## 大叶可爱花, 中国爵床科一新记录种

龚强帮<sup>1</sup>,马兴达<sup>2</sup>,尹海军<sup>1</sup>,王文广<sup>2</sup>,段春成<sup>1</sup>,邓云飞<sup>3</sup>,石干么<sup>1</sup>,申健勇<sup>2\*</sup>

(1. 云南铜壁关省级自然保护区管护局,云南 德宏 678400; 2. 中国科学院西双版纳热带植物园,云南 西双版纳 666303; 3. 中国科学院华南植物园,中国科学院植物资源保护与可持续利用重点实验室,广州 510650)

**摘要:** 首次报道中国爵床科(Acanthaceae)一新记录种: 大叶可爱花(*Eranthemum macrophyllum* Wall. ex Nees)。该种原记载分布于缅甸,在中国仅见于云南省铜壁关省级自然保护区。为名称 *Eranthemum macrophullus* 指定了后选模式。

**关键词:** 爵床科; 可爱花属; 大叶可爱花; 新记录; 中国; 模式标定

doi: 10.11926/jtsb.4191

## Eranthemum macrophyllum Wall. ex Nees (Acanthaceae), A Newly Recorded Species from China

GONG Qiang-bang<sup>1</sup>, MA Xing-da<sup>2</sup>, YIN Hai-jun<sup>1</sup>, WANG Wen-guang<sup>2</sup>, DUAN Chun-cheng<sup>1</sup>, DENG Yun-fei<sup>3</sup>, SHI Gan-mo<sup>1</sup>, SHEN Jian-yong<sup>2\*</sup>

(1. Yunnan Tongbiguan Provincial Nature Reserve, Dehong 678400, Yunnan, China; 2. Xishuangbanna Tropical Botanical Garden Chinese Academy of Sciences, Xishuangbanna 666303, Yunnan, China; 3. Key Laboratory of Plant Resources Conservation and Utilization, South China Botanical Garden, Chinese Academy of Sciences, Guangzhou 510650, China)

**Abstract:** *Eranthemum macrophyllum* Wall. ex Nees (Acanthaceae) is reported as newly recorded species from China. The species was previously known from Myanmar. In China, it is only known from Tongbiguan Provincial Nature Reserve, Yunnan. The lectotype is designated for the name *E. macrophyllum*.

Key words: Acanthaceae; Eranthemum; E. macrophyllum; New record; China; Typification

Eranthemum L. belongs to the family Acanthaceae and comprises approximately 30 species distributed in tropical and subtropical Asia<sup>[1–2]</sup>. Three species and one variety were previously recorded in China<sup>[2–4]</sup>, i.e., E. pulchellum Andrew., E. tetragonum A. Dietr. ex Nees, E. austrosinense H. S. Lo, and E. austrosinense var. pubipetalum (S. Z. Huang ex H. P. Tsui) T. L. Li & Y. F. Deng. Eranthemum pulchellum Andrew is native to SW Himalayan region and now is widely cultivated in S China as ornamental. Eranthe-

mum splendens (T. Anderson) Hort. ex Siebert et Voss, a species restrict to Bangladesh, Bhutan, India and Nepal, was previously erroneously reported from S Yunnan in *Flora Reipublicae Popularis Sinica*<sup>[3]</sup> and *Flora Yunnanica*<sup>[5]</sup>, and it was excluded in *Flora of China*<sup>[2]</sup>.

In the course of the investigation in Tongbiguan Provincial Nature Reserve, we collected a plant of *Eranthemum* which is quite different from other Chinese species by having the shrubby habit and

**Received:** 2020–01–08 **Accepted:** 2020–05–07

This work was supported by STS Program of Chinese Academy of Sciences (Grant No. KFJ-3W-No1), the Theory and Practice Fund for Conservation and Application of National Strategic Tropical Plant Resources (Grant No. 2017XTBG-F05), and the Science & Technology Basic Resources Investigation Program of China (Grant No. 2017FY100100).

GONG Qiang-ban (Born in 1987), Male, interesting in plant taxonomy. E-mail: Qiangbanggong@163.com

<sup>\*</sup> Corresponding author. E-mail: shenjianyong@xtbg.ac.cn

larger leaves and trifurcate branched inflorescences. Further studies reveal that it represents a species new to China reported below.

Eranthemum macrophyllum Wall. ex Nees, Pl. Asiat. Rar. 3: 106. 1832. Type: Myanmar, "Ripae Irawaddi ad rupes Pingee et Mt Prome", 26 Nov. 1826, Wall. Cat. 7179a [lectotype here designated: K-W (K001126830)]. 大叶可爱花 Figure 1.

