

# *Peristylus fallax* Lindl. (Orchidaceae) –a new record for the Flora of Himachal Pradesh, India

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## पेरीस्टायलस फॉलेक्स लिंडल. (ऑर्किडेसी) - भारत के हिमाचल प्रदेश के लिए एक नवीन अभिलेख

प्रतिभा जरयाल एवं प्रोमिला पाठक

### सारांश

पेरीस्टायलस फॉलेक्स लिंडल. (ऑर्किडेसी) हिमाचल प्रदेश के लिए एक नवीन सवितरणात्मक अभिलेख के रूप में प्रतिवेदित किया गया है, इसका वितरण प्रक्षेत्र गढ़वाल क्षेत्र के परे उत्तर पश्चिमी हिमालय में है। इस आलेख में इस जाति के विवरण, वितरण प्रक्षेत्र मानचित्र, अनुलेखन एवं इसके सुगम पहचान हेतु दृष्टिगत लक्षणों के छायाचित्र प्रस्तुत किए गए हैं।

### ABSTRACT

*Peristylus fallax* Lindl. (Orchidaceae) is reported as new distributional record for Himachal Pradesh, hence extending its distribution in North Western Himalayas beyond Garhwal region. This communication highlights description, distribution map, citation, and photographs of diagnostic features of the species for easy identification.

**Keywords:** Himachal Pradesh, India, Orchid, *Peristylus fallax*

### INTRODUCTION

*Peristylus* Lindl. (Orchidaceae) is a large genus represented by 103 species in the world and is distributed from Mascarenes, tropical and subtropical Asia to Mongolia and Pacific region (Govaerts & al., 2017). The genus is represented by 34 species in India (Singh & al., 2019) of which 4 species were earlier reported from the state of Himachal Pradesh (Vij & al., 2013). The generic name is derived from Greek peri = around and stylus = column, referring to the shape of the column. Species under this genus possess convex stigmas that are completely united to base of the labellum and auricles of the column. The spikes bear many small, dull coloured flowers held closer to the rachis. *Peristylus* is closely allied to *Habenaria* Willd., *Platanthera* Lindl. and *Pecteilis* Raf., but can be differentiated on the basis of stigmatic lobes being connate or adpressed to the lip base and by the presence of erect ovary close to the rachis.

While conducting an orchid survey in Himachal Pradesh during July-August, 2019, the authors had collected an interesting specimen of terrestrial orchid from Triund hills (2494.52 m) in Kangra district, Himachal Pradesh.

With the help of authenticated specimens and literature [Deva & Naithani, 1986; <https://www.gbif.org/>], the species was identified as *Peristylus fallax* Lindl. The specimens were processed (Bridson & Forman, 1992), and deposited in the Herbarium of Department of Botany, Panjab University, Chandigarh (PAN) for future reference. Herbarium records were compared using online portals such as Swiss Orchid Foundation (<https://orchid.unibas.ch/>) and Kew Herbarium Catalogue (<https://apps.kew.org/>). A perusal of literature (Deva & Naithani, 1986; Vij & al., 2013; Singh & al., 2019) revealed that this species has not been recorded earlier in Himachal Pradesh. The same is being reported here as addition to the Orchid Flora of Himachal Pradesh. A brief description along with citation, photographs, information on phenology, distribution and voucher specimen has been provided for easy identification of this species. An artificial key for identification of all five species of *Peristylus* found in Himachal Pradesh has also been provided.

### TAXONOMIC TREATMENT

*Peristylus fallax* Lindl., Gen. Sp. Orchid. Pl.: 298. 1835; Pradhan, Indian Orch. Guide Ident. Cult. 1: 96. 1976;

