

# Angiospermic flora of Gauhati University Campus, Assam, India

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## Abstract

The present communication deals with 337 species of Angiospermic plants, 244 dicots, and 93 monocots under 83 families documented from the Gauhati University campus.

**Keywords:** Angiosperm diversity; Gauhati University; Assam.

## INTRODUCTION

Gauhati University is the first University established in North East India [Gauhati University Act. 1947 (Assam Act, XVI of 1947)] in the year 1948. The University which started functioning from the city centre (Cotton College) was shifted to the present campus in 1955-56. It is located at Gopinath Bordoloi Nagar (Jhalukbari) which lies between 91° 40' to 91° 45' E Longitude and 26° 10' to 26° 15' N Latitude. It has tropical climate, with 38° C maximum and 15° C minimum temperature. Soil type is brown and redish sandy loam rich in both macro and micro nutrients. The southern side the campus is bordered by three hillocks, the west, east and north boundary are demarcated by Sath Mile Township, Adabari Township and Garigaon villages and aquatic bodies respectively.

The University has Built-up area of 13,00,000 square feet in a campus spread over 770 acres of land with a satellite campus at Kokrajhar. The campus area has been developed into a small township now known as Gopinath Bardoloi Nagar. It has now about 5000 population including 1500 students residing in hostels.

Nearly, 40% areas of the campus are marshlands, 10% area under hillock and rest are plains and undulating highlands. The diverse physiography helps the campus to harbour rich vegetation. The vegetation of an area is governed by the complex of environmental features including climates, geology, soil, forest biota and phytosociological history. Climate controls the general pattern of vegetation and the details are related to other factors of the habitat. There has not been any serious attempt to study the vegetation and flora of Gauhati University campus. However, the vegetation of the Gauhati University campus can broadly be classified into:

**1. Degraded alluvial inundated grassland:** this is a characteristic type of vegetation of the wetlands, which remains nearly under water in most of the places during summer season.

**2. Riparian seasonal carpet vegetation:** this type of vegetation along the bank of water bodies are quite characteristic, here during winter season water spread reduces within the aquatic bodies due to which a large portion of the wetland become dry, where there appears a herbaceous vegetation in a seasonal basis. This is a kind of carpet vegetation and is the characteristic feature in the alluvial bed of the aquatic bodies.

**3. Aquatic vegetation:** aquatic vegetation is the most interesting feature of GU campus. Quite a large area of the campus has water bodies which harbour a good numbers of aquatic plants. The following hydrophytes were observed in the water bodies of the campus: **i. Free floating hydrophytes:** these plants are found in the stagnant water bodies; **ii. Submerged non anchored hydrophytes:** these are submerged hydrophytes which are non anchored to the soil; **iii. Submerged anchored hydrophytes:** they are submerged and have contact with soil; **iv. Anchored floating hydrophytes:** these plants have contact with soil, water and air; **v. Emergent amphibious:** these are plants on exposed soils, along the immediate margin of the water bodies, usually with rhizome or corms; **vi. Marshy amphibian hydrophytes:** these are rooted to the soil that is usually saturated with water, at least in the early part of their life; **vii. Wetland hydrophytes:** these are border line species of the wetlands. Being a part of the riparian ecosystem there are some characteristic tree species which can thrive the periodic flooding of their root system during summer or these species show their occurrence and distribution near to marshy habitat.

**4. Wasteland vegetation:** this type of vegetation is continued in high waste land and frequently disturbed by anthropogenic pressure. Species found here are *Argemone*, *Rorippa*, *Oxalis*, *Mucuna*, etc.

**5. Highland vegetation:** this vegetation observed on the hillock slopes and is comparatively undisturbed. Species of *Paderia*, *Litsea*, *Osbeckia*, *Glycosmis*, etc. are found in this vegetation.

The present study was undertaken during 2004-2007 to bring out the Angiospermic plant diversity of an anthropogenically disturbed institutional habitat. Introduces, cultivated species, Algae, Fungi, Lichen, Bryophytes, Pteridophytes and Gymnosperms are not covered in the present study.

## MATERIALS AND METHODS

Seasonal visits were made at regular intervals to different spots of the campus for observation and collection of specimens at flowering and fruiting stages. The herbarium specimens were made as per standard methodology (Jain & Rao 1977) and identified with the help of Flora of Assam (Kanjilal *et al*, 1934-1940) and ASSAM Herbarium, BSI, Shillong. Voucher specimens are deposited in the Herbarium of Botany Department, Gauhati University.

## RESULTS AND DISCUSSION

Exploration of the University campus has resulted in the documentation of 337 species of Angiospermic taxa representing 244 genera under 83 families and has been presented in Table-I in alphabetical order. Statistics of different taxa of Angiospermic species are presented in Table II.

