

CRYPTOSTYLIS ARACHNITES (BLUME) HASSK. (ORCHIDACEAE), A RARE SPECIES OF NORTHEAST INDIA

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Abstract

The paper describes and illustrates *Cryptostylis arachnites* (Blume) Hassk.- a species of the lesser known genus, and reconfirms its occurrence in Meghalaya (North East India).

Introduction

CRYPTOSTYLIS R. BR. (Orchidaceae), an Indo-Malesian genus of terrestrial orchids, derives its name from the Greek words, *Kryptos* (hidden) and *stylos* (pillar column), in allusion to its short column that is concealed by the labellum. The genus stands distinct in having slender stems and laxly arranged non-resupinated flowers with pale green sepals and petals. An erect lip that points upwards is, however, its most conspicuous character. The genus with its 30 species is distributed from India to Taiwan to Australia and some Pacific Islands (Comber, 1990). Only one species, *C. arachnites* (Blume) Hassk. is reported from India.

During a plant collection tour to Dawki (Jaintia Hills, Meghalaya) in June 2011, we collected a rare species of ground orchids with pale green sepals and petals and an upward pointed orange-red lip with yellow tinged and deep red dotted apex. It caught our attention due to its non-resupinated flowers. After critical examination and literature studies (Hooker 1890; Kataki, 1986; Misra, 2007; Pradhan, 1976; Seidenfaden, 1992), the species was identified as *Cryptostylis arachnites* (Blume) Hassk. The species was earlier known only from Meghalaya (Khasi hills: Cherrapunjee) in the North Eastern India (Hooker, 1890; Pradhan, 1976) and the present collection from Dawki (Jaintia Hills) reconfirms its occurrence in the state of Meghalaya. Literature studies reveal that the species has also been listed in the orchid flora of Arunachal Pradesh (Chowdhery, 2009), Assam (Kataki, 1986), and Sikkim (Misra, 2007), but without any mention of specific localities of its occurrence in these states. Lucksom (2007), on the other hand, did not include it in his treatise on *Orchids of Sikkim*. Confirmed occurrence (!) of the species in the said states thus warrants authenticated collections.

Cryptostylis is a lesser known genus in India, and the rarity of *Cryptostylis arachnites* calls for its immediate conservation. This paper provides an illustrated account

of the species and is expected to facilitate its identification in the field and elsewhere in the country.

Species Description

Cryptostylis arachnites (Blume) Hassk. in Cat. Bog. 8.1844; Hook.f., Fl. Brit. India 6: 118. 1890; Kataki, Orch. Meghalaya, 208. 1986; Pradhan, Orchids: Guide to Identification & Culture. 1:138; Seidenfaden, Op. Bot. 114: 26. 1992; Misra, Orchids of India- A glimpse. 201. 2007. *Zosterostylis arachnites* Blume in Bijdr. 419. 1825.

Plants 15-60 cm tall with short creeping rhizome; roots 2-3 mm thick. Peduncle 15-50 cm long; sheaths lanceolate acute, 4.5-7 cm long. Leaves 1-3, 8.5-20 × 4.5-7 cm, with 5-15 cm long petiole, elliptic-ovate, acute, pale green with dense reticulation of dark green nerves. Inflorescence green, 15-30 cm long, slender, glabrous, with several to many sterile bracts; rachis 8-10 cm long, 10-20-flowered. Floral bracts green, lanceolate acuminate, 10-18 × 7-8.5 mm. Pedicel and ovary cylindric, 10-16 mm long, glabrous, green. Flowers 3-5 cm across. Sepals & petals pale green flushed, lip dull red; Sepals subequal, linear-lanceolate, acuminate, 15-19 × 1.5-2.5 mm, 3-veined. Petals linear acuminate, 9-10 × 1-1.5 mm, 1-veined. Lip as long as the petal, 15-21 × 5-8 mm, elliptic-lanceolate to ovate-oblong, acuminate, orange-red, tinged yellow near apex and with bright red spots, 5-veined, lateral veins running closely parallel to midvein, base rounded and shallowly saccate, disc with minute hairs. Column 2-2.5 mm long, short, whitish. Anther 2-2.5 mm long, whitish. Pollinia 1.5-2 mm long, yellow (Fig. 1 a-j).

Flowering : May-July.

Fruiting : August-September.

Distribution : India [Meghalaya (Cherrapunjee, East Khasi Hills District; Dawki, Jaintia Hills District)]; Myanmar, Ceylon, Java, Thailand, China, Cambodia,



Fig. 1. a-j. *Cryptostylis arachnites* (Blume) Hassk.: a, Habit; b, Inflorescence; c, Flower dorsal & ventral views; d, Peduncle sheath; e, Floral bract; f, Floral perigone with lip; g, Lip, front view; h, Column; i, Anther; j, Pollinia.

Indonesia, Laos, Malaysia, New Guinea, Philippines, Sri Lanka and Vietnam.

Specimen Examined : India, Meghalaya, Dawki, Jaintia Hills District, ca. 1500 m. D.K. Roy, 101250, 04.06.11 (ASSAM).

Ecology and Habitat : Grows singly or in groups of 2-3 plants in subtropical evergreen forests on floors and slopes. *Calanthe* species often shares its habitats.

Note : *Cryptostylis arachnites* is closely allied to *Cryptostylis javanica*- a species endemic to Java (Comber, 1990). The latter species, however, stands distinct in having somewhat larger and numerous (up to 40) flowers in very long inflorescences, and with an erect and conspicuously spotted lip.

Horticultural Potential : *Cryptostylis arachnites* bears very beautiful and attractive flowers that stay fresh for a period of 3-4 wks. Therefore it seems to have an ample amount of Horticultural potential.

Status and Conservation : The species is very rare in distribution in Meghalaya because so far it could be collected and traced from two districts i.e. East Khasi Hills (Cherrapunjee) & Jaintia Hills (Dawki). Habitat

protection is desirable for its conservation.

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