**Litsea martabanica** (Kurz) Hook. f. (Lauraceae): A New Addition to the Flora of Vietnam

Luu-Dam Ngoc Anh1,2,*, Do Van Hai2,3, Bui Van Huong1, Nguyen Duy Hung2, Luu-Dam Cu1,2, Lydia Kukhareva4, Eugene Popoff4 and Vladimir V. Tito4

1Vietnam National Museum of Nature (VN MN), Vietnam Academy of Science and Technology, No.18, Hoang Quoc Viet Road, Cau Giay District, Ha Noi City, Vietnam. *ngocanh@vn mn.vast.vn (author for correspondence); 2Graduate University of Science and Technology (GUST), Vietnam Academy of Science and Technology, No.18, Hoang Quoc Viet Road, Cau Giay District, Ha Noi City, Vietnam; 3Institute of Ecology and Biological Resources (IEBR), Vietnam Academy of Science and Technology, No.18, Hoang Quoc Viet Road, Cau Giay District, Ha Noi City, Vietnam.
4Central Botanical Garden of the National Academy of Sciences of Belarus, Surganova Street 2v, Minsk 220012, Belarus

*Litsea martabanica* (Kurz) Hook. f. (Lauraceae) is reported for the first time for the flora of Vietnam. *Litsea martabanica* can be distinguished from its closest allies, *Litsea longistaminata* and *Litsea panamanja*, by having smaller leaves, cylindrical, ellipsoid-cylindrical or ovoid fruits, and smaller and cup-shaped perianth tube. A detailed description, important taxonomic notes, and photos are provided.

Keywords: Lauraceae, *Litsea martabanica*, new record, Gia Lai, Vietnam

Lauraceae Juss. comprises 52 genera with about 2,550 species, distributed mainly in tropical and warm regions of southeastern Asia and Brazil (Mabberley 2008). *Litsea* Lam. is one of the largest genera in the family, the species of which form an important component of tropical forests. It is estimated to contain over 300 species, mostly in tropical Asia, but also in Oceania, Australia and in North and Central America (van der Werff 2001). In Vietnam, *Litsea* comprises 41 species with 15 varieties, and 1 form (Nguyen 2017).

During our field investigation of the diversity of essential oil plants in Gia Lai Province in the central highlands of Vietnam, we found an interesting species of *Litsea*. After critically scrutinizing the literature (van der Werff 2001, Huang et al. 2008, Ngernsaengsuroot et al. 2011, Tagane et al. 2017) and comparison with type specimens, we identified this unknown species as *Litsea martabanica* (Kurz) Hook. f., previously known only from Cambodia, China, Myanmar and Thailand.

We here report its occurrence in Vietnam for the first time. *Litsea martabanica* differs from previously known Vietnamese species of *Litsea* in having the leaf blade elliptic-oblong or ovate-oblong with acuminate or caudate apex, fruit cylindrical to ellipsoid-cylindrical, 10–17 × 5–8 mm, and the perianth tube cup-shaped 3–6 mm long in fruit (Nguyen 2003, Nguyen 2017). A taxonomic description, habitat details, color photographs of *L. martabanica* and a comparison with two related taxa, *L. longistaminata* (H. Liou) Kosterm. and *L. panamanja* (Buch.-Ham.ex Nees) Hook. f., is provided in this paper.

**Materials and Methods**

Two voucher specimens of *Litsea martabanica* were collected at A Yun Commune, Mang
Yang District, Gia Lai Province, in the central highlands of Vietnam. The specimens were thoroughly processed following standard protocol and deposited in the Herbarium of the Vietnam National Museum of Nature (VNMN) and Institute of Ecology and Biological Resources, Vietnam Academy of Science and Technology (HN).

We followed the morphological comparison method for this study. Relevant literature was consulted (Kurz 1873, 1877, Hooker 1886, Li & Li 2005, Huang et al. 2008, Ngernsaengsuruay et al. 2011, Nguyen 2017). Type specimens (including images) housed in several virtual herbaria viz. A, BM, E, K, MO, P, US, along with national level herbaria HN, SGN, VNM, VNMN, were consulted to confirm the identity of the specimens. Since we collected only fruiting material, the description of the inflorescence and floral characters are from Ngernsaengsuruay et al. (2011) and partly from specimens in herbaria.

