

## ***Peristylus manii* (H.G. Reichenbach) Mukerjee [Orchidaceae] - a new record for Nepal**

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### **Abstract**

*Peristylus manii* (H.G. Reichenbach) Mukerjee [Orchidaceae] is reported from Nepal for the first time. A morphological description, illustration and relevant notes are provided.

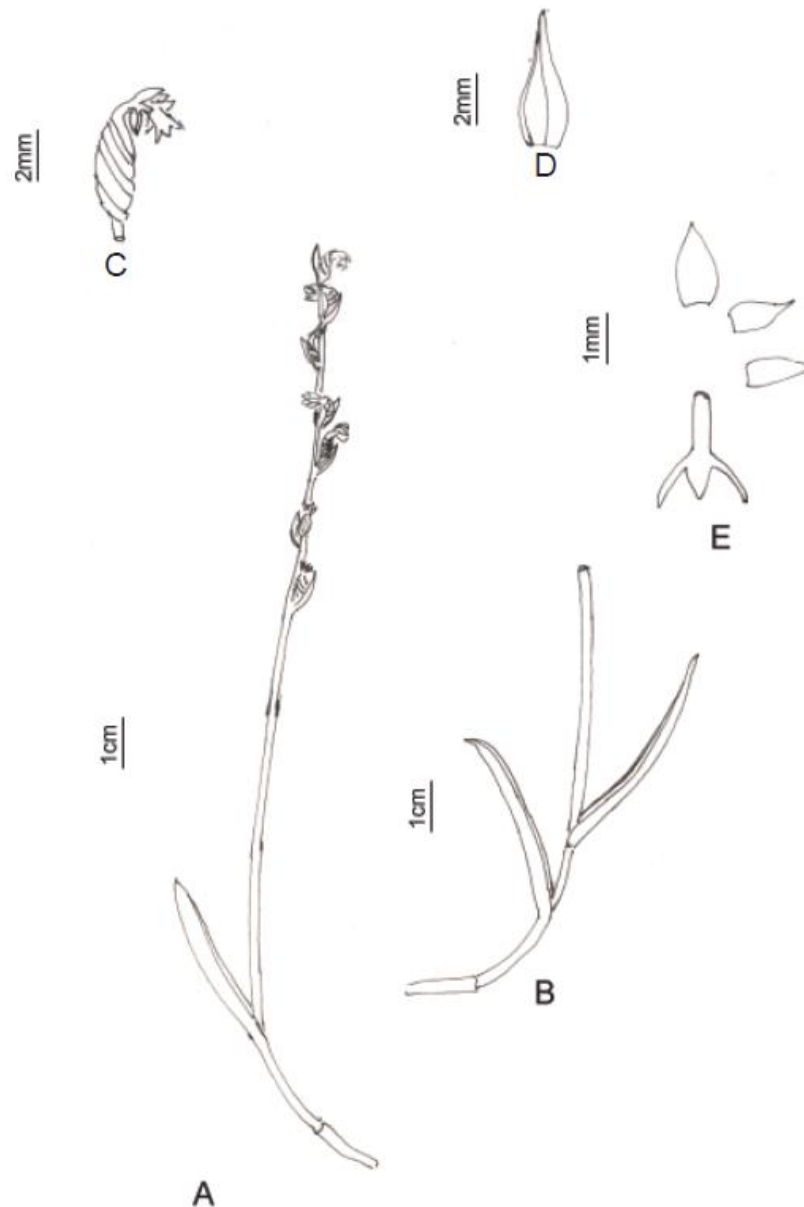
**Key words:** *Peristylus manii*, New record, Nepal

*Peristylus manii* (H.G. Reichenbach) Mukerjee is recorded from India (Khasia Hills & Manipur) and China (S. Sichuan & C. and W. Yunnan) (Hooker *f.* 1888 – 1890; Chen *et al* 2009) but the species has not been recorded from Nepal (Hara *et al.* 1978; Banerji & Pradhan 1984; Press *et al.* 2000; Rajbhandari & Dahal 2004, 2010) so far.

During an intensive survey of species diversity in forests (Scheidegger *et al.* 2010), an orchid species was recorded from Shyo, Lho Village Development Committee (VDC), Gorkha District, Central Nepal which resembled *Herminium* in gross morphological characters. The orchid was found on an open meadow adjacent to a *Pinus-Rhododendron* forest.

