

Notes on Geographic Distribution of *Heterostemma dalzellii* Hook

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ABSTRACT

The Western Ghats is one of the 34th Mega Biodiversity hot spots at the global level due to its high number of endemic plant and animal species. That plant species, especially the endemics, have been reported and published in Red Data Book. *Heterostemma dalzellii* Hook. belongs to the family Apocynaceae is a twining undershrubs species, it is endemic to Western Ghats of India. The present distribution of *H. dalzellii* is only in India and it is restricted to the Diu, Daman, Dadar- Nagarhaveli, Maharashtra, and Goa. Recently discovered in the southeast Gujarat region. IUCN provided the status of many plants which are present in the Western Ghats. But due to the unavailability of the data, these plant is not appearing in IUCN data. There is an urgent need to evaluate their status as per IUCN categories as well as to undertake conservation measures to protect the habitat of the species. The major goal of the species recovery programme will be to re-establish the populations within their historical range. Their taxonomy will be reinvestigated to confirm their taxonomic distinctness. Population parameters will be collected for each population. *H. dalzellii* is one of the species that need to evaluate as per the IUCN category because of lacking primary and secondary data. In the present study, I am generating primary and secondary data for the purpose of standing a species in the IUCN category.

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Introduction

Western Ghats is one of the 34 biodiversity hot spots at global level due to its high number of endemic plant species. In the world family Apocynaceae Juss., comprises about 410 genera and 5556 species (The Plant List (2013). Version 1.1., n.d.). The genus *Heterostemma* was described by Wight and Arnott in Wight (1834). The Genus *Heterostemma* Wight has 30–40 species (Rodda, 2016). Distributed throughout World viz., Burma, China, India, Indonesia, Laos, Malaysia, Nepal, New Guinea, Philippines, Sri Lanka, Thailand, Vietnam and Australia (Zui & Hun, 1995). Its native range is Tropical & Subtropical Asia continent to South West Pacific. In India and subcontinent Indian areas 10 species reported and accepted, this data approved by the Royal Botanic Gardens, Kew herbarium. The species was described as *Heterostemma dalzellii* by J. D. Hooker in the flora of British India (Vol. 4) from Conkan at Vingorla and Malvan of Northern Western Ghats of Maharashtra state, India (Hooker, 1885). *Heterostemma dalzellii* Hook. belongs to the family Apocynaceae is a twining undershrubs species, it is endemic to Western Ghats of India (Myers et al., 2000; Meena & Krishna, 2015; RBG, 2022). It is endemism to Peninsular India (Rao et al., 2019). It is a rare plant and generally observed in undergrowth of forests of Western Ghats (Singh et al., 2001).

The presently distribution of *H. dalzellii* only in India and it is restricted to the Diu, Daman, Dadar- Nagarhaveli, Maharashtra and Goa (Meena & Krishna, 2015). *Heterostemma dalzellii* Hook.f., Fl. Brit. India 4: 48. 1883; T. Cooke, Fl. Bombay 2: 132. 1958 (Repr. Ed.); Rao, Fl. Goa, Diu, Daman, Dadar & Nagarhaveli 2: 263. 1968; Jagtap &

N.P. Singh in Fasc. Fl. India 24: 249. 1999. *H. wallichii* Dalz. & Gibs. Bomb. Fl. 152. 1861, non Wight, 1834. (Fig. 1 & 2). Twining shrubs; stems terete, swollen at nodes, sparingly branched, puberulous. Leaves petiolate, 16 x 13 cm, broadly ovate, apex subacute, base rounded, upper leaves 9–12 x 4–6 cm, ovate-oblong, sparingly appressed hairy above. Flowers in lateral, umbellate cymes; peduncles and pedicels pubescent; corolla 1.0–1.5 cm across, rotate, glabrous within, puberulous without, lobes divided 1/2 way down, c 4 x 3 mm, ovate, acute; corona of 5, large lobes, adnate to staminal column and projecting horizontally; gynostegium c 1 mm long. Follicles 9–10 cm long, gradually tapering at apex. Seeds orbiculate. Flowering & Fruiting from September to October month (Singh et al., 2001). The taxonomical description is *Heterostemma dalzellii* Hook. f. Fl. Brit. India 4:48. 1883; Cooke, Fl. Pres. Bombay 2: 168. 1904; Santapau & Irani in Univ. Bombay Bot. Mem. no. 4:51. 1962; Jagtap et N.P. Singh in Fasc. Fl. India 24: 249. 1999; Singh, N. P. et al Fl. Maha. Dicotyledons. 2:365, 2001; Ingalhalikar, S. Furt. Flo. Sahy. 345. 2007; *Heterostemma wallichii* Dalz. & Gibs. Bomb. Fl. 152.1861, non Wight,1834 (Singh et al., 2001; Sonawane et al., 2020).