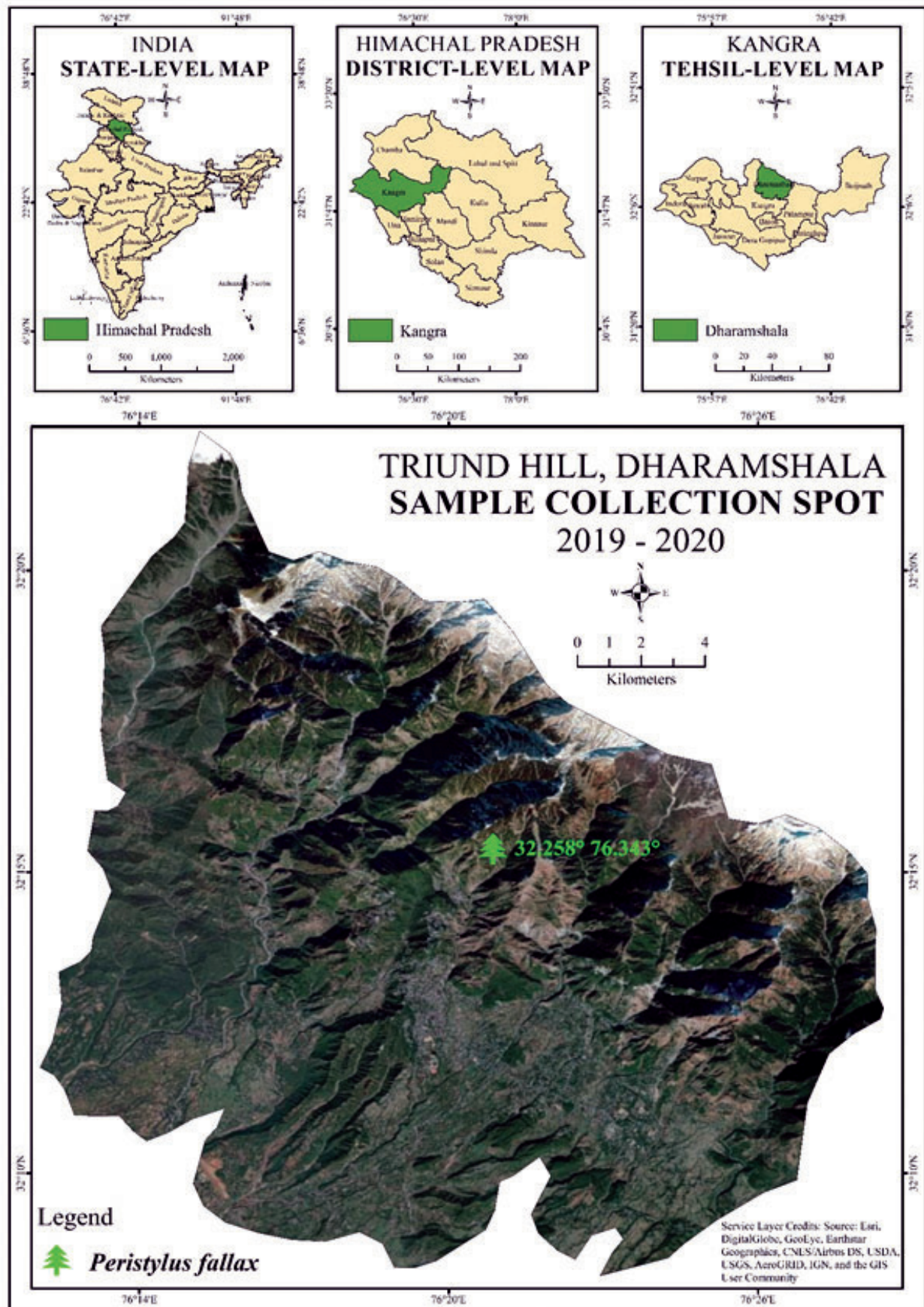
