



### 条纹双唇兰, 中国兰科双唇兰属一新记录种

张培春, 杨小波, 陈琳, 夏丹, 戚春林, 李东海

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# 条纹双唇兰，中国兰科双唇兰属一新记录种

张培春, 杨小波\*, 陈琳, 夏丹, 戚春林, 李东海

(海南大学生态与环境学院, 海口 570228)

**摘要:** 在海南省会山省级自然保护区的野外考察中, 发现双唇兰属中国一新记录种: 条纹双唇兰(*Didymoplexis striata* J.J. Sm.)。条纹双唇兰具有以下特征, 与该属的其他种区分: 花被筒内侧具纵向的浅褐色条纹, 唇瓣中间具扁平的淡黄色加厚, 由唇瓣先端一直延伸至唇瓣基部。

**关键词:** 条纹双唇兰; 兰科; 新记录; 中国

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## *Didymoplexis striata* J.J. Sm., A Newly Recorded Species of Orchidaceae from China

ZHANG Peichun, YANG Xiaobo\*, CHEN Lin, XIA Dan, QI Chunlin, LI Donghai

(College of Ecology and Environment, Hainan University, Haiko 570228, China)

**Abstract:** *Didymoplexis striata* J.J. Sm. was reported as a newly recorded species from China. It was found during a field investigation in Huishan Provincial Nature Reserve, Hainan Province. The species could be differentiated from all other species of this genus by the following combination of characters: a perianth tube with longitudinally light brown stripes on the adaxial surface, entire lip with a pale yellowish median thickening band. In this paper, its morphological descriptions, color photos, distribution, and conservation status are provided.

**Key words:** *Didymoplexis striata*; Orchidaceae; New record; China

The genus *Didymoplexis* Griff., was founded by Griffith in 1844. Approximately 21 species are distributed in India, South China, Indochina to Ryukyu Islands and the Philippines, the Malay Archipelago to Papua New Guinea, tropical Australia, and the southwest Pacific islands, also in southwest Africa and Madagascar<sup>[1-2]</sup>. Three species were previously reported in China: *D. vietnamica*, *D. pallens*, *D. micradenia*, which are mainly distributed in Hainan, Taiwan, Guangxi and Guangdong<sup>[3]</sup>.

In Hainan Island, mild climate and diverse vegetation types<sup>[4]</sup> provide a habitat for a large number of tropical plants, among which orchids are parti-

cularly typical. In recent years, there have been many reports on discovery of orchids<sup>[5-8]</sup>. During a recent botanical survey in Huishan Nature Reserve (Qionghai), a species of the genus *Didymoplexis* Griff. was discovered. After dissection and study of fresh materials and literature review<sup>[9-12]</sup>, it was identified as a newly recorded species in China, *Didymoplexis striata*. This species was previously recorded in Malaysia, Brunei, Indonesia, Solomon Islands, Thailand, and other regions<sup>[2,11]</sup>. The discovery of the species in Hainan Island showed a closer historical relationship of Hainan Island with Southeast Asia<sup>[13]</sup>. *Didymoplexis striata* is morphologically similar to *D.*

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ZHANG Peichun (born in 1996), male, MDC, interested in the classification of orchids. E-mail: 1754805907@qq.com

\* Corresponding author. E-mail: yanfengxb@163.com

*pallens*, except that it has a longitudinally striate perianth tube and an entire lip with a pale yellowish median thickening band.

***Didymoplexis striata*** J.J. Sm., Icon. Bogor. [Boerlage] 2: t. 104 B (1903). (条纹双唇兰) Fig. 1

Holomycotrophic plants. Plants 10–20 cm tall. Rhizome pale brown, fusiform or moniliform, 8–15 mm × 5–8 mm; roots few to many, wiry, often with small globose thickenings. Peduncle 5–18 cm, with 3–5 scalelike sheaths, pale brown to reddish-brown. Pedicel 0.5–3 cm, elongating in fruit, laxly to subdensely 2–5-flowered; floral bracts triangular cupped, ca. 2 mm, apex acute. Flowers opening in succession, white, campanulate; pedicel and ovary erect, brown, 0.7–1.2 cm; pedicel extending to 15 cm in fruit. Dorsal sepal and petals 4–7 mm, usually united for more than 1/2 of their length, free portion ovate-triangular, shallowly 3-lobed, each lobe ovate-deltoid and with an obtuse apex; lateral sepals 3–4.5 mm, connate with each other for up to 1/2 of their length, and with petals

for 1/3 of their length, free portion 2-lobed, each lobe ovate and with an obtuse apex, reflexed; with 3 brown stripes on sepals and 2 brown stripes on petals; lip saddle-shaped, 4.5–6 mm × 6–7 mm, erose-crenate, lateral margins erect or incurved, apex subtruncate; disk with a pale yellowish median thickening band. Column slightly curved, clavate, ca. 4 mm, apex dilated and with 2 conical wings; column foot slightly curved, 2–3 mm. Fl. Apr.—May, Fr. May—Jun.

**Specimen:** Qionghai (琼海): Huishan Provincial Nature Reserve, Hainan Province. April 24, 2021, Zhang Peichun 2021001 (HUTB).

**Distribution:** Malaysia, Brunei, Indonesia (Java and Borneo) and the Solomon Islands (New Georgia and Krombangala), Thailand. Qionghai (琼海), Hainan Province, China.

**Ecology:** Closed lowland rain forests with abundant litter, 300–600 m a.s.l. Flowering was observed in April and May.

**Protection Status:** This species has a very narrow distribution in Huishan Provincial Nature Reserve,



Fig. 1 *Didymoplexis striata* J.J. Sm. A: Habitat; B: Flowering plant; C: Flower, Lip, Column. (Photoed by Kai Zhang)

Hainan Province. At present, only one population has been found, and the number of individuals is 15. According to the evaluation criteria of the threatened degree of species by the World Conservation Union<sup>[14]</sup>, We speculated that the species is a critically endangered species based on the following points (CR: C2ai): the estimated population number of mature individuals is less than 250 (Cr: C), and it is estimated that there is no subpopulation with more than 50 mature individuals

(Cr: C2ai). It is a species with a very small population due to its harsh growth conditions and susceptibility to damage. Follow-up observation of the population dynamics of the newly recorded species and related studies of pollination and reproductive biology should help to develop effective conservation measures.

To facilitate the identification of *Didymoplexis* species, we compiled an identification key to the 4 species distributed in China.

### A taxonomic key to the four species in the genus *Didymoplexis* Griff. in China

1. Column foot conspicuous, longer than 1 mm; lip 6–7 mm wide, broader than long.
2. Bracts triangular, cup-shaped, lip with appendages .....*D. vietnamica* Ormd.(中越双唇兰)
2. Bracts ovate, lip without appendages.
3. Lip disk with a dense row of warty papillae along midvein .....*D. pallens* Griff. (双唇兰)
3. Lip disk with a pale yellowish median thickening band .....*D. striata* J.J. Sm. (条纹双唇兰)
1. Column foot inconspicuous, less than 1 mm, lip 4–5 mm wide .....*D. micradenia* (Rchb.f.) Hemsl. (小双唇兰)

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