

A new locality record for the endemic *Panisea panchaseensis* Subedi (Orchidaceae) in Nepal

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Abstract

Panisea panchaseensis Subedi (Orchidaceae), an endemic orchid of Nepal, which was previously thought to be occurred only in the type locality – “Panchase”, is now also recorded in Dolakha District of Central Nepal. A brief note on distinguishing character, distribution of the species along with photographs is given to validate the new locality report of species in Nepal.

Key words: *Panisea panchaseensis*, Distribution, Central Nepal, Dolakha, Panchase, Orchid

During a recent floristic inventory of Suspa-Kshamawoti Village Development Committee (VDC) of Dolakha district, we encountered an orchid of the genus *Panisea* (Lindley) Lindley. The species was found along with *Bulbophyllum reptans* (Lindley) Lindley in *Daphniphyllum-Quercus* forest. On consultation with the relevant literatures (Chen 1980; Lund 1987; Subedi *et al.* 2011), the plant was identified as *Panisea panchaseensis* Subedi. The identity of this species was also confirmed with the specimens of *Panisea panchaseensis* Subedi at KATH and TUCH.

In Nepal, the genus *Panisea* (Lindley) Lindley is represented by four species, namely *Panisea demissa* (D. Don) Pfitzer, *Panisea panchaseensis* Subedi, *Panisea tricallosa* Rolfe and *Panisea uniflora* (Lindley) Lindley (Rokaya *et al.* 2013; Rajbhandari 2015). The

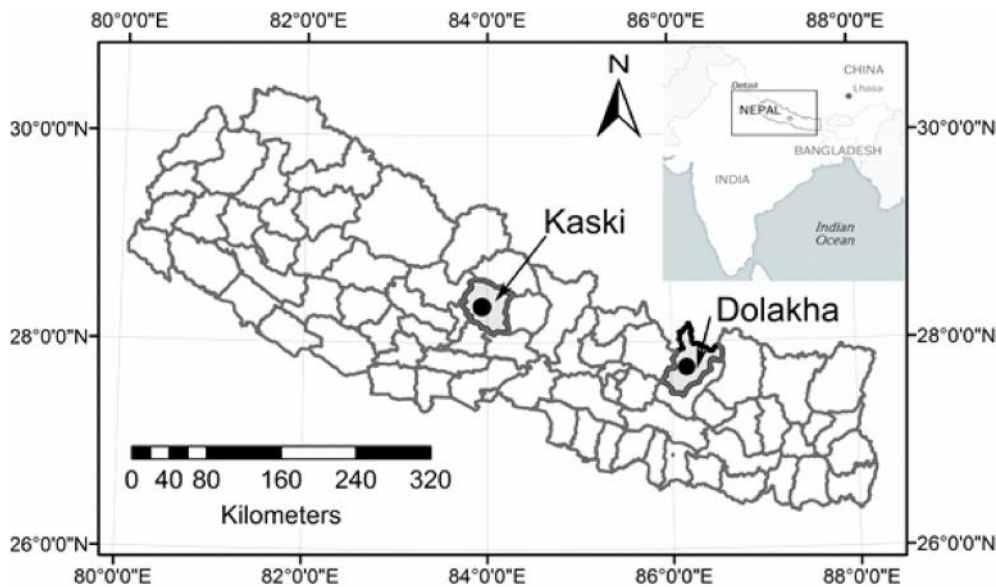


Figure 1. Distribution of *Panisea panchaseensis* Subedi in Nepal Himalaya.



PLATE I. *Panisea panchaseensis* Subedi : A. Habit of the plant in the habitat. B. A plant with flower

Panisea panchaseensis Subedi is characterized by the presence of heteranthous inflorescence with nodding flowers and acute tip of lip.

Panisea panchaseensis Subedi is endemic to Nepal, distributed in the lower temperate forest in the Panchase area, 2400 – 2500 m a.m.s.l., Kaski district, Central Nepal with a narrow distribution range limited to an area of 1 km². The total population is estimated to contain less than 250 mature individuals (Subedi *et al.* 2011). The species is not recorded elsewhere beyond the type locality- ‘Panchase’ till date, thus the present collection locality of the specimen represents the easternmost distribution of the species.

Panisea panchaseensis Subedi, Nord. J. Bot. 29: 361 – 365. 2011. [PLATE - I]

Type: *Protologue:* Paniseae albiflorae hypochilio carinis duabus brevibus aequiformibus et columna brevissima (0.4–0.5 cm longa) similis, sed inflorescentia heterantha, floribus cernuis, epichilii apice acuto differ (Holotype: KATH, Isotype: TUCH).

Flowering: October – January

Habitat: Epiphytic in *Daphniphyllum-Quercus* forest.

Distribution: Central Nepal (Kaski District–Panchase forest and Dolakha District– Suspa-Kshamawoti VDC). [Figure 1]

Specimen examined: Central Nepal, Janakpur Zone, Dolakha District, Suspa-Kshamawoti VDC, 2100 – 2500 m, January 15, 2016, P. Bhandari & S. Karki D16 (TUCH & KATH).

The finding of *Panisea panchaseensis* in Dolakha district shows the eastern most distribution of this species in the Himalaya, which lies at an aerial distance of 130 km² from its type locality showing the disjunct nature of distribution. The elevation range of *Panisea panchaseensis* in the new locality is wider, i.e. 2100 – 2500 m a.m.s.l. compared to very narrow distribution range (2400 – 2500 m) in Panchase forest. Additionally, the population structure of the species in its eastern limit (Dolakha district) is quite good and can be considered as common, with masses of patchy population. Regarding the habitat structure, the species in both the locality favors lower canopy of host species like *Daphniphyllum himalayense* (Benth) Müll.-Argoviensis, *Rhododendron arboreum* J.E. Smith, *Quercus semecarpifolia* J.E. Smith and *Symplocos* spp. Deforestation is the major threat for this species.

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