

***Polystachya concreta* (Jacquin) Garay & H.R. Sweet (Orchidaceae): a new record for Nagaland, India**

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Abstract

Polystachya concreta (Jacquin) Garay & H.R. Sweet (Orchidaceae) is reported as a new distributional record for the orchid flora of Nagaland. A detailed description along with coloured photographs are provided for easy identification in the field.

Key words: *Polystachya concreta*, Orchidaceae, New record, Nagaland

INTRODUCTION

Polystachya W.J. Hooker, which is predominantly an epiphytic genus of Orchidaceae, with about 230 species is distributed throughout the tropics and is characterized by more or less pseudobulbous stem, an inflorescence arising from the top of the pseudobulb and non-resupinate flowers with prominent mentum having short and massive column (Mytnik-Ejsmont & Baranow 2010). In Asia the genus is reported by three species viz., *Polystachya seidenfadeniana* Mytnik & Baranov, *Polystachya wightii* Reichenbach f. and *Polystachya concreta* (Jacquin) Garay & H.R. Sweet which also occur in India (Mytnik-Ejsmont & Baranow 2010). During recent floristic survey as a part of ongoing orchid survey in Nagaland, an interesting epiphytic orchid was collected from a tropical semi-evergreen forest at an altitude about 850 m. After perusal of relevant literature (Hooker 1894; Xingi & Wood 2009; Kurzweil & Lwin 2014) the plant was identified as *Polystachya concreta* (Jacquin) Garay & H.R. Sweet which was so far not reported from Nagaland (Hynniewta *et al.* 2000; Deb *et al.* 2003; Deb & Imchen 2008; Chowdhery 2009). So, the present finding of this species is a new distributional record for the orchid flora of Nagaland. A detailed description along with coloured photographs is provided for its easy identification in the field (Fig. 1). The voucher specimen is deposited in the herbarium of the Department of Botany, Nagaland University, Lumami, Nagaland, India.

Taxonomic treatment

Polystachya concreta (Jacquin) Garay & H.R. Sweet, *Orchideologia* 9(3): 206. 1974; Seidenfaden in *Opera Bot.* 95: 14. 1988. *Epidendrum concretum* Jacquin, *Enum. Syst. Pl.* 30. 1760. *Onychium flavescens* Blume, *Bijdr.* 325. 1825. *Polystachya flavescens* (Blume) J.J. Smith, *Fl. Buitenz.* 6: 285. Fig. 218. 1905; Pradhan, *Indian Orch. Guide to Iden. Cult.* 371.1979. [PLATE I]