**Table 2: Estimate of Angiospermic Taxa in Gauhati University campus**

Taxa	Dicotyledons	Monocotyledons	Total
<b>Family</b>	66	17	83
<b>Genus</b>	189	55	244
<b>Species</b>	244	93	337

Monocots are represented by 93 species and dicots by 244 species. It is interesting to note that Asteraceae with 17 species is the most dominant family among dicots, and Fabaceae with 14 species, Euphorbiaceae with 13 species and Verbenaceae with 12 species are other dominant families of the campus. Among monocots Poaceae is the most dominant family with 32 species and Cyperaceae with 24 species, Araceae and Commelinaceae with 5 species each and Zingiberaceae, Hydrocharitaceae with 4 species each are other dominant families of monocot. Most of the species were recorded from aquatic bodies, followed by waste lands, roadsides, crop fields and of hillocks slopes. Animal grazing, construction activities, etc. are certain anthropogenic disturbances for vegetation in the campus. 213 species are herbs [131 dicots & 82 monocots]; 57 are shrubs [50 dicots & 7 monocots]; 42 species are trees; 25 species are climbers [21 dicots & 4 monocots]. 144 species [117 dicots & 27 monocots] have been recorded from road sides habitat; 88 species [33 dicots & 55 monocots] recorded from marshy area; 55 species [49 dicots & 6 monocots] recorded from wasteland. 44 species [41 dicots & 3 monocots] has been recorded from hill slope. 337 species regenerate by seeds, 20 species by root, 15 species by rhizome, 6 species by stem, 2 species each by tuber and rhizome and 01 species each by leaf and stolon.

## LITERATURE CITED

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**Table 1: Angiospermic plants of Gauhati University campus**

Abbreviations used: H= herb; S= shrub; Cl= climber; T= tree. Cf- crop field; EP= Epiphytic; RS= Road sides; WL= waste land; AB= aquatic body; HS= hillock slopes

<b>Name of the plants</b>	<b>Habit</b>	<b>Habitat</b>	<b>Distribution</b>	<b>Regeneration</b>
<b>DICOTYLEDONS</b>				
<b>Ranunculaceae</b>				
<i>Ranunculus cantoniensis</i> DC.	H	AB	Rare	Seed
<i>Ranunculus scleratus</i> L.	H	AB	Common	Seed
<i>Clematis buchananiana</i> DC.	Cl	RS	Rare	Seed
<b>Dilleniaceae</b>				
<i>Dillenia indica</i>	T	RS	Common	Seed
<b>Menispermaceae</b>				
<i>Cissampelos pareira</i> L.	Cl	WL	Rare	Tuber
<i>Stephania japonica</i> (Thunb.)Miers	Cl	WL	Common	Tuber
<i>Tinospora cordifolia</i> (Willd.)Hook.f. & Thomson	Cl	WL	Rare	Stem
<b>Nymphaeaceae</b>				
<i>Euryale ferox</i> Salisb.	H	AB	Common	Seed
<i>Nymphaea pubescens</i> Willd.	H	AB	Common	Root
<i>Nymphaea stellata</i> L.	H	AB	Rare	Root
<b>Nelumbonaceae</b>				
<i>Nelumbo nucifera</i> Gaertn.	H	AB	Common	Root
<b>Papaveraceae</b>				
<i>Argemone mexicana</i> L.	H	WL	Common	Seed
<b>Brassicaceae</b>				
<i>Cardamine hirsuta</i> L.	H	WL	Rare	Seed
<i>Rorippa benghalensis</i> (DC.) Hara	H	WL	Rare	Seed
<i>Rorippa indica</i> (L.) Hiern	H	WL	Rare	Seed
<i>Brassica campestris</i> L.	H	CF	Common	Seed
<b>Capparaceae</b>				
<i>Capparis zeylanica</i> L.	S	RS	Rare	Seed
<i>Cleome gynandra</i> L.	H	RS	Common	Seed
<i>Cleome viscosa</i> L.	H	WL	Common	Seed
<i>Creteva magna</i> (Lour.)DC.	T	RS	Common	Seed
<b>Flacourtiaceae</b>				
<i>Casearia vareca</i> Roxb.	H	RS	Rare	Seed
<i>Flacourtia jangomos</i> (Lour.)Raeush	S	RS	Rare	Seed
<b>Polygalaceae</b>				
<i>Polygala arvensis</i> Willd.	H	WL	Rare	Seed
<i>Salomonina cantoniensis</i> Lour.	H	RS	Rare	Seed
<b>Caryophyllaceae</b>				
<i>Drymaria diandra</i> Blume	H	RS	Common	Seed
<i>Polycarpon prostratum</i> (Forssk.)Aschens	H	RS	Rare	Seed
<i>Stellaria media</i> (L.)Villars	H	RS	Common	Seed
<b>Portulacaceae</b>				
<i>Portulaca oleracea</i> L.	H	CF	Common	Seed
<i>Portulaca quadrifida</i> L.	H	CF	Common	Seed
<b>Elatinaceae</b>				
<i>Bergia ammannioides</i> Roxb.	H	AB	Rare	Seeds
<b>Hypericaceae</b>				
<i>Hypericum japonicum</i> Thunb. ex Murray	H	RS	Rare	Seeds
<b>Clusiaceae</b>				
<i>Garcinia xanthochymus</i> Hook.f.	T	HS	Rare	Seeds
<i>Garcinia lancaefolia</i> L.	T	HS	Rare	Seeds
<b>Theaceae</b>				

