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SP Panda

AJCB Indian Botanic Garden,
Botanical Survey of India,
Howrah, West Bengal, India

D Behera

Central National Herbarium
(CNH), BSI, Howrah,
West Bengal, India

S Biswa

Central National Herbarium
(CNH), BSI, Howrah,
West Bengal, India

MU Sharief

AJCB Indian Botanic Garden,
Botanical Survey of India,
Howrah, West Bengal, India

BT Panda

P.G. Department of Botany,
Utkal University, Bhubaneswar,
Odisha, India

HN Subudhi

National Rice Research Institute
(NRRRI), Cuttack, Odisha, India

Schoenorchis gemmata (Lindl.) J.J. Smith: An addition to the Orchidaceous flora of Eastern Ghats, India

SP Panda, D Behera, S Biswa, MU Sharief, BT Panda and HN Subudhi

Abstract

The present paper deals with the species '*Schoenorchis gemmata* (Lindl.) J.J. Smith' of Orchidaceae collected from Kolli Hills of Tamil Nadu state which is a new record for Eastern Ghats. Correct nomenclature, short phytochemistry, ecology, phenology etc are described in this paper.

Keywords: *Schoenorchis gemmata*, new record, orchid, Eastern Ghats

Introduction

The genus *Schoenorchis*, consists of 24 species distributed in India and Malay Peninsula (Seidenfaden, 1988) [12]. In India, only 5 species are reported of which *S. jerdoniana* is endemic to Western Ghats. Besides, *S. maniliana* M. Kumar and Sequiera, an epiphytic herb reported as new species from Western Ghats (Kumar and Sequiera, 2000) [3]. In India, *Schoenorchis gemmata* is reported from West Bengal, Assam, Meghalaya, Manipur, Mizoram and Nagaland, Sikkim, and Arunachal Pradesh (Murugesan *et al.*, 2017) [8]. Besides India, it is also reported in Bhutan (Pearce and Cribb 2002) [9] and Bangladesh (Huda, 2007) [2]. This species is distributed in China, Vietnam, Laos, Thailand, Cambodia, Myanmar and Nepal. Maithy *et al.*, (2019) [4] collected this orchid species from Sikkim (Great Rangit river).

The Eastern Ghats lying in between 11° 30' to 21° 0' N Latitudes and 76° 50' to 86° 30' E Longitudes are isolated hill ranges in Peninsular India (Odisha, Andhra Pradesh, Karnataka and Tamil Nadu). Eastern Ghats harbour primarily tropical moist deciduous forest representing species of high economic, timber, medicinal potential. Eastern Ghats are highly significant in terms of their rich floral biodiversity, endemism and rare floristic wealth (Sandhyarani *et al.* 2007) [11]. Of the estimated 2500 flowering plant taxa, there are about 560 tree taxa under 262 genera belonging to 80 families (Sandhyarani *et al.* 2007) [11] distributed in different regions of Eastern Ghats. Prominent hills are the Gingee and Kalrayan hills of Villupuram, Pachamalai hills of Tiruchirapalli, Shevaroy hills of Salem, Kolli hills of Namakkal, Javadi hills of Vellore and Tiruvanmalai, Chitteri and Melagiris hills of Dharmapuri, Biligirirangan hills of Chamrajnagar and Sandoor hills of Bellary and Kollar. Haines (1921-25), Mooney (1950), Pullaiah (1997), Matthew (1984), Muktesh and Sequiera (2000) [1, 6, 10, 5, 7] the earlier workers for the state of Odisha, Andhra Pradesh and Tamil Nadu did not report this species in their respective treaties. The correct nomenclature, diagnostic characters, phenology, ecology, distribution etc. are provided in brief.

