

## Stratification of Vegetation in the Barpeta District of Assam, India

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### Abstract

Study carried out in the Barpeta district of Assam, India during the years 2011 – 2013 to record the stratification pattern in its vegetation recorded the presence of 722 Angiospermic taxa of species and infra-specific ranks. Of these, 546 species were dicotyledonous belonging to 346 genera from 101 families and the remaining 176 taxa were monocotyledonous belonging to 94 genera under 20 families. Different species were found to occur in nearly well demarcated horizontal layers especially in the areas covered by natural vegetation inside the Manas National Park. The remaining areas were characterized by open and scattered vegetation. These plants were found to represent 4 horizontal zones viz. canopy, middle storey, under-storey/shrub and the ground layer, accounting for 68, 107, 138 and 409 species and infra-specific taxa respectively. Evidently shrubs and ground layer elements were found to much outnumber the remaining categories thus indicating a good extent of anthropogenic interference in the study area.

**Key words:** Assam, Barpeta District, Angiosperms, stratification

### INTRODUCTION

Economic development of a country without plant utilization is quite unthinkable (Guha & Chattoraj 2009). The economic activities of man are greatly influenced by forests. Being the major component of vegetation of India, the Angiosperms are expected to bear much influence in this regard. Study of these plants is very important as the information gathered in such studies on any aspect of vegetation of the country is expected to become invaluable for formulating different plans by the Ministry of Environment, Forests and Climate Change (Anonymous 2015).

Study of plant community is an important aspect of research as it provides many important positive results. It is because a given plant community is always an orderly arrangement of organisms having certain trophic relationships amongst themselves. Determination of the degree of productivity and also of capacity of a given plant community to support a particular animal community are among the findings of such studies. The organized nature of plant species in a community can distinctly be observed in their vertical arrangement. The vertical distribution of different species occupying different levels is the stratification or layering. The latter indicates the configuration of the given vegetation type (Ambasht & Ambasht 2004)

The present day Assam, being a part of the Eastern Himalayas, is located within the Himalaya Biodiversity Hotspot. With limited scope of mineral based industrialization, the State is having no other alternative but to opt for agro-based economy. For this purpose,

detailed study of the vegetation of Assam is necessary. The present study was carried out with this background as stratification indicates the nature of vegetation and also the relative number of different categories of plants with their utilitarian potential. The district of Barpeta in Assam was selected as the study area as it is contiguous with the foot-hill region of Bhutan Himalaya in the north and encompasses a short stretch of the mighty river Brahmaputra in the south and as such the study area was expected to serve the objective of the present study.

Barpeta district, with an area of 3245 sq km (before the creation of BTAD) lies between 26° 6' - 26°51' N. latitudes and 90° 38' -91°21' E. longitudes with altitudes ranging between 40 – 81 m AMSL (Anonymous 2009). The district represents a nearly uniform but low-lying plain with numerous water-bodies like rivers, 'beels', swamps, ponds, pools, etc. Inundation by flood is almost an annual disaster (Plate – I: Fig. - 5). The area is almost inhabited by rural people. High fertility of soil is mainly responsible for its meagre urbanization. It is dominated by countryside with vast stretches of cultivated fields that indicates intense biotic interference (Plate – I: Figs. - 3, 5).

The vegetation of the study area, as a whole, was found to be characterized by 10 different types *viz.*, Tropical Semi-Evergreen Forest (Plate - I: Fig.-2), Tropical Deciduous Forest (Plate – I: Fig.-3), Riparian Forest, Tropical Grasslands (Plate - I: Fig.-4), Tropical Savannah, Swamp Vegetation, Aquatic Vegetation, Roadside Vegetation (Plate – I: Fig.-6), Plants of Household Compound and Vegetation of 'Char' Areas (Champion 1935; Rowntree 1954; Rajkhowa 1961; Rao & Panigrahi 1961; Champion & Seth 1968; Rao 1974 and Jain & Hajra 1975). Area under natural vegetation was very limited due to extensive anthropogenic interference.

The present study was carried out with the sole objective of providing a preliminary account of the overall stratification pattern. In order to maintain brevity, detailed phytosociological study was avoided and as such it was not possible to record any overlapping species among the layers.

## MATERIALS AND METHODS

The present work was started with consultation of relevant literature (Rajkhowa 1961; Pandey 2008; Guha & Chatteraj 2009; Anonymous 2009, 2015). Extensive exploration accompanied by collection of specimens was carried out for around 2 years at intervals of 4 – 6 months so as to cover all the seasons. Only the terrestrial Angiosperms were selected for the work as they were the most important and dominant components of the vegetation of the study area. Minute observation was made to record all available morphological features including habit, habitat and height. Herbarium specimens were prepared by following the techniques of Jain & Rao (1977). Families were delimited according to the sequential arrangements of Bentham and Hooker's (1862 – 1883) system followed by adoption of recent modifications (Basak 1983). Identification of herbarium specimens was carried out through direct consultation with herbarium sheets in ASSAM, Shillong. Relevant literature was consulted whenever necessary (Hooker 1872 – 1897; Kanjilal *et al.* 1934 – 1940; Bor 1940; Santapau 1964; Barooah & Borthakur 2003). Names were initially checked for any change by consulting Bennet (1987) and then confirmed from [www.theplantlist.org](http://www.theplantlist.org). Identified specimens were deposited in the GUBH Herbarium.

