



**Orchids of Assam, North East India – An annotated checklist**

**Khyanjeet Gogoi<sup>1</sup>, Raju Das<sup>2</sup> and Rajendra Yonzone<sup>3</sup>**

1.TOSEHIM, Regional Orchid Germplasm Conservation & Propagation Centre (Assam Circle)

Daisa Bordoloi Nagar, Talap, Tinsukia, (Assam) - India

2, Nature's Foster, P. Box 41, Shastri Road, P.O. Bongaigaon, (Assam) - India

3, Dept. of Botany, St. Joseph's College, P.O. North Point, District Darjeeling, (WB) - India

**Abstract**

Assam is one of the eight North East Indian states and Orchids are the major component of the vegetation at different climatic conditions. The agroclimatic condition of Assam is most congenial for the lavish growth and development of wide varieties of Orchid species in natural habitat. During pre-independence time, Hooker (1888 – 1890) in his work Flora of British India include about 350 species of Orchids from Assam- the present North East India. Present paper deals with checklist of 398 specific and 6 intraspecific taxa belonging 102 genera of Orchids in Assam out of which 129 species under 49 genera are terrestrial and 275 specific and intraspecific under 53 genera are epiphytic or lithophytic. *Dendrobium* represents the largest genus with 58 taxa and 51 are monotypic genera found in the regions.

**Key-Words:** Checklist, Orchid Species, Assam, North East India

**Introduction**

Assam found in the central part of North-East India. It extends between the latitudes of 24°8' N – 28°2' N and longitudes of 89°42' E – 96° E. The T-shaped state is sprawled in an area of 78,438 sq. km and is the second largest state in the North East India. It is bordered by the Indian states of Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, and West Bengal. Assam shares its international borders with Bhutan and Bangladesh. It is connected to the rest of the country through a narrow strip known as Chicken's Neck in West Bengal.

The physiographic configuration of Assam characterized by diverse features such as floodplains, marshes, scattered hillocks, folded hill ranges and old plateaus. According to these diverse features Assam can divided into three major physiographic divisions:

1. The Brahmaputra valley.
2. The hills of Karbi Anglong and North Cachar.
3. The Barak valley.

**The Brahmaputra valley:** The Brahmaputra valley covers 70% of the state's total area. Extending east-west for about 725 km with an average wide of 80 km and is an important physiographic unite of the state. The valley as a whole gently slopes down from north-east to south-west in the long profile of the river Brahmaputra.

**The hills of Karbi Anglong and North Cachar:** The hills of Assam are mainly confined to the district of Karbi Anglong and North Cachar. The Karbi Anglong hills are the parts of the Meghalaya plateau and Rangma hills and the North Cachar hills is a part of the Barail range.

**The Barak valley:** Like the Brahmaputra valley, the Barak valley in the southern part of the also constitutes another important physiographic unit. Named after river Barak, the Barak valley lies between the North Cachar hills on the north and the Mizo hills on the south. On the east of the plain stand the Manipur hills and the west lies the Sylhet plain of Bangladesh.

**Climate**

The climate of Assam is typically 'tropical monsoon rainfall' type, with high levels of humidity and heavy rainfall. Since the state of Assam is known to have maximum amount of rainfall, hence the temperatures never go beyond the standard 35° – 38°. It's a moderate climate with warm summers and mild winters. In the monsoon season, the whole state comes alive with the beauty of nature. Climatic variations can

**\* Corresponding Author**

E.Mail: khyanjeetgogoi@gmail.com

be seen regionally. On the one hand, the hilly regions of Assam experience a suitable sub-alpine climatic condition, on the other hand the plane lands of the state go through excessive humid weather.

Primarily, the climate of Assam is categorized under two prime heads- rainy season and winter months. While the rainy season starts from June, the winter months begins with the onset of October. The minimum temperature which is found in the coldest of months in Assam ranges from six to eight degree Celsius.

The occurrence of rains begins with the month of June in the land of Assam. More often than not, the intensity of rainfall crosses such an extent that invariably leads to natural catastrophes like floods. Various districts of Assam, both in remote and prominent areas, experience large-scale damage of agricultural crops, loss of livestock and much other allied destruction.

There are four distinct seasons in Assam- summer, monsoon, autumn and winter.

**Summer:** The summer season in Assam starts from the month of March and extends till the end of June. The season is characterized by extreme humidity and frequent showers. The average temperature during this time of the year is between 35° – 38° Celsius.

**Monsoon:** This season brings relief from the scorching heat of the summers. The neighboring areas of Cherapunji and Mawsynram have the highest rainfall in the world. The average annual rainfall in the state is around 70 inches in the west and around 120 inches in the east.

**Winter:** The winter season in Assam is basically characterized by scanty rainfall and misty mornings and afternoons. It starts in November and continues till the month of February. The average temperature at this time of the year is around 6° – 8° Celsius.

**Spring and Autumn:** In Assam, spring (March-April) and autumn seasons, with moderate temperature and rainfall. As it is neither too cold nor too hot.

Assam Climate is a collective representation of the various weather variations of the state.

#### **Vegetation**

Assam bears a separate identity phytogeographically and represents a number of plant communities in its forest areas and considered as Nature's reservoir of plants resources compare to any place in the World as regards richness of Floristic composition. A few decades ago, Assam had a very large canopy of green cover; but today, the green cover is much below the norm. According to the State of Forest Report (2003) of Forest Survey of India, however, the forest cover stands at 27,018 sq km. Owing to the location in the sub-tropical zone and the prevalence of the Monsoon

climate; the landmass of Assam possesses mainly evergreen, semi-evergreen and deciduous trees. However, depending upon the intensity of precipitation, humidity and temperature, the forests are classified as wet or dry. Variation occurs in growth of different species of trees in different parts of the state due to different soil and ground water regimes and other geographical factors. The general trend of change in the forest type on the basis of predominant plant species from Western Assam to the East is deciduous, semi-evergreen and evergreen forest respectively. The vegetation of Assam can be classified as-

1. Evergreen Forest.
2. Semi-evergreen Forest.
3. Deciduous Forest.
4. Degraded forest.
5. Grassland.

**Evergreen Forest:** Evergreen forest is a forest consisting mainly of evergreen trees that retain green foliage all year round. Evergreen forest found in some specific areas of Upper Assam in the district of Golaghat, Jorhat, Sibsagar, Tinsukia, Dibrugarh and narrow belt along the foot hills of Lakhimpur and Dhemaji; Lower hill ranges of North Cachar hills and in Cachar district and Karimganj district. Some common tree species are: *Dipterocarpus macrocarpus*, *Ailanthus integrifolia*, *Artocarpus chama*, *Mesua ferrea*, *Phoebe cooperiana*, *Shorea assamica*, *Ficus benjamina*, *Dillenia indica*, *Terminalia myriocarpa*, *Diospyros indica*, *Chrysophyllum lanceolatum* etc. Evergreen forests are the home of a wide verity of epiphytic and terrestrial orchids.

**Semi-evergreen Forest:** Semi-evergreen forests are widely spread in Assam and mostly confined along the North and South Banks of the river Brahmaputra; some parts of Karbi Anglong, North Cachar hills, Cachar hills and parts of Cachar District. These forests are mixed with evergreen and semi-evergreen and also deciduous species. Some common tree species are: *Artocarpus chama*, *Bischofia javanica*, *Dillenia indica*, *Dubanga grandiflora*, *Lagerstroemia praviflora*, *Lagerstroemia reginae*, *Mangifera sylvatica*, *Terminalia chebula*, *Terminalia myriocarpa* etc. Understory trees and shrubs include the laurels *Phoebe*, *Machilus*, and *Actinodaphne*, *Polyalthias*, *Aphanamixis*, and cultivated *Mesua ferrea* and species of mahogany, cashews, nutmegs and magnolias, with bamboos. Many species of epiphytic and terrestrial orchids are found in such forest.

**Deciduous Forest:** Such types of forest occur in vast areas of Central and Lower Assam particularly in districts of Nagaon, Morigaon, Kamrup and parts of Nalbari, Borpata, Darrong, Sonitpur, Dhuburi,

Kokrajhar and Goalpara district and also lower altitudes in Karbi Anglong and North Cachar Hills districts. These forests are predominant with *Shorea robusta* and with some other species like *Lagerstroemia praviflora*, *Lagerstroemia reginae*, *Schima wallichii*, *Bischofia javanica*, *Artocarpus chama*, *Dillenia pentagyna*, *Michelia champaca* etc. Some species of epiphytic and terrestrial Orchids are found in such type of forest.

**Degraded forest:** About 44.5% of Reserve forests of Assam have gradually depleted till present time (Goswami, 1992) due to encroachment of forest land for agriculture, settlement of villages, ruthless felling of trees, collection of fire wood and making wood charcoal. Degraded reserve forests of Assam are: Sodai R.F., Darranga, Gorbhanga, Hahim, Kulsu, Mayang, Amsoi, Kholahat, Doboka, Ranga, Pabha, Gali, Kadam of the Brahmaputra valley; Innerline R.F., forest around Bhuban pahar, Lohar bond, Sonai etc of Barak valley and most of the forests of the Barak valley are degraded. In these degraded forests one could barely find tall trees but with a few deciduous trees of medium size. The species are: *Aegle marmelos*, *Bombax ceiba*, *Cassia fistula*, *Ficus hispida*, *Phyllanthus emblica*, *Tamarindus indica* etc. Some important species of orchids are found in such type of forest.

**Grassland:** Grasslands are the major components of natural vegetation of Assam. Extensive areas of Assam are covered by grasslands in flood plain of Brahmaputra valley and also some parts of North Cachar Hills and Karbi Anglong district. Grasslands are most conspicuous in Kaziranga, Manas and Dibrugarh national park and most of the Wildlife Sanctuaries of Assam. The dominant grasses are *Apluda mutica*, *Arundo donax*, *Phragmatis karka*, *Sclerostashya fusca*, *Saccharum procerum*, *Saccharum ravennae*, *Themeda villosa* etc. Numbers of terrestrial Orchids like species of *Brachycorythis helferi*, *Eulophia bicallosa*, *Eulophia dabia*, *Habenaria acuifera*, *Nervilia juliana*, *Peristylus constrictus*, *Spiranthes sinensis*, *Zeuxine strateumatica* etc. are found in grassland.

#### **Historical Background**

A review of literature reveals that after the publication of Hooker's (1888 – 1890) Flora of British India, there have been scanty and sporadic publications on Orchid flora of Assam. Hooker include about 350 species of Orchids from Assam- the present North East India. He also provided description with illustration of a hundred Orchids in- "A century of Indian Orchids". After a long gap Kanjilal et al (1934 – 1940) dealt only Dicotyledons and Gymnosperms in their 4 volume

work of the Flora of Assam. N. L. Bor (1940) only Gramineae of Monocotyledones published in the 5<sup>th</sup> vol. of flora of Assam. But till this date there are no any complete account of the Orchids of Assam have been published.

The floristic study of Assam was initiated by S. Chowdhury including the study of Orchids of Assam. He has made a notable contribution towards the knowledge of Orchid flora of Assam and published a number of papers in different Journals. A.S. Rao, G. Panigrahi, G.K. Deka, P.K. Hajra and many others of the Botanical Survey of India also collected a number of specimens of Orchids from Assam. Several workers namely Kataki (1962), Chowdhury et al (1970, 1971), Barua and Deori (1971, 1988), Das (1976), Chowdhury (1987), Barua and Barua (1991), Chowdhury and Singh (1991), Gogoi, K (2011, 2012) and Gogoi, K et al (2012) also added several species to the Flora of India from this region. Baruah (1978) made a list of 115 species of Orchids in the Brahmaputra valley of Assam. Chowdhury (2005) made list of 293 species under 75 genera of Orchids of Assam. Barua (2001) described 65 taxa under 31 genera in his work "Orchid Flora of Kamrup District, Assam". Later Gogoi, K. (2012) published a book "Wild Orchids of Tinsukia District" and described 105 species under 53 genera. Present study has been conducted to document the Orchid species of Assam with authenticated botanical names, protogues, phenology and habitat.

#### **Material and Methods**

Several field trips were undertaken during 2004-2014 to collect specimens and information related to Orchid species of Assam. The plant specimens have been preserved following standard herbarium techniques (Jain and Rao, 1977) and herbariums were deposited in the Herbarium of the Department of Botany, Guwahati University and The Orchid Society of Eastern Himalaya (TOSEHIM), Regional Orchid Germplasm Conservation and Propagation Centre (Assam Circle), Daisa Bordoloi Nagar, Talap, Tinsukia, Assam, India.

#### **Results**

Considering all these published works and also the present exploration, based on the evidences of herbarium or relevant information of the live plants collected from Assam, it is estimated that there are 398 specific and 6 intraspecific taxa belonging 102 genera of Orchids in Assam out of which 129 species under 49 genera are terrestrial and 275 specific and intraspecific under 53 genera are epiphytic or lithophytic. *Dendrobium* represents the largest genus with 58 species and 51 are monotypic genera in the regions. Regular destruction of habitat is the major threats to the whole Orchid flora in the regions. So conservation

efforts are highly emphasize to save the species throughout the regions.

### **Enumeration of Species**

#### **ACAMPE Lindl.**

About 10 species distributed in India, China, South East Asia and tropical Africa; 6 species in India, 3 species in Assam.

*Acampe ochracea* (Lindl.) Hochr., Bull. New York Bot. Gard. 6: 270 (1910).

**Flowering and Fruiting:** November – February.

**Habitat:** Epiphyte on tree trunk in open forests.

*Acampe praemorsa* (Roxb.) Blatt. & Mc Cann, J. Bombay Nat. Hist. Soc. 35: 1495 (1932).

**Flowering and Fruiting:** November – February.

**Habitat:** Epiphyte on tree trunks and branches.

*Acampe rigida* (Buch.-Ham. ex Sm.) Hunt, Kew Bull. 24: 98 (1970).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on tree trunks or large branches in riverine and secondary forest.

#### **ACANTHEPHIPIUM Bl.**

About 15 species distributed in tropical Asia, Malaysia and Fiji; 3 species in India, 2 in Assam.

*Acanthophippium striatum* Lindl., Bot. Reg. 24:41, Misc.68: (1838).

**Flowering and Fruiting:** April – August.

**Habitat:** Terrestrial on shaded and humid places in dense forests, banks of streams.

*Acanthophippium sylhetense* Lindl., Gen. Sp. Orchid. Pl.: 177 (1833).

**Flowering and Fruiting:** April – November.

**Habitat:** Terrestrial on shaded and damp places in dense forests.

#### **AERIDES Lour.**

About 20 species distributed in the world, from India to Vietnam, Malaysia and Japan, 10 species recorded in India, 5 species in North East India and 4 species in Assam.

*Aerides falcata* Lindl., Paxton's Fl. Gard. 2: 142 (1852).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks in evergreen broad-leaved forests.

*Aerides multiflora* Roxb., Pl. Corom. 3: 67, t. 271 (1820).

**Flowering and Fruiting:** March – August.

**Habitat:** Epiphytic on shaded and humid places in dense forests, banks of streams.

*Aerides odorata* Lour., Fl. Cochinch. 2: 525 (1790).

**Flowering and Fruiting:** March – August.

**Habitat:** Epiphyte in (secondary) lowland (Dipterocarp) forest.

*Aerides roseum* Lodd. ex Lindl. & Paxt., Paxton's Fl. Gard. 2: 109, t.60 (1852).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte in mixed deciduous forest and humid evergreen forest.

