

中国爵床科一新记录种——毛萼爵床

汤慧敏^{1,2}, 邓云飞^{1*}

(1. 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; 2. 中国科学院研究生院, 北京 100049)

摘要:报道中国爵床科(Acanthaceae)爵床属一新记录种——毛萼爵床(*Justicia poilanei* Benoist)。该种分布于云南南部石灰岩地区, 在标本馆长期被鉴定为野靛棵(*Justicia patentiflora* Hemsl.), 但与后者的区别在于它的花冠长约 2 cm, 花萼裂片三角状卵形和花药基部不具芒状附属物。

关键词: 爵床科; 爵床属; 毛萼爵床; 新记录; 中国

中图分类号: Q949.778.6

文献标识码: A

文章编号: 1005-3395(2011)04-0323-04

doi: 10.3969/j.issn.1005-3395.2011.04.006

Justicia poilanei Benoist, A Newly Recorded Species of Acanthaceae from China

TANG Hui-min^{1,2}, DENG Yun-fei^{1*}

(1. Key Laboratory of Plant Resources Conservation and Sustainable Utilization, South China Botanical Garden, Chinese Academy of Sciences, Guangzhou 510650, China; 2. Graduate University of Chinese Academy of Sciences, Beijing 100049, China)

Abstract: *Justicia poilanei* Benoist is reported as a new record to China, and occurs in limestone hills at 1000–2400 m in southern Yunnan Province. It was identified as *Justicia patentiflora* Hemsl. in herbaria, but differs from the latter by its calyx triangular-ovate, corolla ca. 2 cm long, and anther-thecae mucous at base.

Key words: *Justicia poilanei*; *Justicia*; Acanthaceae; New record; China

The genus *Justicia* L. is the largest genus in Acanthaceae, consisting of more than 600 species in the world and 43 species in China^[1-2]. It is mainly characterized by the flowers arranged in dichasia (sometimes reduced to a single flower) in leaf axils or axillary or terminal spikes, racemes, or thyrses, or sometimes forming panicles, calyx 5-(or rarely 4-) lobed, corolla 2-lipped, upper lip 2-lobed, lower lip 3-lobed, stamens 2, exerted, anther bithecaous, thecae superposed, usually spurred at base on lower one or rarely mucous, pollen prolate, ovary with two ovules in each locule^[1].

Justicia patentiflora Hemsl. was described based

on the collection Henry 12773 from Yunnan, China^[3]. In the original description, it is well-illustrated and indicated that its corolla tube slender, 2–3 times of the limb, the lower theca spurred. In the treatment of the family Acanthaceae of Flora Reipublicae Popularis Sinica^[2], Flora Yunnanica^[4] and Higher Plants in China^[5], an illustration of *Justicia patentiflora* was provided, but it is different from that in the original protologue. During revising Chinese *Mananthes* group of *Justicia*, we found some specimens in herbaria fit the illustration in the publications mentioned above^[2,4-5]. After examining the specimens carefully, we found that these specimens are quite different

Received: 2011-04-11 Accepted: 2011-05-12

Supported by the National Natural Science Foundation of China (30670142, 39899400, 30499340), the Pilot Project of Knowledge Innovation, Chinese Academy of Sciences (KSCX-SW-122)

* Corresponding author, email: yfdeng@scbg.ac.cn

from *J. patentiflora* Hemsl. in its triangular-ovate calyx-lobes and mucous anther-thecae, and represent a species, *Justicia poilanei* Benoist, which is not recorded in China before.

Justicia poilanei Benoist, Notul. Syst. (Paris) 5: 125, 1936. Type: Vietnam, "Pakha, prov. de Laokay", Poilane 17264 (holotype, P!; isotype, US!). 毛萼爵床 Plate I: E, G

Justicia patentiflora auct. non Hemsl.: C. C. Hu, Fl. Reipudl. Popularis Sin. 70: 297. 2002, p.p; C. C. Hu, Fl. Yunnan. 16: 799. 2006, p.p; C. C. Hu & X. P. Fu, High Pl. China. 10: 413. 2004, p.p.

