

## *Coelogyne tsii* and *Dendrobium menglaensis* (Orchidaceae), two new species from Yunnan, China

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Received 30 June 2005, revised version received 8 Jan. 2006, accepted 10 Jan. 2006

Jin, X.-H. & Li, H. 2006: *Coelogyne tsii* and *Dendrobium menglaensis* (Orchidaceae), two new species from Yunnan, China. — *Ann. Bot. Fennici* 43: 295–297.

Two new species of Orchidaceae, *Coelogyne tsii* X.H. Jin & H. Li and *Dendrobium menglaensis* X.H. Jin & H. Li, are described and illustrated from Yunnan, China. *Coelogyne tsii* is morphologically reminiscent of *C. prolifera*, from which it differs in having red and secund flowers, and a midlobe one third of the total length of the lip. *Dendrobium menglaensis* is similar to *D. moschatum*, but can be easily distinguished by its complanate stem, 1-flowered inflorescence, smaller flowers and white anther cap.

Key words: *Coelogyne*, *Dendrobium*, new species, Orchidaceae, taxonomy

During our fieldwork in Yunnan from 2001 to 2005, we discovered two new species of Orchidaceae, described below.

### ***Coelogyne tsii*** X.H. Jin & H. Li, *sp. nova* (Fig. 1)

*Habitu C. prolifera subsimilis, sed floribus rubris et secundis, lobo medio longitudine 1/3 totum labium partes aequanti.*

TYPE: China. Yunnan Province, Lushui County, east slope of Gaoligongshan Mountains, alt. 2600 m, 11.III.2005 X.H. Jin 6807 (flowering; holotype KUN; isotype PE).

Epiphytic, rarely terrestrial. Rhizomes creeping, 3 mm in diam. Pseudobulbs 2–3 cm apart along rhizomes, conical to ovate, when young covered by sheaths, 3–5 cm long, 2–3 cm in diam.

Leaves two on each pseudobulb, terminal, convolute, oblong, 14–16 × 4–5 cm, with 5–7 main nerves, coriaceous. Raceme arising from top of fully mature pseudobulbs, up to 50 cm long, 7–10-flowered, far longer than leaves, with many persistent distichous sterile bracts just below rachis and several closely spaced distichous sterile bracts at apex of rachis. Rachis extending and producing annual sets of imbricate bracts and flowers. Floral bracts lanceolate, about 2 cm long, caducous. Flowers open simultaneously, full open, red, with partly black tip, secund; pedicel including ovary 1.5 cm long; dorsal sepal narrow ovate, acuminate, 1.4 × 0.7 cm, 9-veined; lateral sepals elliptical, 1.4 × 0.6 cm, 5-veined; petals linear, acuminate, 1.4 × 0.3 cm, 3-veined; lip white, attached to column, three-lobed, 1.5 × 0.9 cm, without callus; hypochile 1.0 × 0.9 cm, lateral lobes semi-orbicular, erect, entire, edges

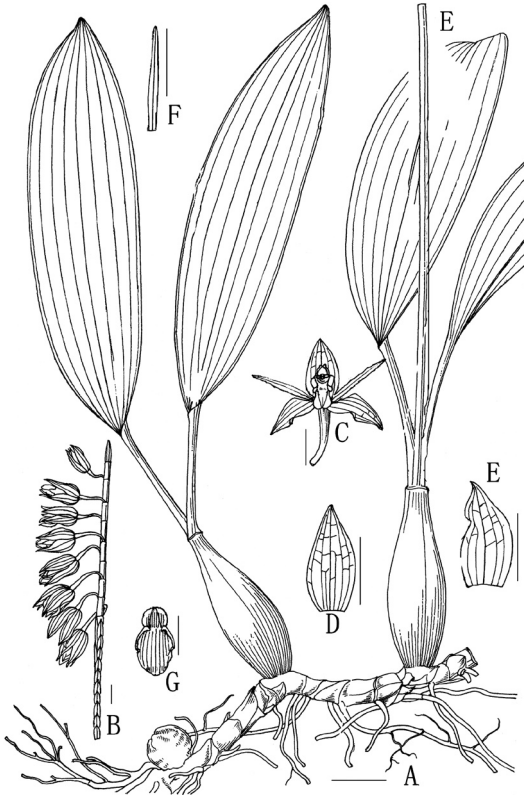


Fig. 1. *Coelogyne tsii* (from holotype, drawn by Wu Xiling). — A: Plant. — B: Inflorescence. — C: Front view of flower. — D: Dorsal sepal. — E: Lateral sepal. — F: Petal. — G: Lip (flattened). Bars = 1 cm.

reflexed outward slightly; epichile  $0.5 \times 0.6$  cm, claw  $0.2 \times 0.2$  cm, mid-lobe rotund, black, one third of total length of lip, entire,  $0.3 \times 0.6$  cm. Column red, winged, 0.8 cm long. Pollinia four, semi-orbicular. Capsule  $20 \times 8$  mm.