For convenience, plants were grouped into four horizontal layers *viz.*, canopy, middle storey, under-storey/shrub and ground layers (Appendices I & II; Plate – I: Figs. - 1, 2). For this purpose, the grouping of life-forms proposed by Raunkiaer (1934) was employed along

with the height of the plants (Raunkiaer 1934; Ambasth & Ambasth 2002). All the 5 major life forms viz., Phanerophytes, Chamaephytes, Hemicryptophytes, Geophytes and Therophytes were taken into account including the three subcategories of Phanerophytes viz., Mesophanerophytes, Microphanerophytes and Nanophanerophytes. The subcategory named 'Megaphanerophytes' was omitted due to absence of plants of that height. After going through the above mentioned criteria, the Angiospermic plants of the study area were delimited into four distinct horizontal strata as follows:

**Canopy Layer:** Plants of 8 to 30 metres high, usually including the mesophanerophytes;

**Middle Layer:** Plants of 3 to 8 metres high, usually including the microphanerophytes;

**Under-storey/Shrub Layer:** Plants of 1.5 to 3 metres high, mostly comprising the nanophanerophytes;

**Ground Layer:** Plants below 1.5 metres high, usually represented by herbs and under-shrubs belonging to chamaephytes, hemicryptophytes, geophytes and therophytes.

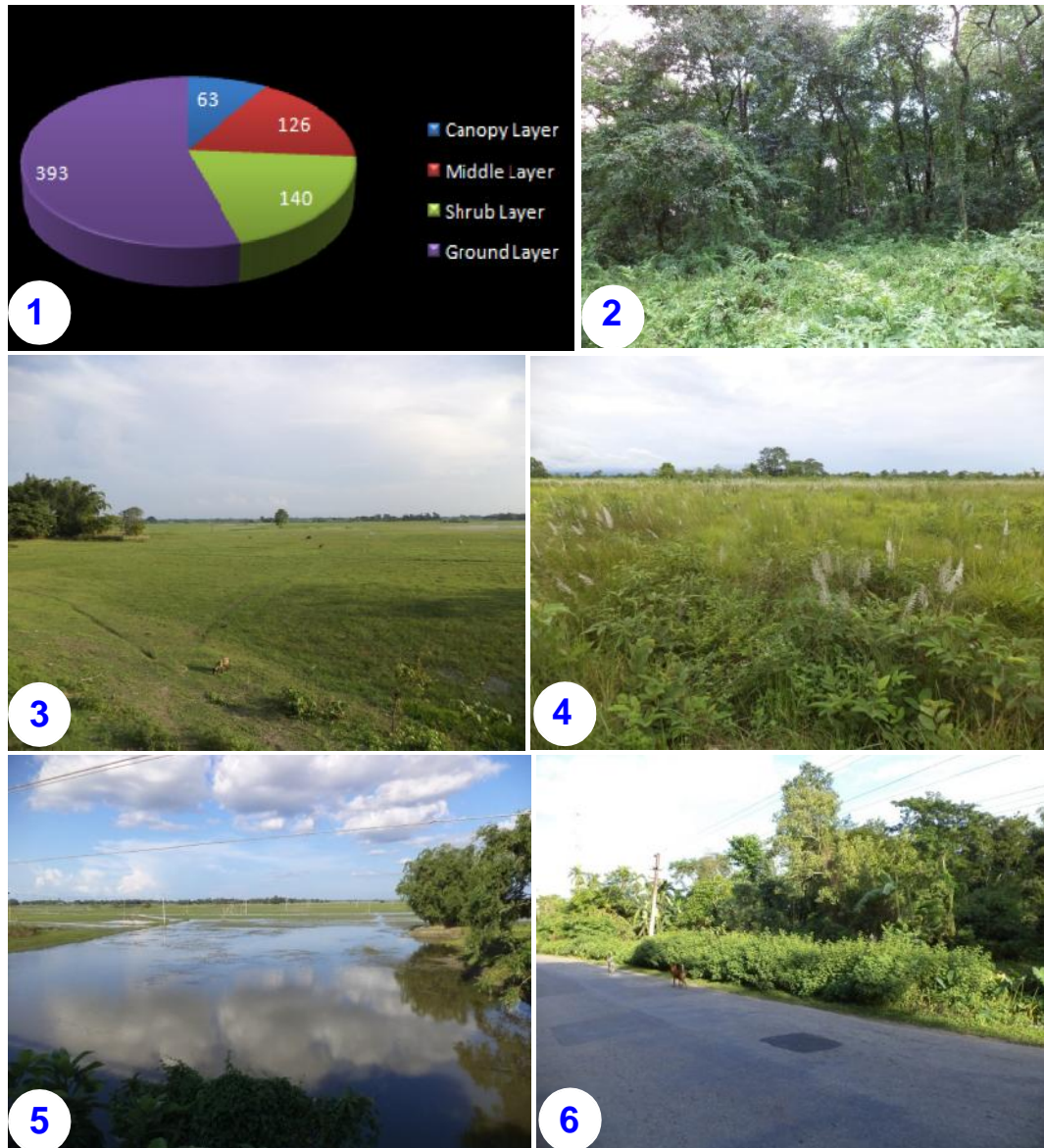
Stratification was recorded in detail for the study area as a whole with an intention to provide a glimpse of the relative numerical strength of different taxa in their respective horizontal layer. A detailed composition of stratification was recorded for a natural forest type viz., 'Tropical Semi-evergreen Forest' (Plate – I: Fig. 2) as an example of occurrence of typical stratification.

