

# *Ehretia longiflora* (Boraginaceae): A new record for India from Andaman & Nicobar Islands

Joju P. Alappatt\*

Department of Environment and Forests, Forest Training Institute, Wimberlygunj, Andaman and Nicobar Islands – 744 206, India.

\*Email: [jojualappatt@yahoo.com](mailto:jojualappatt@yahoo.com)

## Abstract

*Ehretia longiflora* Champ. ex Benth. is first reported from the Andaman & Nicobar Islands to the flora of India. A brief description with photographs is provided for easy identification.

**Keywords:** Andaman & Nicobar Islands, Boraginaceae, *Ehretia longiflora*, India, New Record.

## Introduction

*Ehretia* P. Browne (Boraginaceae), the largest genus of the subfamily Ehretioideae comprises about 50 species, distributed mostly in Africa, South Asia, North America and the Caribbean islands (Zhu *et al.*, 1995). Four species of *Ehretia* have been recorded in Andaman and Nicobar Islands so far (Pandey & Diwakar, 2008; Murugan *et al.*, 2016). Among them, *Ehretia dichotoma* Blume and *E. timorensis* Decne. occur in Andaman Islands only while *E. laevis* Roxb. has been reported from both Andaman and Nicobar group of Islands. *Ehretia microphylla* Lam. is a cultivated species.

During floristic explorations in South Andaman Island, a few specimens belonging to the genus *Ehretia* were collected. Based on critical study and review of literature (Johnston, 1951; Zhu *et al.*, 1995; Mill, 1996; Hsiao *et al.*, 1998), the specimens were identified as *Ehretia longiflora* Champ. ex Benth. A thorough scrutiny of literature (Clarke, 1883; Sinha, 1999; Pandey & Diwakar, 2008; Murugan *et al.*, 2016) revealed that this species was hitherto unrecorded from Andaman & Nicobar Islands and mainland India. In the present treatment the species is reported as new addition to the flora of India. A brief description along with photographs is provided to facilitate easy recognition of this species in the field.

