

# 中国兰科二新记录种

樊杰<sup>1</sup>, 金效华<sup>2\*</sup>, 金伟涛<sup>2</sup>

(1. 山西中医学院, 太原 030024; 2. 中国科学院植物研究所, 系统与进化植物学国家重点实验室, 北京 100093)

**摘要:** 报道了中国西藏兰科植物二新记录种: 无叶沼兰 (*Crepidium aphyllum* (King & Pantl.) A. N. Rao) 和矮生白点兰 *Thrixspermum pygmaeum* (King & Pantl.) Holttum。无叶沼兰和本属另一腐生种 *C. saprophytum* (King & Pantl.) A. N. Rao 的主要区别为假鳞茎圆柱形, 唇瓣平展, 顶端圆形, 中萼片直立。矮生白点兰与 *T. masculiflorum* A. S. Rao & J. Joseph 相似, 但本种花序短于叶, 苞片螺旋排列、花瓣匙形、唇瓣下凹且3裂、中裂片顶端下凹、胼胝体有毛。

**关键词:** 无叶沼兰; 矮生白点兰; 兰科; 中国

doi: 10.3969/j.issn.1005-3395.2012.03.005

## Two New Records of Orchidaceae from China

FAN Jie<sup>1</sup>, JIN Xiao-hua<sup>2\*</sup>, JIN Wei-tao<sup>2</sup>

(1. Shanxi University of Traditional Chinese Medicine, Taiyuan 030024, China; 2. State Key Laboratory of Systematic and Evolutionary Botany, Institute of Botany, Chinese Academy of Sciences, Beijing 100093, China)

**Abstract:** Two new records of Orchidaceae, *Crepidium aphyllum* (King & Pantl.) A. N. Rao and *Thrixspermum pygmaeum* (King & Pantl.) Holttum, are described based on fieldwork in southeastern Xizang (Tibet), China. *Crepidium aphyllum* is easy to distinguish from the heteromycotrophic species *C. saprophytum* by cylindrical pseudobulb, flat lip with rounded apex and erect dorsal sepal. *Thrixspermum pygmaeum* (King & Pantl.) Holttum is similar to *T. masculiflorum* A. S. Rao & J. Joseph, but differs from it by having inflorescence shorter than leaf, bracts spiralled, petals spathulate, lip concaved and 3-lobed, with a hairy callus connecting with column and emarginated middle lobe.

**Key words:** *Crepidium aphyllum*; *Thrixspermum pygmaeum*; Orchidaceae; China

During our botanical trips to Southeast Tibet, two little known orchids from China were discovered and here reported.

1. *Crepidium aphyllum* (King & Pantl.) A. N. Rao, J. Orchid Soc. India **14**: 65. 2000. — *Microstylis aphylla* King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) **8**: 18. 1898. — *Malaxis aphylla* (King & Pantl.) Tang & F. T. Wang, Acta Phytotax. Sin. **1**: 71. 1951. Type: India, Sikkim. Valley of Teesta (Tista), R. Pantling, No. 455 (Lectotype, K!). (Fig. 1)

Heteromycotrophic, 10–25 cm long, yellowish slightly flushed with pale purple. Stem pseudobulbous at base, with 2 or 3 tubular sheaths. Bracts lanceolate, deflexed, 3 mm long. Flowers yellow, flush with dull purple; ovary and pedicel 3 mm long; dorsal sepal elliptic, 3-veined, obtuse, margin revolute, 2 mm long, 1 mm wide; lateral sepals broadly ovate, 3-veined, 1.6 mm long, 1.5 mm wide; petals linear, 1-veined, 1.8 mm long, 0.3 mm wide, adpressed to lateral sepals; lip ovate-reniform, apex obtuse, slightly narrow in middle, with two auricles at base, concave in disc, 3 mm long, 2.1 mm wide; auricles lanceolate,

Received: 2011-08-26

Accepted: 2011-12-28

Supported by the National Natural Science Foundation of China (31170176), Knowledge Innovation Program of Chinese Academy of Sciences (13214G1014), and Shanghai Chenshan Botanical Garden.