Name of the plants	Habit	Habitat	Distribution	Regeneration
<i>Eurya japonica</i> Thunb.	S	HS	Rare	Seeds
<i>Schima wallichii</i> (DC.) Korth.	T	HS	Rare	Seeds
<b>Malvaceae</b>				
<i>Abutilon indicum</i> (L.) Sweet	H	RS	Common	Seeds
<i>Sida acuta</i> Burm.f.	H	RS	Rare	Seeds
<i>Sida cordifolia</i> L.	H	RS	Rare	Seeds
<i>Sida rhombifolia</i> L.	H	RS	Rare	Seeds
<i>Urena lobata</i> L.	H	RS	Common	Seeds
<i>Hibiscus rosa - sinensis</i> L.	S	RS	Common	Stem cutting
<i>Malvaviscus sinensis</i> L.	S	RS	Rare	Stem cutting
<b>Sterculiaceae</b>				
<i>Abroma augusta</i> (L.) L.f.	S	RS	Rare	Seeds
<i>Sterculia villosa</i> Roxb.	T	RS	Rare	Seeds
<b>Tiliaceae</b>				
<i>Triumfetta rhomboidea</i> Jacq.	H	HS	Rare	Seeds
<b>Oxalidaceae</b>				
<i>Biophytum sensitivum</i> (L.) DC.	H	RS	Rare	Seeds
<i>Oxalis corniculata</i> L.	H	WL	Common	Seeds
<i>Oxalis corymbosa</i> L.	H	WL	Common	Seeds
<b>Balsaminaceae</b>				
<i>Hydrocera triflora</i> (L.) Wight & Arn.	H	AB	Rare	Seeds
<i>Impatiens balsamina</i> L.	H	RS	Rare	Seeds
<b>Rutaceae</b>				
<i>Aegle marmelos</i> (L.) Correa	T	RS	Common	Seeds
<i>Glycosmis pentaphylla</i> (Retz.) DC.	S	HS	Common	Seeds
<i>Citrus grandis</i> (L.) Osbeck.	T	RS	Rare	Seeds
<i>Citrus aurantium</i> L.	S	RS	Rare	Seeds
<i>Micromelum integerrimum</i> (Roxb. ex DC) M.Roemer	S	RS	Rare	Seeds
<i>Murraya koenigii</i> (L.) Sprengel	S	WL	Common	Seeds
<i>Murraya paniculata</i> (L.) Jac.	S	HS	Rare	Seeds
<b>Meliaceae</b>				
<i>Dysoxylum binectariferum</i> Hook.f.	T	HS	Rare	Seeds
<i>Toona ciliata</i> Roem	T	HS	Common	Seeds
<i>Melia azadirachta</i>	T	HS	Common	Seeds
<i>Azadirachta indica</i> A.Juss.	T	RS	Common	Seed
<b>Rhamnaceae</b>				
<i>Ziziphus mauritiana</i> Lam.	T	RS	Common	Seed
<b>Vitaceae</b>				
<i>Cayratia trifolia</i> (L.) Gangnep	Cl	WL	Common	Seed
<i>Cissus quadrangularis</i> Wall.	Cl	HS	Rare	Stem
<b>Leeaceae</b>				
<i>Leea guineensis</i> G.Don	S	HS	Common	Seed
<b>Sapindaceae</b>				
<i>Cardiospermum halicacabum</i> L.	H	RS	Common	Seed
<i>Sapindus mukorossi</i> Gaertner	T	HS	Rare	Seed
<b>Anacardiaceae</b>				
<i>Mangifera indica</i> L.	T	RS	Common	Seed
<i>Semecarpus anacardium</i> L.f.	T	RS	Rare	Seed
<i>Spondias pinnata</i> (L.f.)Kurz	T	RS	Rare	Seed
<b>Fabaceae</b>				
<i>Aeschynomene aspera</i> L.	S	AB	Rare	Seed
<i>Aeschynomene indica</i> L.	H	AB	Rare	Seed
<i>Alysicarpus vaginalis</i> (L.) DC.	H	RS	Common	Seed
<i>Centrosema pubescens</i> (DC.) Benth.	Cl	WL	Rare	Seed
<i>Crotolaria pallida</i> Ait.	S	RS	Common	Seed

