

中国马蓝属 爵床科 新组合和新分类群

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摘要: 采用广义的马蓝属 (*Strobilanthes Blume*) 概念, 提出 3 个新组合: 匍匐半插花 (*S. prinulifolia* (Nees) Y. F. Deng & J. R. I. Wood), 直立半插花 (*S. cumingiana* (Forst.) Y. F. Deng & J. R. I. Wood) 和狭叶马蓝 (*S. atropurpurea* var. *stenophylla* (C. B. Clarke) Y. F. Deng & J. R. I. Wood), 描述了 8 新种: 南岭马蓝 (*Strobilanthes austrosinensis* Y. F. Deng & J. R. I. Wood), 冯氏马蓝 (*S. fengiana* Y. F. Deng & J. R. I. Wood), 陶氏马蓝 (*S. taiana* Y. F. Deng & J. R. I. Wood), 启无马蓝 (*S. wangiana* Y. F. Deng & J. R. I. Wood), 景东马蓝 (*S. atroviridis* Y. F. Deng & J. R. I. Wood), 西畴马蓝 (*S. rostrata* Y. F. Deng & J. R. I. Wood), 黄连山马蓝 (*S. spiciformis* Y. F. Deng & J. R. I. Wood) 和匍匐马蓝 (*S. procumbens* Y. F. Deng & J. R. I. Wood). 对南岭马蓝、黄连山马蓝、景东马蓝和匍匐马蓝的花粉形态进行了观察。

关键词: 爵床科; 中国; 新组合; 新种; 马蓝属

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New Combinations and New Species of *Strobilanthes* Blume (Acanthaceae) from China

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Abstract: In the course of preparing the manuscript of *Strobilanthes* for the forthcoming Volume 19 of *Flora of China*, a broad concept of *Strobilanthes* is accepted. Eight new species are described and illustrated: *Strobilanthes austrosinensis* Y. F. Deng & J. R. I. Wood, *S. fengiana* Y. F. Deng & J. R. I. Wood, *S. taiana* Y. F. Deng & J. R. I. Wood, *S. wangiana* Y. F. Deng & J. R. I. Wood, *S. atroviridis* Y. F. Deng & J. R. I. Wood, *S. rostrata* Y. F. Deng & J. R. I. Wood, *S. spiciformis* Y. F. Deng & J. R. I. Wood, and *S. procumbens* Y. F. Deng & J. R. I. Wood. Three new combinations are necessary to be made: *Strobilanthes prinulifolia* (Nees) Y. F. Deng & J. R. I. Wood, *S. cumingiana* (Forst.) Y. F. Deng & J. R. I. Wood, and *S. atropurpurea* var. *stenophylla* (C. B. Clarke) Y. F. Deng & J. R. I. Wood. Pollen morphology of *S. austrosinensis* Y. F. Deng & J. R. I. Wood, *S. atroviridis* Y. F. Deng & J. R. I. Wood, *S. spiciformis* Y. F. Deng & J. R. I. Wood, and *S. procumbens* Y. F. Deng & J. R. I. Wood is illustrated.

Key words: Acanthaceae; China; New combination; New species; *Strobilanthes*

Strobilanthes Blume is the second largest genus of sub-tropical regions of Asia. Estimates of the number of the family Acanthaceae distributed in tropical and species in *Strobilanthes Blume* range from 250

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species^[2] to 350^[3] or 450 or more^[4]. Bremekamp^[5] divided Strobilanthes and its allies into over 54 genera arranged in 27 informal groups in his monograph of the subtribe Strobilanthinae. Terab^[4] recognized a broadly circumscribed Strobilanthes comprising all species of Strobilanthinae. The results of recent molecular studies^[6], statistical analysis^[2] and pollen and gross morphology^[4, 7-8] demonstrate clearly that adequate diagnosis of the majority of groups into which the Strobilanthinae has been divided by Bremekamp^[5] and others^[9-10] is problematic and that a single monophyletic expanded Strobilanthes should be recognized^[2, 6].

In the course of preparing the manuscript of Strobilanthes Blume of Acanthaceae for the forthcoming Volume 19 of Flora of China, the broad circumscription of Strobilanthes Blume is accepted and some new combinations are necessary to be made. Many species have been newly reported from China^[11-17]. In this paper, eight new species from China are described and illustrated. In total 126 species, one subspecies and four varieties will be recognized in the genus from China.

Strobilanthes austrosinensis Y. F. Deng & J. R. I. Wood, sp. nov. TYPE: China, Guangxi, Guilin, Guangxi Botanical Garden, Deng Yunfei 19372 (holotype, BS; isotypes, FHQ, MO). Fig. 1

Inter species quae Bremekamp ad Championellam Bremek. ascripsit affinis *S. oligantha* Miq. et *S. tetrasperma* (Champ.) Druce sed ab illa foliis ellipticis vel late obovatis minoribus (non ovatis), bracteis obovatis, corolla minore (usque 3 mm, non usque 3.5 mm), a hac foliis semper pilosis, bracteis obovatis (non ob lanceolatis), corolla flexuosa (non recta) differt.

Isophyllous perennial herbs, drying a distinct dark green colour, stems procumbent, rooting at the nodes, eventually ascending to ca. 50 cm, sulcate, bifariously pubescent, especially above, with reflexed, whitish, large-celled hairs. Leaves subsessile or petiole, petioles 0~2 cm, bifariously hirsute with reflexed, whitish, large-celled hairs, blades 2~8 cm

× 1~4.5 cm, elliptic to suborbicular, apex acute to obtuse, margin serrate, becoming subentire toward the base, base attenuate, upper surface pilose and hirsute, especially toward the base, densely covered with white cystoliths, lower surface pilose along the veins. Inflorescence of terminal leafy, few-flowered, head-like spikes, often elongating at maturity, spikes 1~2 cm long, rachis densely whitish pilose. Bracts shortly petiole, foliose, broadly obovate-spathulate, 15~18 mm × 5~8 mm, apex rounded or obtuse, margin entire below and 1~3-dentate upward, densely abaxially densely covered with whitish multicellular hairs toward the base, adaxially subglabrous. Bracteoles spatulate, 8~11 mm × 1~2.5 mm, abaxially densely covered with whitish multicellular large-celled hairs toward the base, adaxially whitish pilose. Calyx 1~1.2 cm, 5-lobed almost to the base, lobes oblong-lanceolate, midrib prominent, apex obtuse, margin ciliate with thick white upwardly spreading cilia, abaxially pilose, adaxially subglabrous. Corolla 2.2~2.8 cm long, straight to slightly curved, ventricose, infundibuliform, bluish-purple, outside pilose when young, then glabrescent, inside glabrous except for hairs retaining the style tube base, cylindrical for 1.2~1.5 cm long and ca. 2 mm wide, then gradually widened to ca. 1.5 cm at mouth. Stamens 4, included, didynamous, filaments hirsute, the longer pair ca. 8 mm long, the shorter pair ca. 6 mm long, anthers oblong, ca. 1.2 mm × 0.4 mm. Pollen 58 μm × 41 μm, subglobose, tricolporate, pseudocolpate, echinate, echinulae rounded and variable in the degree of the development (Plate I, A). Ovary ovate, ca. 2 mm long, glabrous except for comose to tip, style ca. 1.5 cm long, hirsute, stigma unequally 2-fid. Capsule ovate-oblong in outline, ca. 9~10 mm × 3 mm, glabrous except for pilose tip and along the suture, 4-seeded. Seeds ovoid, ca. 2.5 mm × 2 mm, densely pilose with mucilaginous hairs and a small glabrous areole.

Distribution. The species is centred on the Nanling Range on the Guangdong-Guangxi-Hunan border region extending east to Jiangxi and Fujian

Provinces

Habitat It grows in thickets and forest margins from 100 ~ 1500 m.

Etymology The specific epithet is derived from Latin “austrosinensis” meaning “south China” because the species was found in South China.

Conservation status The species is very common in the Nanling Ranges which cover more than 20000 km². Therefore it should be considered Least Concern (LC) according to IUCN Red List criteria^[18].

The species clearly belongs to the complex of species placed by Brückelkamp^[5] in *Championella* Brückel because of its herbaceous decumbent habit and distinctive echinulate pollen illustrated in Deng et al^[14]. Although it has long been identified as *S. oligantha* Miq. or *S. tetrasperma* (Champ.) Druce as having something of the appearance of an intermediate between the two in corolla size and shape as well as in leaf dimensions, they appear to be only distantly related. From both *S. austrosinensis* can be distinguished by its more hirsute leaves and its obovate bracts; in *S. oligantha* these are ovate to elliptic in shape whereas in *S. tetrasperma* they are oblanceolate.

