

兜兰属宽瓣亚属(广义)的补充研究

¹刘仲健 ²陈心启 ¹张建勇

¹(深圳市梧桐山苗圃总场 深圳 518114)

²(中国科学院植物研究所系统与进化植物学重点实验室 北京 100093)

Additional notes on the subgenus *Brachypetalum* (s.l.) of *Paphiopedilum*

¹LIU Zhong-Jian ²CHEN Sing-Chi ¹ZHANG Jian-Yong

¹(Shenzhen City Wutongshan Nurseries, Shenzhen 518114)

²(Laboratory of Systematic & Evolutionary Botany, Institute of Botany, the Chinese Academy of Sciences, Beijing 100093)

Abstract Two new orchid taxa, *Paphiopedilum globulosum* Z. J. Liu et S. C. Chen and *Paphiopedilum micranthum* Tang et Wang var. *oblatum* Z. J. Liu et J. Y. Zhang, are described and illustrated based on cultivated plants originating in southeastern Yunnan. Both of them are related to *Paphiopedilum micranthum* Tang et Wang, from which the former differs by having much broader leaves 2.8~3.4 cm wide, a somewhat hooked-tipped lip 1.1~1.2 cm wide, and a staminode almost as big as the mouth of the lip, and the latter by broader leaves 2.2~3 cm wide and an oblate lip at a depth of no more than 1 cm. They all belong to the subgenus *Brachypetalum* (s.l.). A key to 16 Chinese and Vietnamese species of this subgenus is provided.

Key words *Paphiopedilum*; *P. globulosum*; *P. micranthum* var. *oblatum*; Subgen. *Brachypetalum*; New species; New variety; Key; China; Vietnam

摘要 对新种小囊兜兰 *Paphiopedilum globulosum* 与新变种扁球兜兰 *P. micranthum* var. *oblatum* 作了描述与绘图。两者均为采自云南东南部的栽培植物,与硬叶兜兰 *P. micranthum* 近似。但小囊兜兰具有宽得多的叶(宽 2.8~3.4 cm),先端多少呈钩状、宽 1.1~1.2 cm 的唇瓣,以及与唇瓣囊口几乎同样大小的退化雄蕊,而扁球兜兰则叶宽 2.2~3 cm,唇瓣扁球形,囊深不超过 1 cm,可区别于硬叶兜兰。上述种类均属于宽瓣亚属(广义)。该亚属有 16 个种产中国、越南或两地共有。本文提供了分种检索表。

关键词 兜兰属;小囊兜兰;扁球兜兰(变种);宽瓣亚属;新种;新变种;检索表;中国;越南

中国和越南具有丰富的兜兰属 *Paphiopedilum* 植物,近来已为世人所熟知,其中尤以宽瓣亚属 subgen. *Brachypetalum*(广义,包括小萼亚属 subgen. *Parvisepalum*)为甚。据作者所知,目前该亚属已含 15 种及许多变种,而近年发表的竟占 7 种之多:浅斑兜兰 *Paphiopedilum jackii* S. H. Hu,钩唇兜兰 *P. hiepüi* Averyanov、越南兜兰 *P. vietnamense* Gruss et Perner、汉氏兜兰 *P. hangianum* Perner et Gruss、文山兜兰 *P. wenshanense* Z. J. Liu et J. Y. Zhang、心启兜兰 *P. singchüi* Z. J. Liu et J. Y. Zhang 和窄瓣兜兰 *P. angustatum* Z. J. Liu et S. C. Chen。本文所描述的 1 个新种和 1 个新变种也属于这个亚属(广义)。

笔者今年 4 月底在云南南部一苗圃看到了两种正在开花的兜兰属新植物。据苗圃主人称是采自云南东南部文山地区,数量有 250 余株之多。其中数株被带回深圳市梧桐山

苗圃总场并压成标本。两者花的形态均甚近似硬叶兜兰 *P. micranthum*, 但有明显的区别:大花者具扁球形唇瓣,囊深仅 1 cm;小花者的唇瓣直径仅 1~1.2 cm, 并且与囊口几乎等大的退化雄蕊。因此,可以肯定是两种未经记载的新分类群,这里分别作为新种与新变种予以描述发表。至此,中国与越南产的兜兰属宽瓣亚属(广义)的种类共有 16 种,可检索如下(不包括园艺杂交种与变种):

