

## A new record of *Ehretia* (Ehretiaceae, Boraginales) for Thailand

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### ABSTRACT

*Ehretia silvana*, a tree from limestone habitat in Uthai Thani province, is newly recorded for Thailand. A description and illustrations are provided, together with a conservation assessment and a new key to the species of *Ehretia* in Thailand.

KEYWORDS: *Ehretia silvana*, conservation assessment, taxonomy

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### INTRODUCTION

*Ehretia* P.Br. has a pantropical distribution and comprises ca 50 species of trees to shrubs. The genus, formerly in Boraginaceae subfam. Ehretioideae, is now classified under Ehretiaceae (Boraginales), and is distinguished by having a bifid style with two stigmatic branches and drupaceous fruits with four pyrenes (Gottschling & Hilger, 2004; Luebert *et al.*, 2016). This circumscription of the family is supported by molecular analysis using nrITS and cpDNA sequence data (Gottschling *et al.*, 2014). Five species were enumerated in the most recent treatment of the genus for Thailand by Ruengsaawang & Chantaranothai (2010), then still under Boraginaceae.

During the preparation of Boraginaceae and related families for the Flora of Thailand, a collection from limestone habitat in Uthai Thani province in March 2013 has been identified as *Ehretia silvana* R.R.Mill, which represents a new record for Thailand.

### DESCRIPTION

***Ehretia silvana*** R.R.Mill, Edinburgh J. Bot. 53: 266. 1996.— *Cordia acuminata* Wall. in Roxb., Fl. Ind. 2: 339. 1824 [non *Ehretia acuminata* R.Br., Prodr. 1: 497. 1810]. Type: Bangladesh (Silhet), *Wallich Numer. List 896* (lectotype **K-W!**, bottom left-hand

specimen [K001110196], designated by Mill, 1996; isolectotypes **BM!** [BM000603166], **K!** [K000998072], **M!** [M0188691, M0188692]). Figs. 1–2.

Trees, 3–7 m tall; bark thin, rough, grey-brown, with elliptic lenticels, glabrous; branchlets terete, glabrous to sparsely puberulous with glandular trichomes when young. *Leaves* chartaceous, elliptic to broadly ovate, 12–18 × 7–12 cm, apex cuspidate or acuminate, base oblique or rounded, margin entire; upper surface dark green, glabrous, lustrous; lower surface light green, usually puberulous, with scattered in the axils of lateral veins or glandular trichomes when young; lateral veins and venations impressed on upper surface, conspicuous on lower surface; lateral veins 5–6 pairs; petiole 2–3 cm long, grooved above, usually puberulous. *Inflorescences* terminal and subterminal, 5–9 cm long, cymose with 10–30 flowers, puberulous with glandular trichomes. *Peduncles* 2.5–4 cm long, puberulous. *Flowers* subsessile or with pedicels up to 1 mm long, pubescent. *Calyx* green, campanulate, 3–4 mm long, 5-lobed, tube ca 0.5 mm long; lobes narrowly ovate or triangular, 1.5–1.8 × 0.5–1 mm, strigose with glandular trichomes outside, glabrous inside, persistent in fruiting. *Corolla* white, 8–9 mm long, tubular with spreading lobes, 5-lobed; tube 5–7 mm long; lobes oblong 2–3 × 4–6 mm. *Stamens* 5, separate, 5–7.5 mm long;