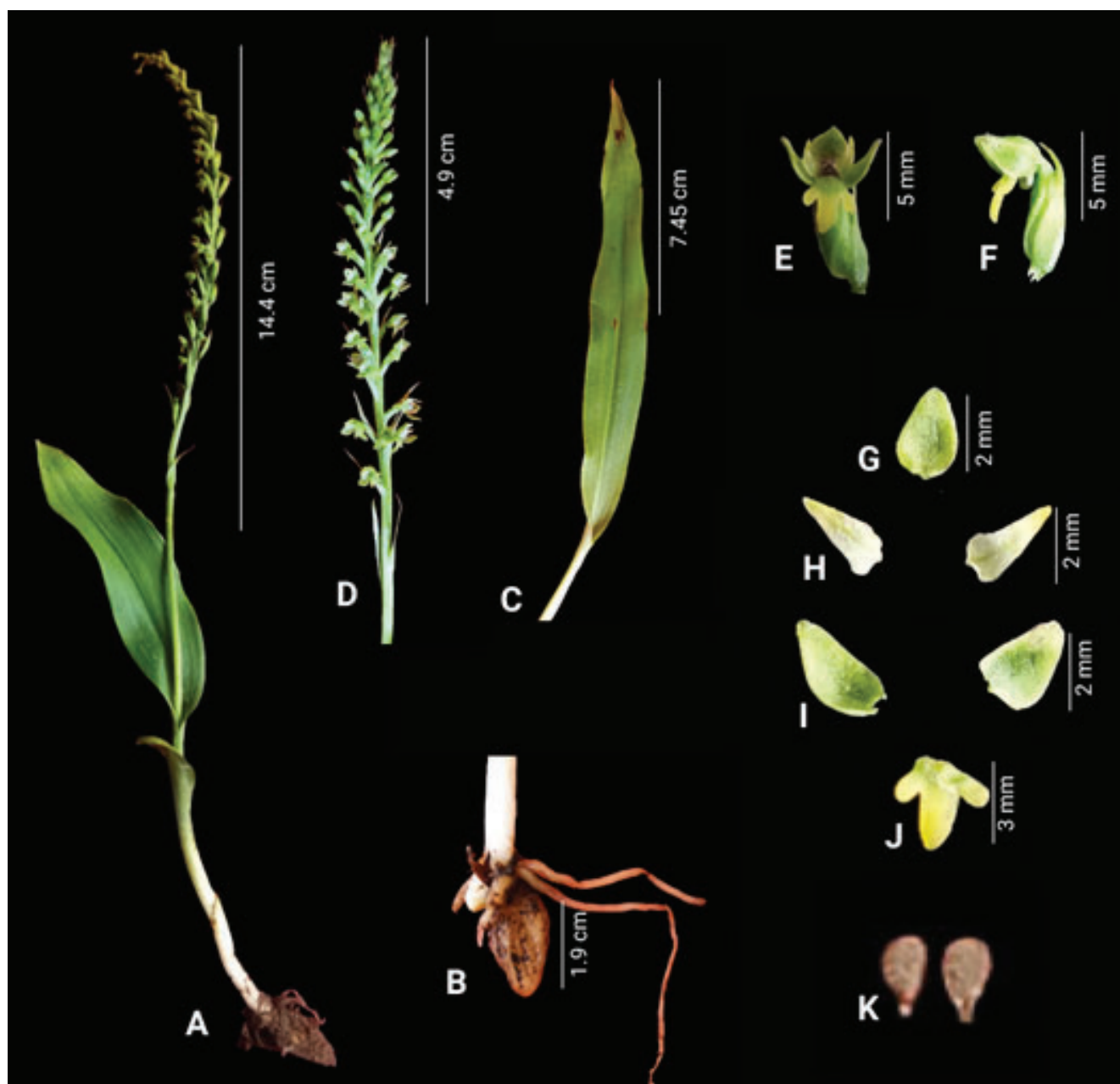