Name of the plants	Habit	Habitat	Distribution	Regeneration
<i>Desmodium gangeticum</i> (L.) DC.	S	RS	Common	Seed
<i>Desmodium heterocarpon</i> (L.)DC.	S	RS	Common	Seed
<i>Desmodium heterophyllum</i> (Willd.)DC.	H	RS	Common	Seed
<i>Desmodium racemosum</i> (Thunb.)DC.	S	HS	Common	Seed
<i>Desmodium trifolium</i> (L.)DC.	H	HS	Common	Seed
<i>Erythrina stricta</i> Roxb.	T	RS	Common	Seed
<i>Mucuna pruriens</i> (L.)DC.	Cl	WL	Common	Seed
<i>Indigofera tinctoria</i> L.	S	HS	Rare	Seed
<i>Butea monosperma</i> (Lam) Kuntz.	T	RS	Common	Seed
<b>Caesalpinaceae</b>				
<i>Bauhinia racemosa</i> Lam.	S	HS	Rare	Seed
<i>Caesalpinia bonduc</i> Flem.	S	HS	Common	Seed
<i>Cassia alata</i> L.	S	RS	Rare	Seed
<i>Cassia occidentalis</i> L.	H	RS	Common	Seed
<i>Cassia tora</i> L.	H	RS	Common	Seed
<i>Cassia sophera</i> L.	H	RS	Common	Seed
<i>Cassia fistula</i> L.	T	RS	Common	Seed
<i>Cassia nodosa</i> Buch.-Ham.	T	RS	Rare	Seed
<b>Mimosaceae</b>				
<i>Mimosa pudica</i> L.	H	RS	Common	Seed
<i>Albizia lebbek</i> Benth.	T	RS	Common	Seed
<b>Rosaceae</b>				
<i>Rubus rugosus</i> Smith	S	HS	Common	Seed
<i>Rosa alba</i> L.	S	RS	Rare	Stem cutting
<b>Crassulaceae</b>				
<i>Kalanchoe pinnata</i> (Lamk.) Pers.	H	WL	Common	Leaf
<b>Combretaceae</b>				
<i>Terminalia arjuna</i> (Roxb.ex DC.)Wt.& Ar.	T	RS	Common	Seed
<i>Terminalia chebula</i> Retz.	T	RS	Common	Seed
<b>Myrtaceae</b>				
<i>Syzygium cumini</i> (L.) Skeels	T	RS	Common	Seed
<i>Psidium guajava</i> L.	T	RS	Common	Seed
<b>Lecythidaceae</b>				
<i>Barringtonia acutangula</i> (L.)Gaertner	T	RS		Seed
<b>Melastomataceae</b>				
<i>Melastoma malabathricum</i> L.	S	WL	Common	Seed
<i>Osbeckia stellata</i> Buch.-Ham. ex D.Don	S	HS	Rare	Seed
<b>Lythraceae</b>				
<i>Lagerstroemia speciosa</i> (L.)Pers.	T	RS	Common	Seed
<i>Rotala rotundifolia</i> (Roxb.) Kochne	H	AB	Common	Seed
<b>Onagraceae</b>				
<i>Ludwigia adscendens</i> (L.)Hara	H	AB	Common	Seed
<i>Ludwigia hyssopifolia</i> (G.Don.)Excell	H	AB	Common	Seed
<i>Ludwigia octovalvis</i> (Jacq.)Raven	H	AB	Rare	Seed
<i>Ludwigia prostrata</i> Roxb.	H	AB	Common	Seed
<b>Trapaceae</b>				
<i>Trapa natans</i> L.	H	AB	Common	Seed
<b>Passifloraceae</b>				
<i>Passiflora foetida</i> L.	Cl	HS	Rare	Seed
<b>Cucurbitaceae</b>				
<i>Coccinia grandis</i> (L.)Voigt.	Cl	RS	Rare	Seed
<i>Momordica charantia</i> L.				
var. <i>muricata</i> (Willd.) Chakravarty	Cl	RS	Rare	Seed
<b>Aizoaceae</b>				

