

***Phreatia elegans* Lindley (Orchidaceae) – a new record for the flora of Nepal**

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Abstract

Phreatia elegans Lindley (Orchidaceae), is reported as a new record for the flora of Nepal. Morphological descriptions, habitat, distribution and relevant notes are provided.

Key words: New distribution, Central Nepal, Panchase forest

Phreatia Lindley (Orchidaceae, Epidendroideae: Podochileae) comprises of 190 - 200 species, and distributed from mainland Asia through SE Asia to Australia, New Zealand and the Pacific Islands (Bose & Bhattacharjee 1980; Pearce & Cribb 2002; Ormerod 2005; Chen & Wood 2009). The genus, closely related to *Eria*, and *Podochilus*, is characterized by its stemless or caulescent plant body with axillary inflorescences, minute flowers with free sepals, lateral sepals remain adnate to the foot of column, and with 8 pollinia.

Nepal harbors 451 species of orchids (Orchidaceae) belonging to 107 genera (Rajbhandari 2015). During our plant exploration of Mt. Panchase, Kaski district, Central Nepal in 2014, we collected an orchid species, the character of which does not match with any previously reported orchids of Nepal. This species was recorded from Panchase Protected Forest in Chapakot Village Development Committee (VDC) at an altitude of 1600 m.

On close examination of herbarium specimens and checking relevant literatures, our specimen is identified as *Phreatia elegans* Lindley which was first reported from Sri Lanka by Lindley (Lindley 1830–'40). *Phreatia elegans* has been so far not recorded from Nepal (Hara 1978; Press *et al.* 2000; Subedi 2002; Rajbhandari & Dahal 2004; Subedi *et al.* 2007; Rokaya *et al.* 2013; Rajbhandari 2015). There is no record of the specimens of this species in the National Herbarium and Plant Laboratories (KATH) and Tribhuvan University Central Herbarium (TUCH). Specimen of *Phreatia elegans* from Nepal is also not available in the British herbaria: BM (<http://data.nhm.ac.uk/>) and K (<http://apps.kew.org/herbcat>, specimen of this species collected from Nepal is not deposited in CAL (Zhao Ping 2014, pers. comm.). Therefore, this species is a new addition for orchid flora of Nepal. Moreover, *Phreatia* is also a new genus reported from Nepal.

***Phreatia elegans* Lindley, Gen. Sp. Orchid. Pl.: 63. 1830. Bose & Bhattacharjee, Orchids of India: 444. 1980; Pearce & Kribb, Orchids of Bhutan: Flora of Bhutan 3 (3): 395. 2002. [PLATES - I & II]**



PLATE - I. *Phreatia elegans* Lindley: A. Flowering plant with habitat; B. Flowers in enlarged view

Type: *Protologue:* Hab. super arbores in sylvis montosis pagi Peradeniae, Zeylonae, MacRae, s.n. (Holotype: not located, Isotype: BM image!).

Synonym: *Thelasis elegans* (Lindley) Blume, *Mus. Bot.* 2: 187. 1856. *Eria elegans* (Lindley) Reichenbach f., *Fl. Vit.* 301. 1868.

Epiphytic herbs. Roots fascicled. Pseudobulbs small, 0.5-1 x 0.6-0.8 cm, tufted, compressed. Leaves one to several, coriaceous, lanceolate, oblong to narrowly oblanceolate, apex bifid, base tapering, 1-veined, 5-12 x 1-1.5 cm. Inflorescence arising from base of pseudobulbs, densely many spaced flowered, racemes in elongate scape, longer than leaves; floral bracts ovate to obovate, 2-4 x 0.5-1 mm. Flower white, 1-2 mm across, pedicel and ovary curved. Dorsal sepal triangular ovate, acute, 1.5-2.1 x 0.6-1 mm; lateral sepals triangular, acute, 1-2 x 0.4-0.6 mm, adnate to column foot. Petals broadly ovate, acute, 0.5-1 x 0.4-0.6 mm; lip fleshy, slightly triangular, margin weakly undulate, ca. 1 mm long, attached to base of column foot; column ca. 0.5 mm long.



PLATE - II. *Phreatia elegans* Lindley: Specimen collected from Panchase Protected forest, in Central Nepal (TUCH)

Flowering: August

Habitat: ± Epiphytic on *Daphniphyllum himalayense* (Bentham) Müller-Argoviensis (Daphniphyllaceae) with associated species like *Herpetospermum pedunculatum* (Seringe) C.B. Clarke (Cucurbitaceae), *Pinalia stricta* (Lindley) Kuntze (Orchidaceae), *Tetrastigma rumicispermum* (M.A. Lawson) Planchon (Vitaceae), at an elevation about 1600 m.

Distribution: Nepal, India, Bhutan, Sri Lanka.

Specimen examined: Central Nepal, Gandaki Zone, Kaski District, Chapakot VDC, Panchase Protected Forest, 1600 m, August 09, 2014, P. Bhandari & A. Bhandari 721P (TUCH).
[PLATE - II]

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