Materials and methods:

Considering the rich and unique biodiversity into account, survey and conservation of orchids in Eastern Ghats were initiated on top most priority. Under this programme field exploration for collection of orchids were made exhaustively in Kolli Hills of Eastern Ghats (Nammakal district of Tamil Nadu). During the field exploration in Eastern Ghats, an interesting epiphytic orchid was collected and identified as *Schoenorchis gemmata* (Fig. 1) in consultation with modern flora. After perusal of modern flora and literatures, it is turned out as new distributional record for Eastern Ghats. The herbarium of this species was prepared and deposited in herbarium of regional plant resources centre, Bhubaneswar.

Taxonomic Treatment

Schoenorchis gemmata (Lindl.) J.J. Smith in *Natuurk. Tijdschr. Ned.-In die.* 72. 100 (1912); Lucksom, *Orch. Sikkim & N.E. Himalaya.* 805. 2007. *Saccolabium gemmata* Lindl. In *Bot. Reg.* 24. Mis. 50. No. 88 (1838). *Cleisostoma gemmatum* (Lindl.) King & Pantl. in *Ann. Roy. Bot. Gard. (Calcutta)* 8. 234, t. 313.

Corresponding Author:**SP Panda**

AJCB Indian Botanic Garden,
Botanical Survey of India,
Howrah, West Bengal, India

Epiphytic. Stem 7-30 cm long, slender, pendulous, enveloped in 0.7-1 cm long, rather expanded, tubular. Leaf sheaths, lower half enveloped in remnant of leaf sheaths, branched. Leaves several, 4.5-12.5 X 0.26-0.5 cm, linear, curved, sub-terete, minutely 3-toothed at the apex, with tubular sheathing at base, fleshy, smooth. Inflorescence 10-20 cm long, panicle, axillary, pendent; peduncle 3.0-3.8 cm long, sub-tubular stem clasping sheathing bracts; rachis 7.0-to 16.2 cm long, panicle branched, rachis ridged with many shortly pedicellate flowers; pedicellate-ovary, 1.8-2.8 mm long, ridged, greenish-purple, smooth; floral bracts 0.8-1.8 mm, lanceolate, acuminate, dark-brown. flowers 4.0-4.2 mm long (measured from tip of sac to tip of lip), whitish-purple, glabrous, sepals & petals connivent. Sepals sub-equal, whitish-purple, not spreading; the dorsal sepal 1.1-1.3 X 0.4-0.5 mm, oblong-ovate, obtuse; arched over column; the lateral pair 1.8-2 X 0.7-0.8 mm, narrowly ovate, obtuse. 0.8-1 X 0.25-0.3 mm, narrowly ovate, obtuse, dark purple. Lip 3-3.2 mm long, white, fleshy, concave; its basal end with a stout cylindrical blunt spur parallel to the ovary ca 1.9 mm long; its interior with a small posterior and a large interior callus occluding the mouth; dorsal callus none; the lateral lobes obscure; the apical lobe ovate, rotund, blunt, entire, concave, with obscure raised mass on the disc. Column very short, thick, with two translucent teeth on sides, dark bottle-green. Anther

dome shaped, broader than long, pale yellow; pollinia 2-broadly ovoid, attached by a broad flat, oblong caudicle to a much elongated oblong gland, orange-yellow.

Fls. & Frts.: May-June.

