

PERISTYLUS FALLAX LINDL. - A NEW DISTRIBUTIONAL RECORD FOR THE ORCHID FLORA OF DARJEELING HIMALAYA OF WEST BENGAL, INDIA

Rajendra Yonzone, Dorjay Lama, R B Bhujel¹, Samuel Rai², and Khyanjeet Gogoi³

Department of Botany, St. Joseph's College, P.O. North Point, District Darjeeling-734 104, West Bengal, India

¹Taxonomy and Ethnobiology Research Laboratory, Cluny Women's College, P.O. Kalimpong, District Darjeeling 734 301, West Bengal, India

²Directorate of Cinchona and other Medicinal Plants, Mungpoo, District Darjeeling-734 301, West Bengal, India

³The Orchid Society of Eastern Himalaya (TOSEHIM), Regional Orchids Conservation and Research Centre (Assam and N.E. India Circle), Daisa Bordoloi Nagar, Talap, Tinsukia-786 156, Assam, India

Abstract

Peristylus fallax Lindl. (Orchidaceae) has been collected from Kalpokhari forest of Darjeeling, West Bengal, India, for the first time and reported as a new record for Darjeeling Himalaya of West Bengal, India. The detailed description, illustration and relevant notes are provided.

Introduction

THE GENUS *Peristylus* was established in 1825 by Blume and comprises over 100 species distributed in South East Asia (Pearce and Cribb, 2002). During our floristic survey (2007-2014) on Orchid Flora of Darjeeling Himalaya, the authors came across interesting specimen of terrestrial orchid species. On critical examination with other authenticated specimens and literatures, an unknown species of terrestrial orchid that was identified as *Peristylus fallax* Lindl. (Orchidaceae) was collected from Kalpokhari forest of Darjeeling Himalaya. A perusal of earlier literature related to the Orchid Flora of Darjeeling (Bose, and Bhattacharjee, 1999; Bruhl, 1926; Hara, 1966, 1971; Hooker, 1888-1890; King and Pantling, 1898; Ohashi, 1975; Pradhan, 1979; Pradhan and Pradhan, 1997; Pearce and Cribb, 2002) revealed that this species was hitherto unrecorded from Darjeeling Himalayan region. Hence, in this paper, it is reported as a new record to Orchid Flora of Darjeeling Himalaya of West Bengal, India. The newly collected specimens were processed and mounted on standard herbarium sheets following Jain and Rao (1977) and have been deposited in the Herbarium of Department of Botany, St. Joseph's College, North Point, Darjeeling and Herbarium of Taxonomy and Ethnobiology Research Laboratory, Cluny Women's College, Kalimpong for future reference. As this species has not been recorded from Darjeeling Himalaya, a brief description, line drawing and illustrations are provided to facilitate its identification (Figs. 1-6).

Species Description

Peristylus fallax Lindl., Gen. Sp. Orchid. Pl.: 298. 1835.

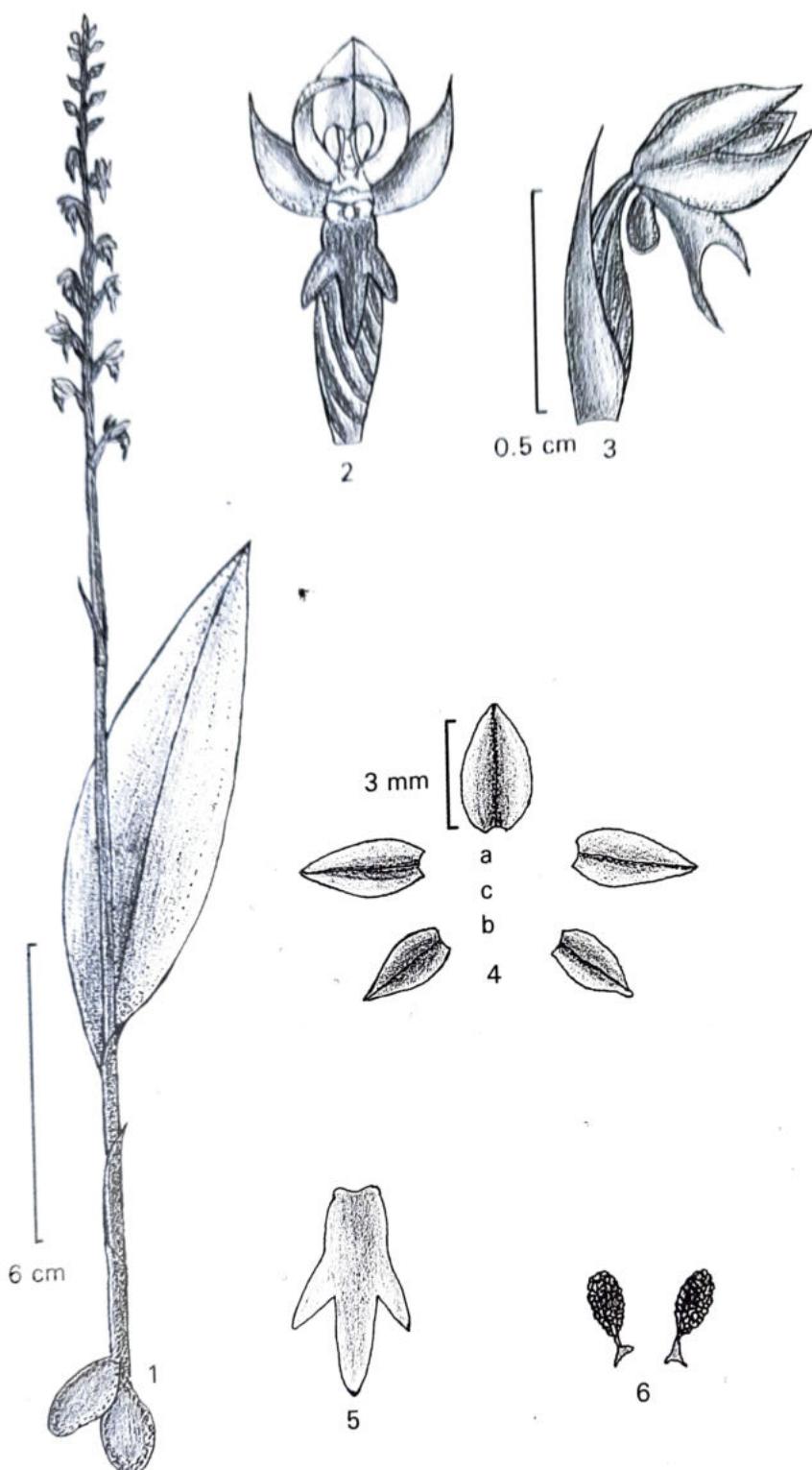
Terrestrial, 21-31 cm tall; *Tuber* 1.4-2.3 x 1-1.3 cm, ellipsoid; *Stem* 11-13 cm long, glabrous; *Leaf* borne about the middle, bracteates above; *Basal sheaths* 2, 3.2-4.6 cm long, tubular, overlapping; *Stem bract* solitary, 8-13 x 0.3-1.3 cm, lanceolate, acute; *Leaves* 3-11 x 1.5-3 cm, solitary; *Inflorescence* laxly few to many-flowered; *Rachis* 3.6-12 cm long, glabrous; *Ovary* pedicellate 5-6 mm long, slender, decurved; *Floral bracts* 0.6-1 x 0.1-0.2 cm, linear-lanceolate, acuminate to subcaudate; *Flowers* 3-3.4 mm across, uniformly green; *Dorsal sepal* 2.9-3.2 x 1.5-2 mm, oblong to ovate-lanceolate, obtuse, 1-veined, forming hood with petals; *Lateral sepals* similar, spreading. *Petals* 2.7-3 x 0.7-1.2 mm, oblong, obtuse, weakly falcate; *Lip* 3-lobed, 2.8-3.6 x 1.4-2.3 mm, spurred, fleshy, base truncate, shortly clawed; side lobes 0.6 x 0.4 mm, divergent, obtuse; mid-lobe 1.3 x 0.7 mm, broadly oblong-ovate, rounded; *Spur* weakly 2-lobed at apex, subglobose to clavate; *Column* 0.7-0.9 mm tall; *Anther* locules parallel; *Pollinia* clavate.