1. 叶上表面无网格斑。
 2. 萼片与花瓣纯白色…………… 白色兜兰 *P. emersonii* Koop. et Cribb
 2. 萼片与花瓣淡黄色或其他色泽。
 3. 退化雄蕊下半部呈 S 形弯曲,向基部逐渐收狭,基部无明显的爪…………… 汉氏兜兰 *P. hangianum* Perner et Gruss
 3. 退化雄蕊平坦,基部骤然收狭而具爪…………… 心启兜兰 *P. singchii* Z. J. Liu et J. Y. Zhang
1. 叶上表面有深浅绿色的网格斑。
 4. 中萼片苹果绿色,通常多少具条纹。
 5. 叶背浅绿色,不具或具疏而色淡的紫点…………… 浅斑兜兰 *P. jackii* S. H. Hu
 5. 叶背由于具较多的深色紫点而多少呈紫色。
 6. 唇瓣具钩状先端…………… 钩唇兜兰 *P. hicpii* Averyanov
 6. 唇瓣不具钩状先端。
 7. 根被密毛;花瓣宽 2.5~5.1 cm;唇瓣直径 3.8~5.4 cm…………… 麻栗坡兜兰 *P. malipoense* S. C. Chen et Tsi
 7. 根被细毛或变无毛;花瓣宽不足 1 cm;唇瓣直径约 1 cm…………… 窄瓣兜兰 *P. angustatum* Z. J. Liu et S. C. Chen
 4. 中萼片非苹果绿色。
 8. 植物具细长的、横走的根状茎;退化雄蕊长度超过宽度。
 9. 花黄色,无明显的斑点或条纹…………… 杏黄兜兰 *P. armeniacum* S. C. Chen et F. Y. Liu
 9. 花非黄色,具或不具斑纹。
 10. 花瓣白色,无斑纹,宽达 2 cm 以上…………… 德氏兜兰 *P. delenatii* Guillaumin
 10. 花瓣绿黄色或其他色泽,有密集的深色斑纹。
 11. 唇瓣宽 3 cm 以上;退化雄蕊明显小于唇瓣的囊口…………… 硬叶兜兰 *P. micranthum* Tang et Wang
 11. 唇瓣宽 1.0~1.2 cm;退化雄蕊与唇瓣的囊口几乎等大…………… 小囊兜兰 *P. globulosum* Z. J. Liu et S. C. Chen
 8. 植物几乎不具或仅具粗短的、近直生的根状茎;退化雄蕊宽度超过长度。
 12. 花序柄长 12~20 cm;唇瓣长度与宽度相近或略超过。
 13. 唇瓣白色,略有细紫点;退化雄蕊宽 1.0~1.2 cm,无毛…………… 雪花兜兰 *P. niveum* (Rehb. f.) Stein
 13. 唇瓣淡紫红色;退化雄蕊宽 1.7~2.1 cm,被细柔毛…………… 越南兜兰 *P. vietnamense* Gruss et Perner
 12. 花序柄长 4~10 cm;唇瓣长度明显超过宽度,通常可达宽度的一倍。
 14. 花具小斑点,斑点直径 0.5~1 mm…………… 同色兜兰 *P. concolor* (Lindl.) Pfitz.
 14. 花具粗大的斑点,斑点直径 2~3 mm。
 15. 花葶基部无鞘;退化雄蕊先端不为尾状…………… 巨瓣兜兰 *P. bellatulum* (Rehb. f.) Stein
 15. 花葶基部具 1 枚鞘;退化雄蕊先端尾状…………… 文山兜兰 *P. wenshanense* Z. J. Liu et J. Y. Zhang

小囊兜兰 新种 图 1

Paphiopedilum globulosum Z. J. Liu et S. C. Chen, sp. nov. Fig. 1

Species nova *Paphiopedilo micrantho* Tang et Wang proxima, a quo differt foliis multo latioribus (2.8 ~ 3.4 latis), labello minore (1.0 ~ 1.2 cm lato) apice plus minusve sursum uncatu, staminodio orem labelli fere aequanti.

