



## **New distributional record of *Peristylus constrictus* (Lindl.) Lindl. from Southern West Bengal, India**

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### **ABSTRACT**

*Peristylus constrictus* (Lindl.) Lindl., a terrestrial orchid, is reported here as new distributional record from Susunia hill, Bankura district, West Bengal. Although, it had been recorded earlier only from Darjeeling, an extreme northern district of West Bengal. A short description along with illustration and photographs of the species is provided for easy identification of this taxon.

**Key Words:** *Peristylus constrictus*, terrestrial orchid, Susunia hill, Bankura district, new distributional record.

### **INTRODUCTION**

The genus *Peristylus* Blume is represented globally by 106 species and 3 varieties, of which 29 species and 2 varieties are found in India (Misra 2007). The members of this genus are distributed from Mascarenes, tropical and subtropical Asia to Mongolia and Pacific region (Govaerts *et al.* 2011). Altogether 14 species of *Peristylus* have been reported from the state of West Bengal (Kumar *et al.* 2013).

During ethnobotanical field exploration, one species of *Peristylus* Blume was collected from the Susunia hill of Bankura district in southern West Bengal. Through critical study of the collected specimen and consultation of relevant literature, it has been identified as *Peristylus constrictus* (Lindl.) Lindl. (Saxena & Brahmam 1996, Misra 2007). The identity of species has also been confirmed through matching with the type material housed at Kew herbarium (Type, K000974162), photo!. Perusal of literature indicates that the taxon was first reported from Relli River side of Kumsi forest in Kalimpong, Darjeeling district, West

Bengal at an altitude of 300-1700 m (Yonzon *et al.* 2012) which falls under temperate belt of the state. Besides its distribution in the Darjeeling district, *Peristylus constrictus* (Lindl.) Lindl. has not so far been cited from all other districts of West Bengal. Therefore, present gathering of this species from Susunia hill, Bankura district can be regarded as a new distributional record from the tropical southern part of the state West Bengal which clearly indicates the extended distribution of this species from temperate Northern belt (Darjeeling district) to tropical Southern belt of the state.

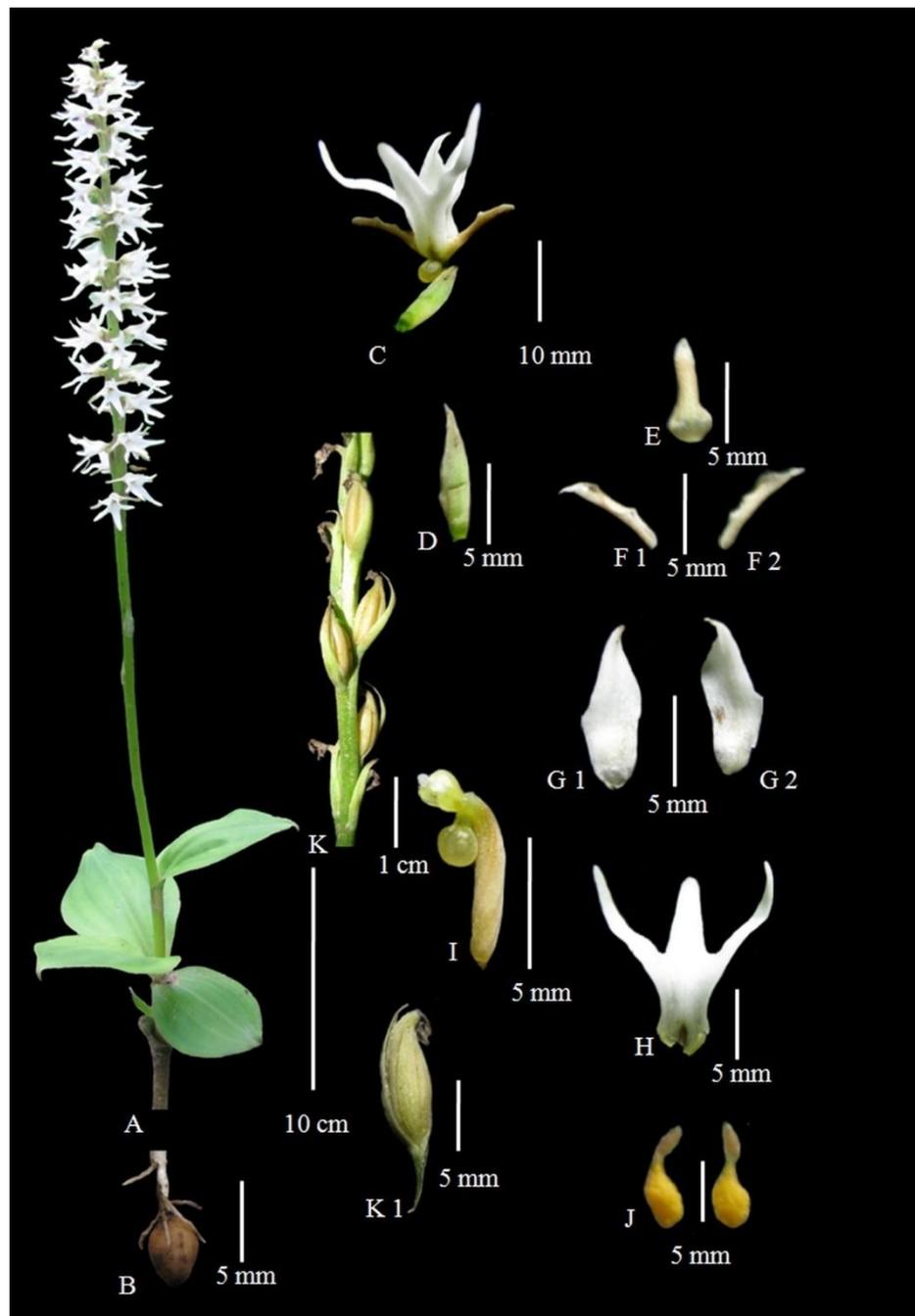
A detailed description along with photographs of the dissected plant parts of this species is provided here in this article. The plant specimens have been deposited in the Visva-Bharati Herbarium (VBH), Department of Botany, Visva-Bharati, Santiniketan.

