

同色兜兰及其亲缘群的研究*

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摘要: 讨论了兰科兜兰属 (*Paphiopedilum*) 中的同色兜兰 (*P. concolor* (Lindl.) Pfitz.) 巨瓣兜兰 (*P. bellatulum* (Rchb. f.) Stein) 及其近亲的异同与亲缘关系, 并描述了 3 个新分类群: 云南的文山兜兰 (*P. wenshanense* Z.J.Liu et J.Y.Zhang) 和广西的大化兜兰 (变种) (*P. concolor* var. *dahuaense* Z.J.Liu et J.Y.Zhang) 及无点兜兰 (变种) (*P. concolor* var. *immaculatum* Z.J.Liu et J.Y.Zhang)

关键词: 兜兰属; 同色兜兰; 巨瓣兜兰; 文山兜兰; 大化兜兰; 无点兜兰; 新种; 新变种
中图分类号: Q 949 **文献标识码:** A **文章编号:** 0253-2700(2000)04-0390-05

Notes on *Paphiopedilum concolor* and Its Allies

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Abstract: The differences and relationships between *Paphiopedilum concolor* (Lindl.) Pfitz., *P. bellatulum* (Rchb. f.) Stein and their allies are discussed; and three new taxa, *P. wenshanense* Z.J.Liu et J.Y.Zhang from Yunnan and *P. concolor* var. *dahuaense* Z.J.Liu et J.Y.Zhang and *P. concolor* var. *immaculatum* Z.J.Liu et J.Y.Zhang from Guangxi, are described.

Key words: *Paphiopedilum*; *P. concolor*; *P. bellatulum*; *P. wenshanense*; *P. concolor* var. *dahuaense*; New species; New varieties

中国云南、广西和贵州的石灰岩山地是兜兰属 (*Paphiopedilum*) 植物荟萃之地。我国产的大多数兜兰种类均见于这个地区。本文所描述的 3 个兜兰新分类群: 文山兜兰 (*Paphiopedilum wenshanense* Z.J.Liu et J.Y.Zhang) 大化兜兰 (变种) (*P. concolor* (Lindl.) Pfitz. var. *dahuaense* Z.J.Liu et J.Y.Zhang) 和无点兜兰 (变种) (*P. concolor* var. *immaculatum* Z.J.Liu et J.Y.Zhang) 也是先采自这个地区, 而后移栽于本场苗圃。由于它们与同色兜兰 (*P. concolor*) 及巨瓣兜兰 (*P. bellatulum*) 均有较密切的亲缘关系, 且在一些苗圃中常被混淆, 因而本文在发表 3 个新分类群的同时, 也对此两种一并加以比较和讨论。

同色兜兰产云南、广西和贵州, 是比较常见的种, 也易于栽培。而巨瓣兜兰则比较罕见, 曾从广西南部 and 云南东南部采到, 但目前在野外已经很难看到其踪迹了。

巨瓣兜兰是 1 个美丽的物种。花白色并具有紫褐色的斑点; 花瓣非常宽阔, 明显宽于唇瓣, 几乎达到后者宽度的 1 倍; 唇瓣一般较宽而短, 长度不超过宽度的 1 倍。而其亲缘

种同色兜兰则是一个变化较大的广布种，具淡黄色至黄白色的花，其上有细小的斑点；斑点虽有疏密与大小的差别，但直径小于 1 mm 或在 1~1.5 mm 之间；唇瓣通常较狭长，长度一般在宽度 1 倍以上。但是，两个种的特征都有一定的变化幅度。因此，国内一些人士将之分为大斑点、中斑点和小斑点 3 类，并把中斑点与大斑点归入巨瓣兜兰，这显然是不科学的。而实际上所谓的中斑点，花是淡黄色的，唇瓣较狭而长，应是典型的同色兜兰，只是斑点略疏而稍大（直径也不及 1.5 mm）而已。巨瓣兜兰与同色兜兰间的主要区别在于斑点：巨瓣兜兰花通常雪白色，具粗大的紫褐色斑点（直径达 2~3 mm 或更大），而同色兜兰花淡黄色至黄白色，具细小的紫色斑点（直径 0.5~1.5 mm）。两者是易于分辨的。

