

中国腐生兰科植物二新记录种

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摘要: 报道了中国腐生兰科植物二新记录种, 即二色肉果兰(*Cyrtosia integra* (Rolfe ex Downie) Garay)和反瓣山珊瑚(*Galeola cathcartii* Hook. f.), 并提供简要描述和图片。

关键词: 肉果兰属; 山珊瑚属; 腐生兰; 兰科; 新记录; 中国

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Two Newly Recorded Mycotrophic Species of Orchidaceae from China

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Abstract: Two newly recorded species of mycotrophic orchids from China, *Cyrtosia integra* (Rolfe ex Downie) Garay and *Galeola cathcartii* Hook. f. are reported. Brief descriptions and photoes of them are also provided.

Key words: *Cyrtosia*; *Galeola*; Mycotrophic orchids; Orchidaceae; New record; China

Mycotrophic orchids are rare and interesting due to their unique habitat. They have no normal leaves and grow in soil rich in decaying organic substances deriving nutrients from the soil through their roots. Among of all the mycotrophic orchids, *Galeola* Lour. is probably by far the largest one^[1]. The generic name *Galeola* is in reference to the form of lip, diminutive of helmet^[2]. The plants are extensive climbers or erect herbs, lacking all green colour, the stems being dull brownish, with only scaly reddish leaves. The flowers are rather large and the fruits are dehiscent, containing rather large winged seeds^[1]. This genus includes about ten species distributed in Madagascar eastwards and from Sikkim to South China and south-eastwards through Thailand to Malaysia, Indonesia, The Philippines and New Guinea^[2], and four species have been reported in China before^[3].

Cyrtosia Bl. is a small Asian genus in Orchidaceae with about seven species being currently recognized. The name of the genus is derived from the Greek *kyrtos*, meaning “curved”, in reference to the prominently curved column^[2]. Most of these species were originally described under *Galeola*, with some new combinations being made by Garay^[4]. However, it can be easily distinguished from the latter by erect plants with mostly striking fleshy, indehiscent fruits containing wingless seeds^[5]. It is distributed from tropical Asia to East Asia, and there are three species reported in China before^[3].

During our extensive expedition of orchids in Yunnan from 2009 to 2010, two mycotrophic species were collected. After a critical study of the plants and by consulting relevant literatures^[6-9], they were identified as *Cyrtosia integra* (Rolfe ex Downie) Garay and *Galeola cathcartii* Hook. f., respectively,

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representing two new records to the Chinese orchid flora, and here reported.

1. *Cyrtosia integra* (Rolfe ex Downie) Garay, Bot. Mus. Leaflet. **30**: 232. 1986; Seidenf. in Opera Bot. **114**: 73. 1992.

Galeola integra Rolfe ex Downie, Kew Bull. 409. 1925; Seidenfaden & Smitinand, Orchids Thailand **1**: 54. 1959; Seidenfaden, Dansk Bot. Ark. **32** (2): 130. Fig. 80. 1978. Type: Thailand: Doi Suthep 900 m, on humus in evergreen jungle, Kerr 304 (holotype, K) (二色肉果兰 Fig. 1: A–D)

Terrestrial herb, erect, 40–60 cm tall; stem glabrous for greater part, furfuraceous near tips, stout at base, closely set scale-like bracts, which are more scattered above. Inflorescences terminal or axillary, forming a very loose panicle up to 10–12 cm long; floral bracts triangular, concave, furfuraceous on back, 3.5 mm by 4 mm at base; flowers crowded at apex, 14 mm long without ovary. Sepals oblong-ovate to broadly ovate, 10–15 mm × 4–6.5 mm, apex acute and rather thick, furfuraceous on back; dorsal sepal greenish brown, oblong; lateral sepals greenish brown, yellow in basal half, broadly ovate. Petals greenish brown, ovate to broadly ovate, 11–13 mm × 5–6 mm, grooved on back, apex rounded to acute; lip yellow, tinged with brown towards apex, fused with base of column, thick, fleshy, orbicular, 8–9 mm × 8–9 mm, deeply concave, sides erect, grooved on back, apex very slightly inrolled and very shortly apiculate, margins entire, disc naked and the apical part strongly pubescent in a half circle, especially on obovate ridged callus. Column prominently curved, with lateral toothed wings, flabellate above, 6–7 mm long without anther. Fl. Apr.–May. Fruits light brown-yellow with purple tint, succulent, 6–6.5 cm × 0.5–0.6 cm. Seeds wingless.

