

## Extended distribution of a rare orchid *Cheirostylis parvifolia* from northern Western Ghats of Maharashtra, India



*Cheirostylis parvifolia* Lindl. a—Habit in humus and side view of flower | b—Rhizomes creeping on rock surface | c—Exposed lip with anthers without sepals and petals | d—Exposed anthers.  
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*Cheirostylis parvifolia* Lindl. belongs to the family Orchidaceae of subtribe Goodyerinae and tribe Cranichideae. It shows scattered and restricted distribution in the Western Ghats and Sri Lanka (Bhattacharjee 2012, 2013). In Maharashtra, *Cheirostylis parvifolia* is restricted to the forests of the Western Ghats as it grows in the undergrowth of semi-evergreen to evergreen forest habitats. It has been reported from various locations of the Northern Western Ghats (NWG) and recently, it has been reported

from Mahendragiri, Odisha in the Eastern Ghats (Dash et al. 2015).

The authors collected the flowering plant specimens during their forest survey from Kalkai Sacred Grove of Kondedhar, Raigad District in NWG of Maharashtra. Based on the critical study of the plant, it was identified as *Cheirostylis parvifolia* Lindl. The literature survey indicated that the reported species showed the northernmost distribution in the Western Ghats of India. A short description of the species is

provided and the collected specimen has been deposited in Agharkar Herbarium (AHMA) of Agharkar Research Institute, Pune. A distribution map of *Cheirostylis parvifolia* is prepared using the locations available in the literature (Sasidharan 1997; Ganesan & Livingstone 2001; Yadav & Sardesai 2002; Jalal & Jayanthi 2018).

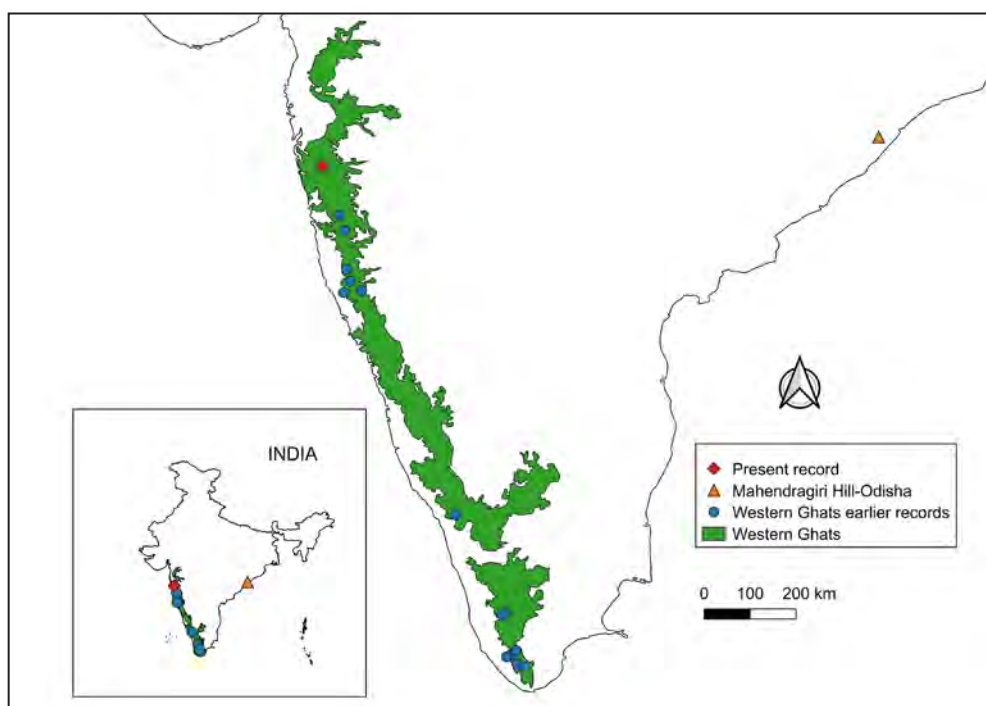
***Cheirostylis parvifolia*** Lindl. in Edwards's Bot. Reg. 25 (Misc.): 19. 1839; Hook.f., Fl. Brit. India 6: 105. 1890; Karthik. et al., Fl. Ind. Enum. Monocot. 118. 1989; Lakshminarasimhan in Sharma et al., (eds.) Fl. Maharashtra, Monocot. 15. 1996; Yadav & Sardesai, Fl. Kolhapur District. 459. 2002; Punekar in J. Econ. Taxon. Bot. 26(1): 105. 2002; Pande et al., Wild Orch. NWG 202. 2010; A. Bhattacharjee in Candollea 67: 32. 2012; Nayar et al., Flower. Plants. Western Ghats Ind. 2: 1069. 2014; Kavade & Deokule, Fl. Chandoli National Park. 360. 2015; *Cheirostylis seidenfadeniana*

C.S.Kumar & F.N.Rasm in Nordic J. Bot. 7: 409. 1987.