Additional specimens examined (Paratypes)
CHINA: Fujian: no precise locality, unknown collector 1650 (PE). Guangdong: Huaiji Xingang 27 Oct 1983 Shi Guoliang 14548 (BSC); Huaiji Xian Xingang 14 Oct 1984 Shi Guoliang 15072 (BSC); Lechang Xian Pingshi 170 m, 18 Aug 1942 Chen Shaoqing 2136 (CAS, BK, BSC); Lechang Xian 230 m, 11 Oct 1987 Exped Nanling 3983 (BSC); Lechang Shi Jinfeng Zhen 600 m, 3 Oct 2006 Ye Yushi & Cao Zhaozhong 3767 (BSC); Liannan Xian Jinkeng Xiang 300 m, 11 Sep 1958 Tan Peixiang 59403 (BSC, KUN, PE); Lian Xian (now Lianzhou) near Longping Xiang 240 m, roadside 7 Oct 1958 Tan Peixiang 59591 (BK, BSC, KUN, MQ, NAS, PE, SZ); Lin District 24 Sep 1918 C. Q. C. B. Clarke 3359 (HK, MQ, PE); Renhua Xian Danxijashan 13 Nov 1973 Huang Chengjiu & Zhang Yongtian 31 (BSC, PE); Ru Yuan Xian Deng Yunfei

19288 (BSC); Ru Yuan Xian Daqiao Gongshe Sep 1971 Ru Yao Team 584 (BSC, MQ); Ru Yuan Xian Xiushui Xiang 6 Sep 1941 Liang Baohan 83176 (BK, BSC); Ru Yuan Xian Tixia Baishuikeng 27 Oct 1938 S. K. Lau 29110 (BK, BSC, MQ); Ru Yuan Xian 24 Oct 1956 C. Wang 42334 (BSC, MQ, SYS); Ru Yuan Xian Qingdong 14 Sep 1943 Mai Heyun M338 (BSC); Wung Yuen District (now Wengyuan) 7 ~ 30 Oct 1933 S. K. Lau 2554 (GH, BSC); Guangxi: Guilin Yanshan 210 m, 10 Sep 1997 Li Guangzhao 15455 (MQ, PE); Guilin Dabu 135 m, 31 Nov 1993 Li Guangzhao 13453 (MQ, PE); Guilin Yanshan 12 Sep 1998 Li Ming 745 (MQ); Guilin Yanshan 26 Nov 1993 Li Guangzhao 13348 (MQ); Guilin Yanshan 14 Nov 1955 Zhong Shuquan A60077 (BK, KUN); Lingui Xian Huixian Xiang 180 m, 25 Oct 1994 Li Guangzhao 14237 (MQ, PE); Lingui Xian Liutang Xiang 140 m, 5 Oct 1997 Li Guangzhao 16443 (PE); Lingui Xian Liutang Xiang 120 m, 5 Oct 1997 Li Guangzhao 16274 (PE); Lingui Xian Nanbian Shan 180 m, 7 Aug 1997 Li Guangzhao 15976 (MQ, PE); Xing'an Xian Huajiang Xiang 600 m, 20 Jun 1995 Li Guangzhao 14615 (MQ, PE); Xing'an Xian Maoershan 750 m, 26 Jul 1997 Li Guangzhao 15114 (MQ, PE); Xing'an Xian Huajiang Xiang 600 m, 20 Jul 1995 Li Guangzhao 14615 (PE); Xing'an Xian Maoershan 400 m, 20 Oct 1997 Li Guangzhao 16539 (PE); Xing'an Xian Huajiang Zhen 500 m, 25 Oct 2005 Liu Fei 1690 (PE); Xing'an Xian Huajiang Xiang 17 Oct 1984 Yang Rurong 84403 (PE); Xing'an Xian 100 m, 19 Sep 1954 Exped Xing'an 29 (BK, BSC, SYS); Yangshuo Xian Yangshuo Park 180 m, 3 Oct 1979 Zhou Gensheng et al 79116 (PE); Yangshuo Xian Baisha Zhen Deng Yunfei 19357 (BSC); Ziyuan Xian Yandong Xiang 550 m, 24 Oct 2005 Zhang Hong 1747 (PE); Hunan: Anhua Xian 670 m, 6 Sep 2004 Duan Lindong 3372 (PE); Chili Xian Suoxiyu Zhangjianwan 430 m, 5 Sep 1984 Exped Xiangxi 823 (PE); Dong'an Xian Dongan station to Damiaokou 90 m, 15 Sep 1948 Y. Liu 683 (HB, BSC, NAS, PE); Guidong Xian Jiangshukou 560 m, 25 Sep 1977 Wan Shaobin & Li Bingguo 5584

(HNNJ BSC); Jianghua Xian Gaotan gongshe 250 m 14 Nov 1975 Li Binggui & Wan Shaobin 5366 (HNNJ BSC KUN PE); Qidong Xian Linguan Zhen 400 m 18 Sep, 2003 Li Jidong 414 (PE); Rucheng Xian Reshui gongshe Lamuping 630 m 13 Oct 1977 Wan Shaobin & Li Binggui 5654 (HNNJ BSC); Xinning Xian Yujiaqiao 300 m 26 Sep 1984 Exped Ziyuanshan 2017 (PE); Xinning Xian 300 m 20 Aug 1994 Luo Linbo 200 (CAS BSC K MQ PE); Xinning Xian 50 m 3 Sep 1985 Luo Yibo 3240 (PE); Xinning Xian Maoji 800 m 13 Jul 1985 Luo Yibo 2708 (PE); Xinning Xian Huilong 270 m 17 Aug 1985 Luo Yibo 3162 (PE); Yizhang Xian Mangshan 500 m 22 Aug 2005 Xiao Baizhong 4587 (PE); Yizhang Xian Mangshan 480 m 20 Nov

2005 Xiao Baizhong 4943 (PE); Yizhang Xian Mangshan 7 Oct 1964 Huang Maoxian 113007 (BSC MO); Yizhang Xian Jinquan Xiang Mangshan 360 m 20 Sep 1942 Liang Baohan 83512 (BK BSC); Yizhang Xian Liyuanbao 130 m 30 Jan 1042 Chen Shaoqing 129 (BK BSC); Zhijiang Xian Q Z Lin et al 223 (BSC); Jiangxi Lushan Houhuling 960 m Cheng Shuzhi & Wan Benben 8 (PE); Lushan Jiangshan tse Aug 1934 H H Hu 2484 (PE); Lushan unknown collector 10483 (PE); Pingxiang Xian Nanyuan Xiang 270 m 21 Oct 1954 Exped Jiangxi 2704 (NAS PE); Shangyou Xian 23 Sep 1971 Exped Jiangxi 790 (PE); Shicheng Xian 19 Oct 1947 Wan Wenhao & Yu Zhongren 1947 (BSC NAS PE).

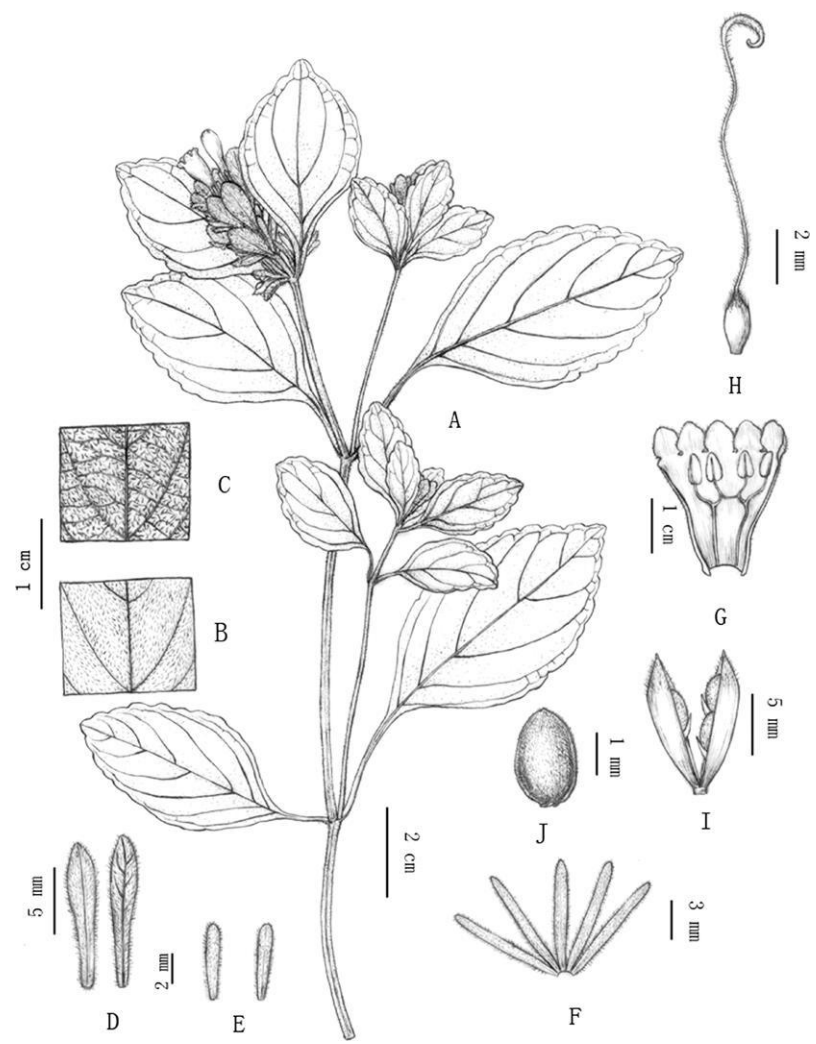


Fig 1 *Suobianthes austrosinensis* Y. F. Deng & J. R. J. Wood

A Habit B Upper surface of leaf C Lower surface of leaf D Bracts E Bracteoles

F Calyx G Corolla opened out H Style and ovary I Capsule J Seed (Drawn by LIU Yun.Xiao)

Strobilanthes wangiana Y. F. Deng & J. R. I. Wood sp. nov. TYPE: China, Yunnan, Yanshan, Timi-ho-shan, 1200 m, in dense forest, 12 Oct. 1939, C. W. Wang 84339 (holotype, KUN; isotype, PE), Fig. 2.