Distribution: Thailand, Laos and Vietnam. New record to China.

China: Yunnan, Pu'er, northwest of Simao District, in the nutrient-rich wetlands near rivers in a moist evergreen broad-leaved rainforest, alt. 1400–1450 m. 2009–04–02, L. Li 107 (spirited specimen, IBSC).

Conservation status: This species is rare and under significant strain requiring protection. We hope our research could draw attention to issues of its international conservation.

It is related to *Cyrtosia nana* (Rolfe ex Downie) Garay^[6], but it can be easily distinguished from the latter by much higher plants (to 70 cm against 9–18 cm), conspicuous dentate column wings, lip without papillae at base.

2. *Galeola cathcartii* Hook. f., Fl. Brit. Ind. 6(1): 89. 1890; King & Pantling, Ann. Roy. Bot. Gard. Calcutta **8**: 263, t. 350. 1898.

Galeola kerrii Rolfe ex Downie, Kew Bull. 409. 1925; Seidenfaden & Smitinand, Orchids Thailand **1**: 54. 1959. Type: Thailand: Doi Suthep 900 m, climbing on trees in evergreen jungle, Kerr 253a (holotype, K) (反瓣山珊瑚 Fig. 1: E–I)

Scandent Plant, bearing roots from nodes. Stem branched, terete, glabrous, scurfy, 5–10 mm in diam. with many, alternate, 2–2.5 cm × 1–1.5 cm, ovate, fleshy, concave scaly bracts. Inflorescences lateral, spreading or drooping panicate, 5–25 cm long, pubescent; rachis 5–12 cm long, terminal, with 5–10 flowers. Flowers subtended by triangular, concave scales, 2.0–2.5 cm across, spreading, yellow, furfuraceous outside, especially at base. Sepals subequal, linear-oblong, subacute at apex, recurved, 2.0–2.5 cm × 0.3–0.5 cm, furfuraceous on back; petals narrower than sepals, revolute, rounded at apex, 2.0–2.5 cm × 0.2–0.3 cm. Lip concave, surrounding the column, spoon-shaped, rounded at apex, obovate when stretched, 1.5–1.8 cm × 0.8–1.1 cm, margin irregularly toothed, the teeth deeper towards apex and disappearing towards base; side lobes erect, with red, small scattered papillae inside. Column 6–8 mm tall, thickened at the top. Anther fleshy, 1.5 mm tall, with conical lobe on back. Pollinia 2, granular. Fl. May–Jun. Fruit 15–20 cm long when ripe, dry capsule.

Distribution: Thailand, Sikkim. New record to China.

China: Yunnan, Pu'er, south of Simao District, in the shady, humid area of montane evergreen rainforest along river banks, alt. 1100–1200 m.

2010-06-12, L. Li 106 (spirited specimen, IBSC).

Conservation status: This species is endangered and rare in occurrence and should receive extra conservation attention.

It is similar to *Galeola nudifolia* Lour.^[6], another scandent species in Yunnan, but a differs from the latter in the lack of the calli at the base of the lip; distinctly slender sepals and petals.