在过去的一些著作中曾记载中国也产 *Paphiopedilum godefroyae* (Godef.) Stein 或 *P. concolor - bellatulum* Hort，但陈心启教授在《中国植物志》第 17 卷中已作了澄清，亦即我国不产此类植物，过去文献中所指的我国植物实际上应是巨瓣兜兰。因为 *P. godefroyae* 的原产地在缅甸南端的毛淡棉（Moulmein），花的构造与巨瓣兜兰及同色兜兰均相去甚远，似不可能是它们之间的杂种。

本文所描述的 1 个新种和 2 个新变种均接近于上述两个种，但区别特征是明显的。文山兜兰接近于巨瓣兜兰，但花萼基部有 1 枚鞘；在白色或淡黄白色的花上的粗斑点为褐红色；退化雄蕊近宽椭圆形，先端尾状，基部心形，明显不同于巨瓣兜兰。大化兜兰（变种）的叶明显较长，可达 13~22 cm；花象牙白色，无斑点；唇瓣外表面两侧各有 5 条隆起的脉；无点兜兰（变种）的花淡黄色，无任何斑纹。两者也均明显区别于同色兜兰。3 个新分类群与同色兜兰及巨瓣兜兰的区别可检索如下：

1. 花无斑点。

2. 叶长 13~22 cm；花象牙白色；唇瓣外表面两侧各有 5 条隆起的脉

..... 大化兜兰 *P. concolor* var. *dahuaense* Z. J. Liu et J. Y. Zhang

2. 叶长 8~13 cm；花淡黄色；唇瓣外表面无隆起的脉

..... 无点兜兰 *P. concolor* var. *immaculatum* Z. J. Liu et J. Y. Zhang

1. 花具斑点。

3. 花疏生或密生细小的斑点，斑点直径 0.5~1.5 mm 同色兜兰 *P. concolor* (Lindl.) Pfitz.

3. 花具粗大的斑点，斑点直径 2~3 mm。

4. 花萼基部无鞘；斑点紫褐色；退化雄蕊先端不为尾状 巨瓣兜兰 *P. bellatulum* (Rehb. f.) Stein

4. 花萼基部具 1 枚鞘；斑点褐红色；退化雄蕊先端尾状

..... 文山兜兰 *P. wenshanense* Z. J. Liu et J. Y. Zhang

1 文山兜兰（新种）图 1：1~4

Paphiopedilum wenshanense Z. J. Liu et J. Y. Zhang, sp. nov. Fig. 1: 1~4

叶 4~5 枚，近椭圆形，长 5~10 cm，宽 3.5~4.5 cm，先端钝圆，不对称的 2 裂，上面有深浅绿色网格斑和略带浊白色斑，背面紫色，但在基部为绿色并具紫点，基部具对摺叶柄。花萼近直立，长 7~10 cm，绿色并具紫褐色斑点，被短柔毛，顶端具 1~3 花；花苞片卵形椭圆形，长 1.6~2 cm，宽 1.5~2 cm，背面中脉上被毛，边缘具缘毛；花梗与子房长 4~4.5 cm，被毛；花直径 6~7 cm，白色或淡黄白色，具褐红色粗斑点；斑点直径 2~2.5 mm；中萼片近圆形，长 2.5~3 cm，宽 2.5~3.5 cm，背面被短柔毛；合萼片卵形，明显小于中萼片，长 2~2.5 cm，宽约 2 cm，先端钝，背面亦被毛；花瓣宽椭圆形或矩圆状椭圆形，长 3.5~4 cm，宽 2.5~3 cm，内表面基部被短柔毛；唇瓣椭圆形囊状，长 3.5

~4 cm, 宽2~2.5 cm, 囊底具毛; 囊口宽阔, 边缘内折; 退化雄蕊近宽椭圆形, 长宽各8~9 mm, 基部心形, 先端尾状, 尾长达1.5~2 mm。