Inter species quae Bremekamp ad Championellam Bremek. ascripsit corolla flexa grandi *S. oligantha* Miq. accedens sed plius parvis fere glabris aspectu foliorum *S. tetraspermae* (Champ.) Druce gaudetibus ab ea recedens.

Isophyllous Perennial herbs up to 1 m tall, stems sulcate, obscurely bifariously pubescent, glabrescent, nodes pustular, sparsely pubescent. Leaves equal in each pair, petiole petioles 0.4–0.5 (~2) cm long, almost glabrous, blades elliptic to ovate-elliptic, 2.5–6 cm × 1.1–2.8 cm, apex obtuse, base cuneate and attenuate onto the petioles, margin crenate, both surfaces glabrous except for large celled hairs along the midrib above, cystoliths prominent, lateral veins 5–7 pairs on each side of midrib, impressed or flattened above, prominent beneath, tertiary veins inconspicuous above, conspicuous beneath. Inflorescence of few flowered subcapitate terminal spikes, spikes 2–4 cm long, flowers sessile, imbricate. Bracts foliose, the lower larger, elliptic, 2–4 cm × 1–1.4 cm, serrate, diminishing in size upwards, the upper oblong, 1.4–2 cm × 0.4–0.6 cm, entire except for a few teeth near the apex, sparsely pubescent outside and glabrous inside, margin ciliate, bracteoles linear-lanceolate, 9–11 mm × 1 mm, silky pubescent outside and glabrous inside, margin ciliate. Calyx 10–13 mm, 5-lobed to ca. 3 mm above base, lobes linear-ob lanceolate, 10–14 mm × 0.6–1.0 mm, outside silky pubescent, inside silky pubescent above the middle and glabrescent toward the base, margin ciliate. Corolla purplish (fide Wang), 3.2–4 cm long, ventricose and bent to 90° at the mouth, outside pubescent, inside glabrous except for hairs retaining the style, tube base cylindrical for ca. 1 cm, 2 mm wide, then gradually widened to ca. 1 cm at the mouth, lobes ovate, 4–5 mm × 4–5 mm, apex obtuse. Stamens 4, didynamous, included, filaments pubescent, the longer pair 3–4 mm long,

the shorter pair 1–2 mm long, anthers oblong, ca. 1.5 mm long. Ovary glabrous except for few hairs at the tip, 2 mm long. Capsules oblong, ca. 1 cm × 0.3 cm, glabrous, 4-seeded. Seeds compressed, ovate, ca. 3 mm × 2 mm, pubescent with a small areole.

Distribution: The species is endemic to Yunnan, China.

Habitat: It grows in dense forest at 1200–2300 m.

Etymology: The species is named after the collector of the type collection Wang Chiu (1913–1987), who travelled in South Yunnan and collected about 25000 specimens including more than 500 type collections, adding much to our knowledge of the area.

Conservation status: *S. wangiana* is known only from three localities but no attempt has yet been made to assess its frequency in the field. From a conservation assessment perspective, the species may turn out to be Endangered (EN) in the sense of the IUCN Red List criteria^[18], but for the present must be classified as Data Deficient (DD).

S. wangiana clearly belongs to the group of species placed by Bremekamp^[5] in *Championella* because of the herbaceous habit and the prominently white ciliate bracts which enclose the terminal few-flowered subcapitate spikes. It is vegetatively similar to *S. tetrasperma* but has the large bent corolla of *S. oligantha*.

Additional specimens examined (Paratypes). CHINA, Yunnan, Shilin County, Guishan, 2300 m, 4 Aug. 2006, Y. M. Shui, W. H. Chen, M. D. Zhang, H. T. Zhao et al. 64350 (PE), Yanshan, Tenglungshan, 1300 m, 20 Sep. 1939, C. W. Wang 83606 (BSC, KUN, PE).

Strobilanthes spiciformis Y. F. Deng & J. R. I. Wood sp. nov. TYPE: China, Yunnan, Luchun, Xian, Mt. Huanglianshan, Hydrologic Station, 1700–1900 m, 22 Oct. 1995, S. K. Wu, Y. M. Shui, Y. P. Yang, L. H. Liu, J. H. He, J. Murata, H. Nagamasu, T. Sugawara, X. Chen & N. Murakami 204 (holotype, KUN; isotypes, BSC, KUN), Fig. 3.

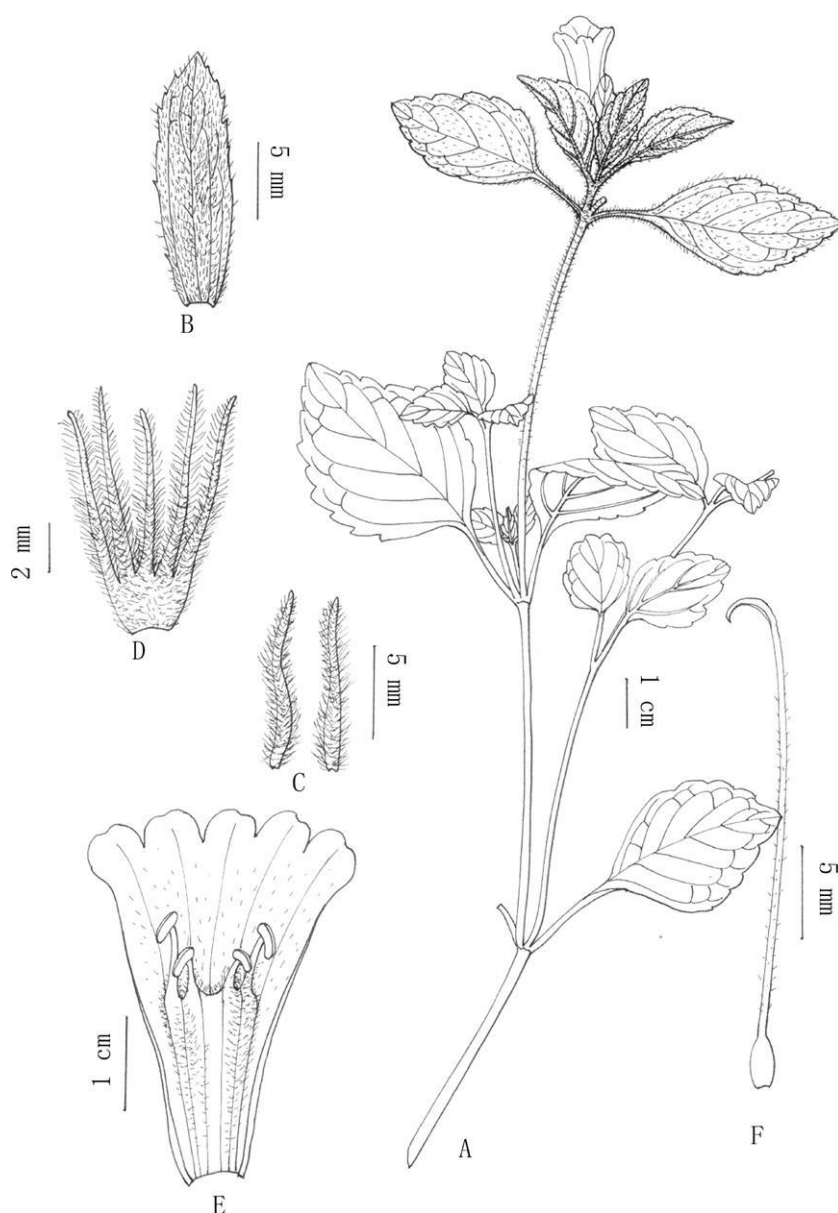


Fig 2 *Strobilanthes wangiana* Y. F. Deng & J. R. I. Wood

A Habit B Bract C Bracteoles D Calyx E Corolla opened out F Style and ovary (Drawn by WANG Ling)