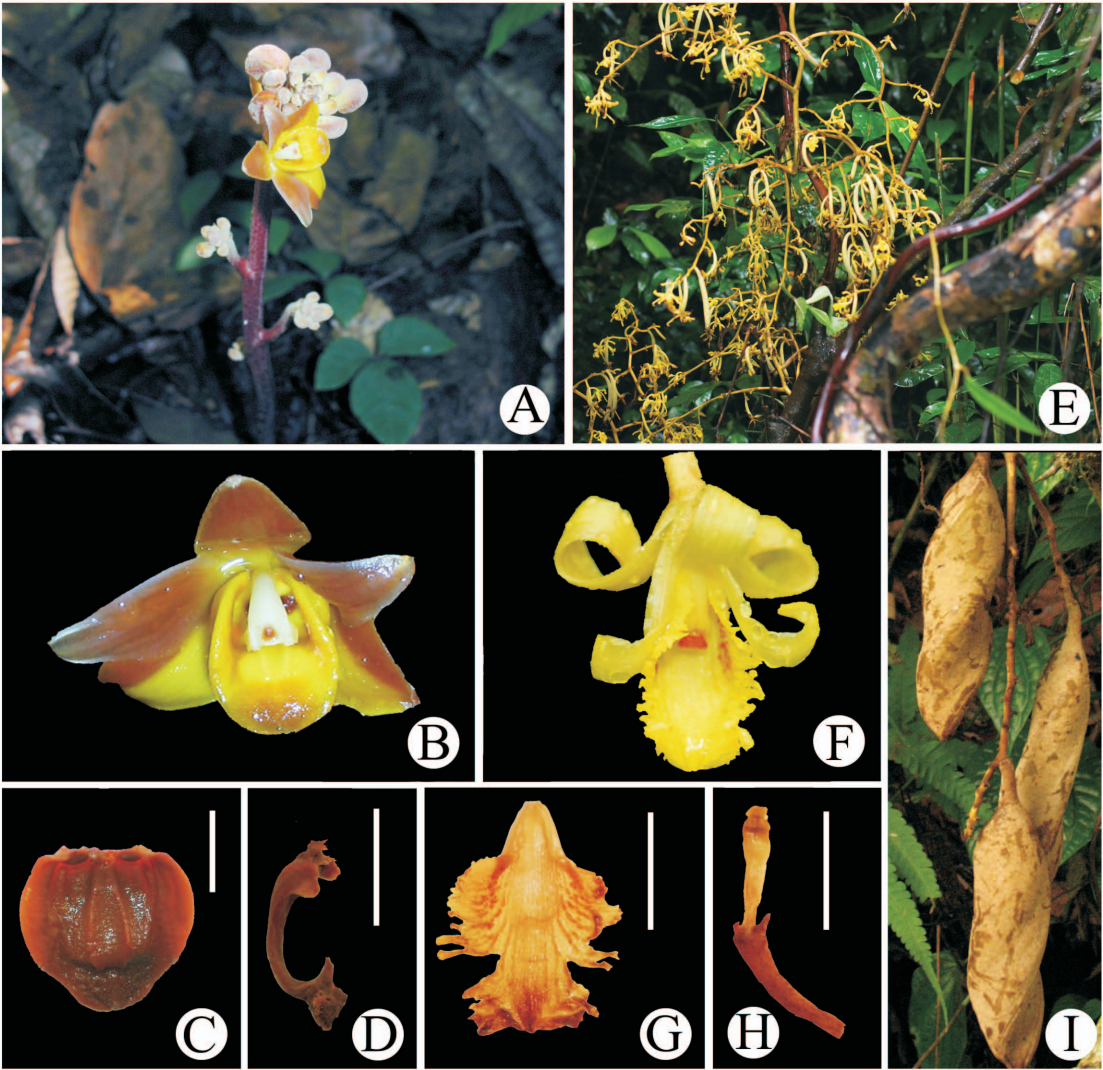


Fig. 1 *Cyrtosia integra* (A-D) and *Galeola cathcartii* (E-I). A. Habitat; B. Front view of flower; C. Front view of lip; D. Lateral view of column; E. Habitat; F. Front view of flower; G. Front view of lip; H. Front view of column; I. Fruits. C,D. Bars = 5 mm; G,H. Bars = 10 mm

References

[1] Seidenfaden G, Wood J J. The Orchids of Peninsular Malaysia and Singapore [M]. Denmark: Fredensborg, Olsen & Olsen, 1992: 127-130.

[2] Pridgeon A M, Cribb P J, Chase M W, et al. Genera Orchidacearum Vol. 3 [M]. Oxford: Oxford University Press, 2003: 302-304, 313-316.

[3] Chen S C, Phillip J C. Flora of China Vol. 25 [M]. Beijing: Science Press and St. Louis: Missouri Botanical Garden Press, 2009: 168-170.

[4] Garay L A. Olim Vanillaceae. Botanical Museum Leaflets Vol. 30 [M]. US: Massachusetts, Harvard University Press, 1986: 223-237.

[5] Seidenfaden G. The orchids of Indochina [J]. Opera Bot, 1992, 114: 73-74.

[6] Seidenfaden G. Orchid genera in Thailand VI. Neottioideae Lindl. [J]. Dansk Bot Ark, 1978, 32(2): 129-137.

[7] Pradhan U C. Indian Orchids: Guide to Identification and Culture [M]. India: Kalimpong, 1976: 152-154.

[8] Bose T K, Bhattacharjee S K. Orchids of India [M]. India: Calcutta, Naya Prokash, 1980: 282-284.

[9] Comber J B. Orchids of Java [M]. UK: Kew, Richmond, Surrey, Royal Botanic Garden, 1990: 72-73.