\* Corresponding author. E-mail: xiaohuajin@ibcas.ac.cn

1 mm long; column 1 mm long, with two 1.2 mm long arm-shaped structures; anther cap elliptic. Flowering from August to September.

*Crepidium* Bl. is a genus comprising about 280 species and mainly distributed in tropic and subtropic Asia, Australasia, and Indian Ocean islands, with a few species extending to temperate Asia. It is characterized by erect inflorescence with persistent floral bracts, the lip of flowers usually concave at base without callus, column lacking a foot with 2 apical arms on either side of clinandrium, and rostellum often obtuse or rounded at apex<sup>[1-2]</sup>.

There are two heteromycotrophic species in *Crepidium*, *C. aphyllum* and *C. saprophytum*, and both of them occurred in the valley of Yarlung Zangbo-Brahmaputra. *Crepidium aphyllum* is characterized by the base of stem in cylindrical pseudobulb shape, flat lip with rounded apex and erect dorsal sepal, while *C. saprophytum* is characterized by the base of stem in globose pseudobulb shape, fold lip with acute apex, and the reflexed dorsal sepal addressed to the ovary<sup>[3-5]</sup>. Our fieldwork observation indicated that the flower become smaller along the inflorescence in *C. aphyllum*.

**Distribution:** NE India and China.

**China:** Xizang, Modog County, Beibeng, alt. 1420 m, under forest, 2009-09-02, SET-ET (Southeast Tibet Expedition Team) 1141 (PE!).

**Conservation Status:** This species is endemic in the subtropical region in the Eastern Himalayas and grows under the natural forest. However, due to the growing population in this region, subtropical forest is decreasing greatly. Therefore, we consider this species as 'Critically Endangered' (CR), according to IUCN red list categories and criteria<sup>[1]</sup>.

2. *Thrixspermum pymaeum* (King & Pantl.) Holttum, Kew Bull. **14**: 275. 1960. — *Sarcochilus pygmaeus* King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) **8**: 207. 1898. Type: India, Sikkim, near Pemiongtsi (Pemayangtse), R. Pantling No. 472 (Lecotype CAL!). (Fig. 2)

Epiphytic on trunk. Stem short 1 cm long. Leaves

4-5, linear-oblong, acuminate, 7-10 cm long, 1 cm wide. Inflorescence 3 cm long, 2- or 3-flowered, slender. Bracts spiral along the rachis, ovate-triangular, acute, much shorter than ovary, 1-2 mm long, 1-2 mm wide. Flowers yellowish white; dorsal sepal elliptic, 5-veined, obtuse, 7 mm long, 3.5 mm wide; lateral sepals elliptic, 4-veined, 7 mm long, 4 mm wide; petals spatulate, 3-veined, obtuse, 6 mm long, 2 mm wide; lip elliptic, concave like a sac, hairy inside, with a callus connecting with column, 3-lobed, 5 mm long, 7 mm wide; lateral lobes semi-orbicular, erect; middle lobe emarginated; column 0.5 mm long. Flowering in May in Kunming Botanical Garden.

The middle size genus, *Thrixspermum* Lour., consists of about 100 species and has the diversity center in tropical southeast and with a few species extending to Eastern Himalayas. This genus is characterized by its saccate but not truly spurred lip with a partly hairy or papillose front wall callus, short column with a long foot; 4 waxy pollinia attached by a common short and broad stipe to a solitary viscidium<sup>[6]</sup>. Recent detail taxonomic survey in southeast tropical Asia indicated that a lot of new taxa have been neglected<sup>[7]</sup>.

There are 15 species (2 endemic) species of *Thrixspermum* in China<sup>[6]</sup> including this little known *T. pygmaeum*. This species is similar to *Thrixspermum masciforme* A. S. Rao & J. Joseph but differs from it by having inflorescence shorter than leaves, larger lateral lobes of lip and the tongue-like callus<sup>[8]</sup>.