Shrubs to 2 m tall. Stems \pm 4-angled, sulcate, glabrous. Leaves opposite; petiole 1–6 cm, flat, sulcate, margin ciliate; blade ovate to ovate-lanceolate, 10–20 cm \times 4–8 cm, base attenuate and decurrent onto petiole, margin entire or undulate, apex acute, glabrous, secondary veins 9–13 on each side of midvein. Spikes terminal or rarely axillary, 7–15 cm, usually trifurcately branched or rarely unbranched; peduncle 1–3 cm; rachis 4-angled, glabrous, with 1

pair of flowers per node. Bracts triangular, 2–2.5 mm \times ca. 2 mm, both surfaces glabrous, margin ciliate; bracteoles similar to bracts. Calyx 3–4 mm, both surfaces puberulent especially distally on inner surface, 5-lobed almost to the base; lobes triangular-ovate, ca. 2 mm broad, margin ciliate, apex acute. Corolla ca. 1.5 cm, red on the tube, yellow with purplish-red stripes on the limbs, outside pubescent; tube as long as limb, 2-lipped, lower lip 3-lobed, lobes subequal, ovate, and apex rounded, upper lip subtriangular, erect, apex emarginate. Stamen 2, filaments ca. 4 mm, glabrous; anther bithecaous, thecae unequal, superposed, both mucous at base. Ovary glabrous, 2 ovules per locule; style ca. 8 mm, glabrous. Capsule narrowly obovoid, ca. 1.5 cm, glabrous. Seeds ovate in outline, flattened, ca. 1.3 mm \times 1.2 mm, rugose. Fl. Dec.–Feb., fr. May–Jul.

Distribution: *Justicia poilanei* Benoist is distributed in northern Vietnam and southwestern China (Fig. 1). It is newly recorded in China and occurs in southern and southwestern Yunnan.

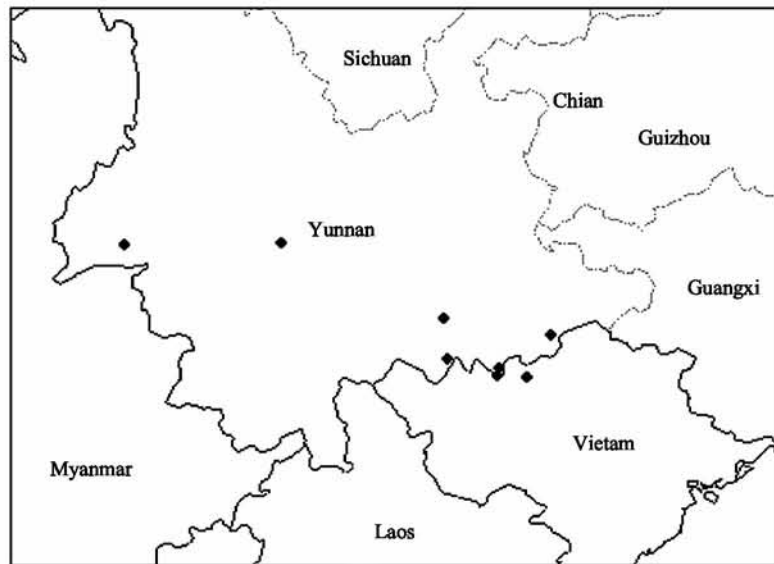


Fig 1 Distribution of *Justicia poilanei* Benoist (◆)

Habitat: The species grows in limestone hills at alt. 200–2400 m.