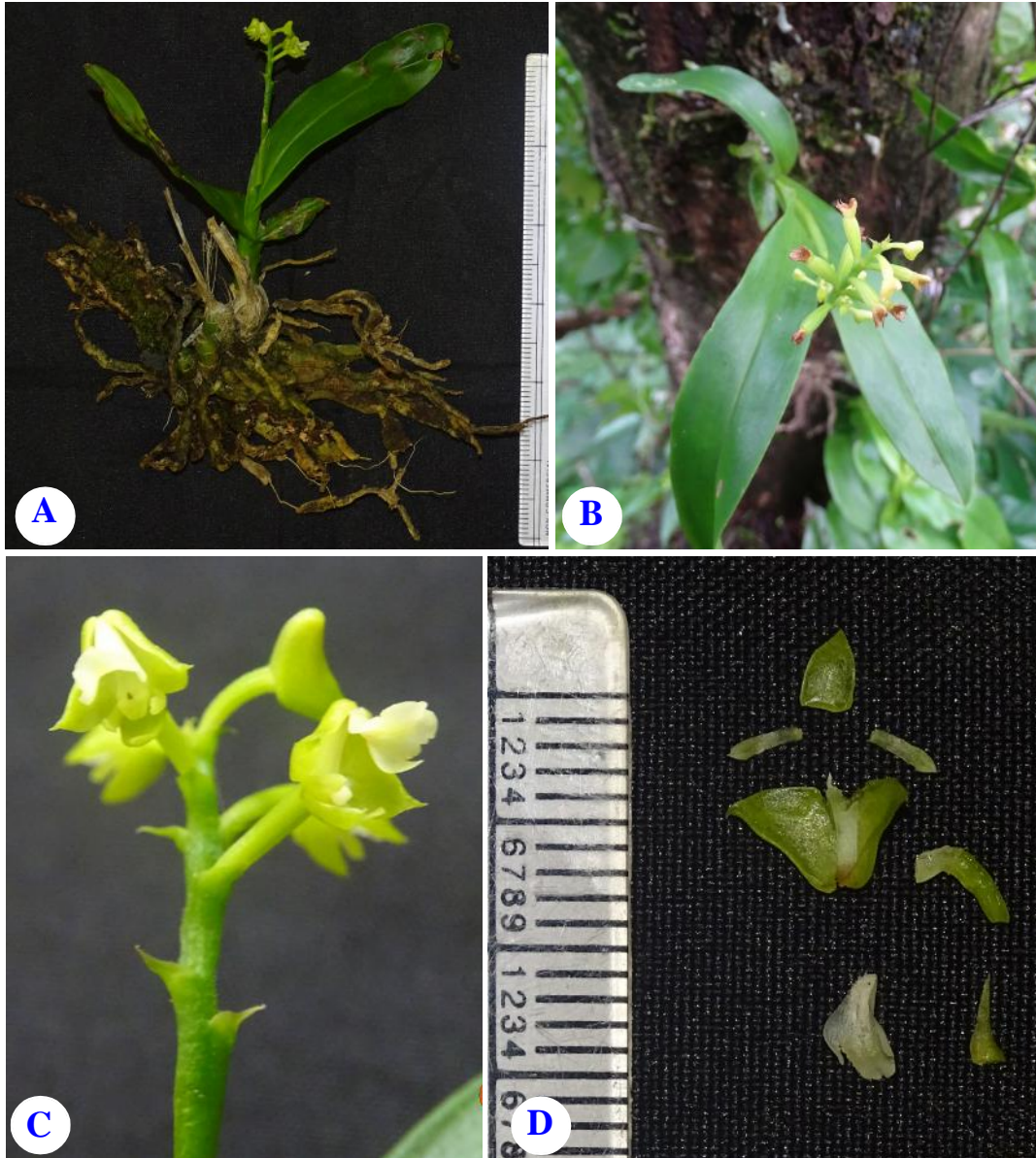


Figure 1: *Polystachya concreta* (Jacquin) Garay & H.R. Sweet. **A.** Habit; **B.** A flowering branch; **C.** Inflorescence; **D.** Dissected flower parts

Plants variable in size, up to 13 cm tall. Stem elongated, pseudobulbs slightly compressed, ovoid, clothed with leaf bases. Leaves 3 – 5, narrowly oblong or narrowly ovate-lanceolate, 7-17 × 1.2-3.5 cm, bilobed at apex, base narrowed into a petiole, papery. Racemes terminal, 4 – 10 cm, often branched; rachis ± winged, 3 – 10-flowered. Flowers small, fleshy, greenish yellow; floral bracts narrowly lanceolate, 2 – 5 mm; pedicel and ovary 7 – 11 mm; dorsal sepal sub-ovate, acute, 3.4 – 4 × 1.5 – 2 mm; lateral sepals of similar size but broader, base forming a prominent mentum; petals linear-oblong, 2.5 – 3 × 0.5 – 1 mm; lip 3.5 – 4 mm, 3-lobed; lateral lobes incurved, ovate-oblong, small; mid-lobe orbicular, margin undulate and erose, apex emarginate, with a thickened central part; column 1 – 1.4 mm long. Capsules ellipsoid, 1.2 – 1.5 cm × 4 – 6 mm.

Flowering: July

Habitat & Ecology: Epiphytic on *Syzygium* sp. More than 10 individuals were observed during field survey.

Exsiccatae: INDIA: **Nagaland**, Zunheboto district, Lumami village, 26° 13' 13.9" N & 94° 29' 03.1" E, 850 m, .04. 07.2015, *H.Y. Jakha* 87 (NUH).

Distribution: Pantropical (from southern North America to tropical South America, tropical and sub tropical Africa, Madagascar and south eastern Asia).

In Asia: India (Peninsula & Andaman & Nicobars, Arunachal Pradesh, Manipur and Nagaland), Myanmar, Thailand, Vietnam, Laos, southeastern China, Sri Lanka, Sumatra, Java, Malaysia.

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LITERATURE CITED

- Chowdhery, H.J. 2009. Orchid diversity in North- Eastern states of India. *J. Orchid Soc. India* 23(1-2): 19 – 42.
- Deb, C.R. & Imchen, T. 2008. *Orchid Diversity of Nagaland*. Scichem Publishing House, Udaipur, Rajasthan, India.
- Deb, C.R.; Jamir, N.S. & Temjensangba. 2003. Orchid Diversity of Nagaland. A revised status. *J. Orchid Soc. India* 17(1-2): 1 – 15.
- Hooker, J.D. 1894. *The Flora of British India*. Vol. 6. L. Reeve & Co. Ltd., Ashford, Kent, England, Pp. 792.
- Hynniewta, T.M.; Katak, S.K. & Wadhwa, B.M. 2000. *Orchids of Nagaland*. Botanical Survey of India, Calcutta, India.
- Kurzweil, H. & Lwin, S. 2014. *A Guide to Orchids of Myanmar*. Natural History Publication (Borneo) Kota Kinabalu.
- Mytnik-Ejsmont, J. & Baranow, P. 2010. Taxonomic study of *Polystachya* Hook. (Orchidaceae) from Asia. *Plant Syst. Evol.* 290: 57 – 63.
- Xingi, C. & Wood, J.J. 2009. *Polystachya*. In: Z.Y. Wu & P.H. Raven (eds.), *Flora of China*, vol. 25. Science press, Beijing & Missouri Botanical Garden Press, St. Louis. Pp. 342 – 343.