Rhizoma elongatum, repens. Folia 5 ~ 7, oblongo-elliptica, 6 ~ 8 cm longa, 2.8 ~ 3.4 cm lata, apice obtusa, supra atroviridi- et viridulo-tessellata, infra pallide viridia et dense purpureo-punctata, basi in petiolum conduplicatum albo-ciliatum contracta. Scapus suberectus, cum inflorescentia uniflora 11 ~ 18 cm longus, pedunculo rubello et dense purpureo-punctato albo-piloso; bractea ovata, 1.5 ~ 2 cm longa, 1.2 ~ 1.6 cm lata, viridis et atropurpureo-punctata, dorso albo-pubescentis; pedicellus cum ovario 3 ~ 4 cm longus, viridis et atropurpureo-punctatus, pilosus; flos 3.5 ~ 4 cm in diam., sepalis et petalis luteolo-albidis et purpureo-striatis, labello albo interdum rubello-striato prope orem, staminodio luteolo-albido interdum plus minusve purpureo-punctulato; sepalum intermedium ovatum, 2 ~ 2.2 cm longum, 1.4 ~ 1.6 cm latum, subacutum, dorso pubescens, ciliatum, multo-nerviium; synsepalum subovatum, 1.8 ~ 1.9 cm longum, 1.1 ~ 1.2 cm latum, dorso dense pubescens; petala late elliptico-ovata, 2.0 ~ 2.2 cm longa, 1.5 ~ 1.6 cm lata, apice rotundata et plus minusve incurvata, dorso et ad basin paginae interioris pubescens, ciliata; labellum subglobuloso-saccatum, cum basi stipitata 2.2 ~ 2.4 cm longum, sacco 1.0 ~ 1.2 cm in diam. apice plus minusve sursum uncatu margine oris induplicato; staminodium oblongo-ellipticum, ca. 1 cm longum, 8 mm latum, basi breviter auriculatum.

China. SE Yunnan (云南东南部): Wenshan (文山), 2001-05-02, Z. J. Liu (刘仲健) 21052 [holotype, here designated, PE; isotype, in Herbarium, Shenzhen City Wutongshan Nurseries(深圳市梧桐山苗圃总场标本室)].

根状茎长,横走。叶5~7枚,矩圆状椭圆形,长6~8 cm,宽2.8~3.4 cm,先端钝,上表面具深浅绿色的网格斑,背面浅绿色并有密集的斑点,基部收狭成柄;叶柄对摺,边缘具白色缘毛。花葶近直立,连同具单花的花序长11~18 cm;花序柄淡红色并密被紫点,具白色长柔毛;花苞片卵形,长1.5~2 cm,宽1.2~1.6 cm,绿色并具深紫色斑点,背面有白色短柔毛;花梗连同子房长3~4 cm,绿色并有深紫色斑点,被长柔毛;花直径3.5~4 cm;萼片与花瓣浅黄白色,具紫色条纹;唇瓣白色,有时在囊口有浅红色条纹;退化雄蕊浅黄白色,有时多少有淡紫色细斑点;中萼片卵形,长2~2.2 cm,宽1.4~1.6 cm,先端近急尖,背面被短柔毛,边缘具缘毛,有多条脉;合萼片近卵形,长1.8~1.9 cm,宽1.1~1.2 cm,背面密被短柔毛;花瓣宽椭圆状卵形,长2.0~2.2 cm,宽1.5~1.6 cm,先端浑圆并多少内卷;背面及内表面基部具短柔毛,边缘具缘毛;唇瓣近小囊状兜形,连同柄状基部长2.2~2.4 cm;囊直径1.0~1.2 cm,先端多少向上呈钩状,囊口边缘内折;退化雄蕊矩圆状椭圆形,长约1 cm,宽8 mm,基部具短耳。

本新种与硬叶兜兰 *Paphiopedilum micranthum* Tans et Wang 相近似,区别点在于:本新种叶明显较宽(宽2.8~3.4 cm),唇瓣较小(直径1.0~1.2 cm),先端多少向上呈钩状,退化雄蕊几乎与唇瓣囊口等大。