Altitude: 830-1200 meter

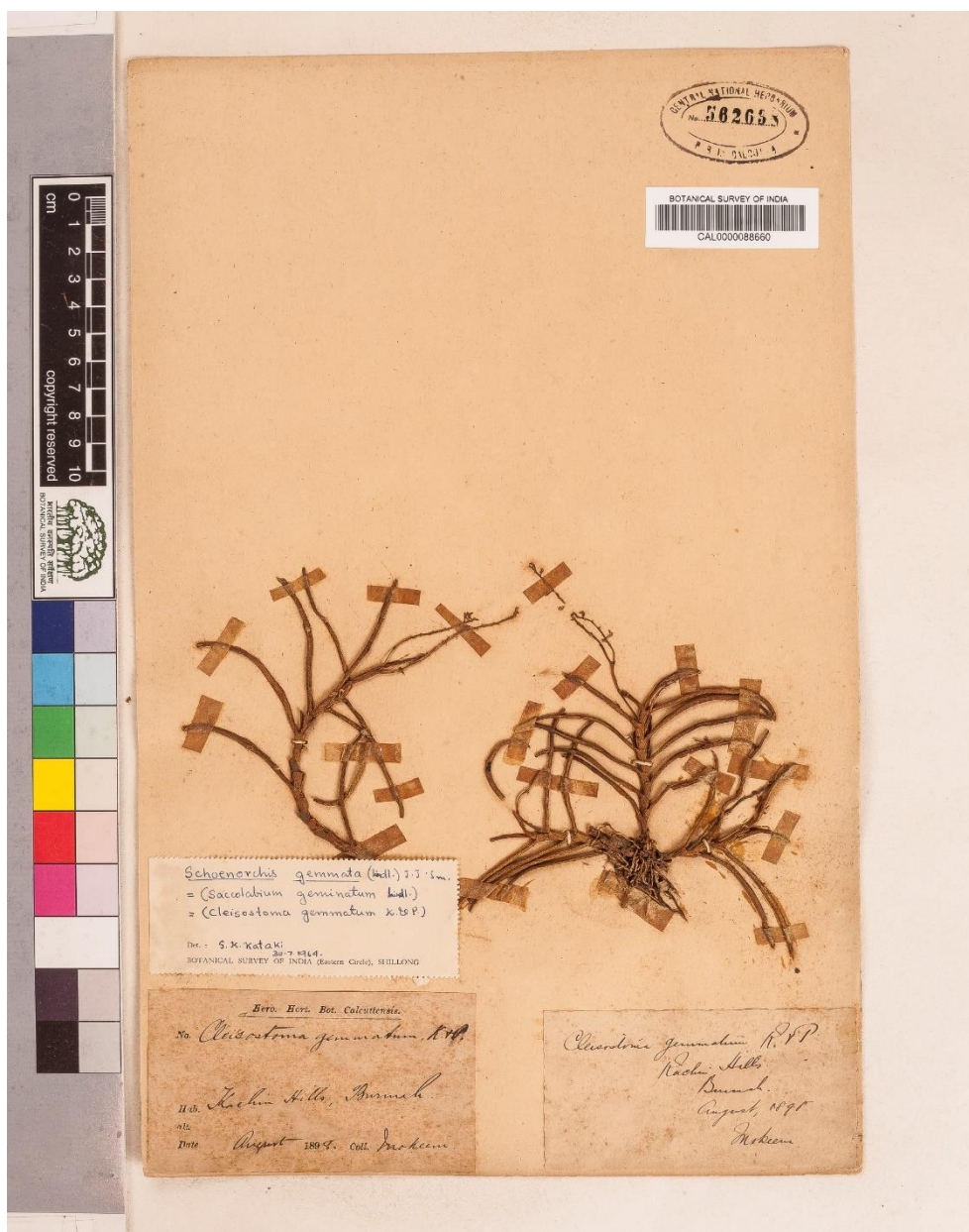
Status: Un-common

Distribution: India (Sikkim, West Bengal, Assam, Meghalaya, Manipur, Mizoram and Nagaland, and Arunachal Pradesh); Cambodia, China, Laos, Myanmar, Nepal, Thailand, Vietnam and Bangladesh.

Ecology: In shola forests under shade.

Specimen examined: Kolli Hills, Tamil Nadu; F.N. 26001

Note: *Schoenorchis*, are commonly known as 'flea orchids'. The name *Schoenorchis* is derived from the Ancient Greek words *schoinos* meaning "sedge", "rush-rope" or "rope". The genus *Schoenorchis* was established in 1825 by Caspar Reinwardt in Hornschuch's *Sylloge Plantarum Novarum*. There has, however, been some dispute about this since both Blume and Reinwardt independently described the genus in the same year (1825). Seidenfaden (1988) [12] reviewed and gave priority to Reinwardt. The genus comprises of 24 species (www.theplantlist.org) distributed in the Himalayas (India) Srilanka, to China (Hainan) and Philippines, South to Indonesia and east to new Guinea, Australia and Pacific Islands.