Shrubs to 2 m high. Roots with elongate tuber-like swellings. Stems quadrangular, white pubescent, coarse; nodes swollen. Leaves petiolate; petioles 0.6–6 cm, glabrescent; blades (4–)10–30 cm×(2–)5–11 cm, obovate to ovate-elliptic, pilose on both surfaces, above with prominent cystoliths, below paler with prominent veins, apex acuminate, margin entire, undulate, base cuneate, decurrent onto petiole; lateral

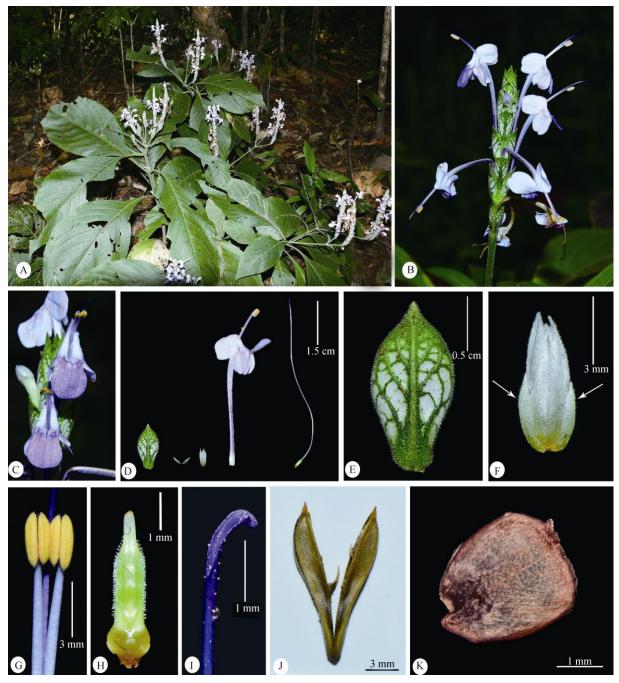


Fig. 1 Eranthemum macrophyllum Wall. ex Nees. A: Plant; B: Florescence; C: Portion of inflorescence showing the flower; D: Bract, bracteoles, calyx, corolla and pistil; E: Bract; F. Bracteole and calyx; G: Stamens showing anthers; H: Ovary; I: Stigma; J: Fruit; K: Seed.

veins 9-15 either side of midrib. Inflorescence of a terminal or axillary spike, 10-25 cm long; peduncles 4–11 cm long; rachis pilose. Bracts imbricate, obovate to elliptic, 1.5-2.1 cm $\times 0.7-1.0$  cm, penninerved, apex acute, glandular-pubescent on both surfaces, abaxially white coloured except green for the veins, with sparsely prominent cystoliths; bracteoles 2.5-4 mm×ca. 1 mm, narrowly lanceolate, apex acuminate, margin ciliate, adaxially glabrous, abaxially glandularpubescent. Calyx 5-7 mm long, white, 5-lobed to middle, lobes ca. 2.5 mm×1 mm, linear, glandularpubescent, apex acuminate. Corolla 5-6 cm long, purple or bluish-purple, purple dotted or patched on the lobes, outside pilose; throat ca. 5 mm long; limb 2lipped, upper lip reflexed, 2-lobed, lower lip 3-lobed, lobes orbicular or obovate, apex retuse or rounded. Fertile stamens 2, inserted on the base of throat; filaments 1.0-1.2 cm long, glabrous; anthers bithecous, thecae oblong, 2.5-4 mm long; staminodes 2, clavate, ca. 0.5 mm long, glabrous. Ovary 3-3.5 mm long, sparsely glandular-pilose, 2 ovules in each locule; styles filiform, 5–6 cm long; stigma oblate, ca. 0.5 mm long. Capsules 1.2-2 cm long, 0.4-0.6 cm broad, with a ca. 5 mm solid stalked base, sparsely glandular-pubescent, 4-seeded. Seeds orbicular, compressed, black, 3 mm in diam., pubescent with mucilagineous hairs.

**Distribution**: China and Myanmar; new record to China, occurring in Yingjiang Xian, Yunnan Province.

**Phenology**: Flowering from October to next March; fruiting from March to May.

**Habitat**: It grows in Monsoon forest at elevation of 500–1 800 m.

Additional specimens examined: CHINA. Yunnan: Yingjiang Xian, Tongbiguan Provincial Nature Reserve, elev. 800 m, 17 Mar. 2019, Shen Jianyong 1163 (HITBC); Yingjiang Xian, on the way from Daonong to Jizhuzhai, 1 450 m, 9 Nov. 1974, Tao Guoda 13301 (HITBC); Yingjiang xian, Nabang to Tongbiguan, 1 800 m, Apr. 28, 1992, Tao Guoda 45521 (HITBC); Yingjiang Xian, Taiping Zhen, Xueli Cun, Tongbiguang Nature Reserve, on the way from