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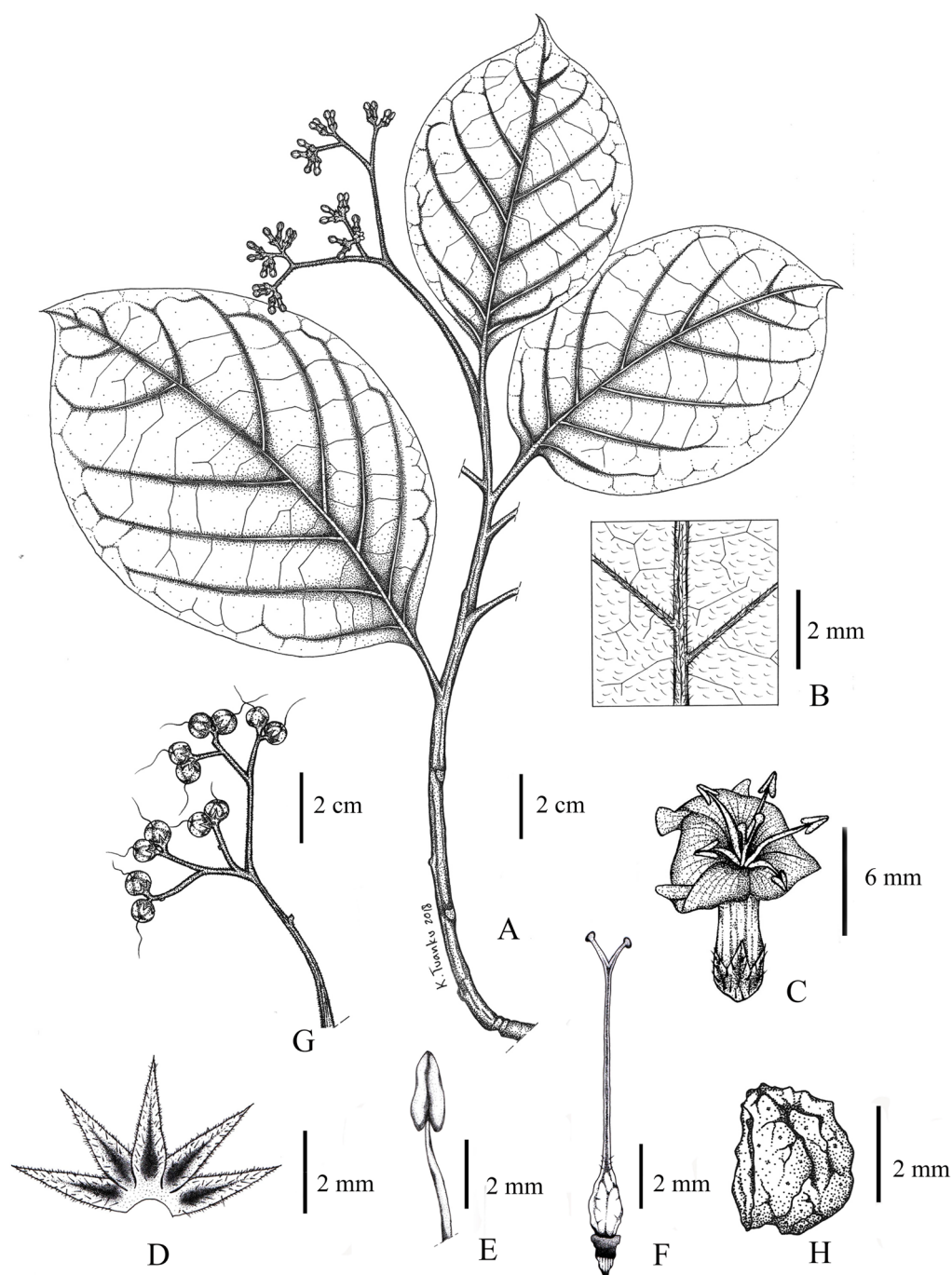


Figure 1. *Ehretia silvana*: A. habit; B. leaf indumentum, abaxial, lamina and midrib; C. flower, later view; D. opened calyx including the tube; E. single stamen; F. pistil; G. infructescence; H. pyrene showing sculptured surface. Drawn by Kritsada Tuanku from Poopath MP-BD39 (BKF).

