



ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

OPEN ACCESS

While conducting a floristic survey of Bollampatty Valley, Coimbatore Forest Division the authors collected an interesting and rare terrestrial orchid species from Siruvani Hills. On critical study and comparison with herbarium materials and literature in the Madras Herbarium (MH), Botanical Survey of India, Southern Regional Centre, Coimbatore, the specimen was identified as *Eulophia pulchra* (Thouars) Lindl.

The genus *Eulophia* (Orchidaceae) comprises 217 species throughout the world (Govaerts et al. 2011). J.D. Hooker (1890) reported 26 species in his Flora of British India. C.E.C. Fischer (1928) in Flora of the Presidency of Madras reported eight species and one variety. Recently, Misra (2007) reported 24 species from India.

Eulophia pulchra (Thouars) Lindl. from the Siruvani Hills is one among the six species of *Eulophia* reported from the Western Ghats of Tamil Nadu. So far, this species had been reported from the Nilgiris and Courtallum (Fischer, 1928) and Salem (Seidenfaden, 1983) in Tamil Nadu. The Madras Herbarium holds only one specimen of *Eulophia pulchra* (Thouars) Lindl., collected by E. Vajravelu in 1974 from the Nilgiris. The present collection from the Siruvani Hills is a new distributional record of *Eulophia pulchra* (Thouars)

EULOPHIA PULCHRA - AN INTERESTING ORCHID FROM THE SIRUVANI HILLS, WESTERN GHATS, INDIA

S. Sambooranam¹, M. Kalaiselvan², R. Gopalan³ & V. Thirunavukarasu⁴

^{1,2,3}Centre for Plant Taxonomy & Floristic Research, Department of Botany, Karpagam University, Coimbatore, Tamil Nadu 641021, India

⁴Conservator of Forests, Forest Genetics, Tamil Nadu Forest Department, Coimbatore, Tamil Nadu, India

¹sambusubu@gmail.com (corresponding author), ²kalaibot@gmail.com, ³gopalankurichi@gmail.com, ⁴vrevthiru@gmail.com

Lindl., in Coimbatore forests.

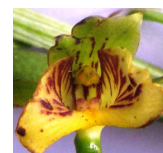
Five field trips were conducted from January–December 2013 in Bollampatty Valley, Coimbatore Forest Division for surveying floristic diversity. During the survey, three small populations of *Eulophia pulchra* (Thouars) Lindl. were located along the banks of the Siruvani River (Images 1 & 2). In each population, 7–10 mature individuals were counted. The flowers and fruits were collected to confirm the identity and photographs were also taken in the field (Images 3–4).

The herbarium specimens are deposited at Karpagam University Herbarium (KUH), Department of Botany (Image 5). Significant morphological characters,



DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
DD	LC	NT	VU	EN	CR	EW	EX

Eulophia pulchra



DOI: <http://dx.doi.org/10.11609/JoTT.o4038.7584-6>

Editor: K. Karthigeyan, Botanical Survey of India, Howrah, India.

Date of publication: 26 July 2015 (online & print)

Manuscript details: Ms # o4038 | Received 04 July 2014 | Final received 07 May 2015 | Finally accepted 01 July 2015

Citation: Sambooranam, S., M. Kalaiselvan, R. Gopalan & V. Thirunavukarasu (2015). *Eulophia pulchra* - an interesting orchid from the Siruvani Hills, Western Ghats, India. *Journal of Threatened Taxa* 7(9): 7584–7586; <http://dx.doi.org/10.11609/JoTT.o4038.7584-6>

Copyright: © Sambooranam et al. 2015. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use of this article in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.

Funding: None.

Competing interests: The authors declare no competing interests.

Acknowledgements: The authors are grateful to the Principal Chief Conservator of Forests, Chennai for permission granted for the study; to the Management, Vice Chancellor and the Registrar of Karpagam University for facilities and encouragement, to Dr. G.V.S. Murthy, Additional Director, Botanical Survey of India, Coimbatore for permission granted to consult the Madras Herbarium and Library.



Image 1. Habitat of *Eulophia pulchra*



Image 2. Study area (Siruvani Hills)

locality, altitude, phenology and distributional data were included in the herbarium label.

Eulophia pulchra (Thouars) Lindl.

Gen. Sp. Orchid. Pl. 182.1833; J. Joseph, Orch. Nilgiris: 24. 1987; J. Joseph & R. Ansari in Henry et al., Fl. Tamil Nadu, Ind., Ser. I: Analysis 3:12.1989. *Limodorum pulchrum* Thouars. Hist. Orchid t. 43 1822. *Eulophia macrostachya* Lindl. Gen. Sp. Orchid. Pl. 183 1833; Wight, Icon. Pl. Ind. Orient. 5: 8. t. 1667-68.1852; Hook. f, Fl. Brit. India 6: 4. 1890; C.E.C. Fisch. in Gamble, Fl. Madras 3: 1435. 1928; B. D. Sharma et al., Fl. Nilgiris in Biol. Mem. 2 (1 & 2): 140. 1977; Abraham & Vatsala, Intr. Orchids 298.1981. *Eulophia striata* Rolfe J. Linn. Soc., Bot. 29: 53 1891.