#### **AGROSTOPHYLLUM Bl.**

Between 40 – 50 species distributed distributed from the Seychelles and tropical Asia East to the Pacific Islands and New Guinea; 4 species in India and 3 in Assam.

*Agrostophyllum brevipes* King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) 8: 156, t.213 (1898).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphytic in tropical valleys.

*Agrostophyllum callosum* Rchb. f., Seeman, Fl. Vit. 296 (1868).

**Flowering and Fruiting:** April – September.

**Habitat:** Epiphytic on trees in dense forests.

*Agrostophyllum planicaule* (Wall. ex Lindl.) Rchb. f., Walpers, Ann. Bot. Syst. 6: 909 (1864).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphyte in mixed deciduous forest and humid evergreen forest.

#### **ANOECTOCHILUS Bl.**

About 40 species known from India, South East Asia to Australia; 16 species in India, 2 species in Assam.

*Anoectochilus brevilabris* Lindl., Gen. Sp. Orchid. Pl.: 499 (1840).

**Flowering and Fruiting:** April – August.

**Habitat:** Terrestrial in dense humid evergreen forest.

*Anoectochilus roxburghii* (Wall.) Lindl., J.F.Royle, Ill. Bot. Himal. Mts.: 368 (1839).

**Flowering and Fruiting:** August – January.

**Habitat:** Terrestrial in dense humid evergreen forest.

**ANTHOGONIUM** Wall. ex Lindl.

One species distributed Bangladesh, Bhutan, Cambodia, China, India, Laos, Myanmar, Nepal, Sri Lanka, Thailand and Vietnam.

**Anthogonium gracile** Lindl., Gen. Sp. Orchid. Pl.: 426 (1840).

**Flowering and Fruiting:** July – December.

**Habitat:** Terrestrial in Grassy slopes or thickets.

**APHYLLORCHIS** Bl.

About 30 species distributed in tropical Asia and the Himalayas, extending as far North as Japan and south to Australia. 3 species in India and 1 in Assam.

**Aphyllorchis montana** Rchb. f., Linnaea 41: 57 (1877).

**Flowering and Fruiting:** June – October.

**Habitat:** Terrestrial (Mycotropic) in grassland forests.

**APOSTASIA** Bl.

About seven species: North East India, Nepal, and Bhutan, north to South Japan, through South East Asia to New Guinea and North Australia. 3 species found in India and Assam.

**Apostasia nuda** R. Br., Wall., Pl. Asiat. Rar. 1: 76 (1830).

**Flowering and Fruiting:** January – March.

**Habitat:** Terrestrial on shady coniferous and broad-leaved evergreen lowland and montane forests.

**Apostasia odorata** Bl., Bijdr.: 423 (1825).

**Flowering and Fruiting:** May – July.

**Habitat:** Terrestrial on forests, crevices, along streams.

**Apostasia wallichii** R. Br., Wall., Pl. Asiat. Rar. 1(4): 75, t.84 (1829).

**Flowering and Fruiting:** April – October.

**Habitat:** Terrestrial on tropical forests, crevices, along streams.

**APPENDICULA** Bl.

About 60 species distributed from tropical Asia to Oceania, mainly in Indonesia and New Guinea, 3 in India and 1 in Assam.

**Appendicula cornuta** Bl., Bijdr. 1: 302 (1825).

**Flowering and Fruiting:** July – September.

**Habitat:** Epiphytic (frequently lithophytic on rocks) in forests.

**ARACHNIS** Bl.

About 13 species distributed from North East India and mainland Asia to Indonesia, New Guinea, and the Pacific islands, 2 in India and 1 in Assam.

**Arachnis labrosa** (Lindl. & Paxt.) Rchb. f., Bot. Centralbl. 28: 343 (1886).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphytic on tree trunks at forest margins, lithophytic on rocks in valleys.

**ARUNDINA** Bl.

One highly variable species distributed from Nepal, North East and South India, and Bhutan, through South China, to South East Asia and South Japan, introduced and naturalized in the Pacific Islands and the Neotropics.

**Arundina graminifolia** (D. Don) Hochr., Bull. New York Bot. Gard. 6: 270 (1910).

**Flowering and Fruiting:** Almost throughout the year (January – December).

**Habitat:** Terrestrial in Grassy slopes, streamsides, thickets, forests.

**BIERMANNIA** King & Pantl.

About nine species distributed China, India, Indonesia, Peninsular Malaysia, Thailand, Vietnam; 2 species in India; 1 species in Assam.

**Biermannia bimaculata** (King & Pantl.) King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) 8: 200, t.267 (1898).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic in dense humid evergreen forest.

**BRACHYCORYTHIS** Lindl.

About 33 species distributed in South and tropical Africa and Madagascar, with a few species extending to tropical and subtropical Asia, about 8 species in India and 1 in Assam.

**Brachycorythis helferi** (Rchb. f.) Summerh., Kew Bull. 10: 235 (1955).

**Flowering and Fruiting:** June – August.

**Habitat:** Terrestrial on forests, open places in grasslands.

**BRYOBIUM** Lindl.

About 20 species distributed from Sri Lanka and South East Asia to New Guinea, North East Australia, and the South West Pacific Islands, 1 species in Assam.

*Bryobium pudicum* (Ridl.) Y.P. Ng & Cribb, Orchid Rev. 113: 272 (2005).

**Flowering and Fruiting:** April – September.

**Habitat:** Epiphyte in deciduous forest and evergreen forest.

**BULBOPHYLLUM** Thou.

East Asia, Africa, Australia and tropical America, about 100 species in India and 62 species are known from North Eastern region. Assam represents 39 species.

*Bulbophyllum affine* Lindl., Gen. Sp. Orchid. Pl.: 48 (1830).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte in mixed deciduous hill forest and in (secondary) evergreen montane forest

*Bulbophyllum ambrosia* (Hance) Schltr., Repert. Spec. Nov. Regni Veg. Beih. 4: 247 (1919).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphytic in forest.

*Bulbophyllum andersonii* (Hook. f.) J.J. Sm., Bull. Jard. Bot. Buitenzorg, sér. 2(8): 22 (1912).

**Flowering and Fruiting:** September – November.

**Habitat:** Epiphyte in mixed deciduous forest and humid evergreen forest.

*Bulbophyllum apodum* Hook. f., Fl. Brit. India 5(2): 766 (1890).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on tree trunks in dense humid evergreen forest.

*Bulbophyllum capillipes* C.S.P. Par. & Rchb. f., Trans. Linn. Soc. London 30: 150 (1874).

**Flowering and Fruiting:** July – October.

**Habitat:** Epiphyte on tree trunks in open evergreen forest.

*Bulbophyllum careyanum* (Hook.) Spreng., Syst. Veg. ed.16(3): 732 (1826).

**Flowering and Fruiting:** October – February.

**Habitat:** Epiphyte on tree trunks in dense primary humid evergreen forest.

*Bulbophyllum cariniflorum* Rchb. f., Walpers, Ann. Bot. Syst. 6: 253 (1861).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte on tree trunks, rocks in mixed forests.

*Bulbophyllum caulinflorum* Hook. f., Fl. Brit. India 5(2): 758 (1890).

**Flowering and Fruiting:** June – August.

**Habitat:** Epiphyte on tree trunks or rocks in broad-leaved forests.

*Bulbophyllum crassipes* Hook. f., Fl. Brit. India 5(2): 760 (1890).

**Flowering and Fruiting:** September – December.

**Habitat:** Epiphyte on Tree trunks in evergreen broad-leaved forests.

*Bulbophyllum cylindraceum* Wall. ex Lindl., Gen. Sp. Orchid. Pl.: 53 (1830).

**Flowering and Fruiting:** October – December.

**Habitat:** Tree trunks or rocks in forests.

*Bulbophyllum delitescens* Hance, J. Bot. 14: 44 (1876).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte in dense humid evergreen forest.

*Bulbophyllum eublepharum* Rchb. f., Walpers, Ann. Bot. Syst. 6: 252 (1861).

**Flowering and Fruiting:** July – September.

**Habitat:** Epiphyte in tree trunks in forests.

*Bulbophyllum forrestii* Seidenf., Dansk Bot. Ark. 29: 120 (1973 publ. 1974).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte in tree trunks in forests.

*Bulbophyllum gracilipes* King & Pantl., J. Asiatic Soc. Bengal 65(2): 119 (1896).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphytic in forest.

*Bulbophyllum guttulatum* (Hook. f.) Balakr., J. Bombay Nat. Hist. Soc. 67: 66 (1970).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphytic in tree trunks in broad-leaved forests.

*Bulbophyllum helenae* (Kuntze) J.J. Sm., Bull. Jard. Bot. Buitenzorg 2(8): 24 (1912).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphyte in tree trunks in forests.

*Bulbophyllum lobbii* Lindl., Edwards's Bot. Reg. 33: t. 29 (1847).

**Flowering and Fruiting:** July – October.

**Habitat:** Epiphyte in lowland and montane forests on trunks.

***Bulbophyllum muscicola*** Rchb. f., Flora 55: 275 (1872).

**Flowering and Fruiting:** September – January.

**Habitat:** Epiphyte in primary broad-leaved evergreen humid forests.

***Bulbophyllum obrienianum*** Rolfe, Gard. Chron., ser.3, 12: 332 (1892).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte in tree trunks in primary, evergreen tropical forests.

***Bulbophyllum odoratissimum*** (J.E. Sm.) Lindl., Gen. Sp. Orchid. Pl.: 55 (1830).

**Key to the varieties:**

- 1a. Sepals and petals white tipped  
with yellow. ....var. *odoratissimum*  
1b. Sepals and petals white. ....var. *racemosum*

**1a. *Bulbophyllum odoratissimum*** (J.E. Sm.) Lindl.  
var. *odoratissimum*

**Flowering and Fruiting:** May – October.

**Habitat:** Epiphyte in dense humid evergreen forest near a waterfall, in dry evergreen forest near a waterfall, in mixed deciduous forest.

**1b. *Bulbophyllum odoratissimum*** (J.E. Sm.) Lindl.  
var. *racemosum* N.P.Balakr., J. Bombay Nat. Hist. Soc. 75: 157 (1978).

**Flowering and Fruiting:** May – October.

**Habitat:** Epiphyte in dense humid evergreen forest near a waterfall, in dry evergreen forest near a waterfall, in mixed deciduous forest.

***Bulbophyllum ornatissimum*** (Rchb. f.) J.J. Sm., Bull. Jard. Bot. Buitenzorg, 2, 8: 26 (1912).

**Flowering and Fruiting:** June – October.

**Habitat:** Growing epiphyte on evergreen forest.

***Bulbophyllum pectinatum*** Finet, Bull. Soc. Bot. France 44: 268 (1897).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic in forests, also found as a lithophyte along ravines,

***Bulbophyllum picturatum*** (Lodd.) Rchb. f., Walpers, Ann. Bot. Syst. 6: 262 (1861).

**Flowering and Fruiting:** March – May

**Habitat:** Epiphytic in tree trunks in limestone forests.

***Bulbophyllum polyrhizum*** Lindl., Gen. Sp. Orchid. Pl.: 53 (1830).

**Flowering and Fruiting:** March – June.

**Habitat:** Growing epiphyte on tree trunks in evergreen broad-leaved forests.

***Bulbophyllum protractum*** Hook. f., Fl. Brit. India, 5(2): 758. (1890).

**Flowering and Fruiting:** June – September.

**Habitat:** Growing epiphyte on evergreen forest.

***Bulbophyllum psychoon*** Rchb. f., Gard. Chron., n.s., 1878: 170 (1878).

**Flowering and Fruiting:** June – August.

**Habitat:** Growing as epiphyte.

***Bulbophyllum pteroglossum*** Schltr., Repert. Spec. Nov. Regni Veg. Beih. 4: 71 (1919).

**Flowering and Fruiting:** April – June.

**Habitat:** Epiphytic in tree trunks in forests.

***Bulbophyllum reptans*** (Lindl.) Lindl. ex Wall., Numer. List: n.1988 (1829).

**Flowering and Fruiting:** October – February.

**Habitat:** Growing as epiphyte on tree trunks or rocks in evergreen forests.

***Bulbophyllum retusiusculum*** Rchb. f., Gard. Chron. 1869: 1182 (1869).

**Flowering and Fruiting:** July – December.

**Habitat:** Epiphytic in Tree trunks or rocks in forests.

***Bulbophyllum rolfei*** (Kuntze) Seidenf., Dansk Bot. Ark. 33(3): 149 (1979).

**Flowering and Fruiting:** August – October.

**Habitat:** Epiphytic in tree forests.

***Bulbophyllum roxburghii*** (Lindl.) Rchb. f., Walpers, Ann. Bot. Syst. 6: 263 (1861).

**Flowering and Fruiting:** May – August.

**Habitat:** Growing epiphyte in evergreen forest.

***Bulbophyllum secundum*** Hook. f., Fl. Brit. India 5(2): 764 (1890).

**Flowering and Fruiting:** May – July.

**Habitat:** Epiphytic in tropical evergreen forests.

***Bulbophyllum spathulatum*** (Rolfe ex Cooper) Seidenf., Bot. Tidsskr. 65: 347 (1970).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphytic in riverine forest and in secondary evergreen forest.

*Bulbophyllum tricorne* Seidenf. & Smitinand, Orch. Thail. (Prelim. List): 806 (1965).

**Flowering and Fruiting:** August – October.

**Habitat:** Epiphyte in humid evergreen forest.

*Bulbophyllum triste* Rchb. f., Walpers, Ann. Bot. Syst. 6: 253 (1861).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphytic in tree trunks in forests.

*Bulbophyllum umbellatum* Lindl., Gen. Sp. Orchid. Pl.: 56 (1830).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphytic in tree trunks in forests.

*Bulbophyllum wallichii* (Lindl.) Rchb. f., Walpers, Ann. Bot. Syst. 6: 259 (1861).

**Flowering and Fruiting:** November-January.

**Habitat:** Epiphytic in tree trunks in forests.

*Bulbophyllum xylophyllum* Parish & Rchb. f., Trans. Linn. Soc. London 30: 151 (1874).

**Flowering and Fruiting:** March – May.

**Habitat:** Epiphytic in tree trunks in forests.

#### **CALANTHE** R. Br.

About 150 species distributed throughout the tropics and sub tropical Asia; 23 species in India, 10 in Assam.

*Calanthe alismifolia* Lindl., Fol. Orchid. Calanthe 6,7: 8, no.27 (1855).

**Flowering and Fruiting:** May – August.

**Habitat:** Terrestrial in evergreen broad-leaved forests.

*Calanthe biloba* Lindl., Fol. Orchid. Calanthe 6,7: 3, no.5 (1855).

**Flowering and Fruiting:** September – December.

**Habitat:** Terrestrial in Thickets on streamsides.

*Calanthe clavata* Lindl., Gen. Sp. Orchid. Pl.: 251 (1833).

**Flowering and Fruiting:** October – January.

**Habitat:** Dense forests, rocky places along valleys.

*Calanthe densiflora* Lindl., Gen. Sp. Orchid. Pl.: 250 (1833).

**Flowering and Fruiting:** August – December.

**Flowering and Fruiting:** Terrestrial in broad-leaved and mixed forests, along streamsides and valleys.

*Calanthe herbacea* Lindl., Fol. Orchid. Calanthe 6, 7: 10, no.34 (1855).

