

**A preliminary study on the Orchids of National Botanical Garden, Mirpur,
Dhaka, Bangladesh**

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The Orchids, comprising a unique group of plants, are one of the most diverse and beautiful of all flowers with colorful and fragrant or non-fragrant flowers belonging to the family Orchidaceae. Orchidaceae is one of the largest families of flowering plants and so far about 25000-35000 species under 600-800 genera have been recorded in this family (Garay, 1960). Orchids with their various ranges of flowers and beautiful colour combinations especially, their longevity provides a source of profound aesthetic pleasure to both owners and visitors (Bose & Yadav, 1989). Most of the orchids are perennial herbs with simple leaves. Large number of Orchids are epiphytes or terrestrial and some are saprophytes and leafless in nature (Larson, 1980). Majority of the cultivated orchids are native of tropical countries and occur in their greatest diversity in humid tropical forests of South and Central America, Mexico, India, Burma, South China, Thailand, Malaysia, Australia. A total of 179 Orchid species under 70 genera have been reported to grow in Bangladesh (Ahmed *et al.*, 2008), of which mostly are epiphytic and some are ground orchids. Different species of *Vanda*, *Dendrobium* and *Cymbidium* are commonly found in the natural habitats of hilly areas of Chittagong Hill Tracts, Mymensingh and Sylhet. Though, till now orchids have been grown naturally and in some case as home garden but in recent years, the commercial production and demand of orchids in Bangladesh have been increased quite rapidly. Some NGO including BRAC, PROSHIKA and private nursery namely, Kingsuk, Dipta Orchids, Micro Orchids and Plants, OMNI Orchids are producing orchids commercially for local market.

Present research work was aimed to know the orchid diversity of Bangladesh National Botanical Garden through proper documentation of different orchid plants grown in the orchid houses of the garden. Field studies were carried out from February to July, 2012. By this time, six visits were made at Bangladesh National Botanical Garden. A wide level of morphological variation was observed among all the species. Various characters in case of flowering were observed. Variation on the longevity of orchid flower was the most important observation. Collected plant materials were matched with the available voucher specimens in Bangladesh National Herbarium (DACB) to identify the specimens.

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Different relevant literatures (Ahmed *et al.*, 2008; Hossain *et al.*, 2009; Huda, 2008; Islam, 2003; King & Pantling, 1898; Misra, 2007; Pasha & Uddin. 2013; Wood, 2006) on orchids available in the Department of Botany and Central library of Jahangirnagar University, Bangladesh National Botanical Garden library and Bangladesh National Herbarium library were consulted. Morphological data, specially flower colour and longevity of each orchid species were studied and recorded. Consulting to the Bangladesh National Botanical Garden authority and to the caretakers of the Orchid house the valuable information were gathered and recorded. The cultivation and caring procedures of the plants were observed at different times. During the investigation a total of 31 orchid species have been recorded and identified which were categorized into Natural and Hybridized Orchids (Table 1.A and Table 1.B).

Table 1.A. Recorded natural orchid diversity in National Botanical Garden, Mirpur, Dhaka

Sl. no.	Scientific name	Bengali name	English name	Flower color	Flower longevity (days)
1	<i>Aerides odorata</i> Lour.	Shukphul		White with purple shade	40-50
2	<i>Arundina graminifolia</i> (D.Don.) Hochr. (Ground orchid)	Ghasphul	Bird orchid	Deep to light purple with whitish margin	15-20
3	<i>Cattleya mossiae</i> C.Parker ex Hook.		Easter Cattleya	Deep pink	30-35
4	<i>Cattleya sp.</i>			Red	30-35
5	<i>Cymbidium aloifolium</i> (L.) Sw.	Churi, Tosabak		Yellow and dark purple	30-40
6	<i>Dendrobium adastra</i>			Dark pink, whitish	25-30
7	<i>Dendrobium aphyllum</i> (Roxb.) C.E.C. Fisch.		Primose yellow	White, slightly pinkish	25-30
8	<i>Dendrobium kingianum</i>		Pink rock orchid	Deep magenta	30-35
9	<i>Dendrobium nobile</i> Lindl.			White with dark pink	30-35
10	<i>Dendrobium palpebrae</i> Lindl.	Nobirian		Deep yellow	15-20
11	<i>Dendrobium sp.</i>			White, slightly greenish	30-35
12	<i>Eria tomentosa</i> (J.König) Hook.f.	Woolen-iria		Brown	35-45
13	<i>Oncidium amabile</i>			White	30-40
14	<i>Papilionanthe teres</i> (Roxb.) Schltr.	Paphoteri		Darker pink with yellow base veined with pink	30-40
15	<i>Phaius tankervillei</i> (Banks) Blume (Ground orchid)	Tankaphai	Nun's orchid	Bronze-white to purplish	40-50
16	<i>Pholidota pallid</i>			White brownish	30-35
17	<i>Rhynchostylis retusa</i> (L.) Blume	Shial leja	Fox Tail Orchid	Pink purple to whitish	45-50
18	<i>Spathoglottis plicata</i> Blume. (Ground orchid)	Kantaglottis	Large Purple orchid	Dark pink	20-25
19	<i>Vanda sp.</i>			Yellow	30-35
20	<i>Vanda tassellata</i> (Roxb.) Hook.f.ex G.Don	Rasna		Brown, violet and whitish	40-45

Table 1.B. Recorded hybrid orchid diversity in National Botanical Garden, Mirpur, Dhaka

Sl. no.	Trade Name	Flower color	Flower longevity (days)
1	Ascocenda Princess Mikasa Pink	Brightly purple colored overlaid with contrasting color	50-60
2	Aranda Hybrid	Deep orange	35-40
3	Cattleya Sun Yun Ruby	Deep red	20-25
4	Dendrobium Bonckoo Gold	Brown and deep yellow	30-35
5	Dendrobium Charming White	White, yellowish and deep magenta within	30-35
6	Dendrobium Golden Magenta	Deep magenta with red	30-40
7	Dendrobium King Kobra	Dark orange yellow	40-45
8	Dendrobium Sonia Red	Very dark magenta	40-45
9	Mokara Golden Tommy	Yellow with spotted	35-40
10	Mokara Leunberger Gold	Brown, yellow	50-55
11	Papilionanthe teres hybrid	Not recorded yet	Not recorded yet

Of these, the epiphytic orchids have been found to be advanced in their flowering. They possess more showy and attractive flowers with more longevity than the others. They need more care and nutrition for growth and flowering. The overall performance of *Aerides odorata* Lour., *Cymbidium aloifolium* (L.) Sw., *Eria tomentosa* (J.König) Hook.f., *Rhynchostylis retusa* (L.) Blume and *Vanda tassellata* (Roxb.) Hook.f.ex G.Don is better specially, in respect to flower colour and their durability. They also possess very good medicinal values and ethnobotanical importance (Pal & Jain, 1998; Rao & Henry, 1995). Among all the recored orchids, the hybrid Ascocenda Princess Mikasa Pink showed the highest flower longevity up to average of 55 days. The orchid plants that are propagated by tissue culture method are more vigorous in growth and flowering such as, *Cymbidium aloifolium*. As Mirpur Botanical Garden is our National Garden, so authentication of botanical enumeration of orchids grown there has been very important which was achieved through the present piece of research.

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