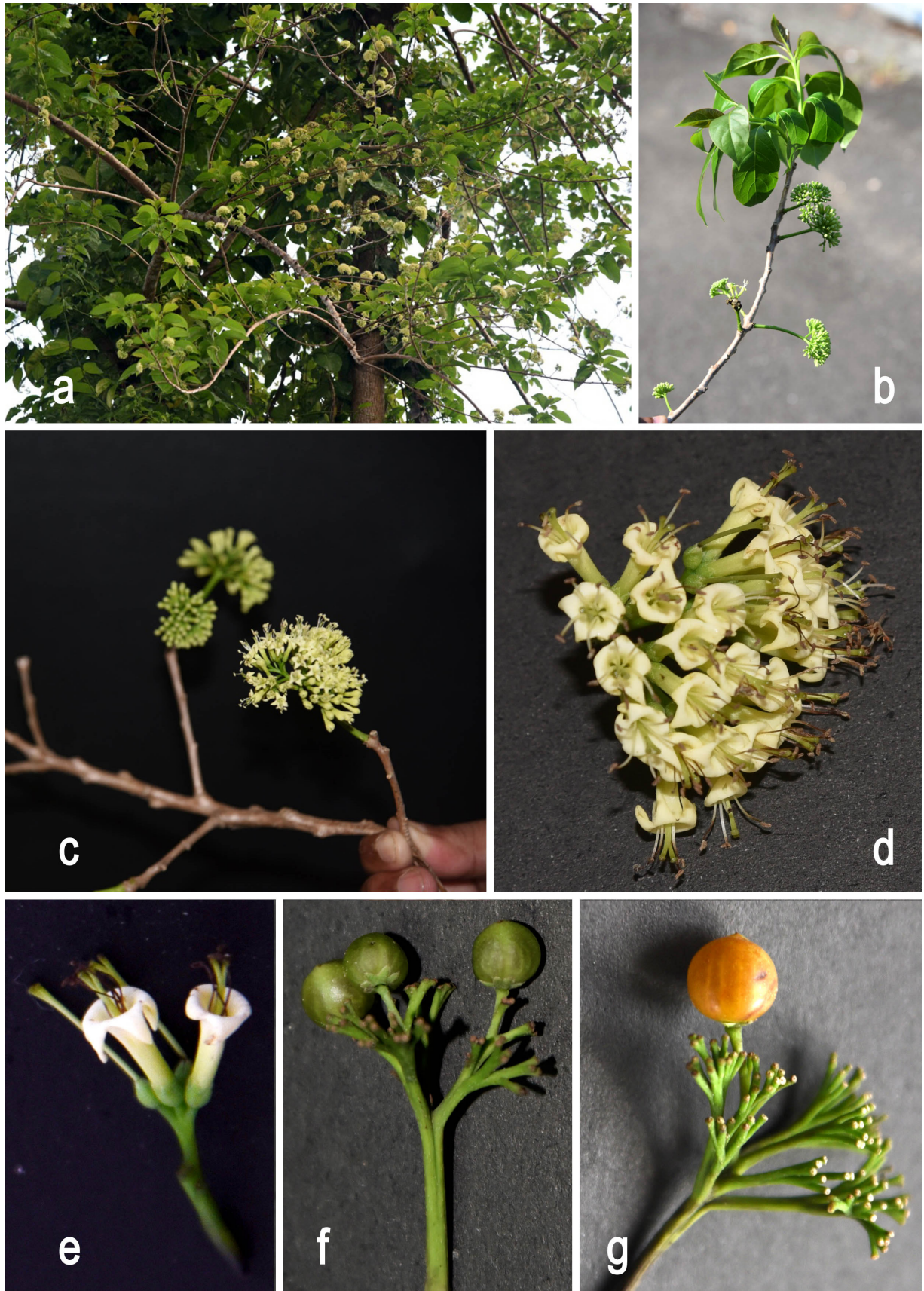
## Taxonomy

*Ehretia longiflora* Champ. ex Benth., Hooker's J. Bot. Kew Gard. Misc. 5: 58. 1853; Gagnep. & Cour. in Lecomte, Fl. Indo-Chine 4: 210. 1914; Kaneh., Form.

Trees Rev. ed. 637. f. 593. 1936; Hou, Taiwania 1: 203. 1950; H.L. Li, Woody Fl. Taiwan 812. 1963; Z.Y. Zhu, Riedl & Kamelin in Z.Y. Wu & P.H. Raven, Fl. China 16: 335. 1995; J.Y. Hsiao & H.Y. Liu in T.C. Huang, Fl. Taiwan ed. 2, 4: 395. 1998. *E. glaucescens* Hayata, Icon. Pl. Form. 3: 153. 1913. **Fig. 1.**

Trees, upto 10 m tall; bark dark gray to dark brown, scaly; young branches brown, lenticellate, branchlets greenish, glabrous. Leaves elliptic to oblong-ob lanceolate, 3–16 × 3–7 cm, subcoriaceous, glabrous, base cuneate, margins entire, apex abruptly acute to acuminate or short-caudate, greenish and shining above; lateral veins 4–7 pairs; petioles 1–3 cm long. Cymes terminal on lateral branches, flat topped, densely flowered, 3–6 cm wide; peduncles 2–5 cm long. Flowers sessile or on short pedicels, c. 1 cm long, 0.5 cm across, fragrant. Calyx 2–2.5 mm, hairy; lobes ovate, c. 1.5 mm long, ciliate along margins. Corolla tubular-campanulate, creamy to greenish white, 10–12 mm long, corolla tube 9–10 mm long, base c. 1.5 mm wide, slightly hairy, glabrous inside, throat 3–4 mm wide; lobes 5, ovate to elliptic-ovate, c. 2 mm, shorter than tube, spreading, soon becoming reflexed. Stamens 5, inserted 3.5–5 mm above the base of corolla tube; filaments filiform, 8–9 mm long, anthers c. 1 mm long. Ovary glabrous, c. 1 × 1 mm.; style 10–11 mm, 2-cleft at apex, branches c. 1 mm long, stigma capitate; ovules 4. Drupes glabrous, green when young, pale yellow to orange red when matured, 9–11 mm in diam.; endocarp divided at maturity into four 1-seeded pyrenes.

*Flowering & fruiting:* March–June.



**Fig. 1.** *Ehretia longiflora* Champ. ex Benth.: **a.** Habit; **b.** Flowering branch; **c.** Inflorescence; **d & e.** Flowers-close up views; **f & g.** Fruits-matured & ripened (Photos by Joju P. Alappatt).

*Habitat:* Rare in inland evergreen forests growing in association with *Bombax insigne* Wall., *Crypteronia paniculata* Blume, *Elaeocarpus tectorius* (Lour.) Poir., *Ficus callosa* Willd., *F. hispida* L.f., *F. nervosa* B. Heyne ex Roth, *Heteropanax fragrans* (Roxb.) Seem., *Pterocymbium tinctorium* Merr. and *Tetrameles nudiflora* R.Br. at an elevation of about 20–30 m from the sea level.

*Distribution:* China, Hong Kong, Taiwan, Vietnam and now in India.