Flowering and Fruiting

June – October.

Habitat

Terrestrial on open grassland.



Figs. 1-6. *Peristylus fallax* Lindl.: 1, Habit (whole plant with inflorescence); 2, Front view of flower; 3, Side view of flower with floral bract, pedicellate ovary; 4, Floral perigone: a, dorsal sepal, b, lateral sepals, c, petals; 5, Side view of pedicellate ovary, column, spur and the lip; 6, Pollinia.

Specimen Examined

India: West Bengal, Darjeeling Himalaya, Kalpokhari forest, 3300 m alt., dt. 05.08.2010, Rajendra Yonzone et al. 1401.

Altitudinal Range

2600 – 3800m.

Present Status

Threatened in natural habitat.

Local Distribution within Darjeeling

Bikhaybhanjang, Kalpokhari, and Sandakphu forest.

Geographical Distribution

India (NorthWest and NorthEast India, Sikkim); Bhutan, China and Nepal.

Conservation Strategy

Since extension of agricultural lands, over grazing, rapid deforestation and many developmental schemes directly harm the natural habitat of orchid species in Darjeeling Himalaya regions (Yonzone et al., 2012), conservation of habitat is urgently required to protect them in nature.

Acknowledgements

The first author is thankful to the University Grants Commission, New Delhi, India for financial assistance during the present investigation.

References

Bose, T. K. and S. K. Bhattacharjee. 1999. *Orchids of India*. Revised Edition. Naya Prokash. Calcutta, India.

Bruhl, P. 1926. *A Guide to the Orchids of Sikkim*. Bishen Singh Mahendra Pal Singh, Dehradun, India.

Hara, H. 1966. *The Flora of Eastern Himalaya*. University of Tokyo Press, Tokyo, Japan.

Hara, H. 1971. *The Flora of Eastern Himalaya*, University of Tokyo Press, Tokyo, Japan.

Hooker, J. D. 1888-1890. *The Flora of British India*. Vol. 5 & 6. L. Reeve and Co. London.

Jain, S. K. and R. R. Rao. 1977. *Field and Herbarium Methods*. Today and Tomorrow's Printers and Publishers. New Delhi, India.

King, G. and R. Pantling. 1898. The Orchids of the Sikkim-Himalaya. In: *Annals of the Royal Botanic Garden*, Calcutta, India.

Ohashi, H. 1975. *The Flora of Eastern Himalaya*. University of Tokyo press, Tokyo, Japan.

Pearce, N. R. and P. J. Cribb. 2002. *Flora of Bhutan. The Orchids of Bhutan*. Vol. 3, Part 3. Royal Botanic Garden, Edinburgh, UK.

Pradhan, U. C. 1979. *Indian Orchids Guide to Identification and Culture*, (Vol. II). Premulaceae Books, Kalimpong, India.

Pradhan, U. C. and S. C. Pradhan. 1997. *100 Beautiful Himalayan Orchids and How to Grow Them*. Premulaceae Books, Kalimpong, India.

Yonzone, R., R. B. Bhujel, D. Lama, and Samuel Rai. 2012. Orchid species diversity of Darjeeling Himalaya of India. *Int. J. Pharm. Lif. Sci.*, 3(3):1533-50.