Cypripedium singchii, a new species of Orchidaceae from China

Zhong-jian Liu1,2,3* Li-jun Chen1

(1. The National Orchid Conservation Center of China (The Orchid Conservation & Research Center of Shenzhen), Shenzhen 518114, China)
(2. The Center for Biotechnology and BioMedicine, Graduate School at Shenzhen, Tsinghua University, Shenzhen 518055, China)
(3. College of Forestry, South China Agricultural University, Guangzhou 510642, China)

Key words: Cypripedium singchii Z. J. Liu & L. J. Chen; Orchidaceae; new species; China

Summary: Cypripedium singchii, a new orchid species from Southeast Yunnan, China, is described, illustrated and photographed. It is akin to Cypripedium subtropicum S. C. Chen & K. Y. Lang, from which it differs by its lip densely covered with white appendages on basal side-lobes and basal back surface and its larger petals to 1.6-2 cm wide. It is named in honor of Professor Sing-chi Chen, a famous orchidologist in China.

Cypripedium singchii Z. J. Liu & L. J. Chen, sp. nov. Fig. 1 & Fig. 2.

Typus: China, S Yunnan, on shrubby slope, alt. 1300 m, 20 June 2009, Z. J. Liu 4590 (holotypus, NOCC!).

Diagnosis: Species nova Cypripedio subtropicum affinis, a quo differ labelli pagina dorsali basali et lobis lateralisbus incurvis basalis dense albo-appendiculatis, petalis majoribus ad 1.6-2 cm latis.

New species is akin to Cypripedium subtropicum S. C. Chen & K. Y. Lang, from which it differs by its lip densely covered with white appendages on basal back surface and its basal incurved side-lobes, and its larger petals to 1.6-2 cm wide.

Etymology: Singchii, the name of Professor Singchi Chen, a well-known orchidologist in China.

Description: Terrestrial plants, 1-1.6 m tall, with a short rhizome and many roots 2-3 mm thick. Stem erect, 0.8-1 cm thick, pubescent, with several sheaths 2.5-10 cm long toward the base, and 9-10 leaves above the middle. Leaves elliptic-oblong to elliptic-lanceolate, 15-33 cm long, 4.5-11 cm wide, acuminate at apex, glabrous above, puberulous below, more or less ciliate, base with a short petiole 1-2 cm long. Inflorescence terminal, racemose, with 4-7 flowers; peduncle 10-21 cm long; rachis 15-19 cm long, white-pubescent (pink-pubescent in dry); bracts linear-lanceolate, 1.5-2.5 cm long, 4-5 mm wide, more or less reflexed, white-pubescent; pedicel and ovary 3.6-4.8 cm long, densely glandular-hairy; flowers fragrant; dorsal sepal and synsepal green or yellow-green, sometimes tinged with purple-brown; petals yellow-green, often marked with purple-brown especially on adaxial surface; lip yellow-green, marked with purple-brown; dorsal sepal orbicular-ovate, 2.5-3.3 cm long, 2.5-3.1 cm wide, acuminate, densely glandular-hairy and with 3 raised veins abaxially; synsepal orbicular to broadly ovate, 2.8-3.3 cm long, 2.5-3.5 cm wide, deeply bilobed at apex, glandular-hairy abaxially; petals subelliptic, 3-3.2 cm long, 1.6-2 cm wide, acute at apex, with many raised veins abaxially; lip deep puffed, complanately subglobose, densely covered with white appendages composed of many moniliform fleshy hairs ca. 0.6 mm long on its basal incurved side-lobes and basal back surface; pouch 5-5.3 cm long, 3.5-3.6 cm wide, with its mouth ca. 1 cm in diam., glabrous on both inner and outer surfaces; staminode looking like a cobra head, 4-6 mm long, upper part 1.5-2 mm wide, stalked basally. Capsules 4.2-4.5 cm long, 1.2-1.3 cm thick, containing 6000-18000 seeds. Seeds 4-4.5 mm long, ca. 1 mm thick.

*To whom correspondence should be addressed.
E-mail: liuji@sinicaorchid.org (Z. J. L).
Fig. 1. *Cypripedium singchii*: 1. Natural environment in Southeast Yunnan; 2. Flowers.
Fig. 2. *Cypripedium singchii*: 1. Flowering plant; 2. Flower, front view; 3. Flower, side view; 4. Dorsal sepal, petal and synsepal, back view; 5. Capsules; 6. Column, side view; 7. Glandular hairs; 8. Ovary cross section, showing many seeds inside.