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SOME NATIVE ORCHID SPECIES USED AS CUT FLOWERS

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ABSTRACT

One of the best-known plant groups in the global horticultural and cut flower trades orchids are also harvested, grown and traded for a variety of purposes, including as ornamental plants, medicinal products and food. Most popular global orchid trade is in artificially propagated cut flowers and plants grown under controlled conditions. Out of 1331 species of orchids of India, 850 species are found in North Eastern Hill Region due to their congenial climatic conditions, diversified topography and altitudinal variation. Amongst them, *Cymbidium eburneum, C. ensifolium*, *Paphiopedilum fairrieanum*, *Paphiopedilum hirsutissimum* , *Paphiopedilum insigne*, *Paphiopedilum spicerianum*, *Paphiopedilum venustum*, *Paphiopedilum villosum*, *Renanthera imschootiana*, *Vanda coerulea*, *Vanda tessellata and Vanda stangeana* are used as cut flowers.

Key words: Cut flowers, orchid species, vase life

INTRODUCTION

ORCHIDACEAE IS one of the largest families of flowering plants (Chase *et al.*, 2015; Willis, 2017) and are almost globally distributed. Till date, 28,484 species have been identified and accepted (Govaerts *et al.*, 2017). By the end of 2017, the IUCN Global Red List included assessments for 948 orchid species, of which 56.5% are reported to be, threatened (IUCN, 2017). In addition to their geographical and taxonomic diversity, orchids are also widely used for a variety of reasons, both legally and illegally, sustainably and unsustainably (Fay, 2015a). One of the best-known plant groups in the global horticultural and cut flower trades (De, 2015), orchids are also harvested, grown and traded for a variety of purposes, including as ornamental plants, medicinal products and food. Most popular global orchid trade is in artificially propagated cut flowers and plants grown under controlled conditions.

ORCHIDS FOR COMMERCIAL USES

Over the last half a century, importance of orchids in floriculture has been amply highlighted by various workers (Hegde, 2016) and agencies in India. These plants have been commercialized as ornamental plants in the horticultural and floricultural trade, which is unsurprisingly, dominated by species with attractive flowers. The principal orchid trade involves artificially propagated plants and cut flowers cultivated in commercial greenhouses. Reported Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) trade in live artificially propagated plants is dominated by a small number of genera with huge number of hybrids (*e.g. Cymbidium*, *Dendrobium* and *Phalaenopsis*, *Cattleya*, *Oncidium*). Orchids are consistently ranked among the best sellers

in the global potted plant trade and also has nearly 10% of all fresh cut flowers traded internationally (De, 2015). Several local species of *Ascocentrum, Calanthe, Cymbidium, Dendrobium, Paphiopedilum* and *Vanda etc.* are in great demand in international market for breeding materials. Dried orchids are used for different purposes such as these are used in vases and baskets and sometimes in shadow boxes. Bright flowers of orchid genera like *Cattleya, Cymbidium, Dendrobium, Paphiopedilum,* and *Pholidota etc*. can be used for drying.

Orchids used for human consumption include globally important products, such as Vanilla flavourings (extracts of *Vanilla*), and other edible products used on national and regional levels.

At least 35 species of orchids are used to make salep, including species from the genera *Anacamptis*, *Dactylorhiza*, *Himantoglossum*, *Ophrys*, *Orchis*, *Serapias* and *Steveniella.*

Many orchids are rich in alkaloids. Experimental evidences have reported the isolation of a number of alkaloids like anthocyanins, stilbenoids and triterpenoids from orchids. Some of the commercial medicinal uses of orchids include Chinese and South Asian Ayurvedic traditional medicine. They are also known to be utilized in some African traditional medicine, *e.g. Vanilla madagascariensis* in Madagascar, North American folk medicine, *e.g. Cypripedium acaule* and *C. parviflorum*and the Unani medicine system, *e.g. Dactylorhiza hatagirea*, *Vanda tessellata*, *Cymbidium bicolor* and *Ipsea speciosa.* Nepal's Ayurvedic trade has been reported to involve nearly 94 orchid species including *Crepidium acuminatum*, *Habenaria intermedia*, *Herminium edgeworthii* and *Malaxis muscifera*. *Eulophia* spp. are also widely used medicinally across large parts of India.