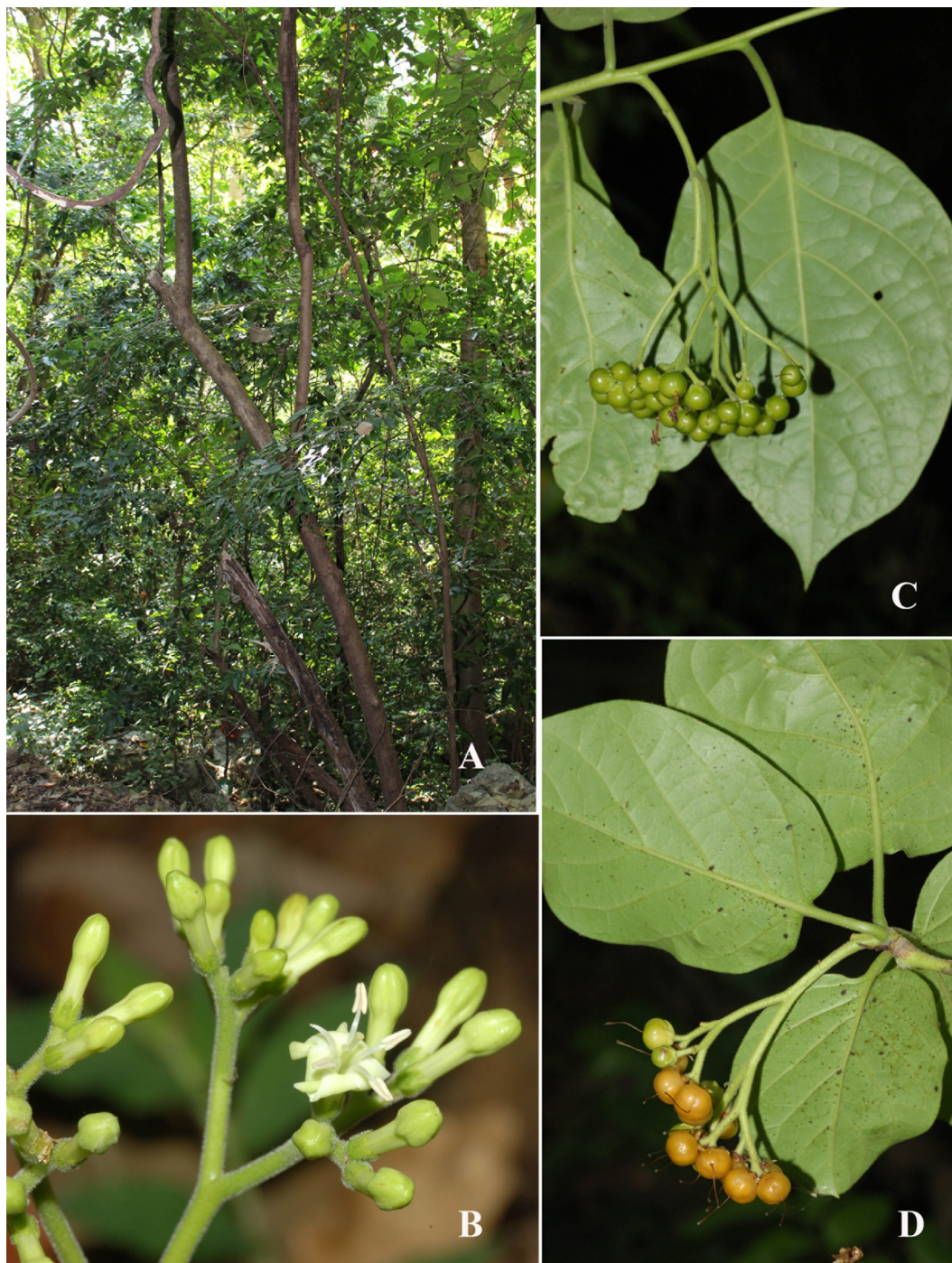


Figure 2. *Ehretia silvana*: A. habit; B. inflorescence; C. habit and young infructescence; D. habit and mature infructescence. Photographed by M. Poopath.



filaments 2–3 mm long, glabrous, inserted near base of corolla lobe, exserted; anther oblong, basifixed and sagittate, 3–3.5 mm long. *Ovary* 4-locular, each locule with 1 ovule, ovoid; style 6–8 mm long, bifid, branches ca 1 mm long, sparsely pubescent or glabrous; stigmas 2, capitate. *Fruits* drupaceous, subglobose, 3–4 mm long, yellow or orange at maturity, separating into 4 pyrenes, 2.8–3 mm long, ridged on the sculpture.

Thailand.— SOUTH-WESTERN: Uthai Thani [Khao Pla-ra, Tham Pathun, 200 m alt., 5 Mar. 2013, Poopath MP-BD39 (BKF!)]

Distribution.— India (Assam), Bangladesh.

Ecology.— In dry mixed deciduous forest on limestone hill, ca 200 m alt. Flowering January–April; fruiting March–May.

Vernacular.— Kom bai khon (กอมใบขน).

IUCN conservation assessment. — In Thailand, it is known only from a single location in a non-hunting area, Khao Pla-ra, Tham Pathun, Uthai Thani province. A small population is restricted in dry mixed deciduous forest. This species also occurs in India (Assam) and Bangladesh. Therefore, it should be considered as Near Threatened (NT) according to the IUCN (2012) criteria.

Notes.— This species resembles *Ehretia wallichiana* Hook.f. & Thomson and *E. exsoluta* R.R.Mill, both from India, in having the corolla with reflexed to spreading lobes, the corolla tube as long as the corolla lobes and exserted stamens. *Ehretia silvana* is different from both species by its puberulous indumentums on lower leaf sides (vs glabrous), terminal and subterminal inflorescences (vs lateral in axils of fallen leaves) and basifixed or sub-basifixed anthers (vs medifixed).

#### KEY TO THE SPECIES OF *EHRETIA* IN THAILAND

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|--|---------------------------------------|
| 1. Trees or shrubs, leaves at least 7 cm long                                |                                       |
| 2. Leaf margin serrate to irregularly dentate                                | <b>1. <i>E. acuminata</i> R.Br.</b>   |
| 2. Leaf margin entire  |                                       |
| 3. Corolla tube twice as long as corolla lobes                               | <b>2. <i>E. javanica</i> Blume</b>    |
| 3. Corolla tube shorter than or as long as corolla lobes                     |                                       |
| 4. Inflorescences scorpioid; corolla tube shorter than corolla lobes         | <b>3. <i>E. laevis</i> Roxb.</b>      |
| 4. Inflorescences cymose; corolla tube as long as corolla lobes              |                                       |
| 5. Leaves elliptic to broadly ovate; inflorescences with glandular trichomes | <b>4. <i>E. silvana</i> R.R.Mill</b>  |
| 5. Leaves oblanceolate; inflorescences glabrous                              | <b>5. <i>E. timorensis</i> Decne.</b> |
| 1. Scandent shrubs, leaves at most 5 cm long                                 | <b>6. <i>E. winitii</i> Craib</b>     |

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