*Peristylus constrictus* (Lindl.) Lindl., Gen. Sp. Orchid. Pl. 300. 1835; Karthik. *et al.*, Fl. Ind. Enum. Monocot. 161.1989; *Herminium*

*constrictum* Lindl. in Edgw. Bot. Reg.18: Subt.1499, 1890. *Habenaria constricta* (Lindl.) Hook.f. in Fl. Brit. India 6:161. 1890; King & Pantl. in Ann. Roy. Bot. Gard. Calcutta 8: 325, t. 429.1898; Prain in Beng. Pl. 2: 1032-1033. 1903. (Fig.1).

Terrestrial herb, 48- 52 cm tall, tuberous ; tuber ovate,  $4.4 \times 3.8$  cm. Stem with 2-4 tubular sheaths at base. Leaves aggregated near the middle of the stem, 4-6, ovate-elliptic to broadly

lanceolate, acute, shortly petiolate, 6-11cm long and 2.5-5 cm wide, tapering at the amplexicaul base, nerves many. Flowers in narrow dense spike, 25-30 cm long; bracts 3-4, lanceolate, acuminate, erect, 1.2 mm long. Flowers sweet scented, 2.1- 2.7 mm long. Sepals pale brown, dorsal sepal concave,  $0.7-10 \times 1 - 3$  mm, lateral sepals narrower, spreading,  $8.5 \times 0.5 - 1$ mm. Petals white, obliquely ovate,  $15 \times 5.5 - 6$  mm long.



**Fig. 1.** *Peristylus constrictus* (Lindl.) Lindl. **A:** Portion of the flowering twig. **B:** Tuber. **C:** Flower. **D:** Bract. **E:** Dorsal sepal. **F 1 & F 2:** Lateral sepal. **G 1. & G 2:** Petal. **H:** Lip. **I:** Column with spur and ovary. **J:** Pollinia. **K:** Portion of the fruiting twig. **K 1:** Fruit.

Lip about as long as sepals or longer, deeply 3-lobed from about the middle, spurred, lateral lobes

linear, slightly falcate, diverging, 15 mm long; median lobe oblong, obtuse, 14 mm long. Spur very short, globose, inflated, 2-3.1mm across.

Ovary  $9 \times 1.5$  mm. Column broad, about  $2 \times 2$  mm tall. Pollinia clavate, caudicles short with large glands,  $2.1 \times 0.75$  mm. Fruit ellipsoid with short beak, 1 - 1.1cm long.

**Flowering and Fruiting time:** July – August.

**Distribution and habitat:** This soil orchid is distributed in Bihar, Jharkhand, Himachal Pradesh, Madhyapradesh, Maharastra, Meghalaya, Sikkim, Uttar Pradesh, Uttarakhand and also West Bengal states of India. It is grown in the dry deciduous Sal (*Shorea robusta* C.F.Gaertn.) forest of Susunia hill, Bankura district of West Bengal at an elevation of 330 m in association with *Lagerstroemia parviflora* Roxb., *Helicteres isora* L., *Habenaria plantaginea* Lindl., *Curculigo orchioides* Gaertn., *Hemidesmus indicus* (L.) R.Br., *Croton roxburghii* Wall., *Ampelocissus latifolia* (Roxb.) Planch., *Tylophora indica* Merr., etc.

**Specimen examined:** India, West Bengal, Bankura dist.: Susunia hill, N 23.39666° and E 86.98096°, 330m, 29 July 2014, S. Karmakar 150 ( Visva-Bharati Herbarium, Santiniketan, West Bengal); Myanmar: Moulmyne, 1827, N. Wallich (K000974162), photo!.

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#### REFERENCES

- Govaerts R, Dransfield J, Zona SF, Hodel DR, Henderson A. 2011. World Checklist of Orchidaceae. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <http://apps.kew.org/wcsp/> Retrieved on 2015-05-14.  
<http://specimens.kew.org/herbarium/K000974162>.
- Kumar V, Debta MR, Sabapathy CM, Chowdhery HJ. 2013. The Orchids of West Bengal, India-A Checklist. *Phytotaxonomy* 13: 8-22.
- Mabberley DJ. 2005. The Plant-Book- a portable dictionary of vascular plants. 2<sup>nd</sup> edition, Cambridge University Press, Cambridge.
- Misra S. 2007. Orchids of India – A glimpse. Bishen Singh Mahendra Pal Singh, Dehra Dun.
- Prain D. 1903. Bengal plants. Vol. II. Calcutta.
- Saxena HO, Brahmam M. 1995. The flora of Orissa. Vol. III. Regional Research Laboratory and Orissa Forest Development Corporation Ltd, Bhubaneswar, India.
- Yonzon R, Lama D, Bhujel RB, Rai S. 2012. Orchid species diversity of Darjeeling Himalaya of India. *International Journal of Pharmacy and Life Sciences* 3(3): 1533-1550.