# GOODYERA SCHLECHTENDALIANA RCHB. f. (ORCHIDACEAE) – A NEW ANGIOSPERMIC RECORD FOR BANGLADESH

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### Abstract

Goodyera schlechtendaliana Rchb. f. of family Orchidaceae is illustrated and reported here as a new angiospermic record from Bangladesh.

Goodyera R. Br. comprises of about 40 species widely distributed in the northern temperate zone, south to Mexico and east to Madagascar, SE Asia, the Pacific Islands, New Guinea and Australia (Pearce and Cribb 2002). Some of the representatives of this genus possess beautifully marked foliage for which they are very popular amongst the orchid growers. Bose *et al.* (1999) reported 17 species of the genus from India but only one species was reported from South India (Abraham and Vatsala 1981). On the other hand, two species of the genus *Goodyera* was reported from Sri Lanka by Malik *et al.* (2003) and 14 species from Bhutan by Pearce and Cribb (2002). *G. procera* (Ker Gawler) Hook. was previously recorded from Bangladesh by Prain (1903) and later on reported by Heinig (1925), Ahmed (1991), Huda *et al.* (1999), Huda (2000), Hoque (2003) and Khanam *et al.* (2001). *Goodyera schlechtendaliana* Rchb. f. has been reported here for the first time from Bangladesh. Inflorescence of G. *schlechtendaliana* is erect, loosely arranged many flowered and sepals are yellowish in colour, on the other hand, inflorescence of G. *procera* (Ker Gawler) Hook. is densely flowered and sepals are uniformly white.

Goodyera is closely related to the genera Anoectochilus and Dossinia. They are included in the 'jewel orchid' group for their delightful variegated foliage. Plants bear fibrous roots with creeping stem below. Leaves are petioled and often coloured. Inflorescence are erect, bear few to many flowers. Flowers are easily identified by the hairs inside the lip and the large stigma in front of column. Sepals are subequal, dorsal, erect, concave forming a hood with a narrow petal. Lip is inferior, hollow or saccate, with bristly hairs inside, sessile on the base of the column. Column is usually short, no foot but copular top. Pollinia 2, often deeply cleft, granulose, pyriform or clavate (Bose et al. 1999).

Goodyera schlechtendaliana Rchb. f. in Linnaea 22: 861 (1849). Georchis schlechtendaliana (Rchb. f.) Rchb. f. in Bonplandia 5: 36 (1854); Goodyera secundiflora sensu Lindl. in J. Proc. Linn. Soc. Bot. 1: 182 (1857), non Griff.; Orchiodes schlechtendaliana (Rchb. f.) Kuntze, Revis. Gen. Pl. 2: 675 (1891); Epipactis schlechtendaliana (Rchb. f.) Eaton in Proc. Biol. Soc. Wash. 21: 68 (1908); Goodyera labiata Pampanini in Nuovo Giorn. Bot. Ital. 17: 246 (1910); Goodyera arisanensis Hayata, lcon. Pl. Formos. 6: 91 (1919); Epipactis labiata (Pampanini) Hu in Rhodora 27: 106 (1925); Epipactis secundiflora (Lindl.) Hu, loc. cit. 106 (1925) [Fig. 1].

Plant terrestrial, 10- 25 cm tall. Stems 9-21 cm tall enclosed in loosely sheathing petioles. Leaves 2-5, clustered towards base, ovate-lanceolate to elliptic-acute, petiolate, green with white mottling or spots, reticulate,  $2-4 \times 1.5$ -2.5 cm; petiole sheathing at base, ca 2.5 cm long. Inflorescence many-flowered, densely glandular pubescent to tomentose; rachis 5-11 cm long; floral bracts

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lanceolate, acute, exceeding the ovary, ca 0.9 cm long. Flowers broadly ovoid, up to 1 cm long; sepals yellowish-pink, petals white, lip white tipped with green; pedicel and ovary glandular, pubescent, twisted 0.5-1.0 cm long. Dorsal sepal broadly lanceolate, dorsally pubescent, 0.9-1.1  $\times$  0.25-0.35 cm; lateral ones obliquely ovate, pubescent, 1.1-1.2  $\times$  0.35-0.45 cm. Petals obovate-lanceolate, appressed to the dorsal sepal, 1.0-1.1  $\times$  0.3-0.4 cm. Lip long-ovate, 0.9-1.1  $\times$  0.4 cm; base spathulate, saccate, pilose within. Column curved, 5-6 mm long.



Fig. 1. *Goodyera schlechtendaliana* Rchb. f.: a. Habit sketch (1×), b. Inflorescence (1×), c. Flower (2.5×), d. Sepals and petals with lip (2×), e. Pollinia (50×), f. Column (front and top views) (25×)

Flowering time: August-September.

*Ecology:* On the moss banks and shady moist places near streams or canals.

Geographical distribution: India, Bhutan, Thailand, China, South-east Asia, Japan and Sumatra. In Bangladesh, the species was collected from Barachara, Cox's Bazar district.

Specimen examined: Cox's Bazar, Barachara; M. M. Hoque and M. K. Huda, 08. 02. 2002, Huda 193 (HCU).

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#### References

- Abraham A. and P. Vatsala.1981. Introduction to Orchids. Tropical Botanic Garden and Research Institute, Trivandram, India. 533 pp.
- Ahmed M. 1991. A taxonomic study of the family Orchidaceae Juss. from Bangladesh. M. Phil. Thesis. Department of Botany, Univ. Chittagong, Chittagong. 226 pp.
- Bose T.K., S.K. Bhattacharjee, P. Das and U.C. Basak. 1999. Orchids of India. Naya Prokash, Calcutta. 487 pp.
- Heinig R.L. 1925. List of plants of Chittagong collectorate and Hill Tracts. Bengal Govt. Branch Press, Derjeeling. 84 pp.
- Hoque M.M. 2003. Diversity of terrestrial orchids and reproductive biology of some threatened orchids of south-east Bangladesh. M. Sc. Thesis. Department of Botany, Univ. Chittagong, Chittagong. 185 pp.
- Huda M.K., M.A. Rahman and C.C. Wilcock. 1999. A preliminary checklist of orchid taxa occurring in Bangladesh. Bangladesh J. Plant Taxon. 6(1): 69-85.
- Huda M.K. 2000. Diversity, ecology, reproductive biology and conservation of orchids of south-east Bangladesh. Ph. D. Thesis. Department of Plant and Soil Science, Univ. Aberdeen, Aberdeen. 249 pp.
- Khanam M., M.Z. Uddin, M.S. Khan and M.A. Hassan. 2001. Our present knowledge on the terrestrial orchidaceous taxa from Bangladesh. Bangladesh J. Plant Taxon. 8(2): 35-49.
- Malik F., W. Siril and F. Suranjan. 2003. Orchids of Sri Lanka. A conservationist's companion. A simplified guide to Identification. Vol. 1. Protected orchids and selected similar species. IUCN Sri Lanka. 147 pp.
- Pearce N.R. and P.J. Cribb. 2002. Flora of Bhutan: The Orchids of Bhutan. The Royal Botanic Gardens, Edinburgh and the Royal Government of Bhutan. pp. 85-94.
- Prain D. 1903. Bengal Plants. Indian reprint (1963), Botanical Survey of India, Calcutta 2: 750-777.

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