Fig 1. Map showing the collection site for *Peristylus fallax* Lindl.



**Fig 2.** *Peristylus fallax* Lindl.: **A.** Habit; **B.** Tuber; **C.** Leaf; **D.** Inflorescence; **E.** Adaxial view of flower; **F.** Lateral view of flower; **G.** Dorsal sepal; **H.** Petal; **I.** Lateral sepals; **J.** Labellum; **K.** Pollinia

Deva & H.B. Naithani, Orch. Fl. N.W. Himalaya: 187, f.99. 1986; N. Pearce & P.J. Cribb, Orch. Bhutan: 176. 2002; Singh & al., Orch. India Pict. Guide: 415. 2019. *Herminium fallax* (Lindl.) Hook.f., Fl. Brit. India 6: 129. 1890. *Habenaria fallax* (Lindl.) King & Pantl., Ann. Roy. Bot. Gard. Calcutta 8: 325, t.428. 1898; Duthie, Ann. Roy. Bot. Gard. Calcutta 9(2): 190. 1906; R.K. Gupta, Fl. Nainital. 351. 1968; Vohra & D. Basu, J. Econ. Taxon. Bot. 14(1): 37. 1990. *Platanthera fallax* (Lindl.) Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4: 111. 1919. *Peristylus fallax* var. *dwarikaii* Deva & H.B. Naithani, Orch. Fl. N.W. Himalaya: 187. 1986; Samant, J. Orch. Soc.

India 16: 69. 2002. *Monorchis fallax* (Lindl.) O. Schwarz, Mitt. Thüring. Bot. Ges. 1: 95. 1949.

Erect, terrestrial herbs, up to 28.8 cm tall. Tubers small, terete,  $1.9 \times 0.9$  cm, rooting at nodes; roots pale yellowish brown, fleshy. Leaf solitary, elliptic-lanceolate, entire, acute, glabrous. Spike up to 9.8 cm long, terminal, densely many-flowered. Stem bracts 2, lanceolate,  $2.9 \times 0.3$  cm with acuminate apex. Flowers resupinate up to 5 mm long, green with yellow apices of labellum and petals. Floral bracts, linear-lanceolate,  $0.5\text{--}2 \times 0.1\text{--}0.2$  cm. Dorsal sepals oblong to ovate-lanceolate,  $2.5 \times 1\text{--}2$



mm, entire, obtuse, forming a hood with petals. Lateral sepals oblong-ovate, 3 × 1-2 mm, obtuse, spreading. Petals oblong-lanceolate, 2 × 0.8 mm, obtuse, weakly falcate, membranous. Labellum 3-lobed; lateral lobes divergent, oblong, obtuse; mid-lobe broadly oblong-ovate, rounded, c. 3 mm long. Anther locules parallel, 0.8-1 mm long; pollinia 2, c. 1 mm long, clavate. (**Fig.2**)

**Habitat:** The species was found growing on sun facing open grassy place on rocky slopes of Triund Hill (2494.52 m), Kangra district, Himachal Pradesh, India.

**Distribution:** INDIA [Arunachal Pradesh, Himachal Pradesh (Fig.1), Nagaland, Sikkim, Uttarakhand]; BHUTAN; CHINA; MALAYSIA; NEPAL.

**Flowering and Fruiting:** July - August.

**Specimen Examined:** India, Himachal Pradesh, Kangra, Triund hill, 2494.52 m, 32.258° N and 76.343° E, 08.08.2019, *Pratibha* 503 (PAN 21955!).

**Key to the species of *Peristylus* found in Himachal Pradesh:**

- 1a. Leaves clustered near middle of the stem; spur globular ...2
- 1b. Leaves approximately towards the base;  
spur ovate-obovate ...4
- 2a. Labellum divided to the middle; lobules slender,  
almost equal in length, linear-lanceolate;  
petals 10-12 mm long ... *P. constrictus*
- 2b. Labellum divided to one third of the length;  
lateral lobules ovate or linear-ovate, broad,  
petals less than 6 mm long ...3
- 3a. Plants slender; basal half of the labellum concave,  
forming a pouch with a wide opening into the spur,  
a papillose area at the entrance of spur;  
petals slightly broader than lateral sepals;  
lateral sepals c. 3 mm long ... *P. affinis*

- 3b. Plants stout; basal half of the labellum  
almost flat with a minute opening into the spur,  
a triangular nectary at the entrance of spur;  
petals much broader than the lateral sepals;  
lateral sepals 5-6 mm long ... *P. goodyeroides*

- 4a. Leaf solitary; labellum flat at base;  
lateral lobes oblong, obtuse;  
spur 2-ribbed inside ... *P. fallax*
- 4b. Leaves 2 or 3, approximately towards the  
base of stem; labellum trough-shaped at base;  
lateral lobes linear; spur without rib inside ... *P. elisabethae*

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