
Epigeneium gaoligongense (Orchidaceae), a New Species from Yunnan, China

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ABSTRACT. *Epigeneium gaoligongense* Hong Yu & Shi-Gang Zhang, a new species of Orchidaceae from Lushui County in western Yunnan, is described and illustrated. It is related to *Epigeneium rotundatum* (Lindley) Summerhayes, but differs from it by having smaller leaves 2.5–7 cm long, narrower petals 1.5–2 mm wide, a broadly ovate-orbicular lip with much larger lateral lobes, three indistinct keels and a callus on the disc, and a shorter column 4–5 mm long.

Key words: China, *Epigeneium*, Orchidaceae, Yunnan.

Epigeneium Gagnepain is an orchid genus of ca. 35 species, distributed in tropical and subtropical Asia. Seven species of this genus have been reported from China (Tsi, 1999). During a botanical trip by the authors to the Gaoligong Mountains in western Yunnan in autumn 2000, several plants of *Epigeneium* were collected from Lushui County at an altitude of nearly 2500 m, where no less than 20 individuals were found growing on rocks or tree trunks on the edge of a forest. They were brought back and cultivated in the greenhouse of the Inmol Laboratory of Biotechnology in Kunming and flowered early in August 2001. The species is similar in habit and to a lesser extent in floral structure to *Epigeneium rotundatum* (Lindley) Summerhayes, a species widely distributed from southwest China to India, Myanmar, and the Himalaya regions. From the latter it differs by having rather small leaves 2.5–7 cm long, narrower petals 1.5–2 mm wide, a broadly ovate-orbicular lip with much larger lateral lobes, three indistinct keels and a callus on the disc, and shorter column 4–5 mm long. We treat it here as a new species belonging to *Epigeneium* sect. *Katherinea* (A. D. Hawkes) Garay & G. A. Romero-Gonzalez, which is characterized by having two terminal leaves on each pseudobulb.

Epigeneium gaoligongense Hong Yu & S. G. Zhang, sp. nov. TYPE: China. Yunnan: Gaoligong Mt., Lushui County, alt. 2500 m, 26 Aug. 2001, H. Yu & S. G. Zhang 101 (holotype, PE; isotype, Herbarium, Inmol Laboratory of Biotechnology, Kunming, Yunnan). Figure 1.

Pseudobulbi 3–9 cm distantes, anguste ovoidei vel cylindrico-ovoidei, 1.5–4 cm longi, 5–8 mm diam., apice bifolii. Folia ovato-elliptica vel elliptica, 2.5–7 × 1.2–2.8 cm. Scapus 2–3 cm longus, apice 1-florus; flos ca. 3 cm diam.; petala lineari-lanceolata, 15–21 × 1.5–2 mm; labellum ambitu late ovato-orbiculare, 1–1.5 × 1.4–2 cm; lobis lateralibus erecto-incurvis ovatis 11 × 6 mm, lobo intermedio late ovato 8–10 mm longo et lato, disco obscure 3-carinato et apice carinarum 1-callosa; columna 4–5 mm longa.

Epiphytic plants with an elongate, creeping rhizome 2–3 mm thick; rhizome usually branched, densely maroon-sheathed when young. Pseudobulbs 3–9 cm apart on the rhizome, enclosed by maroon sheaths when young, narrowly ovoid to cylindrical-ovoid, 1.5–4 cm long, 5–8 mm thick, 2-leaved at apex. Leaves coriaceous, rigid, deep green above, pale green beneath, ovate-elliptic to elliptic, 2.5–7 × 1.2–2.8 cm, bifid at apex; petiole 5–11 mm long. Scape arising from the top of a rather young pseudobulb, 2–3 cm long, glabrous, with 2 or 3 maroon, lanceolate bracts at base, terminating in a single flower; flower ca. 3 cm across; sepals and petals pale green, usually with obscurely reddish purple markings dorsally; lip greenish color, densely red-purple-spotted; dorsal sepal lanceolate, 18–23 × 5–6 mm, obscurely 5-nerved; lateral sepals obliquely lanceolate-ovate, 15–19 × 9–10 mm, obscurely 7-nerved; petals linear-lanceolate, 15–21 × 1.5–2 mm, 1-nerved; lip adnate at base to the top of the column foot, broadly ovate-orbicular in outline, trilobed, 1–1.5 × 1.4–2 cm; lateral lobes erect-incurved, ovate, ca. 11 × 6 mm; mid-lobe broadly ovate, 8–10 mm long and wide, acute at apex; disc with 3 indistinct keels and at their top