**Taxonomy**

Key to the allied taxa of *Litsea martabanica* known from Vietnam (modified from Nguyen 2017)

1a. Leaf blade narrowly elliptic, length/width ratio 7–8; lateral veins 15–20 on each side of midrib; inflorescences in short clusters of subsessile umbels ................................................................. *L. pseudoelongata* H. Liou
1b. Leaf blade obovate to obovate-oblong, obovate-oblong, oblong, elliptic-oblong or lanceolate, length/width ratio less than 4; secondary veins less than 13 on each side of midrib; inflorescences on umbel-bearing reduced branchlets appearing as a raceme of umbels, distinctly pedunculate ................................................................. 2
2a. Fruit compressed globose ................................................................. *L. panamanja* (Buch.-Ham. ex Nees) Hook. f.
2b. Fruit cylindrical, ellipsoid-cylindrical or ovoid ................................................................. 3
3a. Leaf blade obovate to obovate-oblong, apex mucronate ................................................................. *L. longistaminata* (H. Liou) Kosterm.
3b. Leaf blade ovate-oblong, elliptic-oblong or lanceolate, apex acuminate or short acute ................................................................. 4
4a. Young twigs and petioles pale yellow pubescent; leaf blade elliptic-oblong or ovate-oblong; fruit cylindrical, ellipsoid-cylindrical, 1–1.7 × 0.5–0.8 cm ................................................................. *L. martabanica* (Kurz) Hook. f.
4b. Twigs and petioles glabrous; leaf blade obovate, obovate-oblong or oblong, coriaceous; fruits cylindrical or ovoid, 1.8–2.4 × 1–1.3 cm (*L. pierrei* Lecomte) ................................................................. 5
5a. Perianth 3–4 lobed, with many round lenticels outside margin ................................................................. *L. pierrei* var. *lobata* C. K. Allen
5b. Perianth unlobed, unknown about lenticels outside margin ................................................................. 6
6a. Perianth enclosing 2/3 of fruit; largest leaves 13–15 cm long ................................................................. *L. pierrei* var. *pierrei*
6b. Perianth enclosing 1/2 of fruit; largest leaves 22–24 cm long ................................................................. *L. pierrei* var. *grandifolia* C. K. Allen

**Litsea martabanica** (Kurz) Hook. f., Fl. British India 5: 164 (1886). — Fig.1

Type: MYANMAR. Martaban, *Kurz* 955 (K000793195) (lecto- K, image!)

*Tetranthera martabanica* Kurz, Forest Fl. Burma 2: 301 (1877).


Trees, 4–15 m tall; bark smooth, grayish brown. Young branchlets pale yellow pubescent, lenticellate, old branchlets glabrous. Leaves alternate; petiole 0.8–2.5 cm long, pubescent; blade elliptic-oblong or ovate-oblong, 5–15 × 2.5–6 cm, apex acuminate or caudate, base cuneate, slightly oblique, margin entire, thin coriaceous, dark green, glabrous except pubescent on midrib and secondary veins above, glaucous, pubescent or sparsely pubescent beneath, midrib shallowly sunken or flattened above, raised beneath, secondary veins 5–9 pairs, shallowly sunken or flattened above, raised beneath, curving and looping near margin, tertiary veins scalariform-reticulate, distinct beneath. Inflorescences on umbel-bearing reduced branchlets with the appearance of a raceme of umbels, in axils of leaves or along branchlets, raceme of umbels 1–3 cm long; umbels 0.6–1 cm in diam.; peduncles 0.5–1 cm long,
Fig. 1. *Litsea martabanica* (Kurz) Hook. f.  A. Fruiting branch showing abaxial side of the leaves; B. Fruiting branch showing adaxial side of the leaves; C. Infructescences; D. Fruits. Photos taken by Do Van Hai & Bui Van Huong on 17 May 2018 from Luu Dam et al. TN17/C04-GL19 (VNMN).
pubescent; bracts 4, decussate, suborbicular or broadly ovate, concave, 4–6 × 4–5 mm, pubescent outside. Stipitate flowers 4 in each umbel; pedicels 1–8 mm long, densely pubescent; tepals 6, elliptic or elliptic-oblong, subequal, 4–5 × 1–2 mm, membranaceous, pubescent outside; stamens 9–12, unequal; anthers 0.8–1 mm long; filaments slender, 2.5–4 mm long, villose, 2 glands at base or without glands; pistillode none. Pistillate flowers 4 in each umbel; pedicels 6–8 mm long, densely pubescent; tepals 6, elliptic or elliptic-oblong, subequal, 2–3 × 1 mm, membranaceous, pubescent outside; ovary ellipsoid, 1.5–2 × 0.8–1 mm, glabrous; style 2 mm long; stigma peltate; staminodes 9–12, linear, 1–2 mm long, hairy, 2 glands or without glands. Fruits cylindrical, ellipsoid-cylindrical or ovoid, 10–17 mm long, 5–8 mm in diam., green with white dots when young, turning dark purple and black when ripe, glabrous; enlarged perianth tube cup-shaped, 3–6 mm high, 5–7 mm in diam., sparsely pubescent, margin entire; fruiting pedicels 5–10 mm long, sparsely pubescent; infructescence stalks 0.5–1 cm long, pubescent.