扁球兜兰 新变种 图2

***Paphiopedilum micranthum* Tang et Wang var. *oblatum* Z. J. Liu et J. Y. Zhang, var. nov.** Fig. 2

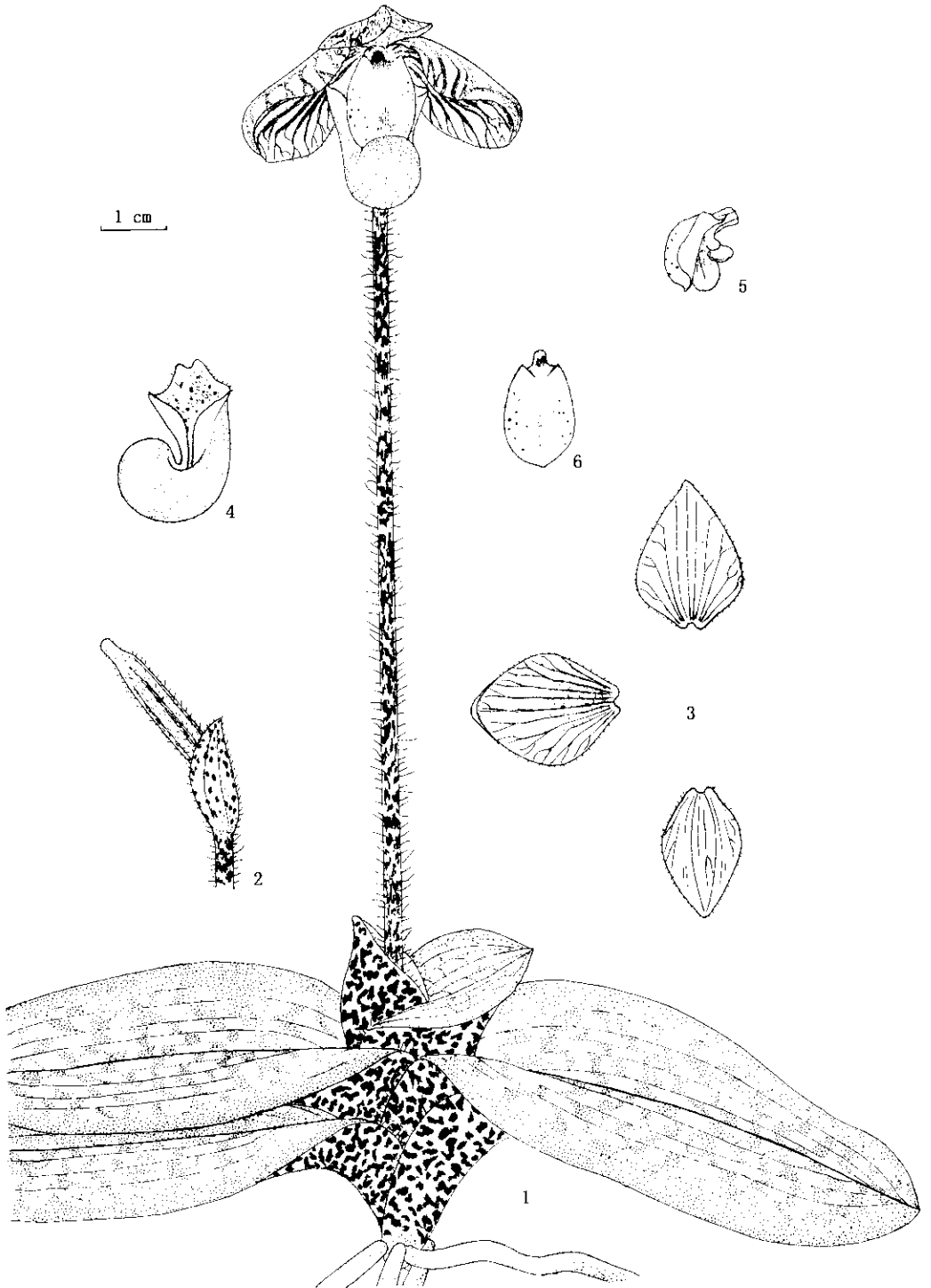


图1 小囊兜兰 1. 带花植株; 2. 花苞片与子房; 3. 中萼片、合萼片和花瓣, 正面观; 4. 唇瓣, 侧面观; 5. 蕊柱, 侧面观; 6. 退化雄蕊, 正面观。

Fig. 1 *Paphiopedilum globulosum* Z. J. Liu et S. C. Chen 1. Flowering plant; 2. Bract and ovary; 3. Dorsal sepal, synsepal and petal, front view; 4. Lip, side view; 5. Column, side view; 6. Staminode, front view.