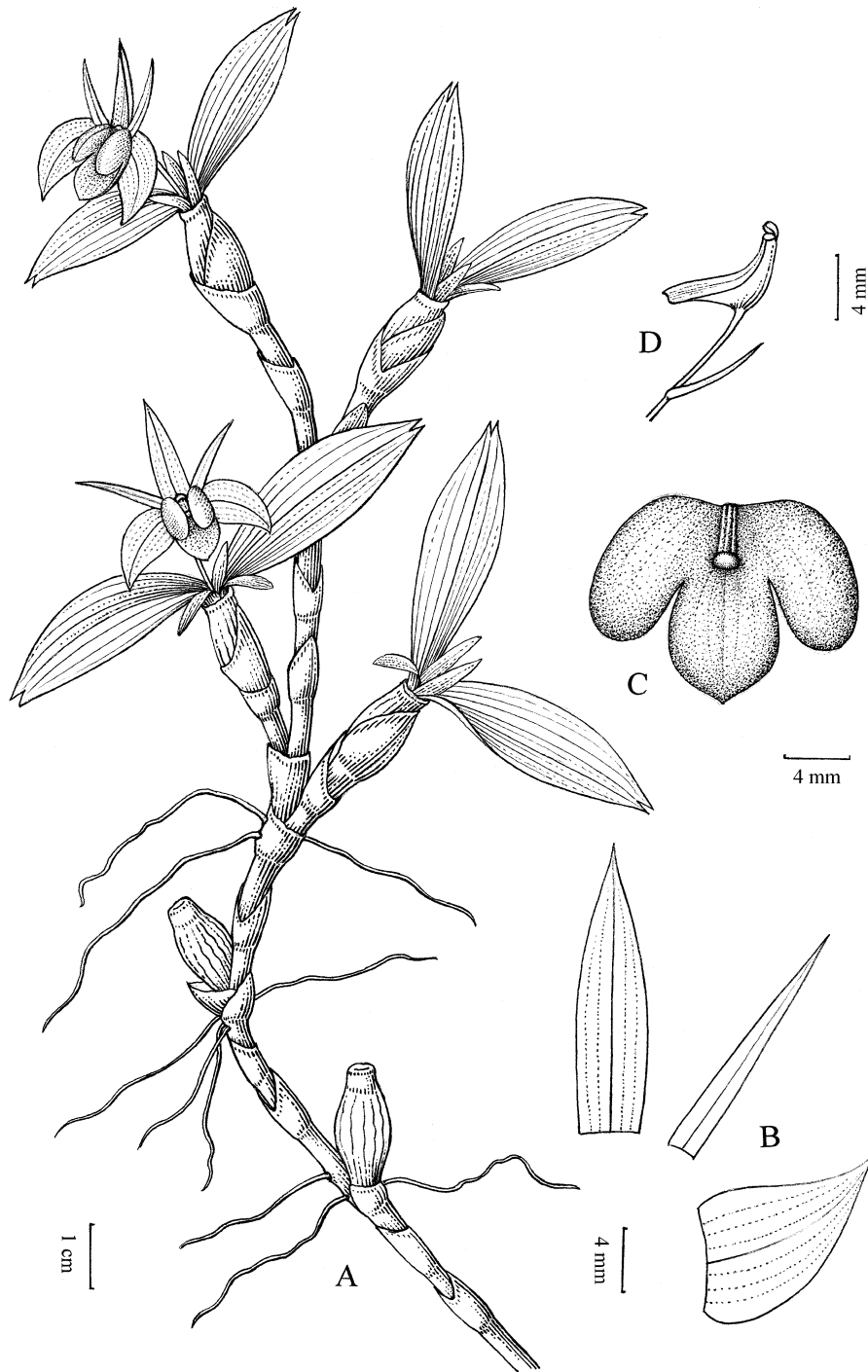


Figure 1. *Epigeneium gaoligongense* Hong Yu & S. G. Zhang. —A. Plant. —B. Dorsal sepal, lateral sepal, and petal, front view. —C. Lip, front view. —D. Column and column-foot, side view. Drawn from the type specimen, Yu & Zhang 101.

a red-purple callus; column stout, 4–5 mm long and wide, base with a foot 5–7 mm long.

ARTIFICIAL KEY TO CHINESE SPECIES OF *EPIGENEIUM*

- 1a. Pseudobulbs with 1 leaf at apex.
 - 2a. Lip rounded, apiculate or slightly emarginate at apex *E. nakaharaei* (Schlechter) Summerhayes
 - 2b. Lip conspicuously bilobed at apex.
 - 3a. Leaves ovate or broadly ovate, 1–2.3 cm long; lip oblong-obovate, with its mid-lobe deeply bilobed at apex . . . *E. fargesii* (Finet) Gagnepain
 - 3b. Leaves often obovate or obovate-elliptic, 2.5–4.7 cm long, lip pandurate, with its mid-lobe emarginated at apex *E. clemensiae* Gagnepain
- 1b. Pseudobulbs with 2 leaves at apex.
 - 4a. Lip with three indistinct keels and a callus on the disc *E. gaoligongense* Hong Yu & S. G. Zhang
 - 4b. Lip with 2 or 3 fleshy lamellae on the disc.
 - 5a. Petals narrowly lanceolate or narrowly oblong, less than 4 mm wide.
 - 6a. Labellum without a claw at base; mid-lobe hooked-aristate at apex . . . *E. fuscescens* (Griffith) Summerhayes
 - 6b. Labellum with a distinct claw at

- base; mid-lobe apiculate at apex *E. yunnanense* T. Tang & Z. H. Tsi
- 5b. Petals lanceolate or oblong-lanceolate, more than 5 mm wide.
 - 7a. Sepals ca. 4.5 cm long; mid-lobe of labellum sub rhombic . . . *E. amplum* (Lindley) Summerhayes
 - 7b. Sepals 2.2–2.5 cm long; mid-lobe of labellum subreniform or nearly orbicular . . . *E. rotundatum* (Lindley) Summerhayes

Distribution. This new species is known only from the type locality in Yunnan, China, where it is rather common growing on rocks or tree trunks on the edges of forests.

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