Facie forma calycis et corolla pubescentis
extensae (Nees) Nees congruens sed bracteolis
absentibus foliis superioribus petiolatis bracteolis
absentibus ad S. oligocephalam C. B. Clarke accedens
sed bracteis non scariosis ab ambabus floribus in spicis
longis dispositis distincta

Anisophyllous perennial undershrubs ca 50 cm
high. Stems woody up to ca 5 mm in diameter, young
parts sulcate and angled, nearly glabrous apart from the
pubescent nodes. Leaves unequal in each pair
petiolate. Petioles (0.5 ~) 1.3 ~ 2.3 (~ 2.5) cm long,
glabrous. Blades of larger leaves 9 ~ 15 cm × 3 ~ 6 cm

smaller leaves 4 ~ 7 cm × 2 ~ 3.5 cm, ovate, apex
acuminate, base cuneate, decurrent onto the petiole,
margins serrate, glabrous on both surfaces, cystoliths
prominent above, lateral veins 5 ~ 6 pairs in each side
of midrib. Inflorescence of terminal spikes 4 ~ 9 cm
long, consisting of up to 5 flower pairs, rachis
quadrangular, glandular pilose. Bracts ca 8 mm ×
5 mm, ovate, rounded, sparsely glandular pilose
above, glabrous below, deciduous as the flowers
open, bracteoles absent. Calyx 10 ~ 16 mm long,
lobes unequal, one distinctly longer than the others,
linear-oblong, accrescent and becoming oblanceolate

in fruit glandular pilose 8~16 mm×1~2 mm apex acute margins ciliate Corolla ca 2.5 cm long straight pubescent in bud but soon glabrescent outside inside glabrous tube base cylindrical fr ca 1 cm and ca 2 mm wide then gradually widened to ca 8 mm at mouth lobes ca 3 mm×3 mm orbicular obtuse Stamens 4 didynamous included filaments pilose the longer pair ca 20 mm long shorter pair ca 5 mm long anthers oblong ca 2 mm×1 mm Pollen 79 μm×46 μm ellipsoid tricolporate boreticulate with scalariform pseudocopi (Plate I B). Ovary 2.5 mm×0.8 mm glabrous except for few glandular hairs at tip style 2 cm long glabrous Capsule 15~20 mm×3~3.5 mm oblong in outline glabrous except for a few glandular hairs at the tip and along the ribs towards the tip 4-seeded seeds ovate to suborbicular ca 3 mm long and broad pilose

Distribution The species is endemic to China Habitat It grows in forest at 1700~2400 m Etymology The specific epithet "spiciformis" refers to the clearly spicate inflorescence which is more pronounced than in *S. extensa* or in species such as *S. oligocephala* C. B. Clarke to which it appears to be related by the absence of bracteoles

Conservation status *S. spiciformis* is only found in some localities in S and SW Yunnan and the area covers less than 1000 km². It may turn out to be Endangered (EN) or Vulnerable (VU) according to the IUCN Red List criteria^[18], but for the present is best classified as Data Deficient (DD) because there have been no field searches for the populations of the species

Additional specimens examined (Paratypes). CHINA Yunnan Longling Huoshan 2400 m 18 Aug 1941, C. W. Wang 90154 (KUN); Luchun Xian Huanglianshan Shui Yum in 4272 (KUN); Luchun Xian Huanglianshan Shui Yum in 4274 (KUN); Luchun Xian Huanglianshan Shui Yum in 4443 (KUN); Luchun Xian way to Laobian 2200 m Oct 19 1973 Tao Deding 1045 (KUN).

Additional specimens examined (Paratypes). CHINA Yunnan Longling Huoshan 2400 m 18 Aug 1941, C. W. Wang 90154 (KUN); Luchun Xian Huanglianshan Shui Yum in 4272 (KUN); Luchun Xian Huanglianshan Shui Yum in 4274 (KUN); Luchun Xian Huanglianshan Shui Yum in 4443 (KUN); Luchun Xian way to Laobian 2200 m Oct 19 1973 Tao Deding 1045 (KUN).

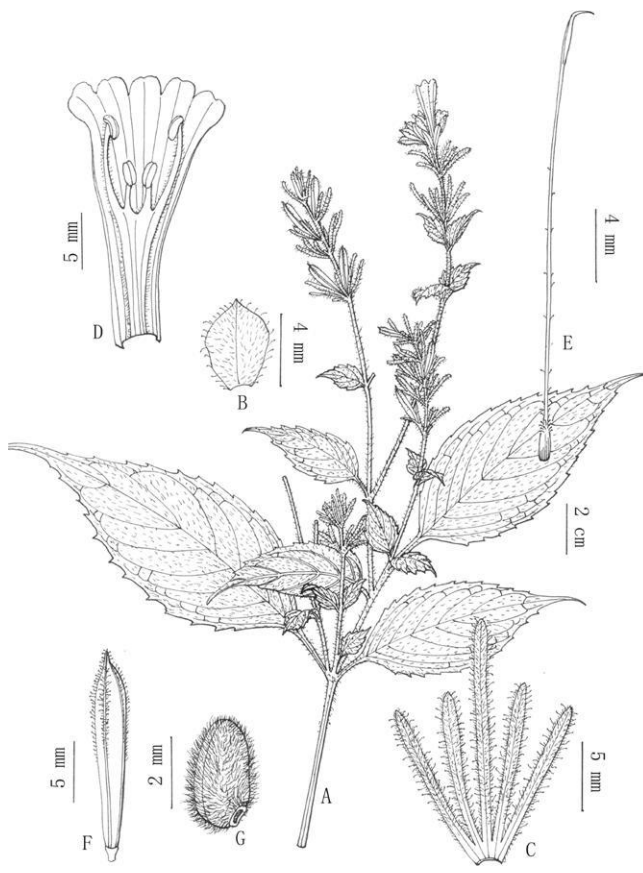


FIG 3 *Strobilanthes spiciformis* Y. F. Deng & J. R. I. Wood

The species is intermediate in many features between *S. extensa* and *S. oligocephala*. In facies it resembles *S. extensa* quite closely and in particular is strikingly similar in calyx structure with the lobes accrescent in fruit, one lobe noticeably longer than the other and clearly oblanceolate in shape. However the upper leaves are petiolate and the inflorescence clearly spicate with some five flower pairs distributed along the rachis. The absence of bracteoles points to a relationship with *S. oligocephala* and *S. pentstemonoides* (Nees) T. Anderson but the spicate inflorescence is distinct and the bracts are not scarious. It also lacks the distinctive falcate leaves typical of most specimens of *S. oligocephala*.

Strobilanthes rostrata Y. F. Deng & J. R. I. Wood, sp. nov. TYPE: CHINA, Yunnan, Sichou Hsien (now Xichou), Faidou, 1450 ~ 1550 m, 16 Sep. 1947, K. M. Feng 11800 (holotype, KUN, isotypes, GH, KUN, PE), Fig. 4.

Quoad flores in spicis secundis dispositis, bracteis lineares et corollam glabram ad *S. helictam* T. Anderson accedit, sed spicis in panicula terminali aggregatis et capsula rostrata ab ea recedens.

Slightly anisophyllous perennial herbs, ca. 1 m tall, stems quadrangular, sulcate, glabrous to weakly bifariously pubescent. Leaves slightly unequal in each pair, long petiolate. Petioles (1.5 ~) 3 ~ 8 mm long, glabrous to slightly bifariously scurfy. Blades elliptic (4.5 ~) 11 ~ 16 mm × (2.5 ~) 7 ~ 10 mm, apex obtuse, base subrounded and slightly decurrent, margin serrate, glabrous on both surfaces but with some multicellular cilia on the margins, adaxially green with numerous cystoliths, abaxially paler. Lateral veins (6 ~) 9 ~ 12 pairs. Inflorescence of branched axillary spikes bearing a pair of reduced leaves at the branching point and forming a lax terminal panicle, ultimate branches slightly zigzag, only one flower fertile in each pair. Bracts and bracteoles similar, linear to linear spatulate, 2 ~ 3 mm long, glabrous or with a few gland-tipped hairs, abaxially densely covered with white cystoliths, abaxially cystoliths 2-lined. Calyx 12 ~ 16 mm long, subequally 5-lobed to ca. 2 mm above the base, lobes linear, thinly pilose with gland-tipped

hairs, abaxially densely covered with white cystoliths, adaxially cystoliths 2-lined along the lobe margins. Corolla ca. 3.8 mm long, bluish, ventricose, outside glabrous, inside glabrous except for hairs retaining the styles. Tube base subcylindrical for ca. 1.2 mm long and gradually widened from ca. 2 mm wide at the base, then sharply bent to 90° at apex. Stamens 4, didynamous, filaments included, the longer pair ca. 8 mm long, the shorter pair ca. 6 mm long, anthers oblong, ca. 2 mm long. Ovary glabrous, style ca. 2.7 mm long, pilose. Capsule 1.5 ~ 1.6 mm long, glabrous, apex forming a beak, ca. 4 mm long, glabrous, 4-seeded. Seeds ovate, ca. 2 mm × 2 mm, appressed, pilose with mucilaginous hairs, areole small.