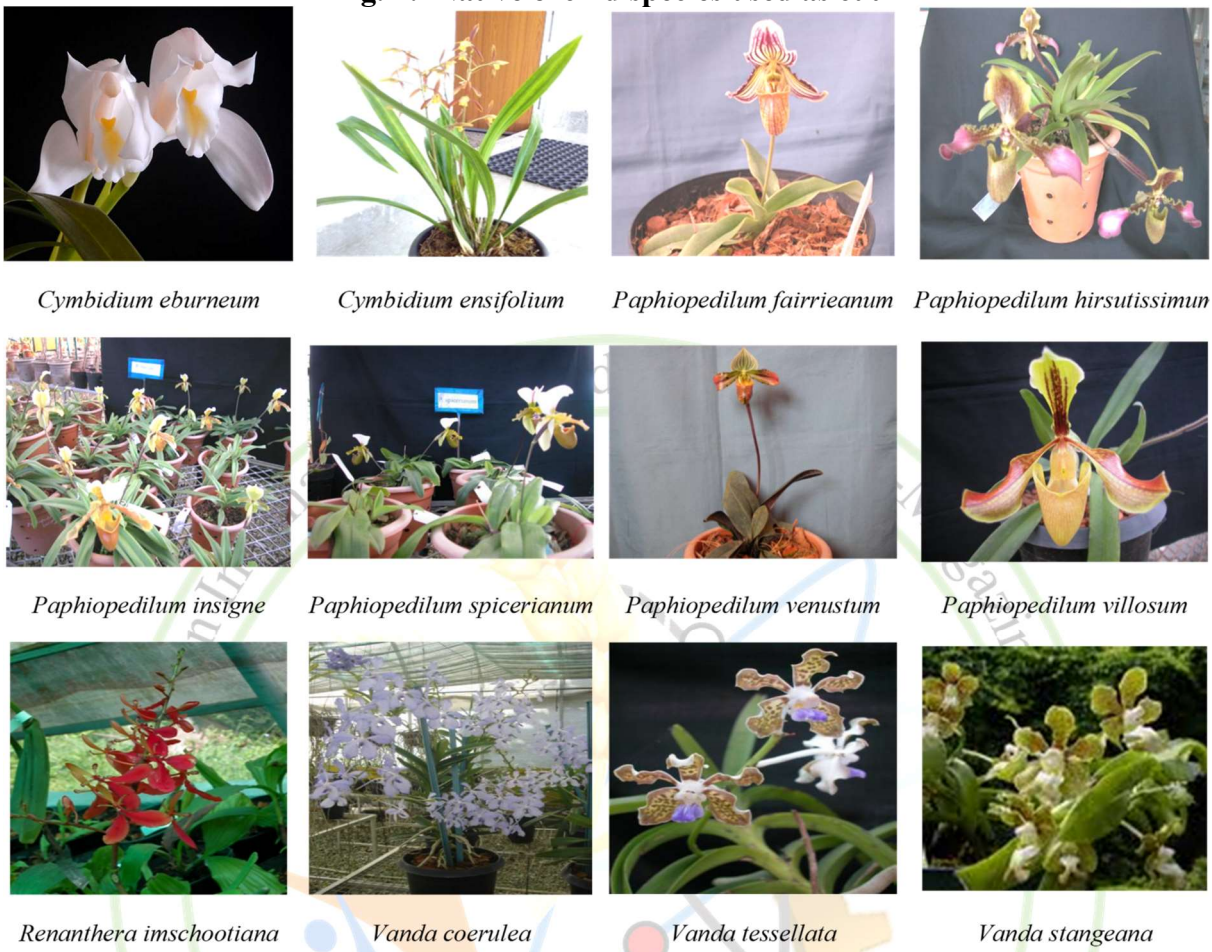
SOME INDIGENOUS ORCHID SPECIES USED AS CUT FLOWERS

Out of 1331 species of orchids of India, 850 species are found in North Eastern Hill Region due to their congenial climatic conditions, diversified topography and altitudinal variation. Amongst them, *Cymbidium eburneum, C. ensifolium*, *Paphiopedilum fairrieanum*, *Paphiopedilum hirsutissimum*, *Paphiopedilum insigne*, *Paphiopedilum spicerianum*, *Paphiopedilum venustum*, *Paphiopedilum villosum*, *Renanthera imschootiana*, *Vanda coerulea*, *Vanda tessellata and Vanda stangeana* are used as cut flowers (Table 1 & Fig.1)).

Table 1: Cut flower qualities of some native orchid species

Name of Species	Spike length (cm)	No of flowers/ spike	Flower diameter (cm)	Vase life (days)
Cymbidium eburneum	25-30	1-2	8-12	25-30
Cymbidium ensifolium	45-50	8-10	4-6	25-30
Paphiopedilum fairrieanum	17-20	01	8-10	50-60
Paphiopedilum hirsutissimum	15-18	01	10-12	56
Paphiopedilum insigne	20-22	01	10.5-11	42
Paphiopedilum spicerianum	20-23	01	10-11	30-40
Paphiopedilum venustum	22-25	01	7-8	60
Paphiopedilum villosum	20-22	01	12-15	65-70
Renanthera imschootiana	60-75	20-60	2-2.5	24
Vanda coerulea	45-60	12-20	8.5-10	14-20
Vanda tessellata	20-25	4-8	5-6	16
Vanda stangeana	20-25	9-12	4-6	10

Fig. 1: Native orchid species used as cut



Out of twelve species used as cut flowers, Paphiopedilum showed maximum vase life 30-70 days followed by cymbidium (25-30 days) and vandaceous orchids (10-25 days).

CONCLUSIONS

Native orchid species of India can be effectively utilized for development of intergeneric, inter-specific or intra-specific natural hybrids of commercially orchid general like *Arachnis*, *Cattleya, Cymbidium, Dendrobium, Mokara, Oncidium, Paphiopedilum, Phalaenopsis, Phaius, Renanthera, Rhyncostylis* and *Vand*a and their compatible alliances which would be market driven having export and medicinal value as well as tolerant to biotic and abiotic stresses. Investigations on habitat, flowering season and cultural practices of these species could open up avenues for pot culture, cut flowers, dry flowers, tree mountings, hanging baskets, herbal preparations and exhibits for market displays.

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