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Caption: Large Indian Civet *Viverra zibetha*, Tricoloured Munia *Lonchura malacca* and *Hoya wightii* (Medium—pencil crayon on watercolour paper) © Supriya Samanta.



## Extended distribution of two endemic epiphytes from the Western Ghats to the Deccan Plateau

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**Abstract:** Extended distribution of two endemic epiphytes, viz., *Hoya wightii* Hook.f. (Apocynaceae) and *Bulbophyllum fimbriatum* Rchb.f. (Orchidaceae) from Western Ghats to Deccan Plateau is reported during field explorations undertaken to document the flora of Kalwan tehsil. The presence of these two species in the Deccan plateau indicates the need of further explorations to document the diversity and endemism of strict endemics of Western Ghats in Deccan plateau.

**Keywords:** India, Kalwan tehsil, new distribution records, northern Western Ghats, rare plants.

Forests are categorized according to the plant species present in a particular area, which in turn depends upon the environmental conditions prevalent in that area. Similarly, the plant species occurring in a particular area are important in deciding the type of forest present in that area. Forest in Kalwan tehsil has been shown to fall in moist tropical and dry tropical by Lakshminarasimhan & Sharma (1991). From the available literature it is evident that much focus has been given on Markanday hill top and Saptashrungi Fort while remaining area of Kalwan tehsil has been scarcely mentioned in the previous works. Therefore, explorations carried out to study the floristic wealth of less explored areas of

Kalwan tehsil from ethno-botanical perspective. During these explorations, two epiphytes, viz., *Hoya wightii* Hook.f. (Apocynaceae) and *Bulbophyllum fimbriatum* Rchb.f. (Orchidaceae) were observed. These species were supposedly endemic to Western Ghats (Pande et al. 2010; Singh et al. 2015) and never been reported from Deccan Plateau. After analysis it is found that, these species have extended their distribution to the Deccan plateau (Figure 1). Their description is provided, the map is given and notes on distribution are also provided.

### MATERIAL AND METHODS

Field trips were carried out to explore floristic wealth and record the ethno-botanically important plants of Kalwan tehsil. Plants were photographed, collected, and herbarium specimens were prepared as per Jain & Rao (1971). Plants were identified by using local floras (Sharma et al. 1996; Singh et al. 2001). The map is as per Rodgers & Panwar (1988).

### Study area

Kalwan tehsil is located in the northwestern part of Nashik District in Maharashtra state of India, between

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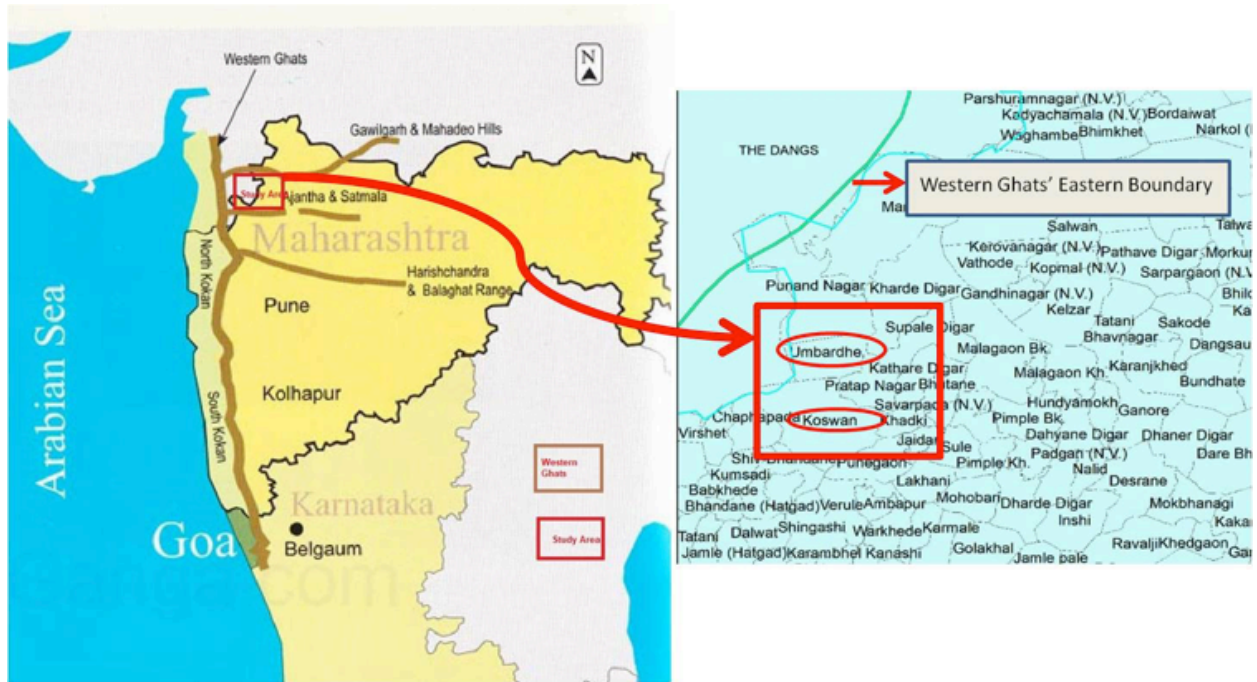


Figure 1. Collection localities of *Hoya wightii* Hook.f. and *Bulbophyllum fimbriatum* Rchb.f. from Deccan Plateau.

20°29'25"N Latitude and 74°01'35"E Longitude. It is bordered by Dang district of Gujarat state towards west, Baglan tehsil Nashik district towards the north, Deola towards east and Chandwad and Dindori tehsils towards the south.