与巨瓣兜兰 (*Paphiopedilum bellatulum*) 有亲缘关系, 区别点在于本新种花萼基部具1枚鞘, 花上的斑点褐红色, 退化雄蕊近宽椭圆形, 基部心形, 先端尾状, 尾长1.5~2 mm。

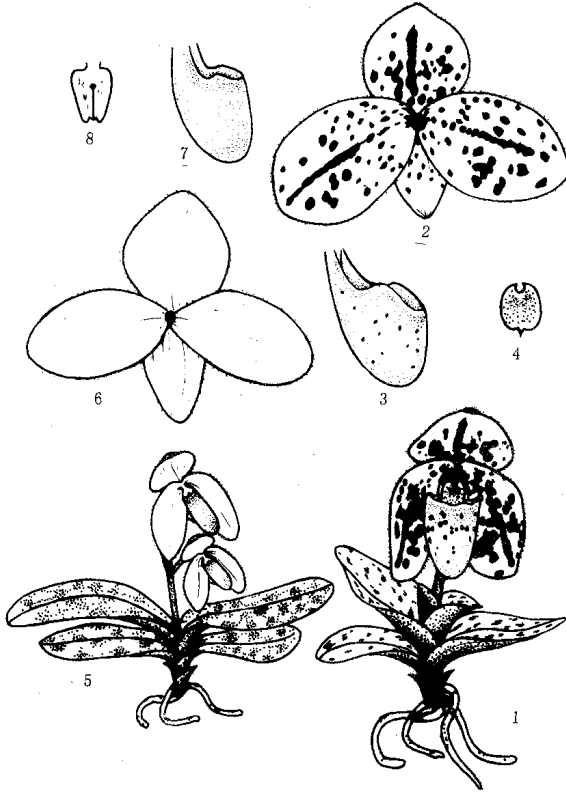


图1 1~4. 文山兜兰 1. 带花植株; 2. 中萼片、合萼片和花瓣, 正面观; 3. 唇瓣; 4. 退化雄蕊。5~8. 大化兜兰(变种) 5. 带花植株; 6. 中萼片、合萼片和花瓣, 正面观; 7. 唇瓣; 8. 退化雄蕊。

Fig.1 1~4. *Paphiopedilum wenshanense* Z. J. Liu et J. Y. Zhang; 1. Flowering plant; 2. Dorsal sepal, synsepal and petals, front view; 3. Lip; 4. Staminode. 5~8. *Paph. concolor* (Lindl.) Pfitz. var. *dahuaense* Z. J. Liu et J. Y. Zhang; 5. Flowering plant; 6. Dorsal sepal, synsepal and petals, front view; 7. Lip; 8. Staminode.

Folia 4~5, subelliptica, 5~10 cm longa, 3.5~4.5 cm lata, apice obtuso-roundata et inaequaliter bifida, supra atroviridi-tessellata et gypseo-notata, infra purpurea praeter basin viridem et purpureo-punctatam, basi conduplicato-petiolata. Scapus suberectus, 7~10 cm longus, viridis et purpureo-brunneo-punctatus, pubescens, 1-ad 3-florus; bractea ovato-elliptica, 1.6~2 cm

longa, 1.5 ~ 2 cm lata, extus pubescens secus costam, margine ciliata; pedicellus cum ovario 4 ~ 4.5 cm longus, pubescens; flos 6 ~ 7 cm in diam., albus vel flavido - albus, brunneo - rubro - punctatus, punctis 2 ~ 2.5 mm in diam.; sepalum dorsale suborbiculatum, 2.5 ~ 3 cm longum, 2.5 ~ 3.5 cm latum, dorso pubescens; synsepulum ovatum, quam id dorsale manifeste minore, 2 ~ 2.5 cm longum, ca 2 cm latum, apice obtusum, dorso pubescens; petala late elliptica vel oblongo - elliptica, 3.5 ~ 4 cm longa, 2.5 ~ 3 cm lata basi interiore pubescentia; labellum ellipsoideo - saccatum 3.5 ~ 4 cm longum, 2 ~ 2.5 cm latum, ad infimum interiorem villosum, ore lato, margine induplicato; staminodium late subellipticum, 8 ~ 9 mm longum et latum, basi cordatum, apice cuspidatum, cauda 1.5 ~ 2 mm longa.