Distribution. The species is endemic to China, occurring in SE Yunnan, China.

Habitat. It grows in forest by streams in limestone areas.

Etymology. The specific epithet is derived from Latin meaning “long-beaked” because of the long-beaked capsule.

Conservation status. *S. rostrata* was only found in one locality in Xichou Xian, Yunnan and the area covers less than 1000 km². It may turn out to be Endangered (EN) or Vulnerable (VU) according to the IUCN Red List criteria¹⁸, but for the present is best classified as Data Deficient (DD) because there has been no evaluation of this species in the field and no additional collection for more than half a century.

The species is similar to *S. helicta* T. Anderson in the second spikes, in which one of the flowers in each pair aborts, the similar linear bracts and bracteoles and glabrous corolla but differs in its paniculate inflorescence, glandular calyx and bracts and long-beaked capsule.

Strobilanthes procumbens Y. F. Deng & J. R. I. Wood, sp. nov. TYPE: China, Chongqing, Nanchuan Xian, Jinshang, Daheba, 1000 m, 14 Sep. 1957, Li Guofeng 64172 (holotype, KUN, isotypes, HIB, BSC, PE, SZ), Fig. 5.

Ex affinitate *S. brandisii* T. Anderson, *S. falconeri* T. Anderson et specierum similiarum, sed foliis minoribus usque 3 cm longis (non 8 cm excedentibus),

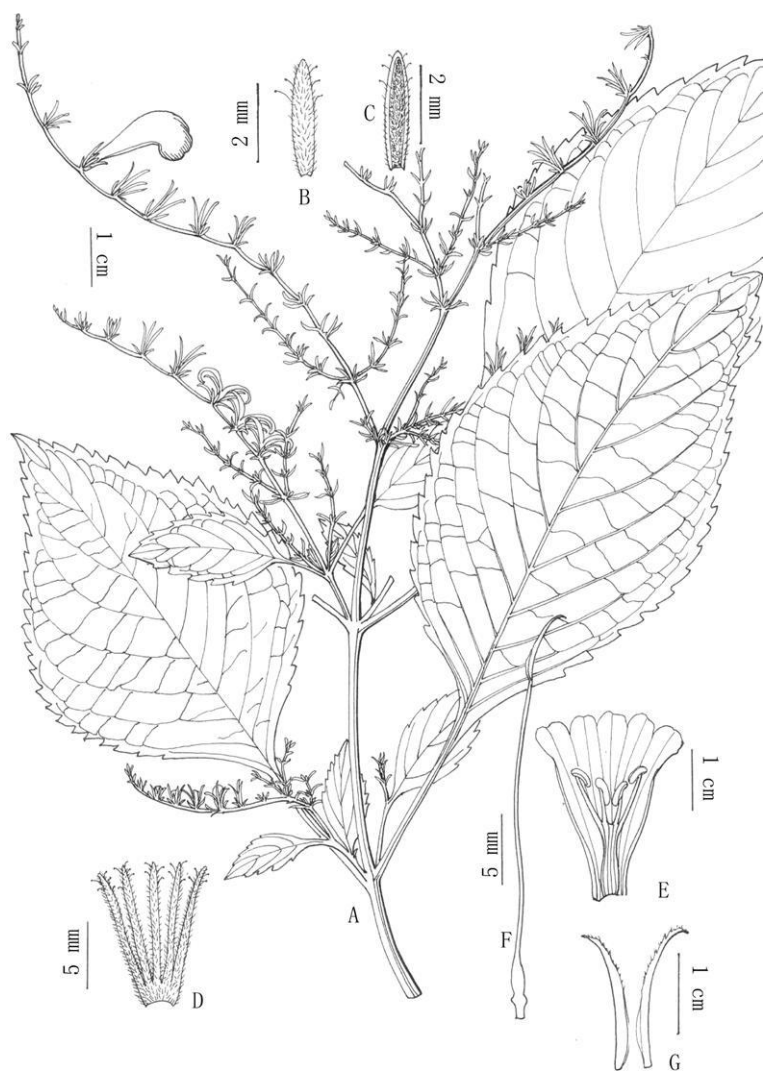


Fig 4 *Stribilanthes rosulata* Y. F. Deng & J. R. I. Wood

A Habit B Bract C Bractlet D Calyx E Corolla opened out F Ovary and style G Dehiscent capsule (Drawn by WANG Ling)

acutis (non acuminatis) bracteis obovato-oblancoatis (non lanceolatis vel oblongo ellipticis) differt

Isophyllous perennial herbs stems at first procumbent and rooting at nodes, then erect to ca. 0.7 m high stems sulcate densely pubescent with multicellular hairs. Leaves equal in each pair petiolate petioles 0.3~1.1 cm long sulcate densely pubescent with multicellular hairs blades ovate to rhomboidal 0.8~3 cm×0.3~2 cm apex acute base cuneate and slightly decurrent onto the petioles margin crenate both surfaces pubescent with multicellular hairs adaxially with numerous cystoliths lateral veins 3~5 pairs adaxially impressed and abaxially elevated Inflorescences of short terminal subcapitate spikes ca. 1 cm long Bracts leaf like

obovate to oblanceolate 4~12 mm×2~4 mm diminishing in size upward margin entire or with 1~2 teeth silky-ciliate adaxially pubescent with yellowish multicellular hairs abaxially pubescent bractlets linear-spathulate ca. 5 mm×1 mm indumentums as for bracts Calyx ca. 3 mm subequally 5-lobed to the base white pipse lobes linear obtuse Corolla 2.3~2.8 cm long white straight to slightly curved funnel-shaped outside pubescent especially on the lobes inside glabrous except for hairs retaining the styles tube base cylindrical for ca. 6 mm long and ca. 1 mm wide then gradually widened to ca. 1 cm at mouth lobes oblong ca. 2 mm×2 mm Stamens 4 didynamous filaments of longer pairs pubescent ca. 4 mm long the shorter pair glabrous ca. 2 mm long

anthers oblong ca. 1.3 mm long, pollen $66\ \mu\text{m} \times 35\ \mu\text{m}$, tricolpate ellipsoid boreticulate with scalariform pseudocolpi (Plate I C). Ovary glabrous except for comose tip, styles ca. 1 cm long, glabrous. Capsule oblong ca. 0.8 cm long, glabrous except for comose tip, 4-seeded. Seeds lenticular ca. 1 mm $\times$ 1 mm, pubescent with a small areole.

Distribution. The species is only found in its type locality Jinfoshan, Nanchuan Xian, Chongqing, China.

Habitat. It grows in streamside at 800 ~ 1000 m.

Etymology. The name procumbens refers to the procumbent habit of the stems.

Conservation status. *S. procumbens* has only been found in Jinfoshan, Nanchuan Xian, Chongqing and the area covers less than 1000 km². It may turn out to be Endangered (EN) or Vulnerable (VU) according to the IUCN Red List criteria^[18], but for the

present is best classified as Data Deficient (DD) because there has been no accurate field assessment of the population of this species.

The new species appears to be most closely related to *S. brandisii* T. Anderson and *S. fukneri* T. Anderson from Myanmar and Thailand and more distantly to *S. esquirollii* H. Lévy. With all these species it shares a congested terminal subcapitate inflorescence densely covered with whitish eventually yellowish hairs and a nearly straight pubescent corolla. From all of these it is distinguished by its smaller leaves and obovate to oblanceolate bracts and bracteoles.

Additional specimens examined (Paratypes).

CHINA, Chongqing, Nanchuan Xian, Jinfoshan, Daheba, Huangbaichang, 870 m, 18 Nov. 1957, Li Guofeng 65077 (HB, KUN, PE, SZ); Nanchuan Xian, Jinfoshan, Daheba, 950 m, 22 Sep. 1957, Li Guofeng 64316 (PE, SZ).