Name of the plants	Habit	Habitat	Distribution	Regeneration
<i>Coldenia procumbens</i> L.	H	RS	Rare	Seed
<b>Molluginaceae</b>				
<i>Glinus lotoides</i> L.	H	RS	Rare	Seed
<i>Mollugo pentaphylla</i> L.	H	WL	Common	Seed
<b>Apiaceae</b>				
<i>Centella asiatica</i> (L.) Urban	H	RS	Common	Runner
<i>Hydrocotyle javanica</i> Thunb.	H	RS	Common	Seed
<i>Oenanthe javanica</i> (Blume)DC.	H	AB	Rare	Seed
<i>Selinum candollii</i> DC.	H	AB	Common	Seed
<b>Rubiaceae</b>				
<i>Anthocephalus chinensis</i> (Lamk.)A.Rich ex Walp.	T	RS	Common	Seed
<i>Cephalanthus occidentalis</i> L.	S	WL	Rare	Seed
<i>Coffea benghalensis</i> Heyne ex M. Roemer	H	WL	Common	Seed
<i>Dentella repens</i> (L.)JR.Forst & G.Forst	H	WL	Common	Seed
<i>Hedyotis diffusa</i> Willd.	H	WL	Common	Seed
<i>Paederia foetida</i> L.	Cl	HS	Common	Seed
<i>Paederia scandens</i> (Lour.)Merr.	Cl	HS	Common	Seed
<b>Asteraceae</b>				
<i>Ageratum conyzoides</i> L.	H	WL	Common	Seed
<i>Blumea laccera</i> (Burm.f.)DC.	H	WL	Common	Seed
<i>Centipeda minima</i> (L.) A.Br. & Aschers	S	WL	Rare	Seed
<i>Erigeron Canadensis</i> L.	H	WL	Rare	Seed
<i>Dichrocephala integrifolia</i> (L.f.) O.Kuntze	H	AB	Rare	Seed
<i>Eclipta prostrata</i> L.	H	WL	Common	Seed
<i>Elephantopus scaber</i> L.	H	WL	Common	Seed
<i>Enhydra fluctuans</i> Lour.	H	AB	Common	Seed
<i>Eupatorium odoratum</i> L.	S	WL	Common	Seed
<i>Gnaphalium luteo-album</i> L.	H	WL	Common	Seed
<i>Mikania micrantha</i> Kunth.	Cl	WL	Common	Seed
<i>Parthenium hysterophorus</i> L.	H	WL	Common	Seed
<i>Sonchus wightianus</i> DC.	H	RS	Common	Seed
<i>Spilanthes paniculata</i> Wallich ex DC.	H	RS	Common	Seed
<i>Tridax procumbens</i> L.	H	RS	Common	Seed
<i>Vernonia cinerea</i> (L.) Less.	H	RS	Common	Seed
<i>Xanthium indicum</i> Koenig	H	RS	Common	Seed
<b>Apocynaceae</b>				
<i>Rauvolfia canascens</i> L.	H	HS	Common	Seed
<b>Asclerpediaceae</b>				
<i>Calotropis gigantea</i> (L.) Roxb.	S	RS	Common	Seed
<i>Calotropis procera</i> (Ait.) Roxb.	S	RS	Common	Seed
<i>Cryptolepis sinensis</i> (Lour.) Merr.	Cl	RS	Common	Seed
<i>Asclepias curasavica</i> L.	S	HS	Rare	Seed
<b>Menyanthaceae</b>				
<i>Nymphoides hydrophullum</i> (Lour) O.Ktze.	H	AB	Common	Root
<i>Nymphoides indicum</i> (L.) O.Ktze.	H	AB	Common	Root
<b>Boraginaceae</b>				
<i>Cynoglossum lanceolatum</i> Forssk.	H	RS	Rare	Seed
<i>Heliotropium indicum</i> L.	H	RS	Common	Seed
<b>Convolvulaceae</b>				
<i>Argyreia nervosa</i> (Burm.f.)Boj.	Cl	WL	Common	Seed
<i>Evolvulus nummularius</i> (L.) L.	H	WL	Common	Seed
<i>Ipomoea aquatica</i> Forssk.	H	AB	Common	Seed
<i>Ipomoea cairica</i> (L.) Sweet	H	RS	Rare	Seed
<i>Ipomoea carnea</i> Jacq.	S	WL	Common	Stem
<i>Ipomoea nil</i> (L.) Roth.	Cl	RS	Common	Seed
<i>Merremia vitifolia</i> (Burm.f.) Hall.f.	Cl	HS	Rare	Seed

