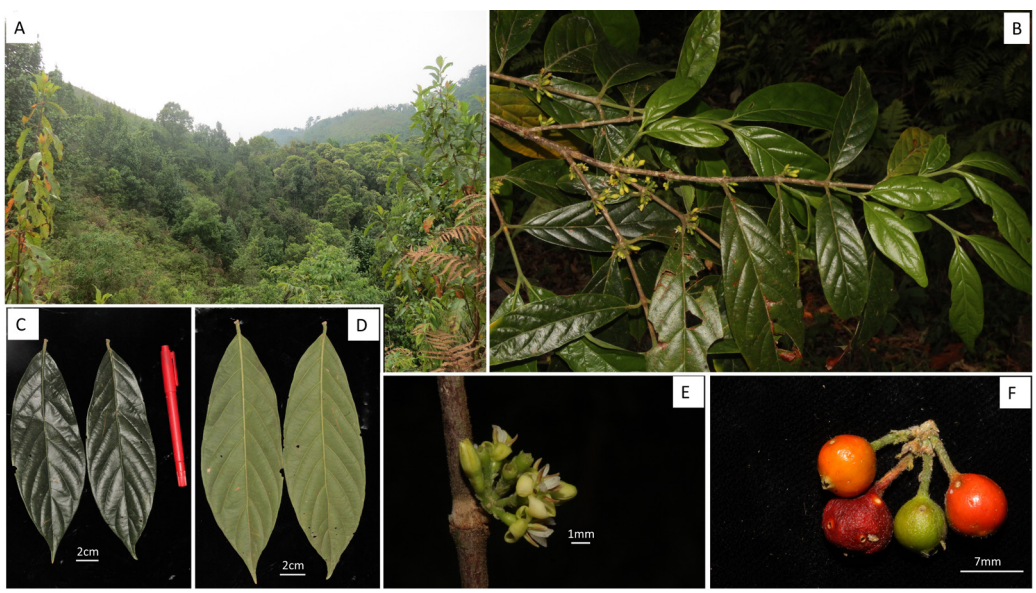

Figure 1. *Diplospora siamica* Craib: A. habitat; B. flowering branches; C. adaxial leaf surface; D. abaxial leaf surface; E. inflorescence and flowers; F. fruits. Photos by Trang Thanh Pham (A), and Hoang Thanh Son (B–F).

Figure 2. Distribution map of *Diplospora siamica* Craib in Vietnam.

ACKNOWLEDGEMENTS

We are grateful to Mr Hoang Thanh Son (Vietnamese Academy of Forest Sciences), Mr Ly Ta Chun, Mr Hoang Manh Quyen (Vietnam National University of Forestry), Mr Lo Van Luong, and Mr Giang A Tua (Son La Province) for their assistance in taking photos and collecting plant materials. We would like to thank Dr Do Van Truong (Department of Biology, Vietnam National Museum of Nature), Dr Phetlasy Souladeth (Faculty of Forest Science, National University of Laos) for their helpful comments and for improving this manuscript.

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