Terrestrial herb, lithophytic or epiphytic; stem erect, 8–15 cm tall; rhizomes fleshy greenish-brown, creeping; leaves mostly near the base, 1–3 cm in length, ovate, acuminate and papery; flowers pinkish-white, 4–8 inscape; sepals connate; petals bi-lobed lip longer than sepal; lobes with 2–4 irregular sublobes at the apex; capsule elliptic-ovate, ribbed, and hairy.

**Flowering & Fruiting:** November to January.

**Distribution:** India (Maharashtra, Odisha, Tamil Nadu, Kerala) and Sri Lanka. Maharashtra: Kolhapur--Patgaon, Chandgad (Jalal & Jayanthi 2018), Dhajipur (Punekar 2002); Satara--Koyana (Pathare 2017), Chandoli (Kavade & Deokule 2015); Sindhudurga-Amboli (Jayaweera 1981; Almeida 1990) and Raigad-Kaikaidevi



Distribution records of *Cheirostylis parvifolia* based on literature and present observation.

sacred grove of Kondedhar (present record).

**Exsiccata:** Kondedhar, 03.xi.2016, Shigwan & Kulkarni 000301 & 31441 (AHMA).

**Ecological notes:** The species was found to be growing with the help of rhizomes on boulders covered with moss. Only 10 individuals were recorded at the location. According to Bhattacharjee (2013), this species should be declared as Near Threatened (NT) following the rules of IUCN (2012). It is also prone to various disturbances in the forests due to tiny habitats. The current location of the sacred grove is close to the road and high human interference was observed which makes the species vulnerable. There is an urgent need for conservation efforts for this species distributed in the NWG.



Herbarium sheet of *Cheirostylis parvifolia* © AHMA.

## References

- Almeida, S.M. (1990).** *Journal of Economic and Taxonomic Botany: Additional series* 8. Scientific Publishers, 304pp.
- Bhattacharjee, A. (2012).** On the status of some species of *Cheirostylis blume* (Orchidaceae) from India. *Candollea* 67(1): 31–35.
- Bhattacharjee, A. (2013).** *Cheirostylis parvifolia* - a 'jewel orchid' of the Western Ghats and Sri Lanka needs conservation. IUCN/SSC-OSG Orchid Conservation News 2:4–5.
- Dash, P.K., A. Bhattacharjee, P. Kumar & P. Mohapatra (2015).** *Cheirostylis blume* (Orchidaceae), a new generic record for the Eastern Ghats, India. *Journal of Threatened Taxa* 7(1): 6826–6829. <https://doi.org/10.11609/JoTT.o4139.6826-9>
- Ganesan, R. & C. Livingstone (2001).** Checklist of orchids from a mid elevation evergreen forest at Kakachi-Kodayar, Kalakkad-Mundanthurai Tiger Reserve, Agasthyamalai, southern Western Ghats. *Zoo's Print Journal* 16(3): 445–446. <https://doi.org/10.11609/JoTT.ZPJ.16.3.445-6>
- IUCN (2012).** *IUCN Red List Categories and Criteria: Version 3.1*. Second edition. Gland, Switzerland and Cambridge, IUCN, UK, iv+32pp.
- Jalal, J.S. & J. Jayanthi (2018).** An updated checklist of the Orchids of Maharashtra, India. *Lankesteriana International Journal on Orchidology* 18(1): 23–62.
- Jayaweera, D.M.A. (1981).** Orchidaceae. pp. 5–368. In: Dassanayake, M.D. & F.R. Fosberg (eds.). *A Revised Handbook to the Flora of Ceylon* 2. Amerind Publishing Co. Pvt. Ltd., 511pp.
- Kawade, S.P. & S.S. Deokule (2015).** *Flora of Chandoli National Park, Western Ghats, Maharashtra, India*. Applied Science Innovation Pvt. Ltd. Pune, India. 360pp.
- Pathare, P.S. (2017).** An Assessment of the Floristic Diversity of Koyana Wildlife Sanctuary, Maharashtra, with special emphasis on the study of Endemic plants Volume 1. Ph.D Thesis submitted to Savitribai Phule, Pune University, Pune, 138pp.
- Punekar, S. (2002).** Report of rare terrestrial orchid species *Cheirostylis parvifolia* Lindl. from Dajipur Wildlife Sanctuary, Kolhapur District of Maharashtra State, India. *Journal of Economic and Taxonomic Botany* 26(1): 105–107.
- Sasidharan, N. (1997).** Studies on the flora of Shendurunj Wildlife Sanctuary with emphasis on endemic species. Kerala Forest Research Institute Research Report 128: 125–126.
- Yadav, S.R. & M.M. Sardesai (2002).** *Flora of Kolhapur District*. Shivaji University, Kolhapur. 459pp.

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