Distribution. Vietnam (Gia Lai), Cambodia (Bokor), China (Yunnan), Myanmar, Thailand.

Ecology and habitat in Vietnam. Litsea martabanica grows in thickets and broad-leaved forests at 950 m a.s.l.

Phenology in Vietnam. Fruiting in May.

<table>
<thead>
<tr>
<th>Characters</th>
<th>Litsea martabanica</th>
<th>Litsea longistaminata *1</th>
<th>Litsea panamanja *2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hairiness of Branchlet</td>
<td>Pale yellow pubescent</td>
<td>Yellow-brown or ferruginous tomentose</td>
<td>Pubescent and becoming glabrous.</td>
</tr>
<tr>
<td>Petiole</td>
<td>0.8–2.5 cm long, pubescent</td>
<td>1–2 cm long, densely ferruginous tomentose</td>
<td>1–1.5 cm long, glabrous</td>
</tr>
<tr>
<td>Leaf blade</td>
<td>elliptic-oblong or ovate-oblong, 5–15 × 2.5–6 cm</td>
<td>obovate to obovate-oblong, 15–25 × 4.6–11.5 cm</td>
<td>oblong or lanceolate, 10–18 × 3–7 cm</td>
</tr>
<tr>
<td>Leaf surface</td>
<td>glabrous except pubescent on midrib and secondary veins above, glaucous, pubescent or sparsely pubescent beneath</td>
<td>glabrous above, pubescent and becoming glabrous beneath</td>
<td>glabrous above, pubescent or glabrescent beneath</td>
</tr>
<tr>
<td>Number of lateral veins</td>
<td>5–9 pairs</td>
<td>7–9 pairs</td>
<td>7–11 pairs</td>
</tr>
<tr>
<td>Leaf base</td>
<td>cuneate, slightly oblique</td>
<td>cuneate or obtuse</td>
<td>cuneate</td>
</tr>
<tr>
<td>Leaf apex</td>
<td>acuminate or caudate</td>
<td>rounded and with abrupt acumen or acuminate</td>
<td>acuminate or shortly acute</td>
</tr>
<tr>
<td>Peduncle</td>
<td>5–10 mm long, pubescent</td>
<td>10 mm long, ferruginous pubescent</td>
<td>3–4 mm long, pubescent</td>
</tr>
<tr>
<td>Fruit</td>
<td>cylindrical, ellipsoid-cylindrical or ovoid, 10–17 × 5–8 mm</td>
<td>oblong, ca. 17 × 8 mm</td>
<td>compressed globose, ca. 6 × 10 mm</td>
</tr>
<tr>
<td>Perianth tube in fruit</td>
<td>cup-shaped, 3–6 mm high, 5–7 mm in diam.</td>
<td>discoid, 1–2 mm high, 5–8 mm in diam.</td>
<td>cup-shaped, 5–6 mm high, 7–8 mm in diam.</td>
</tr>
<tr>
<td>Fruiting pedicel</td>
<td>6–10 mm long, sparsely pubescent</td>
<td>3–4 mm long, pubescent</td>
<td>ca. 8 mm long, pubescent</td>
</tr>
</tbody>
</table>

*1 From the description in Huang et al. (2008) and specimens observed at HN.
*2 From the description in Huang et al. (2008) and Nguyen (2017) and specimens observed at HN.
**Note.** Among the species of *Litsea* inflorescences appearing as racemes (Huang *et al.* 2008, Nguyen 2017), *Litsea martabanica* most closely resembles *L. longistaminata* and *L. panamanja*. However, *L. martabanica* is distinguished from *L. longistaminata* by its smaller elliptic-oblong or ovate-oblong leaves 5–15 × 2.5–6 cm (vs. obovate to obovate-oblong, 15–25 × 4.6–11.5 cm), cup-shaped fruiting perianth tube (vs. discoid) and longer fruiting pedicels (6–10 mm vs. 3–4 mm long) and from *L. panamanja* by its pubescent petioles (vs. glabrous) and larger, cylindrical, ellipsoid-cylindrical or ovoid fruit 10–17 × 5–8 mm (vs. compressed globose, ca. 6 × 10 mm) (Table 1).

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**References**


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