<b>Name of the plants</b>	<b>Habit</b>	<b>Habitat</b>	<b>Distribution</b>	<b>Regeneration</b>
<i>Cuscuta reflexa</i> Roxb.	Cl	WL	Common	Seed
<b>Solanaceae</b>				
<i>Datura metel</i> L.	H	RS	Common	Seed
<i>Datura stramonium</i> L.	H	RS	Common	Seed
<i>Nicotiana plumbaginifolia</i> Viv.	H	WL	Rare	Seed
<i>Physalis minima</i> L.	H	CF	Rare	Seed
<i>Solanum indicum</i> L.	H	RS	Common	Stem
<i>Solanum nigrum</i> L.	H	RS	Common	Seed
<i>Solanum torvum</i> L.	S	HS	Common	Seed
<i>Solanum surattense</i> Burm.f.	H	HS	Common	Seed
<b>Scrophulariaceae</b>				
<i>Limnophila chinensis</i> (Osb.) Merr.	H	AB	Rare	Seed
<i>Limnophila heterophylla</i> (Roxb.) Benth.	H	AB	Common	Seed
<i>Limnophila indica</i> (L.)	H	AB	Common	Seed
<i>Lindernia crustacean</i> (L.) Fl.	H	WL	Common	Stem
<i>Lindernia ciliata</i> (Colsm.) Penn.	H	RS	Common	Seed
<i>Lindernia oppositifolia</i> (Retz.) Mukherjee	H	RS	Common	Seed
<i>Mazus pumilus</i> (Burm.f.) Steenis	H	WL	Common	Seed
<i>Scoparia dulcis</i> L.	H	RS	Common	Seed
<b>Lentibulariaceae</b>				
<i>Utricularia aurea</i> Lour.	H	AB	Common	Root
<b>Acanthaceae</b>				
<i>Hygrophila polysperma</i> (Roxb.) T. Anderson	H	AB	Common	Seed
<i>Hygrophila ringens</i> (L.) Stend.	H	AB	Common	Seed
<i>Justicia adhatoda</i> L.	S	HS	Rare	Root
<i>Phlogacanthus thyrsoiflorus</i> (Roxb.) Nees	S	HS	Common	Seed
<i>Rungia pectinata</i> (L.) Nees	H	RS	Common	Seed
<i>Justicia jendarussa</i> (L.) Burm.	S	RS	Rare	Seed
<b>Verbenaceae</b>				
<i>Callicarpa rubra</i> Vahl.	S	RS	Common	Seed
<i>Clerodendrum colebrookianum</i> Walp.	S	RS	Rare	Seed
<i>Clerodendrum indicum</i> (L.) Kuntz.	S	RS	Rare	Seed
<i>Clerodendrum serratum</i> (L.) Moon	S	HS	Common	Stem
<i>Clerodendrum viscosum</i> Vent.	H	WL	Common	Seed
<i>Gmelina arborea</i> Roxb.	T	RS	Rare	Seed
<i>Lantana camera</i> L.	S	RS	Common	Seed
<i>Lippia alba</i> (Mill.) NE. Br. ex. Britton & Wilson	S	RS	Rare	Seed
<i>Phyla nodiflora</i> (L.) Greene	H	RS	Rare	Seed
<i>Stachytarpheta jamaicensis</i> (L.) Vahl	H	HS	Common	Seed
<i>Tectona grandis</i> L.f.	T	RS	Common	Seed
<i>Vitex negundo</i> L.	S	RS	Common	Seed
<b>Lamiaceae</b>				
<i>Anisomeles indica</i> (L.) O. Kuntze	H	RS	Common	Seed
<i>Leonorus sibiricus</i> L.	H	RS	Common	Seed
<i>Leucas plukenetii</i> (Roth) Spreng	H	RS	Common	Seed
<i>Ocimum basilicum</i> L.	H	RS	Common	Seed
<i>Ocimum sanctum</i> L.	H	RS	Rare	Seed
<i>Stachys oblongifolia</i> Benth	H	RS	Rare	Seed
<i>Teucrium viscidum</i> Bl.	H	AB	Rare	Stolon
<b>Nyctaginaceae</b>				
<i>Boerhavia diffusa</i> L.	H	RS	Common	Seed
<i>Nyctanthes arbor-tristis</i> L.	T	RS	Rare	Seed
<b>Amaranthaceae</b>				
<i>Achyranthes aspera</i> L.	H	WL	Common	Seed

Name of the plants	Habit	Habitat	Distribution	Regeneration
<i>Alternanthera philoxeroides</i> (Mart.)Griseb.	H	AB	Common	Seed
<i>Alternanthera sessilis</i> (L.) Roxb. ex. DC.	H	RS	Common	Seed
<i>Amaranthus spinosus</i> L.	H	RS	Common	Seed
<i>Amaranthus viridis</i> L.	H	RS	Common	Seed
<i>Deeringia amaranthoides</i> Merrill.	H	RS	Common	Seed
<b>Polygonaceae</b>			Common	
<i>Persicaria barbata</i> (L.) Hara	H	WL	Common	Seed
<i>Persicaria hydropiper</i> (L.) Spach.	H	AB	Common	Seed
<i>Persicaria perfoliata</i> (L.)H.Gross	Cl	WL	Rare	Seed
<i>Persicaria strigosa</i> (Roxb.)Nakai	H	WL	Common	Seed
<i>Polygonum plebeium</i> Roxb.	H	WL	Common	Seed
<i>Rumex maritimus</i> L.	H	RS	Rare	Seed
<b>Piperaceae</b>				
<i>Peperomia pellucida</i> (L.) HBK.	H	RS	Common	Seed
<i>Piper thomsonii</i> Hook.f	H	HS	Rare	Root
<b>Lauraceae</b>				
<i>Litsea glutinosa</i> (Lour.) CB Robinson	T	HS	Rare	Seed
<i>Cinnamomum tamala</i> Nees & Eberm	T	HS	Rare	Seed
<b>Euphorbiaceae</b>				
<i>Acalypha indica</i> L.	H	RS	Common	Seed
<i>Bridelia retusa</i> (L.) Spreng.	T	HS	Rare	Seed
<i>Croton bonplandianum</i> Baill.	H	WL	Common	Seed
<i>Croton caudatus</i> Geist.	S	HS	Common	Seed
<i>Euphorbia hirta</i> L.	H	WL	Common	Seed
<i>Euphorbia nerifolia</i> L.	S	WL	Rare	Stem
<i>Jatropha gossypifolia</i> L.	S	RS	Rare	Seed
<i>Jatropha curcas</i> L.	S	RS	Common	Seed
<i>Mallotus philippensis</i> (Lam.) Muell.-Arg.	T	RS	Common	Seed
<i>Phyllanthus amarus</i> Schum.	H	RS	Common	Seed
<i>Phyllanthus acidus</i> Skeel	T	RS	Rare	Seed
<i>Emblica officinalis</i> Gaertn.	T	RS	Rare	Seed
<i>Ricinus communis</i> L.	S	HS	Common	Seed
<b>Urticaceae</b>				
<i>Boehmeria macrophylla</i> Hornem	S	HS	Rare	Seed
<i>Elatostema sessile</i> Forst.	H	Hs	Rare	Seed
<i>Pouzolzia hirta</i> (Bl.) Hassk.	H	WL	Common	Seed
<i>Sarcochlamys pulcherrima</i> Gaud.	S	HS	Rare	Seed
<b>Moraceae</b>				
<i>Ficus heterophylla</i> L.f.	Cl	RS	Rare	Seed
<i>Ficus hispida</i> L.f.	T	RS	Common	Seed
<i>Ficus infectoria</i> Roxb.	T	RS	Common	Seed
<i>Ficus glomerata</i> Roxb.	T	RS	Common	Seed
<i>Streblus asper</i> Lour.	T	RS	Common	Seed
<b>Ceratophylaceae</b>				
<i>Ceratophyllum demersum</i> L.	H	AB	Common	Seed
<b>MONOCOTYLEDONS</b>				
<b>Hydrocharitaceae</b>				
<i>Hydrilla verticillata</i> (L.f.) Royle	H	AB	Common	Seed
<i>Nechamandra alternifolia</i> (Roxb. ex wight.) Thw.	H	AB	Rare	Seed
<i>Ottelia alsimoides</i> (L.) Pers.	H	AB	Rare	Seed
<i>Vallisnaria spiralis</i> L.	H	AB	Common	Seed
<b>Orchidaceae</b>				
<i>Rhynchostylis retusa</i> (L.) Blume	H	EP	Common	Seed
<i>Vanda roxburghii</i> R.Br.	H	EP	Common	Seed
<b>Zingiberaceae</b>				