**Flowering and Fruiting:** June – October.

**Habitat:** Terrestrial in Humid places in dense forests.

*Calanthe lyroglossa* Rchb. f., Otia Bot. Hamburg.: 53 (1878).

**Flowering and Fruiting:** November – February.

**Habitat:** Terrestrial in damp places on riversides.

*Calanthe mannii* Hook. f., Fl. Brit. India 5(2): 850 (1890).

**Flowering and Fruiting:** May – August.

**Habitat:** Terrestrial in forest.

*Calanthe odora* Griff., Not. Pl. Asiat. 3: 365 (1851).

**Flowering and Fruiting:** April – August.

**Habitat:** Terrestrial in broad-leaved forests, shaded and damp places on grassy slopes.

*Calanthe sylvatica* (Thou.) Lindl., Gen. Sp. Orchid. Pl.: 250 (1833).

**Flowering and Fruiting:** August – November.

**Habitat:** Terrestrial in damp places on riversides.

*Calanthe triplicata* (Willemet) Ames, Philipp. J. Sci., 2: 326 (1907).

**Flowering and Fruiting:** April – August. .

**Habitat:** Terrestrial in evergreen broad-leaved forests.

#### **CALLOSTYLIS** Bl.

About six species distributed in China, Himalayan region, India, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam; 1 species in India and Assam.

*Callostylis rigida* Bl., Bijdr. Fl. Ned. Ind.: 340 (1825).

**Flowering and Fruiting:** January – June.

**Habitat:** Epiphytic on trees in mixed forests.

#### **CEPHALANTHERA** Rich.

About 15 species distributed mainly in Europe, North Africa, and East Asia, but also in the Himalayas, South East Asia, and extending to the West coast of North America. 2 species in India and 1 in Assam.

*Cephalanthera longifolia* (L.) Fritsch, Oesterr. Bot. Z. 38: 81 (1888).

**Flowering and Fruiting:** April – August.

**Habitat:** Terrestrial on forests, thickets, along streams, open grasslands.

#### **CEPHALANTHEROPSIS** Guillaumin.

About five species distributed from North East India through South China to South Japan (Ryukyu Islands), mainland South East Asia, the Philippines, and Sumatra; two species in India and Assam.

*Cephalantheropsis longipes* (Hook. f.) Ormerod, Orchid Digest 62: 156 (1998).

**Flowering and Fruiting:** September – November.

**Habitat:** Terrestrial on forest floor.

*Cephalantheropsis obcordata* (Lindl.) Ormerod, Orchid Digest 62: 157 (1998).

**Flowering and Fruiting:** September – December.

**Habitat:** Terrestrial on dense forest floor.

#### **CERATOSTYLIS** Bl.

About 100 species distributed tropical Asia to New Guinea and the Pacific Islands; 4 species in India and 3 in Assam.

*Ceratostylis himalaica* Hook. f., Fl. Brit. India 5(2): 826 (1890).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphytic on trees or lithophytic on rocks in forests.

*Ceratostylis radiata* J.J. Sm., Fl. Buitenz. 6: 295 (1905).

**Flowering:** September- October.

**Habitat:** Flourishing in moist shady places on tree trunks near streams in Tropical climate.

*Ceratostylis subulata* Bl., Bijdr. 306 (1825).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

#### **CHEIROSTYLIS** Bl.

About 50 species distributed from tropical Africa through tropical Asia to New Guinea, Australia, and the Pacific Islands; 11 species in India and 1 in Assam.

*Cheirostylis griffithii* Lindl., J. Proc. Linn. Soc., Bot. 1: 188 (1857).

**Flowering and Fruiting:** September – January.

**Habitat:** Terrestrial on forest floor.

#### **CHILOSCHISTA** Lindl.

About 10 species distributed from the Indian subcontinent through South East Asia to Australia; 4 species in India and 2 in Assam.

*Chiloschista lunifera* (Rchb. f.) J.J. Sm., Orch. Java: 553 (1905).

**Flowering and Fruiting:** March – May.

**Habitat:** Epiphyte on tree trunk.

*Chiloschista parishii* Seidenf., Opera Bot. 95: 176, t.199 (1988).

**Flowering and Fruiting:** May – July.

**Habitat:** Epiphyte on tree trunk and branches.

#### **CHRYSOGLOSSUM** Bl.

About 4 species distributed in tropical Asia to New Guinea and the Pacific Islands; 4 in India and 2 in Assam.

*Chrysoglossum assamicum* Hook. f., Fl. Brit. India 5: 784 (1890).

**Flowering and Fruiting:** February – April.

**Habitat:** Terrestrial on damp rocky places along valleys or in forests.

*Chrysoglossum ornatum* Bl., Bijdr. 338 (1825).

**Flowering and Fruiting:** June – November.

**Habitat:** Terrestrial on shaded and humid places in forests.

#### **CLEISOCENTRON** Bruhl.

1 species in Assam, Eastern Himalayas and Sikkim.

*Cleisocentron pallens* (Cathcart ex Lindl.) Pearce & Cribb, Edinb. J. Bot. 58(1): 118 (2001).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphytic on tree trunks evergreen forests.

#### **CLEISOSTOMA** Bl.

About 100 species distributed in India, South East Asia, Indonesia, New Guinea, Philippines and Pacific Island to Australia. About 19 species in India among them 12 species in Assam.

*Cleisostoma appendiculatum* (Lindl.) Benth. & Hook. f. ex Jackson, Index Kew. 1: 555. (1895).

**Flowering and Fruiting:** August – October.

**Habitat:** Epiphytic on tree trunks in evergreen forests.

*Cleisostoma arietinum* (Rchb. f.) Garay, Bot. Mus. Leafl. 23: 169 (1972).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks.

*Cleisostoma aspersum* (Rchb. f.) Garay, Bot. Mus. Leafl. 23(4): 169 (1972).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on tree trunks.

*Cleisostoma filiforme* (Lindl.) Garay, Bot. Mus. Leafl. 23(4): 171 (1972).

**Flowering and Fruiting:** July – September.

**Habitat:** Epiphytic on tree trunks in broad-leaved evergreen forests.

**Cleisostoma linearilobulatum** (Seidenf. & Smitind.) Garay, Bot. Mus. Leafl. 23(4): 172 (1972).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphytic on tree trunks in evergreen forests.

**Cleisostoma paniculatum** (Ker Gawl.) Garay, Bot. Mus. Leafl. 23: 173 (1972).

**Flowering and Fruiting:** September – February.

**Habitat:** Epiphytic on tree trunks in broad-leaved evergreen forests.

**Cleisostoma racemiferum** (Lindl.) Garay, Bot. Mus. Leafl. 23(4): 173 (1972).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphytic on tree trunks in evergreen forests.

**Cleisostoma simondii** (Gagnep.) Seidenf., Dansk Bot. Ark. 29(3): 66 (1975).

**Flowering and Fruiting:** August – December.

**Habitat:** Epiphyte on thick-barked tree trunks in deciduous lowland dipterocarp forest.

**Cleisostoma striatum** (Rchb. f.) N.E. Brown, G.W. Johnson, Suppl. Gard. Dict.: 901 (1882).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphytic on tree trunks in broad-leaved evergreen forests.

**Cleisostoma subulatum** Bl. Bijdr.: 363 (1825).

**Flowering and Fruiting:** March – August.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Cleisostoma tenuifolium** (L.) Garay, Bot. Mus. Leafl. 23: 175 (1972).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks in forests, lithophytic on rocks along wooded valleys.

**Cleisostoma williamsonii** (Rchb. f.) Garay, Bot. Mus. Leafl. 23(4): 176 (1972).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on tree trunks in forests, frequently lithophytic on rocks along wooded valleys.

#### **COELOGYNE Lindl.**

About 200 species distributed in tropical and subtropical Asia to Oceania; 43 species in India, 15 in Assam.

**Coelogyne assamica** Linden & Rchb. f., Allg. Gartenzeitung 25: 403 (1857).

**Flowering and Fruiting:** January – February.

**Habitat:** Epiphyte on trees in riverine forests.

**Coelogyne barbata** Lindl. ex Griff., Itin. Pl. Khasyah Mts. 72 (1848).

**Flowering and Fruiting:** August – December.

**Habitat:** Epiphyte on trees in forests or on cliffs.

**Coelogyne cristata** Lindl., Coll. Bot.: sub t. 33 (1821).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphytic but frequently found on lithophytic habitat.

**Coelogyne fimbriata** Lindl., Bot. Reg. 11: t.868 (1825).

**Flowering and Fruiting:** June – December.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Coelogyne flaccida** Lindl., Gen. Sp. Orchid. Pl.: 39 (1830).

**Flowering and Fruiting:** February – June.

**Habitat:** Epiphyte on trees in forests.

**Coelogyne griffithii** Hook. f., Fl. Brit. India 5(2): 838 (1890).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte on trees, moss-covered rocks.

**Coelogyne nitida** (Wall. ex D. Don) Lindl., Gen. Sp. Orchid. Pl.: 40 (1830).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphyte on trees as well as lithophyte on moss-covered rocks.

**Coelogyne ovalis** Lindl., Bot. Reg. 24: Misc. 91. 171 (1838).

**Flowering and Fruiting:** August – February.

**Habitat:** Epiphyte on trees in forests or on cliffs (sometime lithophytic).

**Coelogyne prolifera** Lindl., Gen. Sp. Orchid. Pl.: 40 (1830).

**Flowering and Fruiting:** March – August.

**Habitat:** Epiphyte on trees or rocks in forests.

**Coelogyne punctulata** Lindl., Coll. Bot.: t. 33 (1824).

**Flowering and Fruiting:** October – December.

**Habitat:** Epiphyte on trees or rocks in forests.

*Coelogyne schultesii* S.K. Jain & S. Das, Proc. Indian Acad. Sci., B 87(5): 121 (1978).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on trees in forests.

*Coelogyne stricta* (D. Don) Schltr., Repert. Spec. Nov. Regni Veg. Beih. 4: 184 (1919).

**Flowering and Fruiting:** September – December.

**Habitat:** On trees along steep riverbanks in lower and upper montane forests.

*Coelogyne suaveolens* (Lindl.) Hook. f., Fl. Brit. India 5(2): 832 (1890).

**Flowering and Fruiting:** January – April.

**Habitat:** On rocks in evergreen broad-leaved forests.

*Coelogyne trinervis* Lindl., Gen. Sp. Orchid. Pl.: 41 (1830).

**Flowering and Fruiting:** October – November.

**Habitat:** Epiphyte or lithophyte on trees or rocks.

*Coelogyne viscosa* Reichb f., Berl. Allg. Gartenz. 24: 218 (1856).

**Flowering and Fruiting:** September – November.

**Habitat:** On rocks in forests.

#### **COLLABIUM** Bl.

Eleven species distributed South East Asia, from the Himalayas to South East China, Malaysia, Indonesia, and the Philippines, to New Guinea and the Pacific islands; 6 species in India, 1 in Assam.

*Collabium chinense* (Rolfe) Tang & Wang, Fl. Hainan. 4: 217 (1977).

**Flowering and Fruiting:** June – August.

**Habitat:** Terrestrial on damp rocky places in dense forests.

#### **CORYMBORKIS** Thou.

About 5 species distributed in the world, 1 species in India and Assam.

*Corymborkis veratrifolia* (Reinw.) Bl., Coll. Orchid.: 125, t.42e, 43i (1859).

**Flowering and Fruiting:** March – August.

**Habitat:** Terrestrial at shade and in dense humid evergreen forest with undergrowth of tall herbs.

#### **CREMASTRA** Lindl.

Four species distributed in Nepal, North East India, and Bhutan, through South and East China, to North Thailand, Vietnam, and Japan.

*Cremastra appendiculata* (D. Don) Makino, Bot. Mag. (Tokyo): 24 (1904).

**Flowering and Fruiting:** April – July.

**Habitat:** Terrestrial in wet places in forests, along valleys.

#### **CREPIDIUM** Bl.

The genus comprises about 300 species distributed throughout the world and about 280 species distributed throughout the Asian tropics and subtropics, Australasia, and Indian Ocean islands, with a few species in temperate Asia; 10 species in India, 5 in Assam.

*Crepidium acuminatum* (D. Don) Szlach., Fragm. Florist. Geobot., Suppl. 3: 123 (1995).

**Flowering and Fruiting:** June – September.

**Habitat:** Terrestrial in dense humid evergreen forest on rocky terrain, also in the lowlands.

*Crepidium biauritum* (Lindl.) Szlach., Fragm. Florist. Geobot., Suppl. 3: 124 (1995).

**Flowering and Fruiting:** May – July.

**Habitat:** Terrestrial in dense evergreen forest.

*Crepidium calophyllum* (Rchb. f.) Szlach., Fragm. Florist. Geobot., Suppl. 3: 125 (1995).

**Flowering and Fruiting:** July – October.

**Habitat:** Terrestrial on humus-rich soils in dense forests.

*Crepidium mackinnonii* (Duthie) Szlach., Fragm. Florist. Geobot., Suppl. 3: 128 (1995).

**Flowering and Fruiting:** July – September.

**Habitat:** Terrestrial grown on humus-rich soils in dense forests.

*Crepidium purpureum* (Lindl.) Szlach., Fragm. Florist. Geobot., Suppl. 3: 131 (1995).

**Flowering and Fruiting:** June – July.

**Habitat:** Terrestrial grown on humus-rich soils in dense forests.

#### **CRYPTOSTYLIS** R. Br.

About 20 species distributed mainly in tropical Asia, from India and Sri Lanka to the Philippines, Australia, and the Pacific Islands; 1 species in India and Assam

*Cryptostylis arachnites* (Bl.) Hassk., Blume, Coll. Orchid.: 133 (1859).

**Flowering and Fruiting:** May – July.

**Habitat:** Terrestrial on broad-leaved evergreen forests, bamboo forests.

**CYMBIDIUM** Sw.

About 50 species distributed in South East Asia, China, Japan, Indonesia, India and Australia; 30 species in India, 14 in Assam.

**Cymbidium aloifolium** (L.) Sw., Nova Acta Regiae Soc. Sci. Upsal. 6: 73 (1799).

**Flowering and Fruiting:** April – September.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Cymbidium bicolor** Lindl., Gen. Sp. Orchid. Pl.: 164 (1833).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Cymbidium cochleare** Lindl., J. Proc. Linn. Soc., Bot. 3: 28 (1858).

**Flowering and Fruiting:** October – February.

**Habitat:** Epiphyte on trees in forests.

**Cymbidium cyperifolium** Wall. ex Lindl., Gen. Sp. Orchid. Pl.: 163 (1833).

**Flowering:** October – November.

**Habitat:** Shady tropical rainforests.

**Cymbidium dayanum** Rchb. f., Gard. Chron. 1869: 710 (1869).

**Flowering and Fruiting:** June – December.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Cymbidium eburneum** Lindl., Edwards's Bot. Reg. 33: t.67 (1847).