On critical examination the specimen was identified as *Peristylus manii* (H.G. Reichenbach) Mukerjee. The genus *Peristylus* is characterized by the presence of a short, pendulous, scrotiform spur. The species *Peristylus manii* was confirmed by the presence of 1 or 2 linear leaves 0.4 – 0.5 cm wide and a labellum that is 3-lobed near the middle with lateral lobes as long as the middle lobe. The specimen was also compared with the specimen of *P. manii* (Kingdon Ward 18706 deposited at AMES) collected from Khasia Hills in August 1949.

*Peristylus manii* (H.G. Reichenbach) Mukerjee in Notes Roy. Bot. Gard. Edinburgh 21: 153, 1953; Chen, Gale & Cribb in Wu & Raven, Fl. China 25: 141. 2009; Zang in Wu & Raven, Fl. China Illust. 25: t. 184 f. 7 & 8. 2010.



**Fig. 1. *Peristylus mannii*:** **A.** Habit with inflorescence; **B.** Habit without inflorescence; **C.** Flower; **D.** Bract; **E.** Dorsal sepal, petal, lateral sepal and the lip spread out

*Coeloglossum mannii* H.G. Reichenbach, *Linnaea* 41: 54. 1877; *Habenaria gracillima* J.D. Hooker, *Fl. Brit. India* 6: 163. 1890. [Fig. 1]

Plant 14 - 16 cm tall. Stem thin, with one tubular sheath at base. Leaves 1 or 2, 3 - 4 x 0.4 - 0.5 cm, linear, acuminate, base extended to long tubular sheath. Inflorescence 8 - 10 cm, flowers distant, laxly 8 - 10 flowered; flowers ca. 10 mm apart, spirally arranged, green; floral bracts ovate-lanceolate, 4.5 - 5 x 2 mm, as long as or slightly shorter than ovary, acuminate. Ovary 5 - 5.5 mm including pedicel. Dorsal sepal 1.5 x 0.8 mm, oblong-ovate, concave, subacute; lateral sepals 1.5 x 0.5 mm, oblong, acute. Petals 1.25 x 0.25 - 0.5 mm,

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ovate acuminate to oblong acuminate. Labellum ca. 1.6 – 2.0 mm long, spreading, narrowly oblong, ecallose, 3-lobed near middle; lateral lobes diverging 1 x 0.2 mm, as long as mid-lobe, narrowly oblong; mid-lobe 1 x 0.5 mm, oblong to triangular; spur pendulous, scrotiform, ca. 1 mm, obtuse.

**Distribution:** Nepal (Shyo Lho), India (Meghalaya), China (Sichuan & Yunnan).

**Flowering:** October

**Specimen Examined:** Central Nepal, Gandaki Zone, Gorkha District, Shyo Lho VDC, 3000 m, 10 October 2012, S. K.Rai, J. P. Gajurel, S. Devkota, Bibas Rai & Bhim Rai, 25624, KATH.

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### LITERATURE CITED

- Banerji, M.L. & Pradhan, P. 1984. *The Orchids of Nepal Himalaya*. J. Cramer, Vanduz.
- Chen Xingqi; Gale, S. W. & Cribb, P. J. 2009. *Peristylus* Blume. In: Wu Z.-Y and Raven P. H. (eds.), *Flora of China* 25: 141. Science Press, Beijing & Missouri Botanical Garden Press, St. Louis.
- Hara, H.; Stern, W.T. & Williams, L.H.J. (eds.) 1978. *An Enumeration of the Flowering Plants of Nepal*, vol. 1. British Museum (Natural History), London.
- Hooker, J.D. 1888-1890. *The Flora of British India* 6: 163, L. Reeve and Co., Ashford, Kent.
- Press J.R.; Shrestha, K.K. & Sutton, D.A. 2000. *Annotated Checklist of the Flowering Plants of Nepal*. The Natural History Museum, London.
- Rajbhandari, K.R. & Dahal, S. 2004. Orchids of Nepal: a checklist. *Bot. Orientalis* 4(1): 89 – 106.
- Rajbhandari, K.R. & Dahal, S. 2010. Orchidaceae. In: Rajbhandari, K. R. and Baral, S. R. (eds.), *Catalogue of Nepalese Flowering Plants I. Gymnosperms and Monocotyledons*. Department of Plant Resources, Kathmandu.
- Scheidegger, C.; Nobis, M.P. & Shrestha, K.K. 2010. Biodiversity and livelihood in land-use gradients in an era of climate change – outline of a Nepal-Swiss research project. *Bot. Orientalis*, 7: 7 – 17.