Taiping Zhen to Hongbenghe, ca. 510 m, 24 Apr. 2019, Deng Yunfei 27509 (IBSC); Yingjiang Xian, Xima Xiang, Tongbiguan, 800 m, 8 Jan. 2005, Zhou Shishun 3620 (HITBC, QBG); Yingjiang Xian, Tongbiguan Nature Reserve, Chen Li s.n. (IBSC). MYANMAR. Irawaddi, Wallich Cat. 7129 (G, K). Bago Division: Pyay District, Mt Prome, 1826, Wallich Cat. 7179a (K); Tharrawaddy District, Bacodin Reserve, 22 Mar. 1922, C. B. Smales 22 (E). Kachin State: Bhamo District, Shady jungle 40 miles east of Bhamo, 24°20′ N, 600 m, Jan. 1913, G. Forrest 9477 (E, K). Kayin State: Thandaung, "Taong Dong", 26 Nov. 1826, Wallich Cat. 7179b (K-W). Magway Division: Thayetmyo District, E Goma, Mt. Magyigon, 6 Jan. 1905, J. H. Lace 2712 (E). Mandalay Division: Yamethin District, Ngalaik Reserve, near Mosue, 25 Jan. 1909, J. H. Lace 4555 (E); Pyin Oo Lwin District, Maymyo, 1 100 m, 15 Apr. 1913, J. H. Lace 6268 (E). Mon State: Mawlamyine District, Moulmein, J. W. Helfer 6128 (K-W, P).

Notes: Till now, the name Eranthemum macrophyllum has not yet been lectotypified. In the protologue, Nees referenced to "Eranthemum macrophyllum? Wall. Cat. n. 7179" and cited the provenance as "In jugo Taong Dong, d.26 Nov. a. 1826; et in montibus Promae et rupibus ad Pengee in ripa Irawaddi fluminis". We traced four specimens with the number 7179, i.e., one in K (barcode K000882636) with the locality "Irawaddi", one in K-W (K000882630) with the number "7179a" and the locality "Mt. Prome", one in K-W (K000882631) with the number "7179b" and the locality "Taong Dong", and one in G (G00082060) with the number 7179 but without locality. This means that Wallich Cat. 7179 comprises three gatherings, all of them are syntypes according to Art. 9.6 of Shenzhen Code<sup>[6]</sup>. The specimen of Wallich Cat. 7179a (K000882630) at Wallich Herbarium is the better to be preserved, and therefore, it is selected as the lectotype of Eranthemum macrophyllum.

The species *Eranthemum macrophyllum* is easily distinguished from other Chinese species of *Eranthemum* by having the larger leaves for  $(4-)10-30 \text{ cm} \times 10^{-2}$ 

(2–)5–11 cm, trifurcate branched inflorescence and glandular-pubescent bracts, bracteoles and calyx. An

identification key to Chinese species of *Eranthemum* is provided below.

## Key to the Chinese species of Eranthemum

1a. Inflorescence of trifurcate branched spike; bracts broader than 7 mm.
2a. Bracts, bracteoles and calyx glabrous or eglandular-pubescent; cultivated E. pulchellum
1b. Bracts, bracteoles and calyx glandular-pubescent; native
2b. Inflorescence of simple unbranched spike; bracts less than 6 mm broad.
3a. Petioles shorter than 5 mm, bracts narrowly lanceolate to oblong, apex obtuse
3b. Petioles 0.7–2.5 cm long, bracts ovate to elliptic, apex acute
4a. Corolla glabrous; ovary pilose E. austrosinense var. austrosinense
4b. Corolla pubescent; ovary glabrous E. austrosinense var. pubipetalum

Acknowledgements We are grateful to Mr. YANG Zhenghua, Mr. ZHANG Yongsheng, XU Guihua from Tongbiguan Provincial Nature Reserve for their helps during the field works, and LIN Zhenli for preparing the plate. Deng would like to thank the curators of the following herbaria for their helps during his visiting their herbaria: E, HITBC, IBSC, K, P and QBG.

## References

- MABBERLEY D J. Mabberley's Plant-book: A Portable Dictionary of Plants, Their Classification and Uses [M]. 4th ed. Cambridge: Cambridge University Press, 2017: 1–1102.
- [2] HU J Q (HU C C), DENG Y F, DANIEL T F. Eranthemum [M]// WU Z Y,

- RAVEN P H, HONG D Y. Flora of China, Volume 19. Beijing: Science Press & St. Louis: Missouri Botanic Gardens Press, 2011: 432–433.
- [3] TSUI H P. Eranthemum Linn. [M]// HU C C. Florae Reipublicae Popularis Sinicae, Tomus 70. Beijing: Science Press, 2002: 58–61,347. (in Chinese)
- [4] LI T L, DENG Y F. A new combination of *Eranthemum* Linn. (Acanthaceae) from China [J]. J Trop Subtrop Bot, 2007, 15(3): 259–260.
- [5] HU C C, TSUI H P. Acanthaceae [M]// WU C Y. Flora Yunnanica, Tomus 16. Beijing: Science Press, 2006: 627–806. (in Chinese)
- [6] TURLAND N J, WIERSEMA J H, BARRIE F R, et al. International code of nomenclature for algae, fungi and plants (Shenzhen Code) [M]. Regnum Vegetabile 159. Koeltz Scientific Books, Koenigstein. 2018: 1–254.