**Distribution:** Nepal, Vietnam, India, China.

**China:** Xizang, Medog, Beibeng, 900 m, in tropical forest. 2010-05-23, X. H. Jin 10301 (PE!).

**Conservation status:** Although *Thrixspermum pygmaeum* is widespread from Vietnam to Nepal, there are very few records in the field. Thus, we temporarily consider this species as DD according to IUCN Red list Categories and Criteria<sup>[1]</sup>. More studies are needed to understand the conservation status of this taxon.

**Acknowledgments** We thank the reviewers for their significant and constructive comments on the manuscript.

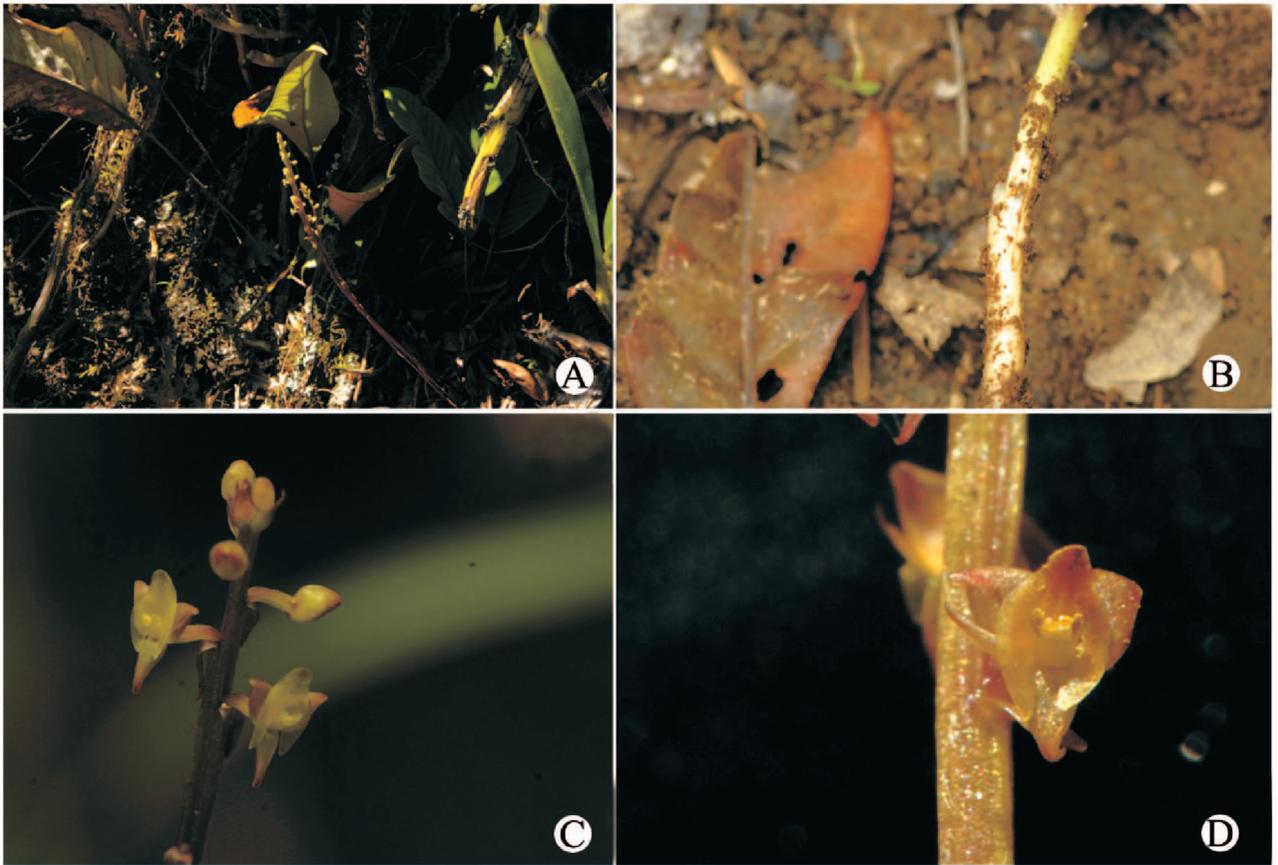


Fig. 1 *Crepidium aphyllum* (King & Pantl.) A. N. Rao. A. Habitat; B. Stem; C. Inflorescence; D. Flower.



