



A study on the morphological diversity of *dendrobium* species found in the joypur reserve forest in Assam

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INTRODUCTION:

Dendrobium is one of the fascinating groups of orchids known for its vibrant, long lasting flowers with diverse morphological features. They are popular amongst hobbyists and extensively cultivated for cut flower production because of their attractive and durable flowers. It is the second largest genus of the family Orchidaceae characterized by epiphytic nature and hence named as *Dendrobium*, meaning living on tree. India is a rich source of *Dendrobium* with over hundred species distributed in various parts of the country. The NE India accounts for around 68 species out of which nearly 20 species grow in Assam.

MATERIALS AND METHODS:

Joypur reserve forest falls under humid zone, characterized by high precipitation and hence is very rich in biodiversity. It homes around 102 species of orchids belonging to 46 genera. During the survey, it was found that the reserve forest is the habitat of around 10 species of *Dendrobium*.

DESCRIPTION OF SPECIES:

Dendrobium acinaciforme Roxb.:

Stem 15-30 cm long, bearing fleshy lanceolate leaves at the basal half and producing flowers on the apical portions. Leaves narrow, pointed, succulent, distichous. Flowers solitary from axils of bracts, small white to greenish yellow. Lip shortly clawed wavy as a notch on the top, white or creamy with a pale yellow blotch in the middle. Flowering – June to August.



Fig: *Dendrobium acinaciforme* Roxb

Dendrobium aduncum Wall.:

Plants with slender, linear, lanceolate leaves minutely and unequally bifid at apex. Flowers produced on leafless stem in short racemes. Flowers pale purple. Lip cymbiform, cuspidate, white, inner surface densely hairy. The anther cap is dark purple and covered with a dense layer of hairs. Flowering – May to June.



Fig: *Dendrobium aduncum* Wall

Dendrobium aphyllum (Roxb.) Fisch.:

A lovely orchid with long pendulous stems bearing flowers all along. They are leafless at the time of flowering. Leaves linear-lanceolate, deciduous, and sessile. Flowers are pale rose with yellow pubescent lip having a spherical or rounded shape at the base, shortly convolute – ciliate with radiating streaks at the base. Flowering May to June.



Fig: *Dendrobium aphyllum* (Roxb.) Fisch.

Dendrobium cathcartii Hk. f.

Epiphytic plants with a cluster of long slender stems with persistent leaves. Leaves linear-lanceolate, sheathing at base. Flowers in pairs. Flowers greenish yellow. Sepals unequal; petals shorter than sepals. Lip yellow marked with purple. Flowering April to May.



Fig: *Dendrobium cathcartii* Hk. f.

***Dendrobium cumulatum* Lindl.:**

Epiphytic orchid with erect pseudobulbs producing a pendulous bunch of light purple flowers. Leaves oblong-lanceolate. Inflorescence Corymbiform. Flowers white with purple, pendent; bracts lanceolate lip obovate-spathulate with shallow notch at apex, white suffused with yellow. Flowering May to June.



Fig: *Dendrobium cumulatum* Lindl.

***Dendrobium fimbriatum* Hk.f.**

Hardy cane type epiphytic species producing bunch of bright yellow flowers. Stem erect with several lanceolate leaves. Older stems leafless, curved or pendulous. Racemes present on leafy or leafless stem at the apical region. Flowers bright yellow with orbicular fimbriate, pubescent lip. Lip bright yellow, wavy margins with or without deep purplish brown blotch in the middle; reddish streak at base. Flowering April to May.



Fig : *Dendrobium fimbriatum* Hk.f.

***Dendrobium lituiflorum* Lindl.**

Long pendulous pseudobulbs bearing purple flowers all along. The leafless stems at the nodes in clusters of 3-5. leaves linear-lanceolate, deciduous absent at the time of flowering. Flowers purple in colour with trumpet shaped, slightly pubescent lip. Lip white with purple transverse stripes, mouth orbicular, white pale purple at tips with purple disc. Flowering March to May.



Fig : *Dendrobium lituiflorum* Lindl.

***Dendrobium moschatum* Sw.**

A robust growing plant with tuft of pseudobulbs of about 1-2 meter. Leaves oblong-acute, inflorescence arising from the apical region of the leafless or leafy stem. Flowers ochraceous with purplish tinge on petals and sepals and reddish veins; lip hairy, forming a cup or pear shaped open mouthed pouch with two large brownish red spots inside. Flowering May to June.



Fig : *Dendrobium moschatum* Sw.

***Dendrobium nobile* Lindl.**

Leaves persistent, ovate-lanceolate. Flowers graceful in colour – white merging with purple at the apex, wavy. Lip purple at tip, white in middle, followed by pale yellow and with deep purple central plot. Flowering March to May.

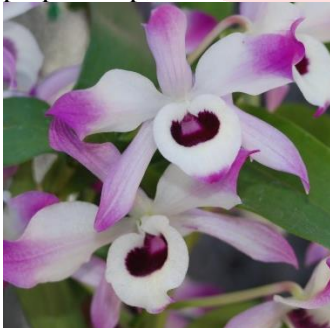


Fig : *Dendrobium nobile* Lindl.

***Dendrobium sulcatum* Lindl.:**

Leaves broad, elliptic-ovate and leathery. Flowers dingy yellow; lip orange yellow, suborbicular when spread out, edges hairy, raised and partly curved inwards, base with a patch of brown nerves on either side. Flowering April to May.



Fig: *Dendrobium sulcatum* Lindl.:

CONCLUSION:

A total of 10 species of *Dendrobium* were presently collected from Joypur reserve forest. All of these are floriculturally significant and are suitable for cut flower production. Seeds of *D. nobile* are used as medicine for wound healing and cure nervous disorder. The stems of *D. moschatum* is locally used for making baskets.

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