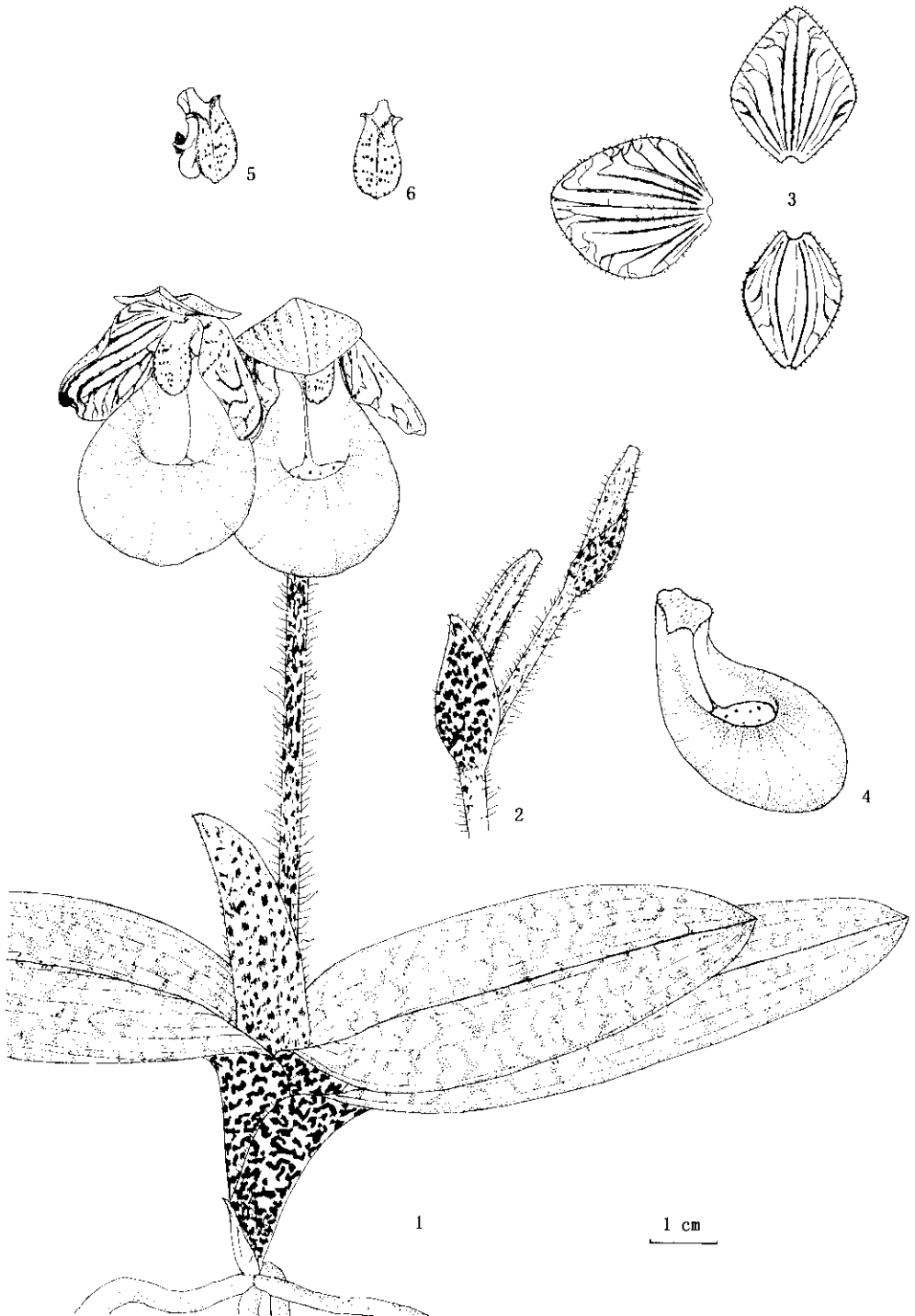


图2 扁球兜兰(变种) 1. 带花植株; 2. 花苞片与子房; 3. 中萼片、合萼片和花瓣, 正面观; 4. 唇瓣, 侧面观; 5. 蕊柱, 侧面观; 6. 退化雄蕊, 正面观。
 Fig. 2 *Paphiopedilum micranthum* Tang et Wang var. *oblatum* Z. J. Liu et J. Y. Zhang 1. Flowering plant; 2. Bract and ovary; 3. Dorsal sepal, synsepal and petal, front view; 4. Lip, side view; 5. Column, side view; 6. Staminode, front view.

A typo differt foliis latoribus 2.2 ~ 3.0 cm latis, labello oblato in profunditate ca. 1 cm.