Name of the plants	Habit	Habitat	Distribution	Regeneration
<i>Alpinia nigra</i> (Geartn.) Burt.	S	AB	Common	Seed
<i>Costus speciosa</i> (Koen.) Smith	S	RS	Common	Seed
<i>Curcuma caesia</i> Roxb.	H	RS	Common	Rhizome
<i>Curcuma aromatica</i> Salisb.	H	RS	Rare	Rhizome
<b>Marantaceae</b>				
<i>Schumanianthus dichotomus</i> (Roxb.) Gagnep	S	AB	Rare	Rhizome
<b>Amaryllidaceae</b>				
<i>Crinum amoenum</i> Roxb.	H	Rs	Rare	Rhizome
<b>Dioscoreaceae</b>				
<i>Dioscorea bulbifera</i> L.	Cl	RS	Rare	Rhizome
<i>Dioscorea pentaphylla</i> L.	Cl	RS	Rare	Rhizome
<b>Liliaceae</b>				
<i>Gloriosa superba</i> L.	S	WL	Common	Rhizome
<b>Smilacaceae</b>				
<i>Smilax ovalifolia</i> Roxb.	Cl	RS	Rare	Rhizome
<b>Pontedariaceae</b>				
<i>Eichhornia crassipes</i> (Mart.) Solms	H	AB	Common	Rhizome
<i>Monocharia hastata</i> (L.) Solms	H	AB	Common	Rhizome
<i>Monocharia vaginalis</i> (Burm.f.) Prest	H	AB	Common	Rhizome
<b>Commelinaceae</b>				
<i>Commelina benghalensis</i> L.	H	RS	Common	Seed
<i>Commelina appendiculata</i> C.B. Clarke	H	RS	Common	Seed
<i>Commelina attenuata</i> Koenig ex. Vahl.	H	WL	Common	Seed
<i>Commelina longifolia</i> Lam.	H	RS	Rare	Seed
<i>Floscopa scandens</i> Lour.	H	WL	Rare	Seed
<b>Araceae</b>				
<i>Amorphophalus bulbifer</i> (Roxb.) Bl.	H	HS	Common	Rhizome
<i>Colocasia esculenta</i> (L.) Schott	H	HS	Common	Rhizome
<i>Lasia spinosa</i> (L.) Thw	H	HS	Common	Rhizome
<i>Pistia stratiotes</i> L.	H	AB	Common	Rhizome
<i>Pothos cathcartii</i> Schott	Cl	RS	Common	Seed
<b>Alismataceae</b>				
<i>Sagittaria guayanensis</i> H.B. & K.	H	AB	Common	Seed
<i>Sagittaria sagittifolia</i> L.	H	AB	Common	Seed
<b>Lemnaceae</b>				
<i>Lemna perpusilla</i> Torrey	H	AB	Common	Seed
<i>Wolffia arrhiza</i> (L.) Hork. ex. Wimm.	H	AB	Rare	Seed
<b>Najadaceae</b>				
<i>Najas graminea</i> Del.	H	AB	Rare	Root
<i>Najas marina</i> L.	H	AB	Common	Root
<i>Najas minor</i> (Pers.) All	H	AB	Common	Root
<b>Potamogetonaceae</b>				
<i>Potamogeton pectinatus</i> L.	H	AB	Rare	Root
<b>Cyperaceae</b>				
<i>Bulbostylis barbata</i> (Rottb.) C.B. Clarke	H	AB	Rare	Root
<i>Carex baccans</i> Nees.	H	AB	Common	Root
<i>Cyperus cephalotes</i> Vahl.	H	AB	Common	Seed
<i>Cyperus compressus</i> L.	H	AB	Rare	Root
<i>Cyperus difformis</i> L.	H	AB	Rare	Seed
<i>Cyperus diffusus</i> Vahl.	H	AB	Common	Seed
<i>Cyperus digitatus</i> Roxb.	H	AB	Common	Seed
<i>Cyperus haspana</i> L.	H	AB	Common	Root
<i>Cyperus iria</i> L.	H	AB	Common	Root
<i>Cyperus natans</i> Vahl.	H	AB	Common	Root
<i>Cyperus pilosus</i> Vahl.	H	AB	Common	Root
<i>Cyperus platystylis</i> Roxb.	H	AB	Rare	Root

