

HERMINIUM MACKINNONII DUTHIE (ORCHIDACEAE) : A NEW ANGIOSPERMIC RECORD FOR DARJEELING HIMALAYA OF (W.B.), INDIA

RAJENDRA YONZONE¹ * D. LAMA¹, R. B. BHUJEL², KHYANJEET GOGOI³ and SAMUEL RAI⁴

¹Department of Botany, St. Joseph's College, North Point, Darjeeling (W.B.)

²Taxonomy and Ethnobiology Research Laboratory, Cluny Women's College, P.O. Kalimpong, Darjeeling (W.B.)

³Regional Orchids Conversation and Research Centre, Assam Circle, Disa Bordoloi Nagar, Talap, Tinsukia (Assam)

⁴Darjeeling K.V.K., U.B.K.V., P.O. Kalimpong, Darjeeling (W.B.)

ABSTRACT : Present paper deals with the *Herminium mackinnonii* Duthie (Orchidaceae) is collected from Rachela forest of Kalimpong sub-division and Maneybhanjang and Tonglu of Darjeeling sub-division of Darjeeling Himalaya of West Bengal and is reported as new angiospermic record for the Darjeeling Himalayan region of India. Detailed taxonomic descriptions along with relevant notes are provided.

Kew words : New record, Orchid species, *Herminium mackinnonii*, Darjeeling Himalaya, India.

INTRODUCTION

Orchids being high value crops with fascinating and showy flowers are always sought after by Orchid enthusiasts, researchers and traders. Orchids are considered to be the most highly evolved among the monocotyledons. In India, Orchids from 9% of our flora and are the largest family of higher plants. It is estimated that at about 25,000-35,000 species with 800-1,000 genera are distributed throughout the world. About 1300 species with 140 genera of Orchid species are found in India with temperate Himalayas as their natural home (Yonzzone and Kamran, 2008). The genus *Herminium* is a small terrestrial Orchid species which was established in 1758 by Linnaeus. The genus comprises about 50 species distributed in Europe, across to China, Japan and the Indian subcontinent (Pearce and Cribb, 2002).

Plants tuberous annual herbs. Stem with bladeless sheaths at base. Leaves solitary or few, sheathing at the base. Inflorescence terminal, racemose, erect, many-flowered. Flowers green, small; ovary sessile. Sepals subequal; dorsal sepal free or the dorsal conniving with the petals to form a hood, the lateral pair spreading. Petals usually smaller than the sepals. Lip adnate to the base of the column, as long as or longer than the sepals. Column short; anther locules parallel; pollinia 2.

While working on Orchid flora of Darjeeling Himalaya, the authors came across interesting specimens of terrestrial Orchid species. After critical examination and comparison with other authenticated specimens and literatures, an unknown species of Orchid that was identified as *Herminium mackinnonii* Duthie (Orchidaceae) and was collected from Dello hill Rachela forest of Kalimpong sub-division and Maney bhanjang and Tonglu of Darjeeling sub-division of Darjeeling district of West Bengal. A perusal of earlier literature related to the Orchid flora of Darjeeling (King and Pantling, 1898; Hooker, 1888, 1890; Hara, 1966, 1971; Ohashi, 1975; Pradhan, 1976 and Pearce & Cribb, 2002) revealed that

the occurrence of this species has not been reported earlier from Darjeeling Himalayan region and hence the present collection are their first record of occurrence for Darjeeling Himalaya of West Bengal, India. The newly collected specimens have been deposited in the Herbarium of Department of Botany, St. Joseph's College, North Point, Darjeeling and Herbarium of Taxonomy and Ethnobiology Research