**RESULTS**

*Hoya wightii* Hook.f. Fl. Brit. India 4: 59 (1883)  
(Image 1A)

Epiphytic pendulous climbers. Stems smooth, cylindrical with adventitious roots at regular intervals. Leaves opposite, petiolate, elliptic lanceolate, acuminate at apex, narrow at base. Flowers in lateral umbellate cymes. Corolla cream coloured, rotate; petals united in the lower halves, slightly pubescent within. Staminal corona purple. Follicles linear to cylindrical.

**Phenology:** Flowering and Fruiting: May–January.

**Notes:** Found growing on *Mangifera indica* L. and *Ficus racemosa* L.

**Specimens examined:** SVD-270620211, 27.vi.2021, India, Maharashtra, Nashik district, Kalwan tehsil, Koswan, coll. S.V. Deore & M.D. Sonawane (Western Circle, BSI, Pune), Image 2.

**Distribution:** Goa, Karnataka, Kerala, Maharashtra, and Tamil Nadu. The present record is the northernmost distribution of this species from Deccan Plateau.



Image 1. A—*Hoya wightii* Hook.f. | B—*Bulbophyllum fimbriatum* Rchb.f. © Sonali Deore.





Image 2. Herbarium of *Hoya wightii* Hook.f.

***Bulbophyllum fimbriatum*** (Lindl) Rchb.f. Ann. Bot. Syst. (Walpers) 6(2): 260 (1861) (Image 1B)

Rhizome stout, pseudobulbs sub-globose, about 1.5 to 2 cm long. Leaves altering with flowering, up to 5–12 × 2 cm. Flowers greenish-yellow, lateral sepals much longer than the dorsal ones, lip spatulate, fleshy, recurved. Capsules green, ob-pyriform, 1 × 0.5 cm.

**Phenology:** Flowering and Fruiting. February–March.

**Specimens examined:** SVD-280320211, 28.iii.2021, India, Maharashtra, Nashik district, Kalwan tehsil, Umbardhe, coll. S.V. Deore & M.D. Sonawane (Western Circle, BSI, Pune), Image 3.

**Notes:** Found growing on *Mangifera indica* L.

**Distribution:** Kiruthika et al. (2018) reported this species from Gadalur (Tamil Nadu). In Maharashtra it has been reported (Sharma et al. 1996) from Pune Satara and Sindhudurg districts. It has not been reported from Nashik district (Lakshminarasimhan & Sharma 1991; Yadav & Dhanke 2010) previously. It was strictly

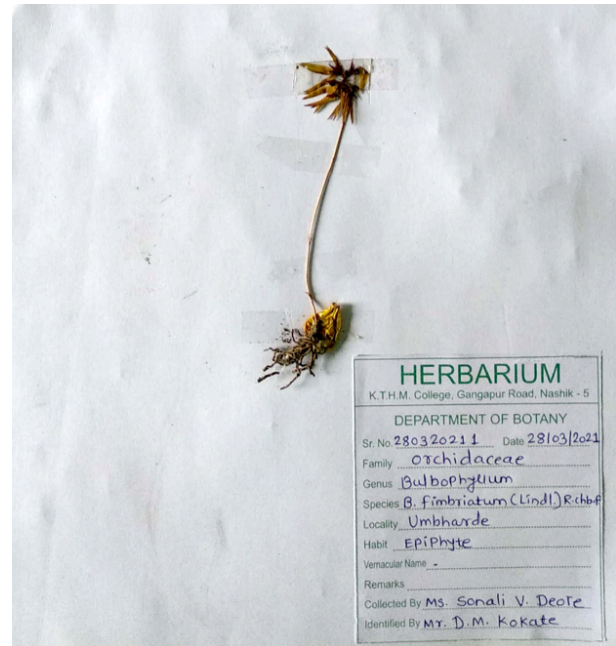


Image 3. Herbarium of *Bulbophyllum fimbriatum* Rchb.f.

endemic to Western Ghats (Singh & Singh (2015) and now extended its distribution to Deccan Plateau.

## REFERENCES

- Jain, S.K. & R.R. Rao (1977). *A Handbook of Field and Herbarium Methods*. Today & Tomorrow's Printers & Publishers, 157 pp.
- Kiruthika, K., M. Sulaiman, P.B. Harathi & R. Gopalan (2018). Revelatory notes on *Bulbophyllum fimbriatum* - An Endemic orchid of Western Ghats, India. *Journal of Economic and Taxonomic Botany* 42: 65–69.
- Lakshminarasimhan, P. & B.D. Sharma (1991). *Flora of Nasik District*. Botanical Survey of India, 644 pp.
- Pande, S., N. Sant, V. Vishwasrao & M.N. Datar (2010). *Wild Orchids of Northern Western Ghats: Including Maharashtra, Goa and Belgaum*. Ela Foundation.
- Rodgers, W.A. & H.S. Panwar (1988). Planning a Wildlife Protected Area Network in India. Wildlife Institute of India, Dehradun.
- Sharma, B.D., S. Karthikeyan & N.P. Singh (1996). *Flora of Maharashtra Monocotyledons*. Botanical Survey of India, 792 pp.
- Singh, J.J. & P. Singh (2015). Threatened orchids of Maharashtra - a preliminary assessment based on IUCN regional guidelines and conservation prioritization. *Journal of Orchid Society of India* 29: 1–14.
- Singh, N.P., P. Lakshminarasimhan, S. Karthikeyan & P.V. Prasanna (2001). *Flora of Maharashtra State Dicotyledones*, Vol. 2 Botanical Survey of India, 1080 pp.
- Singh, P., K. Karthigeyan, P. Lakshminarasimhan & S.S. Dash (2015). *Endemic vascular plants of India*. Botanical Survey of India.
- Yadav, S. & P.V. Dhanke (2010). A Checklist of Plants of Nashik District. Nashik Forest Circle, Nashik, 143 pp.



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