<b>Name of the plants</b>	<b>Habit</b>	<b>Habitat</b>	<b>Distribution</b>	<b>Regeneration</b>
<i>Cyperus rotundus</i> L.	H	AB	Common	Seed
<i>Cyperus tenuispica</i> Stend.	H	AB	Rare	Seed
<i>Eleocharis congesta</i> Don.	H	AB	Common	Seed
<i>Eleocharis dulcis</i> (Burm.f.) Trin.	H	AB	Common	Seed
<i>Eleocharis ochrostachys</i> Stend.	H	AB	Common	Seed
<i>Fimbristylis globulosa</i> (Retz.) Kunth	H	AB	Common	Seed
<i>Fimbristylis miliacea</i> (L.) Vahl	H	AB	Common	Seed
<i>Fimbristylis schoenoides</i> (Retz.) Vahl	H	AB	Rare	Seed
<i>Kyllinga brevifolia</i> Rottb.	H	RS	Rare	Seed
<i>Pycreus polystachyos</i> (Rottb.) Beauv.	H	AB	Rare	Seed
<i>Schoenoplectus articulatus</i> (L.) Palla	H	AB	Rare	Seed
<i>Schoenoplectus grossus</i> (L.f.) Palla	H	AB	Common	Root
<b>Poaceae</b>				
<i>Axonopus compressus</i> (Sw.) P.Beauv.	H	RS	Common	Seed
<i>Brachiaria mutica</i> (Forssk.) Stapf.	H	AB	Common	Seed
<i>Brachiaria reptans</i> (L) Gard & C.E.Hubb.	H	RS	Common	Seed
<i>Coix lacryma-jobi</i> L.	S	RS	Common	Seed
<i>Cynodon dactylon</i> (L.) Pers.	H	RS	Common	Seed
<i>Dactyloctenium aegyptium</i> (L.) Willd.	H	RS	Common	Seed
<i>Digitaria ciliaris</i> L.	H	WL	Common	Seed
<i>Echinochloa colonus</i> (L.) Link	H	RS	Common	Seed
<i>Echinochloa crus-galli</i> (L.)P.Beauv.	H	WL	Common	Seed
<i>Echinochloa cruspavonis</i> (H.B.K.)Schutt.	H	AB	Common	Seed
<i>Echinochloa stagnium</i> (Retz.) P.Beauv.	H	AB	Rare	Seed
<i>Eragrostis atrovirens</i> (desf.)Trin	H	AB	Common	Seed
<i>Eragrostis tenella</i> (L.)P.Beauv.	H	RS	Rare	Seed
<i>Hygroyza aristata</i> (Retz.) Nees ex Wight.	H	AB	Rare	Seed
<i>Hymenachne assamica</i> (Hook.f.)Hitche	H	AB	Common	Seed
<i>Hymenachne acutigluma</i> (Steud.) Gilliland	H	AB	Common	Seed
<i>Imperata cylindrica</i> (L)P.Beauv.	H	RS	Common	Seed
<i>Panicum paludosum</i> Roxb.	H	AB	Common	Seed
<i>Panicum repens</i> L.	H	AB	Common	Seed
<i>Paspalidium favidum</i> (Retz.) A.Camus	H	RS	Common	Seed
<i>Paspalidium punctatus</i> (Burm.) A.Camus.	H	RS	Rare	Seed
<i>Paspalum conjugatum</i> Berg.	H	RS	Rare	Seed
<i>Paspalum longifolium</i> Roxb.	H	AB	Common	Seed
<i>Paspalum paspaloides</i> (Mich.) Scribn.	H	AB	Common	Seed
<i>Paspalum scrobiculatum</i> L.	H	AB	Common	Seed
<i>Phragmites karka</i> (Retz.) Trin.	H	AB	Common	Seed
<i>Pseudoraphis spinescens</i> (Roxb.) Vickery	H	AB	Rare	Seed
<i>Sacciolepis interrupta</i> (Willd.) Stapf.	H	AB	Common	Seed
<i>Saccharum arundinaceum</i> Retz.	H	RS	Common	Seed