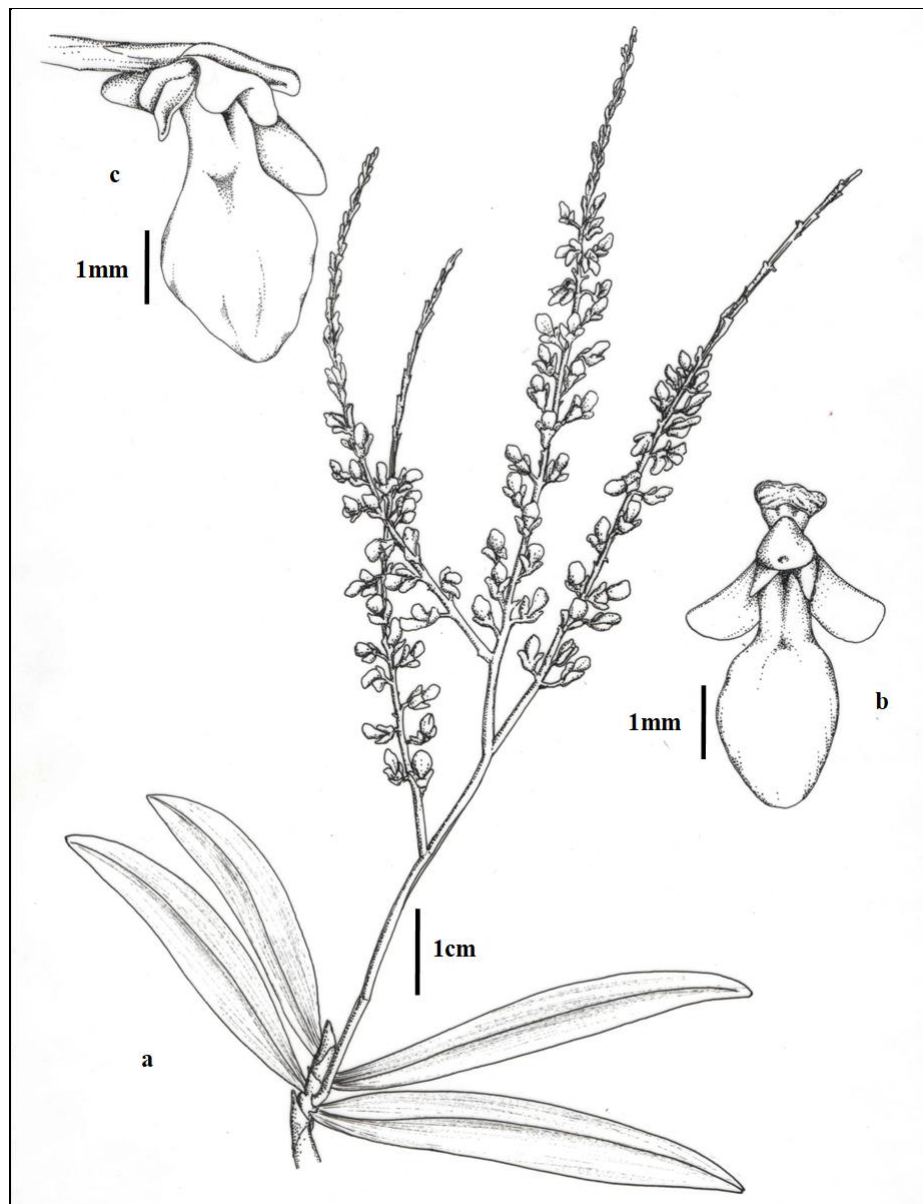


Fig 1: *Schoenorchis gemmata* (Lindl.) J.J. Smith; a. Plant with Inflorescence; b & c. Flower with both the orientation

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