**Flowering and Fruiting:** February – July.

**Habitat:** Rocks along valleys and in open forests.

**Cymbidium elegans** Lindl., Gen. Sp. Orchid. Pl.: 163 (1833).

**Flowering and Fruiting:** October – March.

**Habitat:** Trees in forests, cliffs.

**Cymbidium ensifolium** (L.) Sw., Nova Acta Regiae Soc. Sci. Upsal. 6: 77 (1799).

**Flowering and Fruiting:** October – January.

**Habitat:** Open forests, thickets, grassy places along valleys.

**Cymbidium erythraeum** Lindl., J. Proc. Linn. Soc., Bot. 3: 30 (1858).

**Flowering and Fruiting:** October – January.

**Habitat:** Trees and rocks at forest margins and in forests.

**Cymbidium hookerianum** Rchb. f., Gard. Chron. 1866: 7 (1866).

**Flowering and Fruiting:** January – June.

**Habitat:** Trees in forests, rocks along valleys.

**Cymbidium iridioides** D. Don, Prodr. Fl. Nepal. 36 (1825).

**Flowering and Fruiting:** September – January.

**Habitat:** Trees or rocks in forests or thickets, shaded cliffs.

**Cymbidium lancifolium** Hook, Exot. Fl. 1: t.51 (1823).

**Flowering and Fruiting:** April – September.

**Habitat:** Terrestrial on open forests, Bamboo forests, broad-leaved forests, humus-rich rocks along valleys.

**Cymbidium macrorhizon** Lindl., Gen. Sp. Orchid. Pl.: 162 (1833).

**Flowering and Fruiting:** May – September.

**Habitat:** Forests along riversides, forest margins, open grassy slopes. terrestrial, mycotrophic,

**Cymbidium mastersii** Griff. ex Lindl., Bot. Reg. 31: t.50 (1845).

**Flowering and Fruiting:** October – January.

**Habitat:** Trees or rocks in forests.

**Cymbidium munroanum** King & Pantl., J. Asiatic. Soc. Bengal, Pt. 2, Nat. Hist. 64: 238 (1895).

**Flowering and Fruiting:** April – May.

**Habitat:** growing terrestrial.

**CYRTOSIA** Bl.

Five species distributed in tropical Asia to East Asia; 1 in India and Assam

**Cyrtosia javanica** Bl., Bijdr. 396 (1825).

**Flowering and Fruiting:** May – July.

**Habitat:** Terrestrial (Mycotropic) in humid evergreen forest and Bamboo forests.

**DENDROBIUM** Sw.

More than 1000 species and is widely distributed in Sri Lanka, India, China, Japan, Malaysia, Australia and Newzealand. In India it represents 102 species and 57 species in Assam.

**Dendrobium acinaciforme** Roxb., Fl. Ind. ed. 1832, 3: 487 (1832).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Dendrobium aduncum** Wall. ex Lindl., Bot. Reg. 28:Misc. 58, no.62 (1842).

**Flowering and Fruiting:** March – September.

**Habitat:** Epiphyte on a small tree trunk in dense humid evergreen forest.

**Dendrobium amoenum** Wall. ex Lindl., Gen. Sp. Orchid. Pl.: 78 (1830).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on a small tree trunk.

**Dendrobium amplum** Lindl., N. Wallich, Pl. Asiat. Rar. 1: 25 (1830).

**Flowering and Fruiting:** September – November.

**Habitat:** Growing Lithophytic on rocks or epiphytic on tree trunks in forests or along streams.

**Dendrobium anceps** Sw., Kongl. Vetensk. Acad. Nya. Handl. 21: 246 (1800).

**Flowering and Fruiting:** April – August.

**Habitat:** Growing epiphytic on tree trunks in tropical and subtropical valleys.

**Dendrobium angulatum** Lindl., Gen. Sp. Orchid. Pl.: 88 (1830).

**Flowering and Fruiting:** – May – July.

**Habitat:** Growing epiphytic on tree trunks in tropical and subtropical valleys.

**Dendrobium aphyllum** (Roxb.) Fisher, Gamble, Fl. Madras 3, 1416, (1928).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphyte in mixed deciduous forest or open forest.

**Dendrobium bensoniae** Rchb. f., Bot. Zeitung (Berlin) 25: 230 (1867).

**Flowering and Fruiting:** May – June.

**Habitat:** Epiphyte on tree trunks.

**Dendrobium bicameratum** Lindl., Bot. Reg. 25:Misc. 59, no.85 (1839).

**Flowering and Fruiting:** July – September.

**Habitat:** Epiphytic on tree trunks and branches in temperate forests.

**Dendrobium chrysanthum** Wall. ex Lindl., Bot. Reg. 15: t.1299 (1830).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphytic on tree trunks in dense forests, (frequently lithophytic on wet rocks in valleys).

**Dendrobium chryseum** Rolfe, Gard. Chron. ser.3: 233 (1888).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphytic on tree trunks in high-mountain broad-leaved forests.

**Dendrobium chrysotoxum** Lindl., Bot. Reg. 33: t. 19 (1847).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphytic on tree trunks in sunny evergreen broad-leaved forests, (frequently lithophytic on rocks in open forests).

**Dendrobium crepidatum** Lindl. & Paxt., Paxton's Fl. Gard. 1: 63, t.45 (1850).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphytic on tree trunks in open forests.

**Dendrobium cumulatum** Lindl., Gard. Chron. 1855: 756 (1855).

**Flowering and Fruiting:** June – August.

**Habitat:** Epiphyte on tree trunk in forest along a small stream.

**Dendrobium darjeelingense** Pradhan, Indian Orchids: Guide Identif. & Cult. 2: 336 (1979).

**Flowering and Fruiting:** November – January.

**Habitat:** Epiphytic on tree trunks in lowland semi-evergreen forest.

**Dendrobium densiflorum** Lindl., Gen. Sp. Orchid. Pl.: 90 (1830).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on tree trunks and branches in evergreen broad-leaved forests.

**Dendrobium devonianum** Paxt., Paxton's Mag. Bot. 7: 169 (1840).

**Flowering and Fruiting:** March – September.

**Habitat:** Epiphytic on tree trunks and branches in thick mountain forests.

**Dendrobium eriiflorum** Griff., Not. Pl. Asiat. 3: 316 (1851).

**Flowering and Fruiting:** September – January.

**Habitat:** Epiphytic on tree trunks in subtropical forests (frequently found on lithophytic habitat).

**Dendrobium falconeri** Hook., Bot. Mag. 82: t.4944 (1856).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on tree trunks and branches.

**Dendrobium farmeri** Paxt., Paxton's Mag. Bot. 15: 241 (1849).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks.

**Dendrobium fimbriatum** Hook., Exot. Fl. 1: t.71 (1823).

**Key to the varieties:**

- 1a. Lip with a dark maroon blotch.....var. *oculatum*
- 1b. Lip without a dark maroon blotch.....var. *fimbriatum*

**1a. Dendrobium fimbriatum** Hook. var. *oculatum*

Hook., Bot. Mag. 71: t. 4160 (1845).

**1b. Dendrobium fimbriatum** Hook. var. *fimbriatum* Chowdhary, Orch. Fl. Arunachal Prad., 301 (1998).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphyte in mixed deciduous forest, also in humid evergreen forest.

**Dendrobium formosum** Roxb. ex Lindl., Wall., Pl. Asiat. Rar. : t.29 (1830).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphyte in tropical forest. Not so commonly found in some isolated patches in dense forest areas.

**Dendrobium fugax** Rchb. f., Gard. Chron. 1871: 1257 (1871).

**Flowering and Fruiting:** March – October.

**Habitat:** Epiphyte in humid evergreen forest, mixed deciduous forest.

**Dendrobium gibsonii** Lindl., Paxton's Mag. Bot. 5: 169 (1838).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphytic on tree trunks in open forests.

**Dendrobium griffithianum** Lindl., Edwards's Bot. Reg. 21: t. 1756 (1835).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on trees in high up.

**Dendrobium heterocarpum** Lindl., Gen. Sp. Orchid. Pl.: 78 (1830).

**Flowering and Fruiting:** December – June.

**Habitat:** Epiphytic on trees in sunny open forests.

**Dendrobium hookerianum** Lindl., J. Proc. Linn. Soc., Bot. 3: 8 (1859).

**Flowering and Fruiting:** July – October.

**Habitat:** Lithophytic on rocks in mountain valleys, epiphytic on tree trunks in mountain forests.

**Dendrobium jenkinsii** Wall. ex Lindl., Bot. Reg. 25: t.37 (1839).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on trees in sunny open forests.

**Dendrobium keithii** Ridl., J. Linn. Soc., Bot. 32: 247 (1896).

**Flowering and Fruiting:** January – April.

**Habitat:** Epiphytic on tall tree trunks and branches in sunny open forests.

**Dendrobium kentrophyllum** Hook. f., Fl. Brit. India 5: 725 (1890).

**Flowering and Fruiting:** July – October.

**Habitat:** Epiphytic on ridge-top and lower montane forests.

**Dendrobium lindleyi** Steud., Nomencl. Bot., ed.2: 490 (1840).

**Flowering and Fruiting:** February – June.

**Habitat:** Epiphytic on trees in sunny open forests.

**Dendrobium lituiflorum** Lindl., Gard. Chron. 1856: 372 (1856).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks in open forests.

**Dendrobium manni** Ridl., J. Linn. Soc., Bot. 32: 246 (1896).

**Flowering and Fruiting:** November – January.

**Habitat:** Epiphytic on trees trunks in mixed deciduous tropical forest.

**Dendrobium miserum** Rchb. f., Gard. Chron. 1869: 388 (1869).

**Flowering and Fruiting:** December – February.

**Habitat:** Epiphytic on trees trunks.

**Dendrobium moniliforme** (L.) Sw., Nova Acta Regiae Soc. Sci. Upsal. 6: 85 (1799).

**Flowering and Fruiting:** May – July.

**Habitat:** Epiphytic on tree trunks in broad-leaved forests, lithophytic on rocks in forests and cliffs in valleys.

**Dendrobium moschatum** (Buch.-Ham.) Sw., Neu. J. Bot. 1: 94 (1806).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphytic on tree trunks in open forests (rarely lithophytic).

**Dendrobium nathanielis** Rchb. f., Cat. Orch.-Samml. Schiller, ed. 3: 26 (1857).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on trees trunks in mixed deciduous forest.

**Dendrobium nobile** Lindl., Gen. Sp. Orchid. Pl.: 24 (1830).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphyte in humid evergreen montane ridge forest, also in the lowlands.

**Dendrobium palpebrae** Lindl., J. Hort. Soc. London 5: 33 (1850).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on tree trunk in tropical deciduous forest.

**Dendrobium pachyphyllum** (Kuntze) Bakh. f., Blumea 12: 69 (1963).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on tree trunk and branches in lower montane forests.

**Dendrobium parciflorum** Rchb. f. ex Lindl., J. Proc. Linn. Soc., Bot. 3: 4 (1858).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on tree trunk in open forests.

**Dendrobium parishii** Rchb. f., Bot. Zeit. 21(31): 236 (1863).

**Flowering and Fruiting:** September – October.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Dendrobium polyanthum** Wall. ex Lindl., Gen. Sp. Orchid. Pl.: 81 (1830).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphyte on tree trunk and branches in open deciduous forests.

**Dendrobium praecinctum** Rchb. f., Gard. Chron., n.s., 7: 750 (1877).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Dendrobium pulchellum** Roxb. ex Lindl., Gen. Sp. Orchid. Pl.: 82 (1830).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte on tree trunk in open deciduous forests.

**Dendrobium ruckeri** Lindl., Bot. Reg. 29: t. 60, misc.25, no.38 (1843).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte on tree trunk in dense humid evergreen forest.

**Dendrobium salaccense** (Bl.) Lindl., Gen. Sp. Orchid. Pl.: 86 (1830).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte on tree trunk and branches in dense humid evergreen forest.

**Dendrobium spatella** Rchb. f., Hamburger Garten-Blumenzeitung 21: 298 (1865).

**Flowering and Fruiting:** May – July.

**Habitat:** Epiphytic on tree trunks at forest margins, lithophytic on rocks in forests.

**Dendrobium stuposum** Lindl., Bot. Reg. 24: misc.52, no.94 (1838).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphytic on tree trunks in open and mountain forests.

**Dendrobium sulcatum** Lindl., Bot. Reg. 24: t.65 (1838).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on tree trunks in dense forests.

**Dendrobium terminale** Parish & Rchb. f., Trans. Linn. Soc. London 30: 149 (1874).

**Flowering and Fruiting:** September – November.

**Habitat:** Epiphytic on tree trunks at forest.

**Dendrobium thyrsiflorum** B.S. Williams, Orch.-Grow. Man., ed. 4: 172 (1871).

**Flowering and Fruiting:** April – May.

**Habitat:** Epiphytic on tree trunks at forest.

**Dendrobium transparens** Wall. ex Lindl., Gen. Sp. Orchid. Pl.: 79 (1830).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks and branches in forest.

**Dendrobium treutleri** (Hook. f.) Schuit. & Peter B.Adams, Muelleria 29: 66 (2011).

**Flowering and Fruiting:** September – October.

**Habitat:** Growing in a moist shady place on tree trunk.

**Dendrobium wardianum** R. Warner, Select Orchid. Pl.: t. 19 (1863).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphytic on tree trunks in forests.

**Dendrobium williamsonii** J. Day & Rchb. f., Gard. Chron. 1869: 78 (1869).

**Flowering and Fruiting:** February – April.

**Habitat:** Epiphytic on tree trunks in forests.

**DIDYMOPLEXIS** Griff.

About 18 species distributed India, South China, and Indochina to South Japan (Ryukyu Islands) and the Philippines, throughout the Malay Archipelago to Papua New Guinea, tropical Australia, and the South West Pacific islands, also in South West Africa and Madagascar; 2 species in India, 1 in Assam.

**Didymoplexis pallens** Griff., Calcutta J. Nat. Hist. 4: 383, t. 17 (1844).

**Flowering and Fruiting:** April – July.

**Habitat:** Terrestrial (Mycotropic), growing in bamboo forest.

**DIENIA** Lindl.

About 19 species distributed throughout the Asian tropics and subtropics and in Australia; 3 species in India 1 in Assam.

**Dienia ophrydis** (J. König) Seidenf., Contr. Orchid Fl. Thailand 13: 18 (1997).

**Flowering and Fruiting:** May – August.

**Habitat:** Terrestrial in open humid evergreen forest.

**DIPLOPRORA** Hooker.

Two species distributed in China, India (including Andaman Islands), Myanmar, Sri Lanka, Thailand, Vietnam; 1 in Assam.

**Diploprora championii** (Lindl. ex Benth.) Hook. f., Fl. Brit. India 6(1): 26 (1890).

**Flowering and Fruiting:** July – September

**Habitat:** Growing Epiphytic on tree trunks and branches in forests.

**EPIPOGIUM** Borkh.

Three species in tropical Africa, temperate and tropical Asia, North East Australia, Europe, South West Pacific Islands; 3 species in India, 1 in Assam.

**Epipogium roseum** (D. Don) Lindl., J. Proc. Linn. Soc., Bot. 1: 177 (1857).

**Flowering and Fruiting:** April – October.

**Habitat:** Terrestrial (Mycotropic) in evergreen forest.

**ERIA** Lindl.

About 15 species distributed mainland Asia and the whole of the Malay Archipelago, East to New Guinea and Bougainville Island; 8 species in Assam.

**Eria biflora** Griff., Not. Pl. Asiat. 3: 302 (1851).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphyte in primary montane forests.