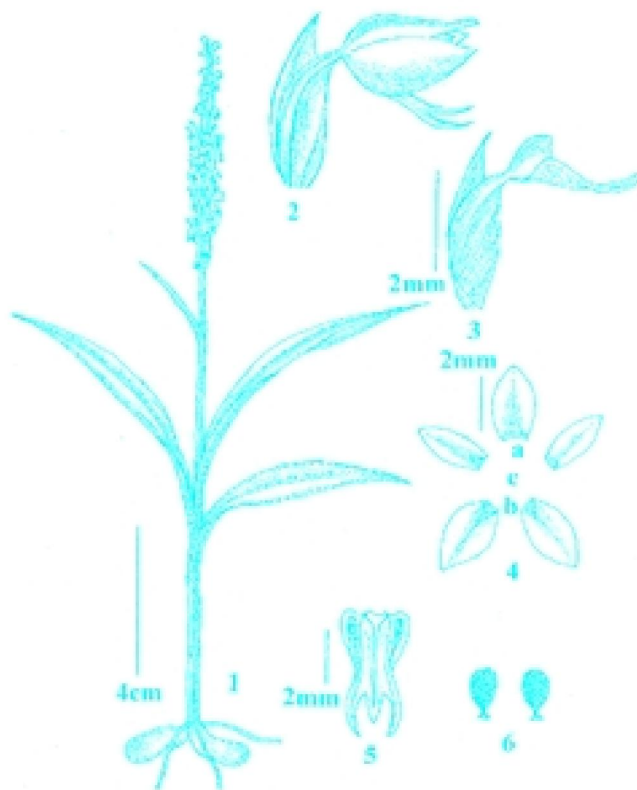


Fig. 1 *Hmackinnonii mackinnonii* Duthie. 1. Habit (whole plant with inflorescence); 2. Side view of pedicellate ovary and flower; 3. Side view of column, lip with pedicellate ovary and floral bract; 4. Floral perigone, a. dorsal sepal, b. lateral sepals, c. petals; 5. Front view of lip; 6. Pollinia

Laboratory, Cluny Women's College, Kalimpong for future reference. A detailed taxonomic account of the species have been prepared based on the fresh specimens along with habitat, altitudinal range, local distribution within Darjeeling and geographical distribution is provided here to authenticate the new record and facilitate its easy identification.

Taxonomic enumeration : *Herminium mackinnonii* Duthie in *J. Asiat. Soc. Bengal*, **71** : 44. 1903 (Fig. 1)

Plant 13-27 cm tall, annual tuberous herb. Tuber 1.5-2.5 x 0.8-1.5 cm, cylindrical. Stem with leaves inserted near middle sheathed. Leaves 2 or 3, 8-15 x 1-2 cm, subopposite to distant, linear-lanceolate to oblong, acute to shortly acuminate, stem clasping sheaths. Inflorescence cylindrical, subdensely many-flowered; pedicellate-ovary 3-5 mm long, ovoid; floral bracts 2-3 x 0.4-1.3 mm, lanceolate. Flowers 2-2.5 mm across; sepals green, petals white, lip white, with a pale green margin. Sepals similar, ovate-oblong, acute, 1-veined, spreading, 2.4-3.5 x 1.4-2 mm. Petals 2.5-3 x 0.3-0.5 mm, linear-lanceolate, acute, 1-veined. Lip 3-lobed, 3-4.5 mm long, claw very short, deflexed from base, 1-veined; base 1.2-1.6 x 0.3-0.5 mm thick, subquadrate, margins incurved, obscurely auriculate; lateral lobes 1-2 mm long, filiform, incurved; mid-lobe linear-lanceolate, 1-1.3 mm long. Column 3-4 mm tall, stout. Anther locules converging from base, 0.3 mm long; pollinia obovate.

Flowering and fruiting : July-September. **Habitat :** Terrestrial on sloppy grass land. **Specimen examined :** Dello hill Rachela forest of Kalimpong sub-division and Maneybhanjang and Tonglu of Darjeeling sub-division of

Darjeeling district (Persist high risk of threat and rare in natural habitat). **Date of collection and voucher specimen number :** 19.09.2007; Rajendra *et al.*, 0124; (West Bengal, India). **Altitudinal range :** 2100-2800 m. **Geographical distribution :** India (North East India, North West India); Nepal.

Conclusion : At present, whole Orchidaceae family persist high risks of threats in the study regions (Yonzone *et al.*, 2012a). Convince people of this region is the best way to protecting the remaining orchid species (Yonzone *et al.*, 2012b) Therefore, conservation of natural habitat by Govt. au-

thorities, NGOs and local people is urgently necessary to protect our precious Orchid species diversity resources throughout Darjeeling Himalayan region of West Bengal, India.

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