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Taxonomy

Kingdom- Plantae
 Phylum- Tracheophyta
 Class- Magnoliopsida
 Order- Gentianales
 Family- Apocynaceae
 Genus- *Heterostemma*
 Species- *dalzellii* Hook.



Figure 1. *Heterostemma dalzellii*

Observation Table 1

Sr. No.	Botanical Name	Locality	Reference
1.	<i>Heterostemma dalzellii</i>	Gujarat - South East Gujarat	(Meena & Krishna, 2015)
2.		Diu, Daman, Dadar-Nagarhaveli	(Meena & Krishna, 2015)
3.		Maharashtra - Nashik	(Awsare et al., 2012)
4.		Maharashtra - Mumbai, Pune, Ratnagiri,	(Singh et al., 2001)
5.		Maharashtra - The Concan at Vingorla & Malwan	(Hooker, 1885)
6.		Maharashtra - Mumbai, Osmanabad, Poona, Raigad, Satara, Ratnagiri, Solapur, Pavas, Barshi	(Kamble & Yadhav, 2004)
7.		Maharashtra - Satpuda	(Sonawane et al., 2020)

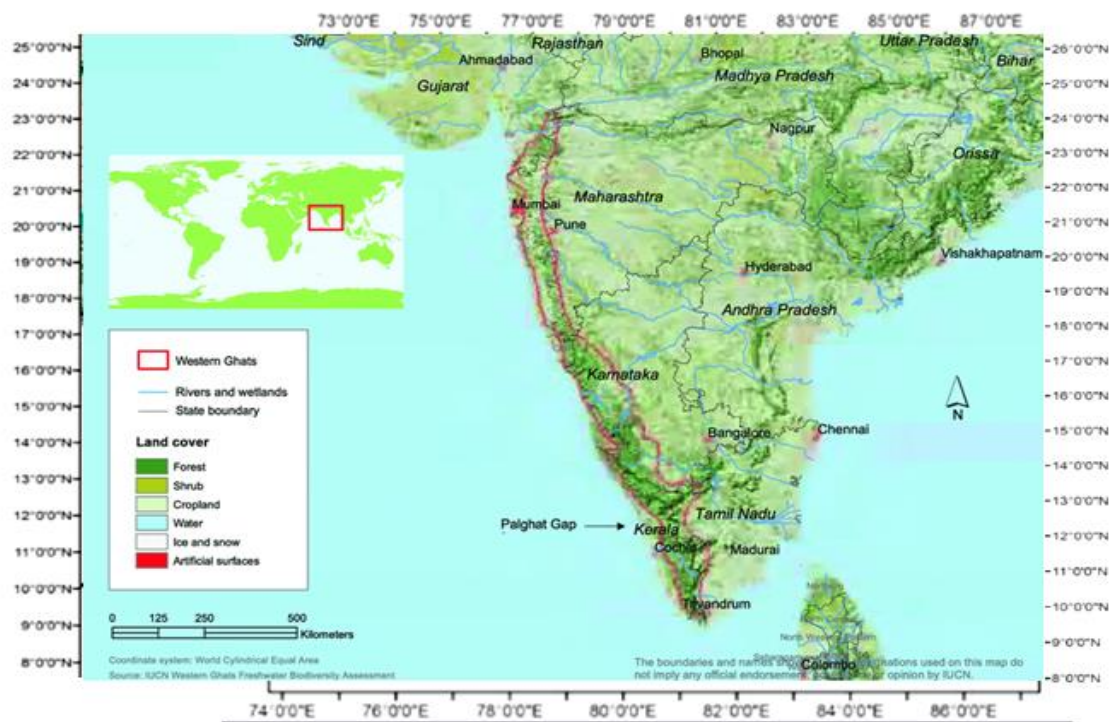


Figure 2. Distribution of *Heterostemma dalzellii* in Peninsular India

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