Terrestrial herb, up to 80cm tall. Pseudobulbs 10–20 × 1–2 cm, cylindrical, erect, clustered, internodes 4–5, 2.5–5 cm long, nodes covered with sheaths, ovate when young, fimbriate on maturity. Leaves 2–3; lamina 20–30 × 10–12 cm, broadly elliptic to oblong, plicate, attenuate at base, acuminate at apex, acumen up to 3cm long; 10–15-nerved at base, midrib and two lateral nerves prominently raised beneath, obscure and canaliculate above, others obscure on both surfaces, all nerves converging at apex; petiole up to 11cm long. Inflorescence arising from base or at the nodal axils of pseudobulb, up to 60cm long, racemes many-flowered; sheaths 4–5, tubular at base, scaly upward; flowering rachis 20–25 cm long, grooved; bracts 10–25 × 1–3 mm, linear, acuminate. Pedicel with ovary up to 4cm long; Flowers pale green or yellowish green turning yellow. Dorsal sepal 10–13 × 3–4 mm, linear – lanceolate, acute to acuminate; lateral sepals 10–12 × 2–4 mm, falcate, oblique at base, acuminate at apex. Petals greenish yellow with purple dots, 10–12 × 2–4 mm, ovate to

obliquely oblong, apiculate at apex, connivent. Lip white turning yellow with purple stripes, obliquely orbicular, 10–15 mm across, spurred, 3-lobed; lateral lobes with purplish stripes, erect, ovate-falcate, obtuse to rounded at apex; mid lobe much broader than long, broadly 2-lobuled, lobules with purplish spots, truncate, apiculate at notched apex, disc with 2 fleshy calli at mouth, two ridged from base to apex; spur globose, incurved, 2-lobed; column 4–5 × 3 mm, thick, sessile, deflexed. Pollinia 2, ovoid. Fruit up to 4cm long, cylindrical, ridged (Images 3–4).

Specimens examined: The collection from the Manar River bank in the Nilgiri Hills, at 600m by E. Vajravelu represented by two sheets numbered 45067 dated 30.vi.1974 deposited in Madras Herbarium (MH), BSI-Coimbatore. The present collection from Siruvani Hills of Coimbatore forests, at 720m is SS-651 (dated 5.ix.2013) collected by S. Sambooranam. The specimens are deposited at Karpagam University Herbarium (KUH), Karpagam University, Coimbatore.

Flowering & Fruiting: August–November.

Distribution: Tamil Nadu: Nilgiri, Salem and Tirunelveli Hills.

Habitat and Ecology: Rare along the Banks of streams and rivers in evergreen forests, from 600–900 m.

Conclusion: *Eulophia pulchra* (Thouars) Lindl. is collected after a lapse of 40 years from the Western Ghats of Tamil Nadu which also forms a new distribution record for Coimbatore Forest Division.

Fyson (1932), in 'The Flora of The South Indian Hill Stations' reported 59 species of orchids in 25 genera including two species of *Eulophia*. He did not mention the occurrence of *Eulophia pulchra* (Thouars) Lindl., in his book though Robert Wight (1852) has collected it from the eastern slopes of Burlear along the river



Image 3. Habit with Inflorescence



Image 4. Flower - closeup view



Image 5. Herbarium specimen of *Eulophia pulchra* (Thouars) Lindl.

bank. Vajravelu (1974) collected the same species from the Mannar River side of Nilgiris. In India *E. pulchra* is distributed only in peninsular regions (Misra 2007). The present collection is an evidence of the existence and extended distribution of *Eulophia pulchra* (Thouars) Lindl. from Nilgiris to Coimbatore in the Western Ghats of Tamil Nadu. It adds a species to floral diversity record and also proves the richness of orchid diversity in the forests of Coimbatore.

Reference

Fischer, C.E.C. (1928) *Orchidaceae*, pp. 1399–1478.. In: Gamble, J.S. (ed.). *The Flora of the Presidency Madras*. Vol. 3, London.

- Fyson, P.F. (1932). *The Flora of The South Indian Hill Stations*. Government Press, Madras, 697pp.
- Govaerts, R., J. Pfahl, M.A. Campacci, D.H. Baptista, H. Tigges, J. Shaw, P. Cribb, A. George, K. Kreuz & J. Wood (2011). *World Checklist of Orchidaceae*. Royal Botanic Gardens, Kew, <http://apps.kew.org/wcsp/> on-line dated 5 April 2014.
- Henry, A.N., V. Chithra, V. & N.P. Balakrishnan (1989). *Flora of Tamil Nadu, Anal. Vol. 3: 12*. Botanical Survey of India, Coimbatore, 171pp.
- Hooker, J.D. (1890). *The Flora of British India*. Vol. 6: 4. London: I. Reeve & co., publishers to the home, Colonial and Indian Governments, 6, Henrietta Street, Covent Garden, 693pp.
- Misra. S. (2007). *Orchids of India*. Bishensingh Mahendrapal Singh, Dehra Dun, 402pp.
- Seidenfaden, G. (1983). *Orchidaceae*, pp. 1550–1611. In: *Flora of Tamilnadu Carnatic*, Vol. 3. Rapinat Herbarium, Trichy, 2154pp.
- Wight, R. (1852). *Icones Plantarum Indiae Orientalis*, Vol. 1. P.R. Hunt, American Mission Press, 352pp.