**Eria connata** Joseph, Hegde & Abbareddy, Bull. Bot. Surv. India 24(1-4): 114 (1982).

**Flowering and Fruiting:** July – October.

**Habitat:** Epiphyte in dense humid evergreen forest.

**Eria carinata** Gibson ex Lindl., J. Proc. Linn. Soc., Bot. 3: 50 (1859).

**Flowering and Fruiting:** September – February.

**Habitat:** Epiphyte in dense humid evergreen forest.

**Eria clavicaulis** Wall. ex Lindl., Bot. Reg. 26 (Misc.): 90, no.220 (1840).

**Flowering and Fruiting:** March – May.

**Habitat:** Epiphyte in dense humid evergreen forest.

**Eria ferruginea** Lindl., Bot. Reg. n.s. 25: t.35 (1839).

**Key to the varieties:**

1a. Inflorescence laxly racemose,  
more than 4-5 flowers opening  
insuccession at a time.....var. **ferruginia**

1b. Inflorescence densely racemose,  
branched, less than 3-4 flowers  
opening in succession at a time.... var. **assamica**

**1a. Eria ferruginea** Lindl. var. **ferruginea**

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphyte in dense humid evergreen forest.

**1b. Eria ferruginea** Lindl. var. **assamica** Gogoi et al.  
MIOS J. 15(2): 2-11. (2014).

**Flowering and Fruiting:** April – June.

**Habitat:** Epiphyte in dense humid evergreen forest.

**Eria javanica** (Sw.) Bl., Rumphia 2: 23 (1836).

**Flowering and Fruiting:** July – October.

**Habitat:** Epiphyte or lithophytic in rocky places.

**Eria lasiopetala** (Willd.) Ormerod, Opera Bot. 124: 22 (1995).

**Flowering and Fruiting:** February – July.

**Habitat:** Epiphyte in humid evergreen forest, mixed deciduous forest.

*Eria tomentosa* (Koen.) Hook. f., Fl. Brit. India 5: 803 (1890).

**Flowering and Fruiting:** September – December.

**Habitat:** Epiphyte in humid evergreen forest, mixed deciduous forest.

#### **ERIODES** Rolfe.

One species distributed in Bhutan, South West China, North East India, Myanmar, Thailand, Vietnam; 1 in India and Assam

*Eriodes barbata* (Lindl.) Rolfe, Orchid Rev. 23: 326 (1915).

**Flowering and Fruiting:** October – February.

**Habitat:** Epiphytic on tree trunks at forest margins or in open forests.

#### **ERYTHRODES** Bl.

About 20 species distributed in tropical Asia from India and Sri Lanka to New Guinea and the Pacific Islands; 2 species in India and 1 in Assam.

*Erythrodes hirsuta* (Griff.) Ormerod, Seidenf., Contr. Orch. Fl. Thailand 13: 12 (1997).

**Flowering and Fruiting:** March – June.

**Habitat:** Evergreen broad-leaved forests.

#### **ERYTHRORCHIS** Bl.

Three species distributed in South East Asia, extending north to South Japan (Ryukyu Islands) and southeast to New Guinea and the Pacific islands, 2 species in India and 1 in Assam.

*Erythrorchis altissima* (Bl.) Bl., Rumphia 1: 200 (1837).

**Flowering and Fruiting:** April – July.

**Habitat:** Terrestrial (Mycotropic) on Bamboo forests, evergreen broad-leaved forests.

#### **EULOPHIA** R. Br.

About 200 species distributed throughout the tropics; 32 species in India; 9 species in Assam.

*Eulophia bicallosa* (D. Don) Hunt & Summerh., Kew Bull. 20: 60 (1966).

**Flowering and Fruiting:** February – May.

**Habitat:** Terrestrial on sparse forests, Bamboo forests, grassy slopes.

*Eulophia bracteosa* Lindl., Gen. Sp. Orchid. Pl.: 180 (1833).

**Flowering and Fruiting:** April – July.

**Habitat:** Terrestrial on open places along valleys, scrubby grasslands.

*Eulophia dabia* (D. Don) Hochr., Bull. New York Bot. Gard. 6: 270 (1910).

**Flowering and Fruiting:** January – June.

**Habitat:** Growing on damp and loose soil and grass land.

*Eulophia graminea* Lindl., Gen. Sp. Orchid. Pl.: 182 (1833).

**Flowering and Fruiting:** March – June.

**Habitat:** Terrestrial on grassy places in open forests, open slopes, disturbed grasslands, forests along sandy beaches, coastal grasslands.

*Eulophia herbacea* Lindl., Gen. Sp. Orchid. Pl.: 182 (1833).

**Flowering and Fruiting:** June – September.

**Habitat:** Terrestrial on montane grasslands.

*Eulophia kamarupa* Sud. Chowdhury, J. Orchid Soc. India 7: 49 (1993).

**Flowering and Fruiting:** January.

**Habitat:** Growing on damp and loose soil and grass land.

*Eulophia mannii* (Rchb. f.) Hook. f., Fl. Brit. India 6(1): 4 (1890).

**Flowering and Fruiting:** June – October.

**Habitat:** Terrestrial on forests.

*Eulophia spectabilis* (Dennst.) Suresh, Regnum Veg. 119: 300 (1988).

**Flowering and Fruiting:** March – August.

**Habitat:** Terrestrial on mixed forests, grassy slopes.

*Eulophia zollingeri* (Rchb. f.) J.J. Sm., Orch. Java: 228 (1905).

**Flowering and Fruiting:** May – August.

**Habitat:** Terrestrial (Mycotropic) on forests, bamboo forests, grassy slopes.

#### **GALEOLA** Lour.

About ten species distributed in tropical Asia, extending to S. China, Japan, New Guinea, and Madagascar; 4 species in India and 1 in Assam.

*Galeola lindleyana* (Hook. f. & Thom.) Rchb. f., Xenia Orchid. 2: 78 (1862).

**Flowering and Fruiting:** May – September.  
**Habitat:** Terrestrial (Mycotropic) on sparse forests, sparse thickets, humus-rich and moist rocky places along valleys.

**GASTROCHILUS** D. Don  
About 20 species distributed in East Asia, India, Malaysia and adjoining Islands; 12 species in India, 4 in Assam.

**Gastrochilus calceolaris** (Buch.-Ham. ex J.E. Sm.) D. Don, Prodr. Fl. Nepal.: 32 (1825).

**Flowering and Fruiting:** March – July.  
**Habitat:** Epiphyte in humid evergreen forest, mixed deciduous forest.

**Gastrochilus dasypogon** (J.E. Sm.) Kuntze, Revis. Gen. Pl. 2: 661 (1891).

**Flowering and Fruiting:** October – January.  
**Habitat:** Epiphyte in humid evergreen forest, mixed deciduous forest.

**Gastrochilus inconspicuus** (Hook. f.) Kuntze, Revis. Gen. Pl. 2: 661 (1891).

**Flowering and Fruiting:** June – September.  
**Habitat:** Epiphyte in humid evergreen forest, mixed deciduous forest.

**Gastrochilus obliquus** (Lindl.) Kuntze, Revis. Gen. Pl. 2: 661 (1891).

**Flowering and Fruiting:** October – January.  
**Habitat:** Epiphyte on tree trunks and branches at forest margins.

**GEODORUM** Jackson  
About 10 species in India, South East Asia, Australia, and South West Pacific Islands; 6 species in India, and 4 in Assam.

**Geodorum appendiculatum** Griff., Calcutta J. Nat. Hist. 5: 357 (1845).

**Flowering and Fruiting:** May-June  
**Habitat:** Terrestrial, growing in association with *Melastoma malabathricum* L., *Eupatorium odoratum* L. etc.

**Geodorum densiflorum** (Lamk.) Schltr., Repert. Sp. Nov. Regni Veg. Beih. 4: 259 (1919).

**Flowering and Fruiting:** June – September.  
**Habitat:** Terrestrial in forest, also in grass land.

**Geodorum laxiflorum** Griff., Calcutta J. Nat. Hist. 5: 356 (1845).

**Flowering and Fruiting:** June – July.  
**Habitat:** Terrestrial in evergreen forest, also in grass land.

**Geodorum pallidum** D. Don, Prodr. Fl. Nepal.: 31 (1825).

**Flowering and Fruiting:** April – May.  
**Habitat:** Terrestrial in evergreen forest, also in grass land.

**GOODYERA** R. Br.  
About 40 species widely distributed in Mexico, South East Asia, Pacific Islands, New Guinea, Australia and Madagascar; 19 species in India, 6 in Assam.

**Goodyera foliosa** (Lindl.) Benth. ex C.B. Clarke, J. Linn. Soc., Bot. 25: 73 (1889).

**Flowering and Fruiting:** July – December.  
**Habitat:** Terrestrial on forests, damp places along valleys.

**Goodyera hispida** Lindl., J. Linn. Soc., Bot. 1: 183 (1857).

**Flowering and Fruiting:** September – April.  
**Habitat:** Terrestrial on lowland broadleaf evergreen forests.

**Goodyera procera** (Ker Gawl.) Hook., Exot. Fl. 1(3): t.39 (1823).

**Flowering and Fruiting:** March – June.  
**Habitat:** Terrestrial at the bank of a small stream and in open herbaceous vegetation at the top of a waterfall in evergreen forest, also on rock in a stream.

**Goodyera recurva** Lindl., J. Proc. Linn. Soc., Bot. 1: 183 (1857).

**Flowering and Fruiting:** September – October.  
**Habitat:** Tree trunks in evergreen broad-leaved forests.

**Goodyera repens** (L.) R. Br., Aiton, Hortus Kew., ed. 2(5): 198 (1813).

**Flowering and Fruiting:** July – November.  
**Habitat:** Terrestrial on forests along valleys.

**Goodyera viridiflora** (Bl.) Lindl. ex D. Dietrich, Syn. Pl. 5: 165 (1852).

**Flowering and Fruiting:** August – December.  
**Habitat:** Forests, damp places along streams, in thin leaf litter on rocks.

**GYMNADENIA** R. Br.

About 16 species distributed throughout Europe and parts of Central and East Asia, the Himalayas, and Japan; 2 species in India and 1 in Assam.

**Gymnadenia orchidis** Lindl., Gen. Sp. Orchid. Pl.: 278 (1835).

**Flowering and Fruiting:** June – October.

**Habitat:** Terrestrial on forests, thickets, alpine grasslands.

**HABENARIA** Willd.

About 600 species distributed in tropical and subtropical areas; about 70 species in India; 11 in Assam.

**Habenaria acuifera** Wall. ex Lindl., Gen. Sp. Orchid. Pl. 325 (1835).

**Flowering and Fruiting:** June – December.

**Habitat:** Terrestrial on forest grasslands.

**Habenaria arietina** Hook., Fl. Brit. India 6: 138 (1890).

**Flowering and Fruiting:** August – September.

**Habitat:** Terrestrial on Grassy slopes.

**Habenaria commelinifolia** (Roxb.) Wall. ex Lindl., Gen. Sp. Orchid. Pl.: 325 (1835).

**Flowering and Fruiting:** August – October.

**Habitat:** Terrestrial on forests floor and wasteland.

**Habenaria digitata** Lindl., Gen. Sp. Orchid. Pl.: 307 (1835).

**Flowering and Fruiting:** July – October.

**Habitat:** Terrestrial on forests.

**Habenaria furcifera** Lindl., Gen. Sp. Orchid. Pl. 319 (1835).

**Flowering and Fruiting:** June – November.

**Habitat:** Terrestrial on broad-leaved forests or forest margins.

**Habenaria longifolia** Buch.-Ham. ex Lindl., Gen. Sp. Orchid. Pl.: 324 (1835).

**Flowering and Fruiting:** August – October.

**Habitat:** Terrestrial on open grasslands.

**Habenaria mandersii** Collett & Hemsl., J. Linn. Soc., Bot. 28: 133 (1890).

**Flowering and Fruiting:** August – December.

**Habitat:** Terrestrial on deciduous forest.

**Habenaria reniformis** (D. Don) Hook. f., Fl. Brit. India 6: 152 (1890).

**Flowering and Fruiting:** August – December.

**Habitat:** Terrestrial on moist grasslands.

**Habenaria plantaginea** Lindl., Gen. Sp. Orchid. Pl.: 323 (1835).

**Flowering and Fruiting:** August – October.

**Habitat:** Terrestrial on moist grasslands.

**Habenaria stenopetala** Lindl., Gen. Sp. Orchid. Pl. 319 (1835).

**Flowering and Fruiting:** August – November.

**Habitat:** Terrestrial on broad-leaved forests or forest margins.

**HERMINIUM** L.

About 25 species distributed in Europe, parts of South West and Central Asia, extending to East and South East Asia and the Himalayas; 15 species in India, 1 in Assam.

**Herminium lanceum** (Thunb. ex Sw.) Vuijk, Blumea 11(1): 228 (1961).

**Flowering and Fruiting:** June – October.

**Habitat:** Terrestrial on mixed forests, coniferous forests, bamboo forests, thickets, grasslands.

**HETAERIA** Bl.

About 30 species distributed in tropical Africa and Asia, extending to New Guinea, North East Australia, and the Pacific Islands; 5 species in India, 1 in Assam.

**Hetaeria affinis** (Griff.) Seidenf. & Ormerod, Oasis, Suppl. 2: 9 (2001).

**Flowering and Fruiting:** January – May.

**Habitat:** Terrestrial in secondary evergreen forest close to a small stream.

**HYGROCHILUS** Pfitz.

One species distributed China, North East India, Laos, Myanmar, Thailand and Vietnam.

**Hygrochilus parishii** (Veitch & Rchb. f.) Pfitz., Engler, Nat. Pflanzenfam. 1: 112 (1897).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks in open forests.

**LIPARIS** Rich.

About 320 species distributed mainly in the tropics of the world and comparatively less frequent in the temperate region; 45 species in India and 12 in Assam.

**Liparis barbata** Lindl., Gen. Sp. Orchid. Pl.: 27 (1830).

**Flowering and Fruiting:** July – October.

**Habitat:** Terrestrial on soil-covered rocks in forests.

**Liparis bootanensis** Griff., Itin. Pl. Khasyah Mts.: 98 (1848).

**Flowering and Fruiting:** August – December.

**Habitat:** Epiphytic on forest margins, forests or shaded trees, rocks or cliffs along valleys.

**Liparis cespitosa** (Lamk.) Lindl., Bot. Reg. 11: sub t.882 (1825).

**Flowering and Fruiting:** June – November.

**Habitat:** Epiphytic on trees, rocks in forests, shaded places.

**Liparis delicatula** Hook. f., Fl. Brit. India 5: 705 (1890).

**Flowering and Fruiting:** December – February.

**Habitat:** On trees in forests.

**Liparis distans** C.B. Clarke, J. Linn. Soc., Bot. 25: 71 (1889).

**Flowering and Fruiting:** December–February.

**Habitat:** On trees in forests, shaded cliffs along valleys.

**Liparis elliptica** Wight, Icon. Pl. Ind. Orient. 5: t. 1735 (1851).

**Flowering and Fruiting:** November – February.

**Habitat:** On trees in forests.

**Liparis mannii** Rchb. f., Flora 55: 275 (1872).

**Flowering and Fruiting:** November – February.

**Habitat:** Epiphyte in humid evergreen forest.

**Liparis nervosa** (Thunb.) Lindl., Gen. Sp. Orchid. Pl.: 26 (1830).

**Flowering and Fruiting:** May – October.

**Habitat:** Terrestrial on shaded places in grasslands or soil-covered rocks.

**Liparis odorata** (Willd.) Lindl., Gen. Sp. Orchid. Pl.: 26 (1830).

**Flowering and Fruiting:** April – Octorber.

**Habitat:** Terrestrial on forests, sparse forests, grassy slopes.

**Liparis petiolata** (D. Don) Hunt & Summerh., Kew Bull. 20: 52 (1966).

**Flowering and Fruiting:** May – August.

**Habitat:** Terrestrial on stream sides, humid places.

**Liparis plantaginea** Lindl., Gen. Sp. Orchid. Pl.: 29 (1830).

**Flowering and Fruiting:** June – November.

**Habitat:** Epiphyte in humid evergreen forest.

**Liparis vestita** Rchb. f., Flora 55: 274 (1872).

**Flowering and Fruiting:** June – July.

**Habitat:** Epiphytic on tree branches.

**Liparis viridiflora** (Bl.) Lindl., Gen. Sp. Orchid. Pl.:31 (1830).

**Flowering and Fruiting:** October – December.

**Habitat:** Epiphyte in humid evergreen forest and mixed deciduous forest.

**Liparis wightiana** Thwaites, Enum. Pl. Zeyl. 295 (1861).

**Flowering and Fruiting:** June – September.

**Habitat:** Terrestrial on forests, shaded places in grasslands or soil-covered rocks.

**LUISIA** Gaud.

About 40 species in tropical Asia, Malaysia, Australia and Japan; 16 species in India, 5 in Assam.