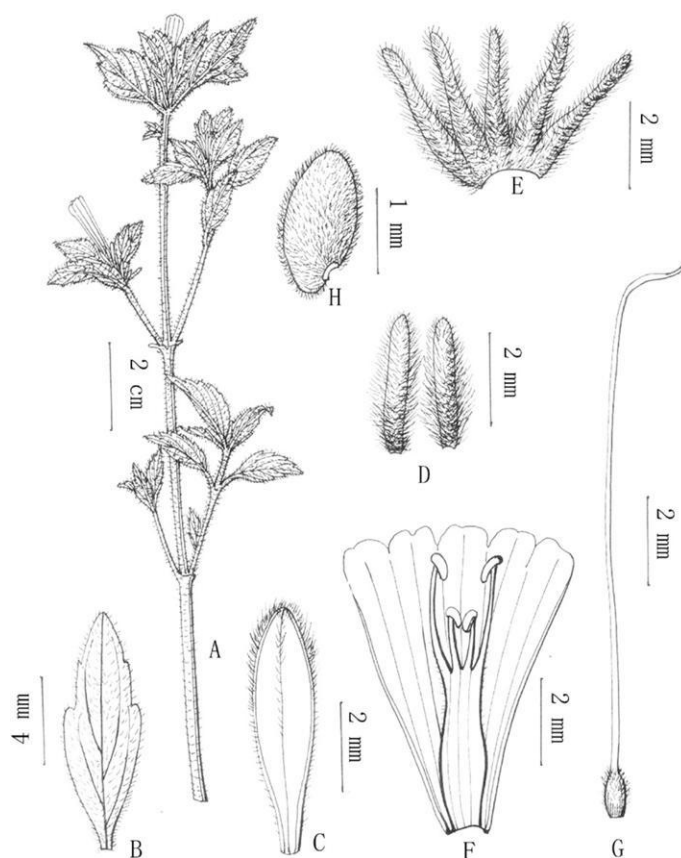


Fig. 5 *Strobilanthes procumbens* Y. F. Deng & J. R. J. Wood

A: Habit; B: Outermost bract; C: Inner bract; D: Bracteole; E: Calyx; F: Corolla opened out; G: Ovary and style; H: Seed. (Drawn by WANG Ling)

Strobilanthes taoana Y. F. Deng & J. R. I. Wood, sp. nov. TYPE: CHINA, Yunnan, Jinghong City, Jinuo Xiang, Youleshan, 2200 m, 24 Jan. 1987, Tao Guoda 38840 (holotype: IBSC; isotype: HIBC). Fig. 6

Affin to *S. rubescenti* T. Anderson, seed species, simplicibus rectis bracteis oblongo-ellipticis persistentibus corolla alba minore fere recta usque 2.5 cm longa, differt.

Weakly anisophyllous undershrub; stems somewhat sulcate, woody below, pilose with multicellular hairs, eventually glabrescent. Leaves unequal in each pair, the smaller about two-thirds the size of the larger, subsessile, petioles 0–2 mm long, pilose, blades 4–10 cm × 2–5 cm, broadly ovate, apex acute to shortly acuminate and commonly

falcate, base slightly asymmetric, rounded to subcordate, briefly decurrent onto the petiole margin, serrate, adaxially green with inconspicuous cystoliths, nearly glabrous except for a few scattered hispid hairs and a strigose or scurfy midrib, abaxially paler, glabrous except for a few hairs on the veins, densely covered with prominent cystoliths on both surfaces. Inflorescence of axillary spikes, 2–5 cm long, the flowers in opposite pairs but frequently single because of the abortion of one flower; rachis pilose, straight. Inflorescence bracts similar to leaves, diminishing in size upwards; floral bracts oblong-elliptic, 3–6 mm × 2–4 mm, acuminate, glabrous; bracteoles obovate to oblong-lanceolate, glabrous, 3–5 mm × 1–2 mm. Calyx subequally 5-lobed to ca. 1 mm above the base, the lobes 9–16 mm × 1–2 mm, linear, obtuse, almost

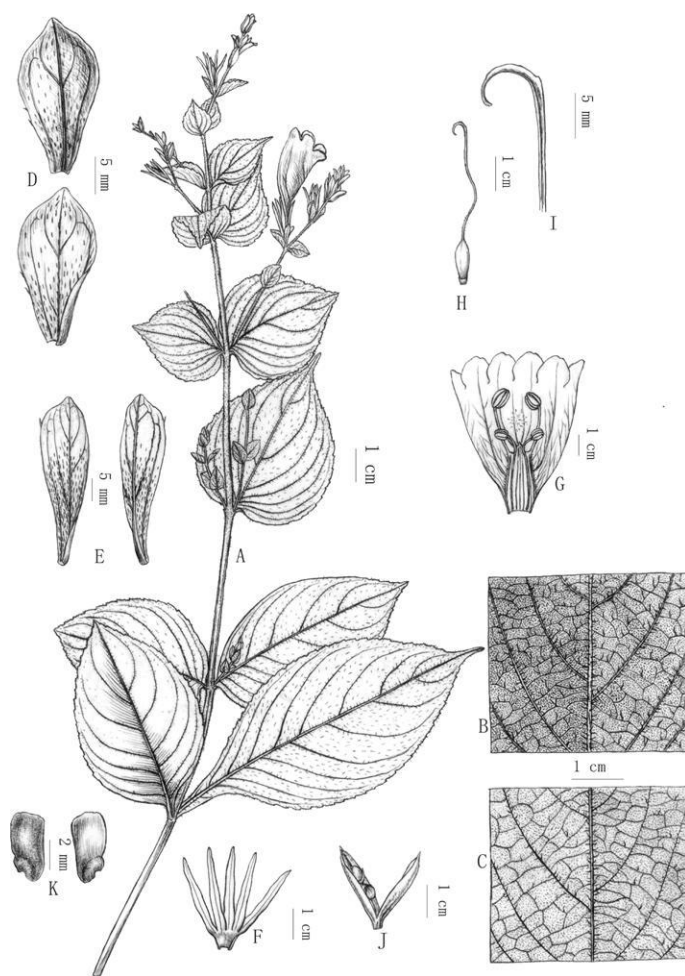


Fig. 6 *Strobilanthes taoana* Y. F. Deng & J. R. I. Wood

A: Habit; B: Upper surface of leaf; C: Lower surface of leaf; D: Bract; E: Bracteole; F: Calyx; G: Corolla opened out; H: Ovary and style; I: Stigma; J: Capsule; K: Seed. (Drawn by LIU Yun-xiao)

colourless glabrous covered with cystoliths. Corolla 2~2.5 cm long white funnel-shaped outside glabrous inside glabrous except for the hairs retaining the style straight ca. 2 mm wide at base gradually widened to 1.2 cm. 5-lobed lobes ovate 4~6 mm long apex rounded. Stamens 4 didynamous filaments glabrous the longer pair ca. 6 mm long the shorter pair ca. 2 mm long anther thecae globose ca. 1 mm in diameter glabrous. Ovary glabrous style ca. 2 cm long glabrous. Capsule not seen.

Distribution. The species is only known the type locality Jinghong City Yunnan China.

Conservation status. *S. taoana* is only known from Youleshan Jinghong City Yunnan and the area covers less than 1000 km². It may turn out to be Endangered (EN) or Vulnerable (VU) according to the IUCN Red List criteria^[8], but for the present is best classified as Data Deficient (DD) because no field assessment has been made.

This species resembles *S. rubescens* T. Anderson in its ovate shortly petiolate to subsessile ovate leaves and inflorescence of axillary spikes with distant flowers and small oblong elliptical floral bracts but differs in its unbranched spikes with a nearly straight rachis persistent bracts and straight white corolla.

Strobilanthes atroviridis Y. F. Deng & J. R. I. Wood sp. nov. TYPE: China Yunnan Gengtung (now Jingdong) Hsiao Tou Shan 2400 m, 26 Nov. 1939. M. K. Li 2086 (holotype BSC; isotypes HIBG KUN). Fig. 7.

Corolla flexa ad *S. yunnanensis* Diels et affines accedens sed floribus in spicis brevibus subcapitatis pedunculatis calyce bilabiat et corolla glabra ab ea recedens calyce bilabiat ad *S. dryadum* Benoist et *S. longispicam* (H. P. Tsui) J. R. I. Wood & Y. F. Deng accedens sed floribus in capitulis vel spicis brevibus pedunculatis dispositis ab ea recedens.

Weakly anisophyllous undershrubs up to 10 m high. Stems branched quadrangular sulcate glabrous densely covered with prominent white cystoliths nodes pustular pubescent. Leaves slightly unequal long petiolate petioles 2~9 cm glabrous

blades 5~24 cm × 2~14 cm ovate elliptic apex acute to long acuminate base abruptly narrowed and then decurrent onto the petiole margin serrate drying blackish-green above glabrous or with a few multicellular hairs sparsely covered with prominent cystoliths especially along the veins beneath glabrous paler lateral veins 6~10 pairs on each side of midrib prominent on both surfaces curved net nearby the margin tertiary veins conspicuous. Inflorescence of shortly pedunculate axillary spikes commonly reduced to capitula spikes 1~3 (~6) cm flower 1 (~4)-paired peduncles 1~20 mm sometimes bearing a small leaf below spike rachis glandular pubescent with gland-tipped hairs. Bracts 9~14 mm × 2~3 mm linear lanceolate glandular pubescent outside glabrous inside bracteoles 7~10 mm × 1~2 mm linear lanceolate glandular pubescent outside glabrous inside. Calyx 10~15 mm long glandular pubescent outside glabrous inside 2-lipped the lower lip 2-lobed almost to the base the lobes 9~14 mm × 2~3 mm linear lanceolate acute the upper lip 3-lobed with 3 lanceolate teeth 5~7 mm long connate for 4~7 mm. Corolla purplish blue (field collectors) 3~4 cm long glabrous outside and inside strongly bent above base the tube ca. 2 mm wide at the base then gradually widened to ca. 2 cm at the mouth the lobes ovate ca. 1 cm × 1 cm emarginate. Stamens 4 didynamous filaments sparsely pilose below the longer pair ca. 8 mm long the shorter pair ca. 6 mm long styles ca. 2 cm glabrous. Pollen 70 μm × 37 μm ellipsoid tricolporate bireticulate pseudocolpate scalariform (Plate 1 D). Capsules unseen.