Specimens examined: China. Yunnan (云南): Gejiu(个旧), Y. M. Shui(税玉民) 14447 (KUN), Y. M. Shui(税玉民) 14517(KUN), Y. M. Shui(税玉民)

15953(KUN); Hekou(河口), Y. M. Shui et al(税玉民等) 40750(KUN); Jingdong(景东), M. K. Li(李鸣岗) 1258 (IBSC, PE); Jinping(金平), Department of Biology, Yunnan University(云南大学生物系) 45 (KUN), Department of Biology, Yunnan University

(云南大学生物系) 101(KUN), Y. F. Deng(邓云飞) 17778(IBSC); Malipo(麻栗坡), Y. M. Shui(税玉民) 20489(IBSC, KUN), Y. M. Shui(税玉民) 20508(KUN), Y. M. Shui(税玉民) 21830(KUN), Y. Z. Wang et al(王印政等) 5169(KUN, PE); Luxi(潞西), H. T. Tsai(蔡希陶) 56830(IBSC, PE)。

Justicia poilanei Benoist was misidentified as *J. patentiflora* Hemsl. in herbaria by some authors, and

merged with the latter by Hansen in herbarium but not published yet. However, it can be easily distinguished from the latter by its calyx-lobes triangular-ovate and both anther thecae mucicous at base (Plate I: A-B,E,G). *J. patentiflora* has the calyx-lobes lanceolate and anther-thecae spurred at base on lower one (Plate I: C-D, F). Comparison characters of *Justicia poilanei* Benoist and *J. patentiflora* Hemsl. are showed in Table 1.

Table 1 Comparison characters of *Justicia poilanei* Benoist and *J. patentiflora* Hemsl.

	<i>J. poilanei</i>	<i>J. patentiflora</i>
Lateral veins	9-13 pairs	7-10 pairs
Calyx	Triangular-ovate, 3-4 mm × 2 mm	Lanceolate, 2-3 mm × 2 mm
Corolla length	ca. 2 cm	ca. 1.5 cm
Corolla tube/limb	Corolla limb as long as the tube	Corolla limb about half of the length of tube
Anther-thecae	Mucicous at base	Spurred at base on lower one

Acknowledgements We would like to thank the curators of following herbaria for their helps: E, GH, IBSC, K, KUN, P and PE. We are grateful to Dr. Jun Wen, Rusty Russell and Ingrid Lin of United States National Herbarium, Smithsonian Institution (US) for their helps to get permission from the herbarium US to use the images of isotypes of *Justicia patentiflora* Hemsl. and *J. poilanei* Benoist.

References

- [1] Graham A W. Delimitation and infra-generic classification of *Justicia* (Acanthaceae) [J]. Kew Bull, 1988, 43: 551-642.
 [2] Hu C C. *Mananthes* Bremek. [M]// Hu C C. Flora Reipublicae

- Popularis Sinicae Tomus 70. Beijing: Science Press, 2002: 289-298.(in Chinese)
 [3] Hemsley W B. *Justicia patentiflora* Hemsl. [J]. Hooker's Icon Pl, 1905, 28: t. 2792.
 [4] Hu C C, Tsui H P. Acanthaceae [M]// Wu Z Y. Flora Yunnanica Volume 16. Beijing: Science Press, 2006: 799-800.(in Chinese)
 [5] Hu C C, Fu X P. Acanthaceae [M]// Fu L K, Hong T. Higher Plants in China Volume 10. Qingdao: Qingdao Publishing House, 2004: 329-416.(in Chinese)
 [6] Benoist R. Acanthacées Nouvelles d'Indochine [J]. Notul Syst (Paris), 1936, 5: 106-131.