**Luisia brachystachys** (Lindl.) Bl., Rumphia 4: 50 (1849).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphytic on tree trunks in forests along valleys.

**Luisia filiformis** Hook. f., Fl. Brit. India 6(1): 23 (1890).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphytic on tree trunks in dense forests (rarely lithophytic).

**Luisia macrotis** Rchb. f., Gard. Chron. 1869: 110 (1869).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphyte in humid evergreen forest, growing on exposed trees.

**Luisia trichorrhiza** (Hook.) Bl., Rumphia 4: 50 (1849).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphyte in humid evergreen forest, growing on exposed trees.

**Luisia tristis** (G. Forst.) Hook. f., Fl. Brit. India 6: 25 (1890).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte in humid evergreen forest, growing on exposed trees.

**MICROPERA** Lindl.

About 15 species distributed from the Himalayas to South East Asia, New Guinea, Australia, and the Solomon Islands; 4 species in India, 4 in Assam.

***Micropora mannii*** (Hook. f.) Tang & Wang, Acta Phytotax. Sin. 1(1-2): 94 (1951).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte on tree trunk in evergreen tropical forest.

***Micropora obtusa*** (Lindl.) Tang & Wang, Acta Phytotax. Sin. 1(1): 94 (1951).

**Flowering and Fruiting:** June – October.

**Habitat:** Epiphyte on tree trunks and branches in evergreen tropical forest.

***Micropora pallida*** (Roxb.) Lindl., Edwards's Bot. Reg. 18: t. 1522 (1832).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte on tree trunk in evergreen tropical forest.

***Micropora rostrata*** (Roxb.) Balakr., J. Bombay Nat. Hist. Soc. 67(1): 66 (1970).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte on tree trunk in evergreen tropical forest.

#### **MONOMERIA** Lindl.

About three species distributed Nepal to Myanmar, Thailand, and Vietnam; 2 species in India, 1 in Assam.

***Monomeria barbata*** Lindl., Gen. Sp. Orchid. Pl.: 61 (1830).

**Flowering and Fruiting:** January – April.

**Habitat:** Epiphyte on tree trunks or rocks in forests.

#### **MYCARANTHES** Bl.

About 25 species distributed in Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, New Guinea, Philippines, Singapore, Thailand, Vietnam; 2 species in Assam.

***Mycaranthes floribunda*** (D. Don) S.C. Chen & J.J. Wood, Fl. China 25: 348 (2009).

**Flowering and Fruiting:** December – March.

**Habitat:** Epiphyte in dense humid evergreen forest.

***Mycaranthes pannea*** (Lindl.) S.C. Chen & J.J. Wood, Fl. China 25: 348 (2009).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte in dense evergreen forest, in secondary evergreen lowland forest, in deciduous dipterocarp forest and in mixed deciduous forest.

#### **NEPHELAPHYLLUM** Bl.

About 15 species distributed from India, Bhutan, Myanmar, Thailand, and Indochina north to China and Japan, eastward through Malaysia and Indonesia to the Philippines; one species in Assam.

***Nephelaphyllum cordifolium*** (Lindl.) Bl., Fl. Javae Nov. Ser. 1: t. 61.3 (1858).

**Flowering and Fruiting:** June – August.

**Habitat:** Forests, shaded and damp places.

#### **NERVILIA** Commer. ex Gaud.

About 65 species distributed in tropical and subtropical Africa, Madagascar, and parts of the Arabian Peninsula, across India, Nepal, and Bhutan to Japan, South East Asia, New Guinea, North Australia, and the South West Pacific islands; 14 species in India, 3 in Assam.

***Nervilia concolor*** (Bl.) Schltr., Bot. Jahrb. Syst. 45: 404 (1911).

**Flowering and Fruiting:** May – August.

**Habitat:** Forests, shaded and damp places along valleys.

***Nervilia juliana*** (Roxb.) Schltr., Bot. Jahrb. Syst. 45: 402 (1911).

**Flowering and Fruiting:** May – August.

**Habitat:** Terrestrial, growing on open and loose soil.

***Nervilia plicata*** (Andr.) Schltr., Bot. Jahrb. Syst. 45: 403 (1911).

**Flowering and Fruiting:** April – July.

**Habitat:** Forests, shaded and damp places.

#### **OBERONIA** Lindl.

About 150 species mainly distributed to tropical Asia, a few are known from pacific Islands and Australia, a single species in Madagascar and tropical Africa; 50 species in India, 13 in Assam.

***Oberonia acaulis*** Griff., Itin. Pl. Khasyah Mts.: 76 (1848).

**Flowering and Fruiting:** October – December.

**Habitat:** Epiphytic on trees in forests.

***Oberonia anthropophora*** Lindl., Gen. Sp. Orchid. Pl.: 16 (1830).

**Flowering and Fruiting:** April – May.

**Habitat:** Epiphytic on trees along valleys.

*Oberonia clarkei* Hook. f., Icon. Pl. 18: t. 1779a (1888).

**Flowering and Fruiting:** September – December.

**Habitat:** Epiphytic on trees in forests.

*Oberonia ensiformis* (J.E. Sm.) Lindl., Fol. Orchid. Oberonia 8: 4, no.21 (1859).

**Flowering and Fruiting:** September – December.

**Habitat:** Epiphytic on trees in forests.

*Oberonia falcata* King & Pantl., J. Asiat. Soc. Bengal, 64(3): 329 (1896).

**Flowering and Fruiting:** July – November.

**Habitat:** Epiphytic on trees in forests.

*Oberonia falconeri* Hook. f., Icon. Pl. ser.3(18): t.1780 (1888).

**Flowering and Fruiting:** September – December.

**Habitat:** Epiphytic on tree trunks in forests.

*Oberonia jenkinsiana* Griff. ex Lindl., Fol. Orchid. 8: 4 (1859).

**Flowering and Fruiting:** August – October.

**Habitat:** Epiphytic on trees in forests.

*Oberonia emarginata* King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) 8: 6 (1898).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphytic on trees along valleys.

*Oberonia mannii* Hook. f., Hooker's Icon. Pl. 21: t. 2003 (1890).

**Flowering and Fruiting:** December – January.

**Habitat:** Epiphytic on trees in forests.

*Oberonia mucronata* (D. Don) Ormerod & Seidenf., Seidenf., Contr. Orch. Fl. Thailand 13: 20 (1997).

**Flowering and Fruiting:** September – January.

**Habitat:** Epiphyte on tree trunk in evergreen tropical forest.

*Oberonia obcordata* Lindl., Fol. Orchid. Oberonia 8: 7, no.43 (1859).

**Flowering and Fruiting:** July – January.

**Habitat:** Lithophytic on rocks in forests.

*Oberonia pachyrachis* Rchb. f. ex Hook. f., Fl. Brit. India 5(2): 681 (1890).

**Flowering and Fruiting:** November – April.

**Habitat:** Epiphytic on trees in dense forests.

*Oberonia pyrulifera* Lindl., Fol. Orchid. Oberonia 8: 3, no.15 (1859).

**Flowering and Fruiting:** September – January.

**Habitat:** Epiphytic on trees in forests.

#### **ODONTOCHILUS** Bl.

About 40 species distributed in North India and the Himalayas, through South East Asia, as far North as Japan, East to the South West Pacific Islands; 7 species in India, 3 in Assam.

*Odontochilus elwesii* C.B. Clarke ex Hook. f., Fl. Brit. India 6(1): 100 (1890).

**Flowering and Fruiting:** July – September.

**Habitat:** Terrestrial on damp places in evergreen broad-leaved forests and Bamboo forests.

*Odontochilus lanceolatus* (Lindley) Bl., Coll. Orchid. 80 (1859).

**Flowering and Fruiting:** July – August.

**Habitat:** Damp places in evergreen broad-leaved forests.

*Odontochilus tortus* King & Pantl., J. Asiat. Soc. Bengal, 65(2): 125 (1896).

**Flowering and Fruiting:** November – December.

**Habitat:** Terrestrial on dense forests.

#### **OREORCHIS** Lindl.

About 16 species distributed Bhutan, East and South West China, North East India, Japan, Korea, Myanmar, Nepal, East Russia (Far East, Siberia); 2 species in India, 1 in Assam.

*Oreorchis micrantha* Lindl., J. Proc. Linn. Soc., Bot. 3: 27 (1859).

**Flowering and Fruiting:** June – October.

**Habitat:** Terrestrial in forest and waste lands.

#### **ORNITHOCHILUS** (Wall. ex Lindl.) Benth. & Hook. f.

The genus comprises about 3 species distributed from the Indian Himalayas and China, through South East Asia to Malaysia, Sumatra and Borneo; 1 species in India and Assam.

*Ornithochilus difformis* (Wall. ex Lindl.) Schltr., Feddes Report. Spec. Nov. Regni Veg. Beih. 4: 277 (1919).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphytic on tall tree trunks in open forests or at forest margins.

***OTOCILUS* Lindl.**

Four species distributed in Bhutan, China, North East India, Myanmar, Nepal, Thailand, and Indochina; 4 species in India, 2 in Assam.

***Otochilus fuscus* Lindl.**, Gen. Sp. Orchid. Pl. 35 (1830).

**Flowering and Fruiting:** November – July.

**Habitat:** Epiphyte on trees in forest.

***Otochilus lancilabius* Seidenf.**, Opera Bot. 89: 94 (1986).

**Flowering and Fruiting:** October – November.

**Habitat:** Epiphytic on trees in forests.

***PACHYSTOMA* Bl.**

About 20 species distributed tropical Asia and the Malay Archipelago, N Australia, New Guinea, and New Caledonia; 2 species in India, 1 in Assam.

***Pachystoma pubescens* Bl.**, Bijdr. Fl. Ned. Ind.: 376, t. 3, f. 29 (1825).

**Flowering and Fruiting:** March – September.

**Habitat:** Grassy slopes.

***PANISEA* (Lindl.) Lindl.**

Seven species distributed in Bhutan, Cambodia, China, North East India, Laos, Myanmar, Nepal, Thailand, Vietnam; 4 species in India and 1 in Assam.

***Panisea tricallosa* Rolfe**, Bull. Misc. Inform. Kew 1901: 148 (1901).

**Flowering and Fruiting:** May – June.

**Habitat:** Epiphytic on trees in forests.

***Panisea uniflora* (Lindl.) Lindl.**, Fol. Orchid. 5: 2 (1854).

**Flowering and Fruiting:** October – March.

**Habitat:** Epiphytic on trees or lithophytic on rocks in forests.

***PAPHIOPEDILUM* Pfitz.**

About 80–85 species distributed in tropical Asia to the Pacific islands, with some species extending to subtropical areas; 9 species in India, 3 in Assam.

***Paphiopedilum spicerianum* (Rchb.f.) Pfitz.**, Jahrb. Wiss. Bot. 19: 164 (1888).

**Flowering and Fruiting:** September – January.

**Habitat:** Rocky places, cliffs or crevices of limestone rocks in forests or on bushy slopes.

***Paphiopedilum venustum* (Wall. ex Sims) Pfitz.**, Jahrb. Wiss. Bot. 19: 163. 1888.

**Flowering and Fruiting:** January – March.

**Habitat:** Humus-rich and rocky places in thickets or at forest margins.

***Paphiopedilum villosum* (Lindl.) Stein**, Orchid.-Buch: 490 (1892).

**Flowering and Fruiting:** September – November.

**Habitat:** Rocky places, cliffs or crevices of limestone rocks in forests or on bushy slopes.

***PAPILIONANTHE* Schltr.**

About 11 species in India, South East Asia, and Malaya Archipelago; 4 species in India, 3 in Assam.

***Papilionanthe teres* (Roxb.) Schltr.**, Orchis 9: 78, t.12 (1915).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphyte in mixed deciduous forest, also on solitary roadside trees.

***Papilionanthe uniflora* (Lindl.) Garay**, Bot. Mus. Leafl. 23(10): 372 (1974).

**Flowering and Fruiting:** July – December.

**Habitat:** Epiphyte forest also on roadside trees.

***Papilionanthe vandarum* (Rchb. f.) Garay**, Bot. Mus. Leafl. 23(10): 372 (1974).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphyte forest also on roadside trees.

***PECTEILIS* Rafinesque**

About five species distributed in East and South East Asia, Himalayas; 4 species in India, 1 in Assam.

***Pecteilis susannae* (L.) Raf.**, Fl. Tellur. 2: 38, no.125 (1836).

**Flowering and Fruiting:** July – October.

**Habitat:** Terrestrial, Forests, grassy slopes, damp places in valleys.

***PELATANTHERIA* Ridl.**

About five species: Tropical Himalayas South to Sumatra, North to Korea and Japan; 1 species in India and Assam.

***Pelatantheria insectifera* (Rchb. f.) Ridl.**, J. Linn. Soc., Bot. 32: 373 (1896).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphyte on tree trunk and branches.

***PENNILABIUM* J.J. Sm.**

About ten to 12 species distributed from India through Thailand and Malaysia to Indonesia and the Philippines; 2 species in India, 1 in Assam.

**Pennilabium struthio** Carr, Gard. Bull. Straits Settlem. 5: 151 (1930).

**Flowering and Fruiting:** July – September.

**Habitat:** Growing as epiphyte.

#### **PERISTYLUS** Bl.

About 70 species distributed in East, South, and South East Asia to New Guinea, North East Australia, and the South West Pacific Islands; 29 species in India, 4 in Assam.

**Peristylus constrictus** (Lindl.) Lindl., Gen. Sp. Orchid. Pl.: 300 (1835).

**Flowering and Fruiting:** June – September.

**Habitat:** Terrestrial on scrubby slopes.

**Peristylus densus** (Lindl.) Santapau & Kapadia, J. Bombay Nat. Hist. Soc. 57: 128 (1960).

**Flowering and Fruiting:** May – October.

**Habitat:** Terrestrial on moist grasslands forest.

**Peristylus goodyeroides** (D. Don) Lindl., Gen. Sp. Orchid. Pl.: 299 (1835).

**Flowering and Fruiting:** June – September.

**Habitat:** Terrestrial on broad-leaved forests, scrub, grassy slopes.

**Peristylus prainii** (Hook. f.) Kranz., Orchid. Gen. Sp. 1: 514 (1901).

**Flowering and Fruiting:** July – October.

**Habitat:** Terrestrial,

#### **PHAIUS** Lour.

About 40 species distributed tropical Africa, Madagascar, tropical and subtropical Asia to Oceania; 7 species in India, 3 in Assam.