*Specimens examined:* INDIA, **Andaman & Nicobar Islands**, South Andaman Island, Mt. Harriet Hill Ranges, near Hope Town, 31.03.2017, Joju P. Alappatt 1456 (Herbarium, Forest Training Institute, Wimberlygunj); Hope Town, 07.03.2018, Joju P. Alappatt 1519 (PBL). CHINA, **Little Hong Kong**, February 1958, C. Wilford 355 (K000998021, digital image!), **Hong Kong**, s.d., J.G. Champion s.n. (K000998018, digital image!); *Ibid.*, 1854, G. Bentham 146 (K000998019, digital image!).

*Notes:* *Ehretia longiflora* belongs to a group of very closely related but geographically isolated species in which the other members are *E. dunniana* H.Lev. (South China), *E. javanica* Blume (Indonesia, Malesia and Thailand) and *E. wallichiana* Hook.f. & Thomson ex Gamble (North East India, Nepal, Burma and Bhutan). In *E. dunniana* secondary and tertiary veins are more evident in the leaf lamina. Young twigs, inflorescence and calyx are densely and minutely pubescent and corolla tube is less than 10 mm long. *E. javanica* has more rounded, more evidently veined, broadly elliptic leaves. *E. wallichiana* has thinner much more evidently veined leaves and flowers with a larger calyx (3.0–4.5 mm), shorter corolla tube (5–6 mm) and longer lobes (3.0–4.5 mm) and larger anthers (1.7 mm).

#### Key to the species of *Ehretia* in Andaman & Nicobar Islands

1. Cymes 1–3-flowered; leaves small (< 3.5 cm long) with few dentations at apex ..... *E. microphylla*
1. Cymes many flowered; leaves large (> 5 cm long) margin serrate or entire ..... 2
2. Corolla tube twice as long as corolla lobes.....  
..... *E. longiflora*
2. Corolla tube shorter than or as long as corolla lobes ..... 3
3. Inflorescence produced on new shoots bearing well developed leaves.....*E. dichotoma*
3. Inflorescence produced on roughened/verrucose shoots of previous season before new leaves..... 4

4. Leaves smaller, ovate to lanceolate, shortly acuminate ..... *E. laevis*

4. Leaves larger, broadly oblong to oblanceolate, more acuminate.....*E. timorensis*

#### Acknowledgements

The author is grateful to Shri Tarun Coomar IFS, PCCF, Department of Environment & Forests, Andaman & Nicobar Islands and Dr. Lal Ji Singh Botanical Survey of India, Port Blair for providing facilities and support.

#### Literature Cited

- Clarke, C.B. 1883. Boragineae. In: Hooker, J.D. (ed.), *The Flora of British India*. Vol. 4. L. Reeve & Co. Ltd., London. pp. 134–179.
- Hsiao, J.Y. & H.Y. Liu 1998. Boraginaceae. In: Huang, T.C. (ed.), *Flora of Taiwan, Second edition*. pp. 582–646.
- Johnston, I.M. 1951. Studies in the Boraginaceae, XX. Representatives of three subfamilies in Eastern Asia. *J. Arnold Arbor.* **32**: 1–26, 99–122.
- Mill, R.R. 1996. Notes relating to the Flora of Bhutan: XXXV. Boraginaceae, III. *Ehretia wallichiana*: a tangle disentangled. *Edinburgh J. Bot.* **53(2)**: 247–270.
- Murugan C., Prabhu S., Sathiyaseelan R. & R.P. Pandey, 2016. *A checklist of plants of Andaman and Nicobar Islands*. ENVIS Centre on Floral Diversity, Botanical Survey of India, Kolkata. Available from: <http://www.bsienviis.nic.in/database/Checklist-of-Andaman-Nicobar-islands/24427.aspx> (accessed 28.10.2017)
- Pandey, R.P. & P.G. Diwakar 2008. An integrated checklist flora of Andaman and Nicobar Islands, India. *J. Econ. Taxon. Bot.* **32(2)**: 403–500.
- Sinha, B.K. 1999. Boraginaceae. In: Hajra, P.K. & P.S.N. Rao (eds.), *Flora of Great Nicobar Island*. Botanical Survey of India, Kolkata. pp. 315–317.
- Zhu, G., Riedl, H. & R.V. Kamelin. 1995. Boraginaceae. In: Wu, Z.Y. & P.H. Raven (eds.), *Flora of China*. Vol. 16 (*Gentianaceae through Boraginaceae*). Science Press, Beijing and Missouri Botanical Garden Press, St. Louis. 479 pp.

Received: 30.04.2018

Revised and Accepted: 17.12.2018