

Biodiversity Record: Straggly rush orchid, *Dendrobium lobbii*, in scrubland near Clementi Forest

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Subjects: Straggly rush orchid, *Dendrobium lobbii* (Angiosperms: Asparagales; Orchidaceae).

Subjects identified by: Koh Jun Wang.

Location, date and time: Singapore Island, scrubland near Clementi Forest; 19 November 2022; 1002 and 1022 hrs.

Habitat: Seasonally swampy open scrubland in urban site.

Observers: Lew Yu Xuan Ethan and Koh Jun Wang.

Observations: Live mature individuals were found in flower and fruit at two locations in swampy scrubland dominated by resam (*Dicranopteris linearis* var. *linearis*) and exposed to full sun. More immature individuals were found at three locations nearby during subsequent visits. These were rooted on soil and in decaying leaf litter among resam, alongside bamboo orchid (*Arundina graminifolia*), slender pitcher plant (*Nepenthes gracilis*), and simpoh ayer (*Dillenia suffruticosa*) (Fig. 1). Flowers and fruits were observed. A voucher specimen was collected and preserved in the herbarium at the Singapore Botanic Gardens under the accession number SING 2023-003.



Fig. 1. Habitat of *Dendrobium lobbii*. An individual plant is indicated by the arrow. (Photograph by: Lew Yu Xuan Ethan)

Remarks: *Dendrobium lobbii* Teijsm. & Binnend. is a slender, grass-like, terrestrial orchid that grows to 70 cm tall, with stiff, narrow leaves which split into two unequal lobes towards the leaf apex (Figs. 2 & 3). The leaves are arranged in an alternate manner along thin wiry stems which are covered in long, dark brown hairs (Fig. 4) while the flowers are borne singly or in pairs along the stem nodes (Lok et al., 2008) (Fig. 5). It can be found throughout as a terrestrial plant in open peaty places at altitudes of 200 to 1900 m (Schuiteman et al., 2022).

It was classified as nationally extinct in the first edition of the Singapore Red Data Book (Turner et al., 1994) because since 1930, no further collections had been made up to the publication of that book. However, it was rediscovered in the forest areas surrounding MacRitchie Reservoir on 10 July 2007 (Lok et al., 2008). Consequently, *Dendrobium lobbii* has been assessed as nationally critically endangered in subsequent checklists regarding the flora of Singapore (Chong et al., 2009; Lindsay et al., 2022).

Resam-dominated scrubland is a type of vegetation regenerating on clear-felled wasteland within the urban matrix of modern Singapore. Acidic, nitrogen- and phosphorus-limited clayey soils with high aluminium toxicity appear to favour the establishment of resam-dominated scrubland (Lam et al., 2020), and this can subsequently develop into long-lived, pioneer dominated, albeit species poor and successional stagnant adinandra belukar (Sim et al., 1992; Chua et al., 2016), or other forms of native-dominated forests (Chua et al., 2016).



Fig. 2. Narrow leaf of *Dendrobium lobbii* with a flower. Fig. 3. Split leaf apex. (Photographs by: Koh Jun Wang)



Fig. 4. Long, dark brown hairs cover the stems of *Dendrobium lobbii*. Fig. 5. Flower detail. (Photographs by: Lew Yu Xuan Ethan)

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