China. SE Yunnan (云南东南部): Wenshan (文山), 2001-05-02, Z. J. Liu (刘仲健) 21053 (holotype, here designated, in Herbarium, Shenzhen City Wutongshan Nurseries).

本新变种与原变种 *Paphiopedilum micranthum* Tang et Wang var. *micranthum* 的区别在于: 本新变种叶较宽(宽 2.2 ~ 3 cm), 唇瓣的囊扁球形, 深仅 1 cm。

During a trip of the senior author to Yunnan in last April, two new forms of *Paphiopedilum* were seen in a nursery, which were said to be collected from Wenshan Prefecture in southeastern Yunnan. The plants, as many as nearly 250 individuals, were in blossom. They are similar in appearance to *Paphiopedilum micranthum* Tang et Wang, but have broader leaves and differently structured flowers. We can identify two types of flowers among the plants: one having a small subglobos lip 1 ~ 1.2 cm in diam. and a staminode as big as the mouth of the lip, and the other having an oblate-saccate lip at a depth of no more than 1 cm. They are treated here as two new taxa: *Paphiopedilum globulosum* Z. J. Liu et S. C. Chen and *P. micranthum* Tang et Wang var. *oblatum* Z. J. Liu et J. Y. Zhang. Both of them belong to the subgen. *Brachypetalum* (s.l., including subgen. *Parvisepulum*). Thus the subgenus comprises 16 species indigenous to China, Vietnam or both, to which a key is provided as follows (including neither hybrids nor varieties):

1. Leaves untessellated on upper surface.
 2. Sepals and petals pure white **P. emersonii** Koop. et Cribb
 2. Sepals and petals not pure white.
 3. Staminode with a sigmoid curve in lower half, gradually narrowing towards the base, without a basal claw **P. hangianum** Perner et Gruss
 3. Staminode completely flat, abruptly narrowed at base into a claw **P. singchii** Z. J. Liu et J. Y. Zhang
1. Leaves tessellated on upper surface.
 4. Dorsal sepal apple-green, more or less striped.
 5. Leaves pale green or scatteredly purplish-spotted on lower surface **P. jackii** S. H. Hu
[= *P. malipoense* S. C. Chen et Tsi var. *jackii* (S. H. Hu) Averyanov]
 5. Leaves purple or densely purple-spotted on lower surface.
 6. Lip with somewhat hooked apex **P. hiepii** Averyanov
[= *P. malipoense* S. C. Chen et Tsi var. *hiepii* (Averyanov) Cribb]
 6. Lip without hooked apex.
 7. Roots densely pubescent; petals 2.5 ~ 5.1 cm wide; lip 2.8 ~ 5.4 cm in diam. **P. malipoense** S. C. Chen et Tsi
 7. Roots puberulous or glabrescent; petals less than 1 cm wide; lip ca. 1 cm in diam. **P. angustatum** Z. J. Liu et S. C. Chen
 4. Dorsal sepal not apple-green.
 8. Rhizome elongate, creeping; staminode longer than broad.
 9. Flowers yellow **P. armeniacum** S. C. Chen et F. Y. Liu
 9. Flowers not yellow.
 10. Petals not striped **P. delenatii** Guillaumin
 10. Petals purple-striped.
 11. Lip over 3 cm wide; staminode much smaller than the mouth of the lip **P. micranthum** Tang et Wang
 11. Lip 1.0 ~ 1.2 cm wide; staminode almost as big as the mouth of the lip **P. globulosum** Z. J. Liu et S. C. Chen

8. Rhizome short, not creeping; staminode broader than long.
12. Peduncle 10 ~ 20 cm long; lip usually a little longer than broad
13. Lip white, minutely purple-spotted; staminode 1.0 ~ 1.2 cm wide, glabrous **P. niveum** (Rchb. f.) Stein
13. Lip purplish-reddish; staminode 1.7 ~ 2.1 cm wide, puberulous **P. vietnamense** Gruss et Perner
12. Peduncle 4 ~ 10 cm long; lip usually twice longer than broad.
14. Flowers with small coloured spots (0.5 ~ 1 mm in diam.) **P. concolor** (Lindl.) Pfitz.
14. Flowers with large coloured spots (2 ~ 3 mm in diam.).
15. Scape not sheathed at base; staminode not cuspidate at apex **P. bellatulum** (Rchb.f.) Stein
15. Scape 1-sheathed at base; staminode cuspidate at apex **P. wenshanense** Z. J. Liu et J. Y. Zhang