**Phaius flavus** (Bl.) Lindl., Gen. Sp. Orchid. Pl.: 128 (1831).

**Flowering and Fruiting:** April – June.

**Habitat:** Terrestrial from the humid shady floors of broadleafed, evergreen primary forests on moss covered logs in scrub and in splash along steep watercourses.

**Phaius mishmensis** (Lindl. & Paxt.) Rchb. f., Bonplandia (Hannover) 5: 43 (1857).

**Flowering and Fruiting:** September – February.

**Habitat:** Terrestrial on the bank of a small stream in dense humid evergreen forest.

**Phaius tankervilleae** (Banks ex I'Herit.) Bl., Mus. Bot. 2: 177 (1856).

**Flowering and Fruiting:** February – June.

**Habitat:** Terrestrial on shaded and damp places in forests, at forest margins, along valleys, or by streamsides.

#### **PHALAENOPSIS** Bl.

About 46 species distributed in India, South East Asia, Indonesia, Philippines and North Australia; 14 species in India, 8 in Assam.

**Phalaenopsis cornu-cervi** (Breda) Bl. & Rchb. f., Hamburger Garten-Blumenzeitung 16: 116 (1860).

**Flowering and Fruiting:** April- May.

**Habitat:** Epiphyte or lithophyte of exposed lowland locations on stunted vegetation in fairly exposed areas or in dense riverine or lowland forests.

**Phalaenopsis deliciosa** Rchb. f., Bonplandia (Hannover) 2: 93 (1854).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphyte in gallery forest along a large river, in a shady spot in humid evergreen forest.

**Phalaenopsis lobbii** (Rchb. f.) Sw., Gen. Phalaenopsis: 53 (1980).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte in forest along a river, in a shady spot in humid evergreen forest.

**Phalaenopsis mannii** Rchb. f., Gard. Chron. 1871: 902 (1871).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphytic on tree trunks in broad-leaved evergreen forests.

**Phalaenopsis malipoensis** Z.J. Liu & S.C. Chen, Acta Bot. Yunnan. 27: 37 (2005).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte in forest along with a water body, in a shady spot.

**Phalaenopsis parishii** Rchb. f., Bot. Zeitung (Berlin) 23: 146 (1865).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphytic on tree trunks in open forests.

**Phalaenopsis pulcherrima** (Lindl.) J.J. Sm., Repert. Spec. Nov. Regni Veg. 32: 366 (1933).

**Flowering and Fruiting:** July – August.

**Habitat:** Lithophytic or terrestrial orchid in sandy soils in evergreen, lowland forests along canyons of montane streams and rivers.

*Phalaenopsis taenialis* (Lindl.) Christenson & Pradhan, Selbyana 9: 168 (1986).

**Flowering and Fruiting:** April – June.

**Habitat:** Epiphytic on tree trunks in forests.

**PHOLIDOTA** Lindl. ex Hook.

About 30 species distributed in India, China, Malaysia, Indonesia, New Guinea, Pacific Islands and Australia; 10 species in India, 5 in Assam.

*Pholidota articulata* Lindl. Gen. Sp. Orchid. Pl. 38 (1830).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte (frequently lithophytes) in semideciduous and evergreen montane forests.

*Pholidota chinensis* Lindl., J. Hort. Soc. London 2: 308 (1847).

**Flowering and Fruiting:** April – June.

**Habitat:** Epiphytic on trees or lithophytic on rocks in forests or at forest margins and shaded places.

*Pholidota imbricata* Hook., Exot. Fl. 2: t.138 (1825).

**Flowering and Fruiting:** March – August.

**Habitat:** Epiphyte on tree trunk near a small stream in deciduous dipterocarp forest and humid evergreen forest, on a large *Ficus* spp., branch in riverine forest.

*Pholidota pallida* Lindl., Bot. Reg. 21: sub t. 1777 (1835).

**Flowering and Fruiting:** May – October.

**Habitat:** Epiphytic on tree trunks in forests, (frequently lithophytic).

*Pholidota rubra* Lindl., Gen. Sp. Orchid. Pl.: 37 (1830).

**Flowering and Fruiting:** October – February.

**Habitat:** Epiphytic.

**PHREATIA** Lindl.

About 190 species distributed from Sri Lanka and mainland Asia, through South East Asia, to Australia, New Guinea, and the Pacific Islands, most species occurring in Indonesia and New Guinea; 3 species in India and 1 in Assam.

*Phreatia elegans* Lindl., Gen. Sp. Orchid. Pl.: 63 (1830).

**Flowering and Fruiting:** August – September.

**Habitat:** Epiphytic on trees in forests.

**PINALIA** Lindl.

About 160 species distributed from North West Himalayas and North East India to Myanmar, South China, Vietnam, Laos, Thailand, the Malay Archipelago, North East Australia, and the Pacific Islands; 8 species in Assam.

*Pinalia acervata* (Lindl.) Kuntze, Revis. Gen. Pl. 2: 679 (1891).

**Flowering and Fruiting:** April – September.

**Habitat:** Epiphyte in dense humid evergreen forest.

*Pinalia amica* (Rchb. f.) Kuntze, Revis. Gen. Pl. 2: 679 (1891).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphyte in secondary evergreen montane forest.

*Pinalia bractescens* (Lindl.) Kuntze, Revis. Gen. Pl. 2: 679 (1891).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphyte in tropical forest.

*Pinalia excavata* (Lindl.) Kuntze, Revis. Gen. Pl. 2: 679 (1891).

**Flowering and Fruiting:** May – October.

**Habitat:** Broad-leaved forests along valleys.

*Pinalia leucantha* Kuntze, Revis. Gen. Pl. 2: 679 (1891).

**Flowering and Fruiting:** April – June.

**Habitat:** Epiphytic on trees.

*Pinalia pumila* (Lindl.) Kuntze, Revis. Gen. Pl. 2: 679 (1891).

**Flowering and Fruiting:** March – September.

**Habitat:** Epiphyte in humid evergreen forest, mixed deciduous forest.

*Pinalia spicata* (D. Don) S.C. Chen & J.J. Wood, Fl. China 25: 354 (2009).

**Flowering and Fruiting:** July – August.

**Habitat:** Epiphytic on trees on wooded slopes or lithophytic on rocks in valley forests.

*Pinalia stricta* (Lindl.) Kuntze, Revis. Gen. Pl. 2: 679 (1891).

**Flowering and Fruiting:** November – April.

**Habitat:** Lithophytic on rocks on shaded slopes or epiphytic on tree trunks along valleys.

**PLATANTHERA** Rich.

About 200 species distributed throughout Europe and North Africa, north temperate Asia, the Malay Archipelago, and New Guinea, and Central and North America; 15 species in India and 1 in Assam.

*Platanthera clavigera* Lindl., Gen. Sp. Orchid. Pl.: 289 (1835).

**Flowering and Fruiting:** July – September.

**Habitat:** Forests, scrub, grasslands along valleys.

**PODOCHILUS** Bl.

About 60 species: from India and Sri Lanka to China, south and east through Indonesia and New Guinea to the Pacific islands; 4 species in India, 2 in Assam.

*Podochilus cultratus* Lindl., Gen Sp. Orchid. Pl.: 234 (1833).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphyte on tree trunk in wet evergreen tropical forest.

*Podochilus khasianus* Hook. f., Fl. Brit. India 6(1): 81 (1890).

**Flowering and Fruiting:** March – August.

**Habitat:** Epiphyte on tree trunk in wet evergreen tropical forest.

**POMATOCALPA** Breda

Thirteen species distributed from India through Malesia and North Australia to Fiji, North to North East Himalayas and Taiwan; 7 species in India, 2 in Assam.

*Pomatocalpa spicatum* Breda, Gen. Sp. Orchid. Asclep.: t.15 (1829).

**Flowering and Fruiting:** April – June.

**Habitat:** Epiphytic on tree trunks in forests.

*Pomatocalpa undulatum* (Lindl.) Tang & Wang, Acta Phytotax. Sin. 1(1-2): 100 (1951).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphyte in the wet evergreen tropical forest.

**PONERORCHIS** Rchb. f.

About 20 species distributed from the Himalayas through Central and East China to Korea and Japan; 1 species in Assam.

*Ponerorchis chusua* (D. Don) Soó, Acta Bot. Acad. Sci. Hung. 12: 352 (1966).

**Flowering and Fruiting:** June – October.

**Habitat:** Terrestrial on forests, Rhododendron scrub, alpine grasslands, limestone outcrops, scree.

**PTEROERCAS** Hasselt ex Hasskarl.

About 20 species distributed from North East India to Indonesia; 4 species in India, 1 in Assam.

*Pteroceras teres* (Bl.) Holt., Kew Bull. 14: 271 (1960).

**Flowering and Fruiting:** June – September.

**Habitat:** Epiphyte in the wet evergreen tropical forest.

**RHYNCHOSTYLIS** Bl.

About 4 species distributed in India, Srilanka, Myanmar, South East Asia, Malaysia, Philippines and Indonesia; 2 in India and 1 in Assam.

*Rhynchostylis retusa* (L.) Bl., Bijdr.: 286, t.49 (1825).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte in the evergreen tropical forest and deciduous mixed montane forest.

**ROBIQUETIA** Gaud.

About 40 species distributed in Indonesia, Malaysia, Philippines, Papua New Guinea, Australia and Pacific Island; 6 species in India, 2 in Assam.

*Robiquetia spatulata* (Bl.) J.J. Sm., Natuurk. Tijdschr. Ned.-Indië 72: 114 (1912).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphyte on a liana over a large stream in humid secondary evergreen lowland forest.

*Robiquetia succisa* (Lindl.) Seidenf. & Garay, Bot. Tidsskr. 67: 119 (1972).

**Flowering and Fruiting:** May – September.

**Habitat:** Epiphytic on tree trunks in open forests or on cliffs.

**SACCOLABIOPSIS** J. J. Sm.

Fifteen species distributed from the Himalayas and China south to Thailand, through the Malay Archipelago, east to New Guinea and Australia; one species in India and Assam.

*Saccolabiopsis pusilla* (Lindl.) Seidenf. & Garay, Bot. Tidsskr. 67: 118 (1972).

**Flowering and Fruiting:** April – May.

**Habitat:** Epiphytic on tree trunks in subtropical forests.

**SMITINANDIA** Holtt.

About three species distributed in India, Bhutan, Myanmar, South East Asia East to Borneo and Sulawesi; 2 species in India, 1 in Assam.

*Smitinandia micrantha* (Lindl.) Holtt., Gard. Bull. Singapore 25: 106 (1969).

**Flowering and Fruiting:** March – July.

**Habitat:** Epiphytic on tree trunks in open forests or on cliffs.

**SPATHOGLOTTIS** Bl.

About 46 species distributed in tropical Asia to Australia and the Pacific Islands; 3 species in India, 1 in Assam.

*Spathoglottis plicata* Bl., Bijdr.: 401, t.76 (1825).

**Flowering and Fruiting:** January – December.

**Habitat:** Terrestrial on sunny places at forest margins, grassy slopes.

**SPIRANTHES** Rich.

About 50 species distributed in America, Europe, Asia, Pacific Island and Australia; 2 species in India, 1 in Assam.

*Spiranthes sinensis* (Pers.) Ames, Orch. 2: 53 (1908).

**Flowering and Fruiting:** July – October.

**Habitat:** Terrestrial on open and moist areas in forests, thickets, wet grasslands, meadows, Marshes.

**STEREOCHILUS** Lindl.

Six species described from Bhutan, China, North East India, Myanmar, Thailand, Vietnam. 2 species in India, 1 in Assam.

*Stereochilus hirtus* Lindl., J. Proc. Linn. Soc., Bot. 3: 38 (1859).

**Flowering and Fruiting:** June – August.

**Habitat:** Epiphytic in moist deciduous forests.

**SUNIPIA** Lindl.

About 20 species distributed in Nepal to Myanmar, Thailand, and Vietnam; 10 species in India, 1 in Assam.

*Sunipia cirrhata* (Lindl.) Hunt, Kew Bull. 26: 184 (1971).

**Flowering and Fruiting:** October – December.

**Habitat:** Epiphyte in evergreen forest.

**TAENIOPHYLLUM** Bl.

Between 120 and 180 species distributed in tropical Africa through tropical Asia to Australia and the Pacific islands; 10 species in India, 3 in Assam.

*Taeniophyllum crepidiforme* (King & Pantl.) King & Pantl., Ann. Roy. Bot. Gard. Calcutta, 8: 245, t. 324 (1898).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphyte in humid evergreen forest.

*Taeniophyllum glandulosum* Bl., Bijdr.: 356 (1825).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on tree trunks in forests.

*Taeniophyllum retrospiculatum* (King & Pantl.) King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) 8: 244, t.325 (1898).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphytic on tree trunks in forests.

**TAINIA** Bl.

About 32 species distributed in India China, South East Asia; 9 species in India, 4 in Assam.

*Tainia angustifolia* (Lindl.) Benth. & Hook. f., Gen. Pl. 3: 515 (1883).

**Flowering and Fruiting:** July – October.

**Habitat:** Growing lithophyte on a small rock humid evergreen forest and terrestrial in open deciduous forest on humus rich soil at elevation of 1000 meter.

*Tainia latifolia* (Lindl.) Rchb. f., Bonplandia 5: 54 (1857).

**Flowering and Fruiting:** March – June.

**Habitat:** Terrestrial on dense humid evergreen forest.

*Tainia minor* Hook. f., Fl. Brit. India 5(2): 821 (1890).

**Flowering and Fruiting:** May – August.

**Habitat:** Terrestrial in dense humid evergreen forest.

*Tainia viridifusca* (Hook.) Benth. ex Hook. f., Fl. Brit. India 5: 820 (1890).

**Flowering and Fruiting:** April – May.

**Habitat:** Terrestrial in evergreen broad-leaved forests.

*Tainia wrayana* (Hook. f.) J.J. Sm., Bull. Jard. Bot. Buitenz. 2, 8: 6 (1912).

**Flowering and Fruiting:** June – September.

**Habitat:** Terrestrial in dense humid evergreen forest.

**THELASIS** Bl.

About 20 species: from India eastward to New Guinea and the Pacific islands; 4 species in India, 2 in Assam.

*Thelasis longifolia* Hook. f., Fl. Brit. India, 6(1): 87 (1890).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic in evergreen forest.

*Thelasis pygmaea* (Griff.) Bl., Fl. Javae nov. ser.: 22 (1858).

**Flowering and Fruiting:** July – October.

**Habitat:** Epiphytic in mixed deciduous and evergreen forest.

**THRIXSPERMUM** Lour.

About 100 species widely distributed from the Himalayas to Philippines and the tropical Islands of South West Pacific; 11 species in India, 6 in Assam.

*Thrixspermum acuminatissimum* (Bl.) Reichb. f., Xen. Orchid. 2, 121 (1867).

**Flowering and Fruiting:** November – February.

**Habitat:** Epiphyte growing on lateral branches of lower canopy of host tree, cool and shady place.

*Thrixspermum centipeda* Lour., Fl. Cochinch.: 520 (1790).