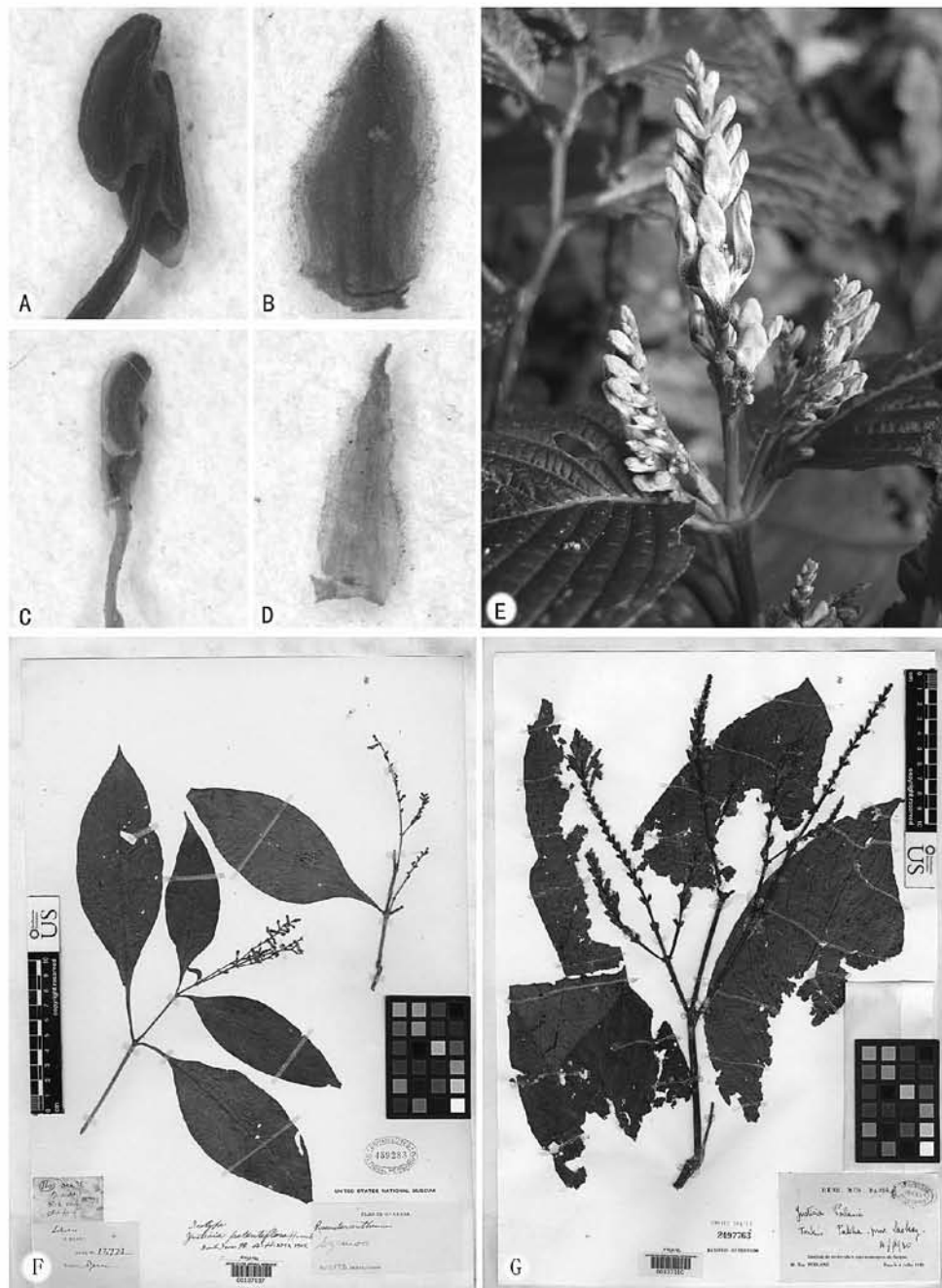


Plate I *Justicia poilanei* Benoist. and *J. patentiflora* Hemsl.

A. Anther of *J. poilanei* (from Y. F. Deng 17778); B. Calyx of *J. poilanei* (from Y. F. Deng 17778, IBSC); C. Anther of *J. patentiflora* (from Z. Z. Li 225, IBSC); D. Calyx of *J. patentiflora* (from Z. Z. Li 225, IBSC); E. Plant of *J. poilanei*; F. Isotype of *J. patentiflora* (courtesy of Smithsonian Institution); G. Isotype of *J. poilanei* (courtesy of Smithsonian Institution)