*Coelogyne tsii* belongs to sect. *Prolifera* and is similar to *C. prolifera*, *C. ustulata* and *C. ecarinata*, but it is not difficult to distinguish from them. *Coelogyne tsii* is characterized by the red and second flowers with a lip with a black, reflexed tip, and a midlobe one third of the total length of the lip. *Coelogyne prolifera* has yellow flowers, a midlobe half the size of the length of lip and distichous flowers. The main difference from *C. ecarinata* and *C. ustulata* is that the lips of these two species have keels that are absent in *C. tsii*. *Coelogyne tsii* usually grows epiphytically on tree trunks in subtropical evergreen forest and flowers in March. The species

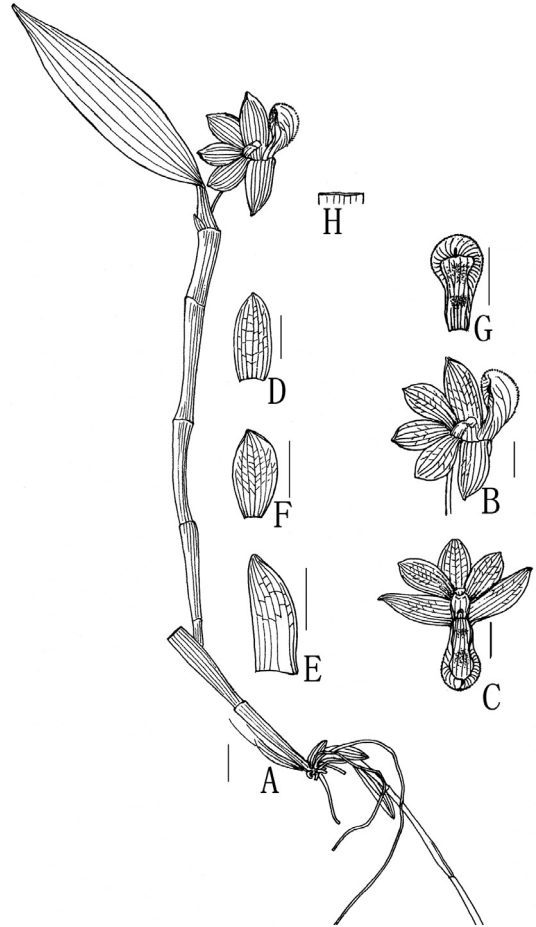


Fig. 2. *Dendrobium menglaensis* (from holotype, drawn by Wu Xiling). — A: Plant. — B: Lateral view of flowers. — C: Lateral view of flower. — D: Dorsal sepal. — E: Lateral sepal. — F: Petal. — G: Lip. — H: Transection of upper part of stem. Bars = 1 cm.

can be considered rare as it is known only from two sites on the east slope of Gaoligongshan Mountains (2000–2600 m) along the Nu River (Salween). Its habitat is greatly affected by agricultural activities.

The specific epithet honors Zhan-huo Tsi who devoted his life to Chinese orchidology.

***Dendrobium menglaensis*** X.H. Jin & H. Li, *sp. nova* (Fig. 2)

*Habitu D. moschato subsimilis, sed complanato caule, inflorescentia uniflora, parviore flore, anthera operculo albo.*

TYPE: China. Yunnan Province, Xishuangbanna Prefecture, Mengla county, alt. 1200 m, 2.V.2005 X.H. Jin 6954 (flowering; holotype KUN; isotype PE).

Litophytic, rarely epiphytic. Stem clustery, complanate, 10–20 cm long, wider from base, up to 0.3 mm wide at base and 0.7 cm wide at apex, 0.15 cm in diam., enclosed by persistent leaf sheaths, often with offshoot rising from nodes of upper part. Leaf arising from apex of stem, with petiole very short, lanceolate, 6–8 × 1.5 cm, unequally acuminate at apex, with 3–5 main nerves. Inflorescence 1-flowered, borne from nodes near apex of stem, 1 cm long, with 1 tubular sheath at base. Floral bract ovate, 2 mm long. Pedicel with ovary 2 cm long. Flower single, yellow, widely open. Dorsal sepal elliptic, 7-veined, acute, 1.6 × 0.8 cm; lateral sepals oblique, long elliptic, 2 × 0.9 cm, 7-veined; petals long ovate, 1.5 × 0.8 cm, 7-veined, lip slipper-shaped, 2 × 0.8 cm, golden-yellow, adhered to column foot with a movable joint, hypochile 0.5 × 0.3 cm, lateral lobes enrolled and entire; epichile 1.5 × 0.8 cm, apex bilobed, with a purple blot near center, ornamented with short hairs on inside and outside. Column short, 0.4 cm long, yellow, hairy adaxially; column foot 0.9 cm long. Mentum short and wide, oblong, 0.7 × 0.5 cm long. Pollinia 4, oblong, anther cap white. Capsule greenish yellow, 1.5 × 0.6 cm.

*Dendrobium menglaensis* belongs to sect. *Dendrobium* and is similar to *D. moschatum*, but it is not difficult to distinguish the two species from each other. *Dendrobium menglaensis* is characterized by having a complanate, 1-leaved stem, 1-flowered inflorescence and slipper-shaped lip, whereas *D. moschatum* has stems with leaves in different planes and inflorescences with multiple flowers that are much larger. *Dendrobium menglaensis* grows in limestone areas. Up to now, only one population, consisting of 50 clusters, is known, and the species must therefore be considered rare. Its habitat is greatly affected by development of rubber plantations.

The specific epithet refers to Mengla County in Xishuangbanna where the type specimen was collected.

## Acknowledgements

We thank two anonymous reviewers for their critical review of the manuscript. We are also grateful to Wu Xiling for the excellent illustration. The research is supported by the National Science Foundation USA (Award No. DEB-0103795), Knowledge Innovation Program of the Chinese Academy of Sciences (No. KSCX2-SW-108) and the grant for the construction of scientific and technological platforms from the Chinese Ministry of Science and Technology (2004DKA30430).