**Flowering and Fruiting:** May – October.

**Habitat:** Epiphyte in mixed deciduous forest, in humid evergreen forest, in dry evergreen forest on a hilltop near a waterfall,

*Thrixspermum formosanum* (Hayata) Schltr., Repert. Spec. Nov. Regni Veg. Beih. 4: 273 (1919).

**Flowering and Fruiting:** February – March.

**Habitat:** Epiphytic on trees or branches in forests.

*Thrixspermum musciflorum* A.S. Rao & J. Joseph, Bull. Bot. Surv. India 11 (1& 2): 204–205 (1971).

**Flowering and Fruiting:** June – August.

**Habitat:** Epiphytic on tree trunks.

*Thrixspermum pygmaeum* (King & Pantl.) Holtt., Kew Bull. 14: 275 (1960).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphyte in mixed deciduous forest, in humid evergreen forest.

*Thrixspermum trichoglossis* (Hook. f.) Kuntze, Revis. Gen. Pl. 2: 682 (1891).

**Flowering and Fruiting:** March – April.

**Habitat:** Epiphytic on tree trunks in open forests.

**THUNIA** Rchb.f.

About six species distributed in SE Asia and Bhutan, China, India, and Nepal; 3 species in India and one in Assam.

*Thunia alba* (Lindl.) Rchb.f., Bot. Zeitung (Berlin) 10: 764 (1852).

**Flowering and Fruiting:** May – August.

**Habitat:** Lithophytic on rocks or epiphytic on lower branches of trees in forests or in shaded and rocky places.

**TRICHOTOSIA** Bl.

50 species widely distributed from Himalayas to the South-West Pacific Island; 3 species in India, 2 in Assam.

*Trichotosia pulvinata* (Lindl.) Kranz., Engler, Pflanzenr., (IV, 50) Dendrob.: 138 (1911).

**Flowering and Fruiting:** March – July.

**Habitat:** Lithophytic on rocks in forests.

*Trichotosia velutina* (Lodd. ex Lindl.) Kranz., Engler, Pflanzenr., (IV, 50) Dendrob.: 140 (1911).

**Flowering and Fruiting:** August – November.

**Habitat:** Epiphyte on tree trunks in humid forest.

**TROPIDIA** Lindl.

About 20 species distributed mainly in tropical and subtropical Asia, with a few species extending to Australia and the Pacific islands and one in Central and North America; 4 species in India, 2 species in Assam.

*Tropidia angulosa* (Lindl.) Bl., Coll. Orchid.: 122 (1859).

**Flowering and Fruiting:** September – January.

**Habitat:** Terrestrial in dense humid evergreen forest and forest margins.

*Tropidia curculigoides* Lindl., Gen. Sp. Orchid. 497 (1840)

**Flowering and Fruiting:** May – November.

**Habitat:** Terrestrial in dense humid evergreen forest and evergreen montane forest.

**UNCIFERA** Lindl.

About six species distributed from Tropical Himalayan regions to Indochina and Thailand; 4 species in India, 2 species in Assam.

*Uncifera acuminata* Lindl., J. Proc. Linn. Soc., Bot. 3: 40 (1859).

**Flowering and Fruiting:** July – September.

**Habitat:** Epiphytic on tree trunks in dense forests.

*Uncifera obtusifolia* Lindl., J. Proc. Linn. Soc., Bot. 3: 40 (1859).

**Flowering and Fruiting:** July – October.

**Habitat:** Epiphytic on tree trunks in dense forests.

**VANDA** Jones ex R. Br.

About 40 species distributed in tropical Asia to New Guinea and Australia; 16 species in India, 9 species in Assam.

**Vanda ampullacea** (Roxb.) L.M. Gardiner, Phytotaxa 61: 48 (2012).

**Flowering and Fruiting:** March – June.

**Habitat:** Epiphytic on tree trunks in broad-leaved evergreen forests.

**Vanda bicolor** Griff., Not. Pl. Asiat. 3: 354 (1851).

**Flowering and Fruiting:** February – April.

**Habitat:** Epiphytic on tree trunks.

**Vanda coerulea** Griff. ex Lindl., Edwards's Bot. Reg. 33: t. 30 (1847).

**Flowering and Fruiting:** October – January.

**Habitat:** Epiphytic on tree trunks in open forests or along rivers.

**Vanda coeruleascens** Griff., Not. Pl. Asiat. 3: 352 (1851).

**Flowering and Fruiting:** December – April.

**Habitat:** Epiphytic on tree trunks in open forests.

**Vanda cristata** Lindl., Gen. Sp. Orchid. Pl.: 216 (1833).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks in evergreen broad-leaved forests.

**Vanda curvifolia** (Lindl.) L.M. Gardiner, Phytotaxa 61: 49 (2012).

**Flowering and Fruiting:** March – May.

**Habitat:** Epiphytic on tree trunks and branches in dry forests.

**Vanda stangeana** Rchb. f., Bot. Zeitung (Berlin) 16: 351 (1858).

**Flowering and Fruiting:** April – May.

**Habitat:** Epiphytic on trees or branches in forests.

**Vanda tessellata** (Roxb.) Hook. ex G. Don in J.C. Loudon, Hort. Brit.: 372 (1830).

**Flowering and Fruiting:** April – August.

**Habitat:** Epiphytic on trees in mixed forests.

**Vanda testacea** (Lindl.) Rchb. f., Gard. Chron., n.s., 8: 166 (1877).

**Flowering and Fruiting:** May – August.

**Habitat:** Epiphytic on tree trunks in dense forests.

**VANDOPSIS** Pfitz.

About five species distributed in India, China, mainland South East Asia, the Philippines, the Malay Archipelago to New Guinea; 1 species in India and Assam.

**Vandopsis undulata** (Lindl.) J.J. Sm., Natuurw. Tijdschr. Ned.-Indië 72: 77 (1912).

**Flowering and Fruiting:** April – July.

**Habitat:** Epiphytic on tree trunks in forests or lithophytic on rocks on shrubby slopes.

**VANILLA** Plumier ex P. Miller.

About 70 species distributed throughout the tropics; 6 species in India, 1 species in Assam.

**Vanilla borneensis** Rolfe, J. Linn. Soc., Bot. 32: 460 (1896).

**Flowering and Fruiting:** May – July.

**Habitat:** Terrestrial, climbing on tree trunks in dense forests.

**ZEUXINE** Lindl.

About 90 species distributed in the tropics and subtropics of the old World; 19 species in India. 11 species in Assam.

**Zeuxine clandestina** Bl., Coll. Orchid. Arch. Ind. 70.t. 39.f. 4 (1858).

**Flowering and Fruiting:** January – March.

**Habitat:** Terrestrial, growing in dense forest, cool and shady place.

**Zeuxine flava** (Wall. ex Lindl.) Trimen, Syst. Cat. Fl. Pl.: 90 (1885).

**Flowering and Fruiting:** March – June.

**Habitat:** Terrestrial, on open forests in limestone areas.

**Zeuxine glandulosa** King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) 8: 288, t. 384 (1898).

**Flowering and Fruiting:** March – May.

**Habitat:** Terrestrial, growing in dense forest, cool and shady place.

**Zeuxine goodyeroides** Lindl., Gen. Sp. Orchid. Pl. 486 (1840).

**Flowering and Fruiting:** September – October.

**Habitat:** Growing in dense forest, cool and shady place.

**Zeuxine gracilis** (Breda) Bl., Coll. Orchid.: 69 (1858).

**Flowering and Fruiting:** March – May.

**Habitat:** Terrestrial, growing in dense forest, cool and shady place.

**Zeuxine grandis** Seidenf., Dansk Bot. Ark. 32(2): 90, t. 56 (1978).

**Flowering and Fruiting:** March – May.

**Habitat:** Terrestrial, growing in dense forest, cool and shady place.

**Zeuxine lindleyana** A.N. Rao, Arunachal For. News 6(1): 34 (1988).

**Flowering and Fruiting:** March – May.

**Habitat:** Terrestrial, growing in grass land.

**Zeuxine longilabris** (Lindl.) Trim., Jour. Ceylon Br. Roy Asiat. Soc. 9: 90 (1885).

**Flowering and Fruiting:** March – June.

**Habitat:** Terrestrial, growing in grass land.

**Zeuxine membranacea** Lindl., Gen. Sp. Orchid. Pl.: 486 (1840).

**Flowering and Fruiting:** November – February.

**Habitat:** Terrestrial on damp grasslands, meadows, valleys, along streams.

**Zeuxine nervosa** (Wall. ex Lindl.) Benth. ex Trimen, J. Ceylon Branch Roy. Asiat. Soc. 9: 90 (1885).

**Flowering and Fruiting:** February – April.

**Habitat:** Terrestrial on damp places in forests.

**Zeuxine strateumatica** (L.) Schltr., Bot. Jahrb. Syst. 45: 394 (1911).

**Flowering and Fruiting:** January – April.

**Habitat:** Terrestrial, growing in grass land.

## **Discussion**

Orchids are the major component of the vegetation at different climatic conditions of Assam. The forest of Assam is rich with handsome number Orchid species and exist several phylogenetically important species. Tropical wet evergreen forests of Lakhimpur, Tinsukia and Dibrugarh district and it's adjoining foot hills of Arunachal Pradesh is very much rich in Orchid diversity. Orchids grow best in the evergreen and semi-evergreen forest and to some extent in moist deciduous forests. Assam consists of 398 specific and 6 intraspecific taxa belonging 102 genera of Orchids, including terrestrial and epiphytic species. Several interesting Orchids like *Bryobium pudicum*, *Bulbophyllum ambrosia*, *B. apodum*, *B. gracilipes*, *Chrysoglossum ornatum*, *Cleisostoma linearilobulatum*, *C. simondii*, *Collabium chinense*, *Crepidium calophyllum*, *Cymbidium cyperifolium*,

*Dendrobium densiflorum*, *D. nobile*, *Diploprora championii*, *Eulophia zollingeri*, *Habenaria acuifera*, *Liparis nervosa*, *L. wightiana*, *Pennilabium struthio*, *Phalaenopsis mannii*, *P. malipoensis*, *P. parishii*, *Taeniophyllum crepidiforme*, *T. retrospiculatum*, *Tainia angustifolia*, *T. wrayana*, *Thelasis pygmaea*, *Thrixspermum acuminatissimum*, *T. formosanum*, *T. musciflorum*, *T. pygmaeum*, *Vanda coerulea*, *V. coeruleascens*, *Zeuxine glandulosa*, *Z. grandis*, *Z. lindleyana*, etc. have been recorded from Assam. *Phalaenopsis malipoensis*, *Tainia angustifolia*, *Thrixspermum acuminatissimum*, *T. formosanum* is new addition to the orchid flora of India and *Bryobium pudicum*, *Bulbophyllum ambrosia*, *B. apodum*, *B. gracilipes*, *Chrysoglossum ornatum*, *Cleisostoma linearilobulatum*, *C. simondii*, *Collabium chinense*, *Crepidium calophyllum*, *Cymbidium cyperifolium*, *Diploprora championii*, *Eulophia zollingeri*, *Habenaria acuifera*, *Liparis nervosa*, *L. wightiana*, *Pennilabium struthio*, *Taeniophyllum crepidiforme*, *T. retrospiculatum*, *Tainia angustifolia*, *T. wrayana*, *Thelasis pygmaea*, *Thrixspermum musciflorum*, *T. pygmaeum*, *Zeuxine glandulosa*, *Z. grandis*, *Z. lindleyana* etc., are new record for Assam. Species like *Eulophia zollingeri*, *Habenaria acuifera*, *Liparis nervosa*, *L. wightiana*, *Phalaenopsis malipoensis*, *Thrixspermum formosanum*, *Tainia angustifolia* and *Vanda coerulea*, *V. coeruleascens* and *Vanilla borneensis* etc. are reported only from Karbi Anglong district. *Paphiopedilum spicerianum*, *P. venustum* and *P. villosum* is reported only from Cachar district. *Bryobium pudicum*, *Bulbophyllum apodum*, *Chrysoglossum ornatum*, *Cleisostoma linearilobulatum*, *Thrixspermum acuminatissimum*, *Taeniophyllum retrospiculatum* etc. are reported from Dibrugath and Tinsukia District. *Bulbophyllum ambrosia*, *B. gracilipes* and *Zeuxine grandis* are reported only from Kokrajhar district of Assam. *Artocarpus chaplasa*, *Anthocephalus cadamba*, *Bischofia javanica*, *Bombax malabaricum*, *Dillenia indica*, *D. pentagyna*, *Duabanga sonneratiae*, *Dipterocarpus macrocarpus*, *Lagestroemia flosreginae*, *Premna bengalensis*, *Stereospermum chelonoides*, *Terminalia myriocarpa* etc. are the major hosts for the epiphytic Orchid species in the regions.

The terrestrial Orchid show very localized occurrence in Assam; however *Eulophia dabia*, *Nervilia juliana*, *Spiranthes sinensis*, *Zeuxine strateumatica* are well distributed in the grasslands of the rever banks of the Brahmaputra, species like *Calanthe sylvatica* is also common on the forest floor. *Acanthephippium striatum*, *Collabium chinense*, *Corymborkis*

*veratrifolia*, *Crepidium acuminatum*, *Dienia ophrydis*, *Geodorum densiflorum*, *Goodyera procera*, *Hetaeria affinis*, *Phaius mishmensis*, *Tainia latifolia*, *T. minor*, *Tropidia curculigoides*, *Zeuxine glandulosa*, *Z. goodyeroides* etc. are growing on the dense forest floor of the forests. Similarly *Phaius tankervilleae* is found in the semi aquatic habit and the saprophytic species *Didymoplexis pallens* growing in the bamboo forest of due to presence of thick layer of decomposed leaf litters under damp and shady situation.

### **Conclusion**

The agroclimatic condition of Assam of North East India is most congenial for the lavish growth and development of wide varieties of Orchid species in natural habitat. Nevertheless, whole Orchidaceous family facing high risk of threat because of tea plantations, timber felling, forest fires, unscientific method of harvesting, hunting, soil erosion, encroachment problem, construction of reservoirs and dams, charcoal making, grazing etc. Regular and rapid destruction of natural habitat by deforestation, soil erosion, overgrazing, use of herbicides and increase of agricultural lands by clearing forest, developmental schemes, rapid urbanization, ignorance and finally indiscriminate collection for floral business cause greater harm in the natural population of the species in the regions. During the spring festival Orchid species are sold in the local markets of Assam in large numbers. Many sellers collect these orchids from the natural habitat. Today many species are in rare, vulnerable, threatened, endangered and critically endangered status in this region. Now *Paphiopedilum spicerianum*, *P. venustum* and *P. villosum* is very rare in occurrence. Some species like *Bulbophyllum elassonotum*, *B. iners*, *Dendrobium assamicum*, *Habenaria trifurcata*, *Hetaeria anomala*, *Zeuxine cordata* have no any recent record from Assam. These species might have been lost from Assam due to habitat lost. It is observed that high risk of extinction is possible in near future if habitats of these species are not conserved in proper ways. Therefore, conservation of natural habitat is urgently necessary by means of conduction village level awareness programmes by government departments and NGOs with constant affiliation with department of forest and wildlife in the regions is the only solution to save our praiseworthy Orchid diversity resources of Assam is vanish for ever from nature.

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