Distribution. The species is only known from its type locality Wuliangshan Jingdong Xian Yunnan China.

Habitat. It grows in wet places in forest at 2100~2400 m.

Etymology. The name *atroviridis* refers to the characteristic blackish-green colour of the leaves which are similar to those of *S. cusia* (Nees) Kuntze.

Conservation status. *S. atroviridis* is only found in Wuliangshan Jingdong Xian Yunnan and the area covers less than 1000 km². It may turn out to

be Endangered (EN) or Vulnerable (VU) according to the IUCN Red List criteria^[18], but for the present is best classified as Data Deficient (DD) because there has been no accurate field assessment of the population of this species.

The species shares with *S. dryadum* R. Bennoist and *S. longispica* (H. P. Tsui) J. R. I. Wood & Y. F. Deng in a 2-lipped calyx with the three upper calyx lobes fused for about half of their length. However, it differs in a number of characters including its wingless thachis, symmetrical leaves and

glabrous strongly curved corolla, the latter recalling species such as *S. yunnanensis* Diels. It is unusual in having very poorly developed spikes which are commonly reduced to a single flower pair forming a pedunculate subcapitate inflorescence.

Additional specimens examined (Paratypes). CHINA: Yunnan, Jingdong Xian Wuliangshan, 2150 m, 3 Apr. 1959, Xu Shuogui 3539 (KUN); Jingdong Xian Wuliangshan, 2130 m, 8 Apr. 1959, Xu Shuogui 4524 (KUN); Jingdong Xian Di Shouei Keng, 2400 m, 1 Jun. 1939, M. K. Li 2768 (BSC, KUN).

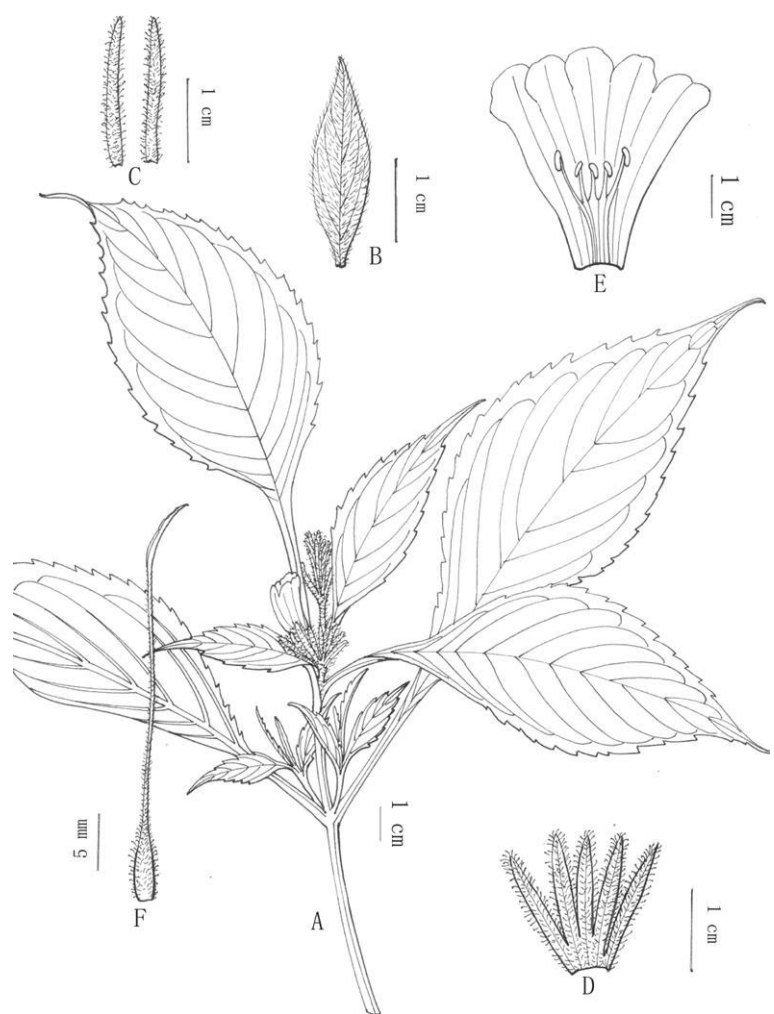


Fig. 7 *Strobilanthes atroviridis* Y. F. Deng & J. R. I. Wood
A. Habit B. Bract C. Bracteoles D. Calyx E. Corolla opened out F. Ovary and style (Drawn by WANG Ling)

Strobilanthes fengana Y. F. Deng & J. R. I. Wood sp. nov. TYPE: China, Yunnan, Sichou Hsien (now Xichou), Faa doou, 1500~1600 m, 20 Sep. 1947, K. M. Feng 11933 (holotype, KUN; isotypes, KUN, PE).

Inflorescentia terminali parvis spicarum brevium subcapitatarum composita et corolla flexa. Sarcorrhizam (C. Ling) C. Z. Zheng ex Y. F. Deng & N. H. Xia revocans sed foliis ciliatis bracteis oblongo lanceolatis scarposis (non foliosis), lobis

calycis linearispatulatis non attenuatis et corolla pilosa ab ea recedens probabiliter ex affinitate *S. yunnanensis* Diels sed inflorescentia terminali et foliis anguste ovato ellipticis margine undulatis (non ovatis serratis) discernenda.

Isophyllous perennial herbs up to 50 cm tall stems quadrangular sulcate glabrescent. Leaves petiolate slightly unequal in each pair. Petioles 1~2 cm long sulcate bifariously pilose; blades narrowly ovate to narrowly elliptic 4~15 cm $\times$ 2~6 cm acuminate to an obtuse apex margin undulate to crenulate ciliate base rounded or broadly cuneate thin in texture cystoliths prominent sparsely pilose on both surfaces but especially on the margins and veins abaxially paler abaxially lateral veins 4~7 pairs. Inflorescence terminal formed of dense shortly pedunculate head-like spikes 1.5~3 cm long from the uppermost leaf axils peduncles pubescent. Bracts oblong lanceolate 1~1.5 cm $\times$ 0.3~0.4 cm adaxially sparsely pubescent abaxially glabrescent bracteoles linear lanceolate 8~10 mm $\times$ 1~2 mm adaxially densely covered with multicellular large-celled hairs abaxially glabrous. Calyx 1.1~1.2 cm long 5-lobed almost to the base one lobe longer than the others lobes linear spatulate margin ciliate with multicellular hairs abaxially covered with multicellular hairs upward. Corolla lavender 3~3.5 cm long bent 90° above the middle outside pilose with large-celled hairs inside glabrous except for hairs retaining the style tube base cylindrical for ca. 1.5 cm long and ca. 2 mm wide then gradually widened to ca. 1.3 cm at mouth. Stamens 4 didynamous included filaments pilose the longer pair ca. 8 mm long the shorter pair ca. 6 mm long anthers oblong ca. 2 mm long. Capsule oblong 1.2~1.4 cm $\times$ 0.3~0.4 cm glabrous 4-seeded. Seeds ovate 3 mm $\times$ 2 mm pubescent with a small areole.

Distribution. The species is only found from type locality Xichou Xian, Yunnan, China.

Habitat. It grows under the forest at 1200~1500 m.

Etymology. The species is named after the collector Prof. Feng Kuimei (1917~2007) at Kunming

Institute of Botany, Chinese Academy of Sciences who collected the type collection of the new species. Prof. Feng was a taxonomist of Theaceae, Ericaceae and so on. He had investigated the plants in Yunnan Province and made more than seven thousand collections including about four hundred type ones^[9].

Conservation status. *S. fengiana* has only been found in Xichou Xian, Yunnan and the area covers less than 1000 km². It may turn out to be Endangered (EN) or Vulnerable (VU) according to the IUCN Red List criteria^[18], but for the present is best classified as Data Deficient (DD) because no assessment of this species in the field has ever been made.

Herbarium specimens of *S. fengiana* have a strong superficial resemblance to *S. sarcothiza* in having a terminal subcapitate inflorescence with the short spikes arising from the uppermost pair of leaf axils. This is reinforced by the discolorous leaves and the similar bent corolla. However, it seems likely that this resemblance is superficial as the bracts of *S. fengiana* are somewhat scarious and very different from the foliose bracts of *S. sarcothiza*. This character in fact suggests an affinity with *S. yunnanensis* Diels, a supposition supported by the linear spatulate calyx lobes and pilose corolla. However, almost all specimens of *S. yunnanensis* have a clearly axillary inflorescence, the leaves ovate rather than ovate-elliptic and the bracts acute rather than acuminate.