Species nova *Paphiopedilo bellatulo* affinis, sed differt scapo basi univaginato, maculis in flore brunneo - rubris, staminodio late subelliptico basi cordato apice cuspidato, cauda 1.5 ~ 2 mm longa.

Yunnan (云南): Wenshan County (文山县), cultivated in Shenzhen City Wutongshan Nurseries, Z. J. Liu (刘仲健) 1507 (Holotype, in Herbarium, Shenzhen City Wutongshan Nurseries; 主模式, 保藏于深圳梧桐山苗圃总场标本室), 2 May 2000.

2 大化兜兰 (新变种) 图 1: 5 ~ 8

Paphiopedilum concolor (Lindl.) Pfitz. var. *dahuaense* Z. J. Liu et J. Y. Zhang, var. nov. Fig. 1: 5 ~ 8

本变种区别于原变种在于叶明显较长, 长可达 13 ~ 22 cm; 花白色, 无斑点; 唇瓣外表面两侧各有 5 条隆起的脉。

A typo differt foliis multo longioribus ad 13 ~ 22 cm longis, flore eburneo immaculato, labello in quoque latere paginae exterioris nervis quinque elevatis ornato.

Guangxi (广西): Dahua County (大化县), cultivated in Shenzhen City Wutongshan Nurseries, Z. J. Liu (刘仲健) 1521 (Holotype, in Herbarium, Shenzhen City Wutongshan Nurseries; 主模式, 保藏于深圳梧桐山苗圃总场标本室), 2 June 2000.

3 无点兜兰 (新变种)

Paphiopedilum concolor (Lindl.) Pfitz. var. *immaculatum* Z. J. Liu et J. Y. Zhang, var. nov.

本变种区别于原变种在于花淡黄色, 无斑点。

A typo differt flore minore flavido immaculato.

Guangxi (广西): Na Po County (那坡县), cultivated in Shenzhen City Wutongshan Nurseries, Z. J. Liu (刘仲健) 1520 (Holotype, in Herbarium, Shenzhen City Wutongshan Nurseries; 主模式, 保藏于深圳梧桐山苗圃总场标本室), 1 June 2000.

It seems that there is some confusion about the dividing line between *Paphiopedilum concolor* (Lindl.) Pfitz. and *P. bellatulum* (Rehb. f.) Stein, two related but distinct species both found in the limestone areas of southwestern China. Recently three new entities related to them have been found in the same area. In the present paper the differences and relationships between the five taxa are briefly discussed and a key to them are provided, in addition to describing the three new taxa: *P. wenshanense* Z. J. Liu et J. Y. Zhang, *P. concolor* var. *dahuaense* Z. J. Liu et J. Y. Zhang

and *P. concolor* var. *immaculatum* Z. J. Liu et J. Y. Zhang , based on the plants transplanted to our nursery several months ago.

P. wenshanense , a native of Wen Shan County in southeastern Yunnan , is an allied species of *P. bellatulum* . It is characterized by having a sheath at the base of the scape , a white or yellowish – white flower with large brown – red spots and a broadly subelliptic staminode with cordate base and cuspidate apex , these features being distinct from those in *P. bellatulum* . *P. concolor* var. *dahuaense* was collected from Da Hua County of central Guangxi . The plant is similar in habit to *P. concolor* , from which it differs by having much longer leaves up to 13 ~ 22 cm long and a ivory – white , unspotted flower with five raised nerves on either side of the saccate lip . The third taxon , *P. concolor* var. *immaculatum* , is indigenous to Na Po County of southwestern Guangxi . It is also very similar in habit to *P. concolor* , but the yellowish flower is smaller and spotless , by which it can be easily distinguished from *P. concolor* var. *concolor* .

致谢 本文承陈心启教授审阅斧正。