Fig. 2 *Thrixspermum pygmaeum* (King & Pantl.) Holttum

## References

- [1] IUCN. IUCN Red List Categories and Criteria Version 3.1 [M]. Gland, Switzerland: IUCN, 2001: 10–15.
- [2] Pridgeon A M, Cribb P J, Chase M W, et al. *Genera Orchidacearum* Vol. 4 [M]. Oxford: Oxford University Press, 2005: 457–456.
- [3] King G, Pantling R. The Orchids of the Sikkim Himalaya [J]. *Ann Roy Bot Gard Calcutt*, 1898, 8(pt. 1/2): 18–207.
- [4] Tang T, Wang F T. Contributions to the knowledge of Eastern Asiatic Orchidaceae II [J]. *Acta Phytotax Sin*, 1951, 1(1): 23–102.(in Chinese)
- [5] King G, Pantling R. New Orchids from Sikkim [J]. *J Asiat Soc Bengal, Pt. 2, Nat. Hist.*, 1896, 65(2): 118.
- [6] Chen S C, Wood G G. *Crepidium* Blume [M]// Chen S C, Liu Z J, Zhu G H, et al. *Flora of China* Vol. 25. Beijing: Sciences Press, St. Louis: Missouri Botanical Garden Press, 2009: 229–234.
- [7] Seidenfaden G. Orchid Genera in Thailand: XIV. Fifty-nine vandoid Genera [J]. *Opera Bot*, 1988, 95(1): 148–152.
- [8] Pearce N R, Cribb P J. The Orchids of Bhutan [M]. Edinburgh: The Royal Botanic Garden and Bhutan: Royal Government of Bhutan, 2002: 1–568.

## 推荐一本分类学参考书——《东亚高等植物分类学文献概览》

马金双(2011). 东亚高等植物分类学文献概览。北京:高等教育出版社。ISBN 978-7-04-032948-3

马金双教授所著的《东亚高等植物分类学文献概览》一书详细地介绍了东亚的中国、日本、朝鲜和韩国及其周边国家与地区的高等植物分类文献,共有10大类近1200种。该书分为4个部分,第一部分为绪论,主要介绍文献的基础知识,涉及文献的种类、级别、检索等内容,并讨论了植物分类学文献的特殊性,着重介绍了我国图书馆目前所使用的2种图书分类法,对于植物分类学的研究生和初学者特别有用。第二部分介绍了检索书类、辞书类、植物志类、植物系统、采集史、国际植物命名法规、拉丁文与模式、参考书类等8个类别的图书。第三部分对中外有关植物分类按国家进行了介绍。第四部分为附录,包括世界及中国的主要标本馆的介绍、中国植物志卷册及分科索引、植物分类学常用网站等18项。

正如陈晓亚院士为此书题序中所言“在生物学各分支学科中,大概要数分类学与文献的关系最为紧密。”对于植物分类学研究而言,文献的考订和查阅相当费时费力。尤其是对于中国等众多发展中国家的植物分类学研究者来说,由于大部分早期的文献都在欧美等发达国家出版,文献的考订工作更为困难。马金双教授所著的《东亚高等植物分类学文献概览》是在美国植物学家 E. D. Merrill & E. H. Walker 编著的 *A Bibliography of Eastern Asiatic Botany* (1938)及 E. H. Walker 编著的 *A Bibliography of Eastern Asiatic Botany Supplement I* 之后,对东亚植物分类文献进行了全面的收集和整理,是从事东亚及其周边地区高等植物分类工作的必备参考书。

中国科学院华南植物园 夏念和 研究员