Additional specimens examined (paratypes). CHINA: Yunnan: Si-chow Hsien (now Xichou), Fadoy 1200 m, 2 Dec. 1939, C. W. Wang 85193 (KUN); Xichou Xian, Fadoy 1750 m, 28 Sep. 1980, Li Heng 140 (KUN); Xichou Xian, Fadoy, Caoguoshan 1450 m, 14 Nov. 1962, Wu Quan-an WEN 62-299 (KUN); Xichou, Xiaojiaogou, Ciliuchong 1400 m, 10 Nov. 1992, Wang Yinzheng 92043 (PE); Xichou Xian, Fadoy, Xiang Caoguoshan 1500 m, 22 Dec. 2004, Deng Yunfei 17565 (BSC).

Strobilanthes atropurpurea Nees var. *stenophylla* (C. B. Clarke) Y. F. Deng & J. R. J. Wood, stat. nov. Basionym: *Strobilanthes stenophylla*

C. B. Clarke in Hook. f. Fl. Brit. Ind. **4**: 469. 1885. TYPE: India, Meghalaya, Khasia Mts., alt. 3~5000 ft. J. D. Hooker & T. Thomson 2033 (lectotype K, chosen here).

Strobilanthes martinicensis Lévesq., Repert. Spec. Nov. Regni Veg. **12**: 99. 1913. syn. nov. TYPE: China, environs de Tchen-lin-tcheou, propr. de Kouy-tcheou, Oct. 1897. E. Bodinier & L. Martin 1930 (holotype E, isotypes K, P).

Distribution. It is disjunct in E. Himalayan region (India and Myanmar) and Guizhou of China.

The variety differs from var. *atropurpurea* only in its lanceolate leaves. In var. *atropurpurea*, the leaves are always ovate to ovate-elliptic. This variety is not well known.

Strobilanthes cumingiana (Nees) Y. F. Deng & J. R. I. Wood comb. nov. Basionym: *Ruellia cumingiana* Nees in DC. Prodr. **11**: 148. 1847. *Hemigraphis cumingiana* (Nees) F. Vill., Fl. Philipp. ed. **4** (13A): 3. 153. 1880. TYPE: Philippines, Luzon, Cuming 1310 (lectotype K, chosen by Moylan et al. 2002).

Distribution. The species is distributed in China (Taiwan), Indonesia, Malaysia, Philippines.

Additional specimens examined. CHINA: Taiwan, Taitung Hsien, Lanyu Hsiang, Hongtzu Village, 29 May 1996. T. Y. Yang, C. H. Chu & S. Y. Jen 6684 (KUN), Taitung Hsien, Lanyu ca. 350 m, 6 April 1987. Ching-I Peng 10736 (CAS), Taitung Hsien, Lanyu, 8 May 1984. Ching-I Peng 6675 (CAS), Taitung Hsien, Lanyu, 400 m, 27 Feb. 1993. Chi-Cheng Liao 1221 (GH, MO), Taitung Hsien, Lanyu Hsiang, alt. 320 m, 7 Apr., 2002. T. Y. Yang & C. Y. Liu 14679 (MO), Taitung Hsien, Lanyu, 50~300 m, 16 Apr., 1992. S. F. Huang & Y. C. Hsu 4717 (GH).

Strobilanthes primulifolia (Nees) Y. F. Deng & J. R. I. Wood comb. nov. Basionym: *Ruellia primulifolia* Nees in DC., Prodr. **11**: 144. 1847. *Hemigraphis primulifolia* (Nees) F. Vill. Novis App. **153**. 1880. TYPE: Philippines, Sorsogon, Haenke s.n. (lectotype R, chosen by Moylan et al. 2002).

Ruellia repens G. Forst., Fl. Ins. Austr. Prodr.

144. 1786. non *Strobilanthes repens* Bojer ex Nees (1847). *Hemigraphis repens* (G. Forst.) T. Anderson ex Hemsf., Bot. Voy. Challenger **1** (3): 173. 1886. TYPE: Vanuatu, Tanu Island, Forster s.n. (lectotype BM, chosen by Moylan et al. 2002).

Hemigraphis pacifica Hosakawa, Trans. Nat. Hist. Soc. Form. **25**: 127. 1935. TYPE: Melanesia, Palau Islands, Hosokawa 7400 (holotype, TAI).

Distribution. The species is distributed in China (Taiwan), Indonesia, Japan, Malaysia, Papua New Guinea, Philippines, Australia and Pacific islands (New Caledonia).

Ecology. It is a weed of roadsides, ponds and streamsides below 400 m.

Additional specimens examined. CHINA: Taiwan, Pingtung Hsien, Kengting National Park, Nanjenshan, 300 m, 17 Sep. 1991. Chih-Chia Wang 545 (GH), Taitung Hsien, Yehyu Stream, 13 Apr., 2004. Shih-Wen Chung 8044 (MO), Taitung Hsien, Lanyu, 8 May 1984. Ching-I Peng 6692 (CAS), Taitung Hsien, Lanyu, 350 m, 6 April 1987. Ching-I Peng 10734 (CAS), South Cape, Schminers A. Henry 1214 (K), Taitung Hsien, Lanyu, 21 July 2002. Tien-Tsai Chen 12042 (PE), A-Ts'ai Hsien, Kuran, K. syun, Mar. 30, 1932. S. Sasaki s.n. (MO), Hengchun Peninsula, Kuran, 11 Oct. 1929. S. Saito 6940 (GH).

Acknowledgments. We are grateful to the curators of following herbaria: CAS, GH, HIB, HIB, IBK, BSC, K, KUN, MO, PE and SZ. John Wood would like to thank MO for funding his visit to PE and KUN in 2008 to check specimens of the plants described here.

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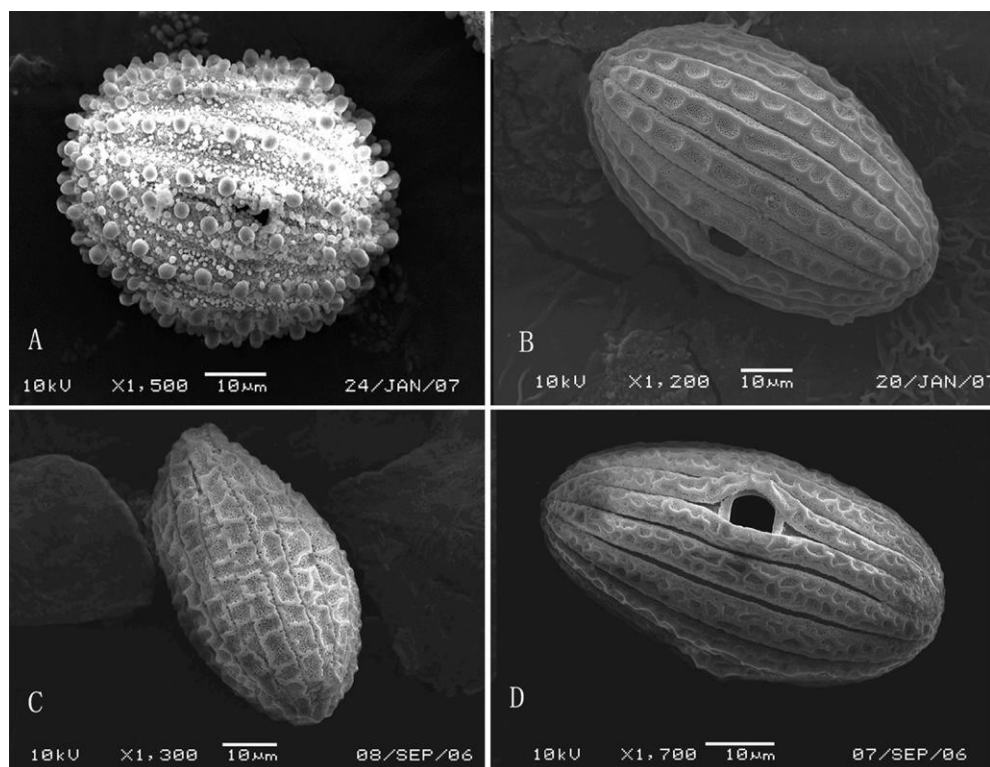
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Explanation of plate

Plate

A. Pollen of *Suobianthes austrosinensis* Y. F. Deng & J. R. I. Wood from Y. S. Ye & Z. Z. Cao 3767 (IBSC). B. Pollen of *S. spiciformis* Y. F. Deng from S. K. Wu et al 204 (IBSC). C. Pollen of *S. procumbens* Y. F. Deng & J. R. I. Wood from Li Guofeng 64172 (KUN). D. Pollen of *S. aurovirdis* Y. F. Deng & J. R. I. Wood from Xu Shuogui 59-3539 (KUN).



DENG Yun-fei et al. Plate