Occurrence of *Crepidium aphyllum* (King & Pantl.) A.N. Rao (Orchidaceae) in Darjiling Hills: a new record for West Bengal, India

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Abstract

Collection of *Crepidium aphyllum* (King & Pantl.) A.N. Rao (Orchidaceae) from temperate habitat of Labdah Khasmahal area of Darjeeling Hills is a new record of its occurrence for the state of West Bengal in India. A brief description and photographs have been provided for its easy identification.

Key words: Orchidaceae, *Crepidium aphyllum*, *Microstylis*, New record, Darjeeling, West Bengal

INTRODUCTION

The terrestrial orchid genus, *Crepidium* Blume, comprises of about 280 species, distributed mainly in the Asian tropics and subtropics, Australasia, and Indian Ocean islands, with a few species in temperate Asia (Chen & Wood 2009) of which 10 species including two mycoheterotrophs are recorded so far from India (King & Pantling 1898; Misra 2007; Jie *et al.* 2012). The genus was segregated from *Malaxis* Sol. ex Sw. by Szlachetko in 1995. The members of the genus are mostly terrestrial or sometimes lithophytic and characterized by small flowers, persistent floral bracts, column without foot and lip of flowers concave at base.

The District of Darjeeling in West Bengal state of India lies between 26° 31' to 27° 13' N latitudes and between 87° 59' to 88° 53' E longitudes spreading over an area of about 2436.55 km² (O'Malley 1999). The altitudinal variation in various parts of the district ranges from 150 m (at Sukna) to 3660 m (at Sandakphu) with diverse topographical conditions (Das 1995, 2004).

During two field explorations to Labdah Khasmahal, Darjeeling in the months of July 2016 and August 2017, the authors could locate a few scattered small populations of a miniature orchid which was identified as *Crepidium aphyllum* (King & Pantl.) A.N. Rao with the help of available published literature [King & Pantling (1898), Rao (1988, 2000), Tang & Wang (1951), Matthew (1981), Banerji (1982), Jie *et al.* (2012), Yonzon *et al.* (2012) and Swami (2016)]. A few plant samples were collected and processed into mounted herbarium specimens following Jain & Rao (1977) and deposited in the herbaria of Llyod's Botanic Garden and Botany Department, Darjeeling Government College, Darjeeling. In India *Crepidium aphyllum* is reported so far only from Sikkim (King &

Pantling 1898) and Aruanchal Pradesh (Hegde & Rao 1987). hence the present collection of this species from Darjeeling Hills forms a new distributional record for this region as well as for the state of West Bengal. A brief description of the species along with photographs is provided here for its easy identification.

Figure 1. *Crepidium aphyllum* (King & Pantl.) A.N. Rao. A&B. Plants in natural habitat; C. Flower scapes; D. Portion of an inflorescence showing closer view of flowers.

Crepidium aphyllum (King & Pantl.) A.N. Rao in J. Orc. Soc. India 14: 65. 2000; *Microstylis aphylla* King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) 8: 18. 1898; *Malaxis aphylla* (King & Pantl.) Tang & F.T. Wang, in Acta Phytotax. Sin. 1: 71. 1951; S.N.Hegde & A.N.Rao in Ind. J. For. 10(3): 197. 1987; A.N.Rao in J. Orch. Soc. India 2:17. 1988; Jie, Xiao-hua & Wei-tao in J. Trop. Subtrop. Bot. 20(3):239. 2012.

Type: India, Sikkim, Valley of Teesta, *R. Pantling*, 455 (K!). [<http://specimens.kew.org/herbarium/K000387669>]. **[Figure 1]**.

A small mycoheterotrophic herb, 10 – 25cm long, fragile; Tuber solitary, oblong, spindle shaped, hairy, roots zero or few at the base of the scape; Scape 5 – 12 cm long, erect, internodes 2 – 5, with 2 – 5 tubular sheaths, glabrous, yellowish-purple; Inflorescence terminal, erect, 2 – 10 cm long, 10 – 40 flowered raceme, narrowing and dense above; Floral bracts lanceolate, deflexed, 1mm broad and 3mm long, shorter than pedicel in basal flowers and exceeding pedicel in upper younger flowers, margin entire, apex acute, yellowish-purple-green in color, glabrous, persistent; Flowers 2 – 3.5 mm broad and 3–5 mm long, non-resupinate, yellow flushed with dull purple, glabrous; pedicel 2–3mm long (including ovary), glabrous; lateral sepals ovate, 1.2 – 1.4 mm broad and 1.4 – 1.5 mm long, recurved, apex obtuse, margin entire, dorsal sepal elliptic, 1 mm broad and 1.7 – 2 mm long, apex obtuse, margin entire, revolute, lateral petals linear, 0.3 mm broad and 1.6 – 2 mm long, apex sub-acute, recurved, margin entire, adpressed to lateral sepals, Lip ovate, 1.2 – 2 mm broad and 2 – 2.5 (– 3) mm long, apex obtuse, narrowed in the middle with two sagittate auricles at the base, auricles lanceolate-triangular, 0.5mm broad and 1mm long, apex sub-acute, column ca. 1mm long, apically lobed with a bow-shaped structure, anther cap elliptic, pollinia 4; Capsules oblong-obovoid, 3 – 4 mm long.

Exsiccates: West Bengal: Darjeeling, Labdah Khasmahal, 26° 57' 49.45" N and 88° 20' 29.77" E, 1606±10m, 10.07.2016, *Norbu Sherpa & Nayan Thapa*, 00210 (DGCH); Labdah Khasmahal, 26° 57' 51.96" N and 88° 20' 60.37" E, 1618±10m, 13.08.2017, *Lhamu Sherpa & Norbu Sherpa*, LB014381 (LBH).

Specimen Examined: Images: Sikkim: Valley of Teesta, 305.0 m, 11.07.1896, *R. Pantling*, 455 (K000387669!); Valley of Teesta, 300 m, 11.07.1896, *R. Pantling*, 455 (G000354757!).

Local Distribution: Labdah Khasmahal, Darjeeling, West Bengal.

Global Distribution: India (Arunachal Pradesh, Sikkim, West Bengal), China.

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