## RESULTS AND DISCUSSION

The study resulted in the recognition of 722 Angiospermic species and infra-specific taxa out of which 546 were dicotyledonous belonging to 346 genera under 101 families while the remaining 176 monocotyledonous elements belonged to 94 genera under 20 families. Evidently the study area was found to possess a rich floristic diversity (Appendix-II; Plate – I: Figs.-1, 2, 3, 4 & 6). Stratification was clearly observed only in two vegetation types viz., 'Tropical Semi-

**Table – 1.** Number of Angiospermic Species and Infra-specific Taxa Belonging to Different Life-forms

LIFE-FORMS	ANGIOSPERMIC SPECIES & INFRASPECIFIC TAXA		TOTAL
	DICOTYLEDONS (101 Families, 346 Genera)	MONOCOTYLEDONS (20 Families, 94 Genera)	
Mesophanerophytes	61 (11.17% of M; 8.42% of H)	02	63 (8.70% of H)
Microphanerophytes	118 (21.61% of M; 16.30% of H)	08	126 (17.40% of H)
Nanophanerophytes	140 (25.64% of M; 19.33% of H)	00	140 (19.34% of H)
Chamaephytes	16	02	18 (2.49% of H)
Hemicryptophytes	02	57 (32.02% of N; 7.87% of H)	59 (8.14% of H)
Cryptophytes/ Geophytes	01	78 (43.82% of N; 10.77% of H)	79 (10.91% of H)
Therophytes	208 (38.07% of M; 28.72% of H)	29 (17.41% of N; 4.48% of H)	237 (33.01% of H)
<b>TOTAL</b>	<b>546 (M)</b> <b>(75.41% of H)</b>	<b>176 (N)</b> <b>(24.58% of H)</b>	<b>722 (H)</b> <b>(121 Families, 440 Genera)</b>



**PLATE – I: Fig. – 1.** Number of species & infra-specific taxa in different layers of stratification; **Fig. – 2.** Stratification in Tropical Semi-evergreen Forest in MNP; **Fig. – 3.** Vast tract of cultivated field near Barpeta town; **Fig. – 4.** Grassland inside MNP near Bansbari Range office; **Fig. – 5.** Cultivated field under flood near Pathsala town; **Fig. – 6.** Rich growth of roadside vegetation at Keotkuchi, near Barpeta town.

Evergreen Forests' (Appendix- I; Plate – I: Fig. - 2) and 'Tropical Deciduous Forests'. Major part of the study area was covered by open, almost scattered vegetation (Plate – I: Figs.-3, 4, 5). However, it was interesting to note that the tendency of formation of distinct layering was shown by the study area wherever there was any undisturbed pocket in the open countryside (Plate – I: Fig. - 6). Indeed, not a single spot could be noticed that possessed no plant element at all, a fact indicative of the potential of the study area to harbour rich growth of vegetation.

**Table – 2.** Number of species and infra-specific taxa occupying different layers of stratification

HORIZONTAL LAYER/ STOREY	ANGIOSPERMIC SPECIES/ INFRA-SPECIFIC TAXA		TOTAL
	DICOTYLEDONS	MONOCOTYLEDONS	
<b>Canopy Layer</b> (Mesophanerophytes)	<b>61</b> (11.17% of A)	<b>02</b> (1.12% of B)	<b>63</b> (8.70% of C)
<b>Middle Layer</b> (Microphanerophytes)	<b>118</b> (22.61% of A)	<b>08</b> (4.49% of B)	<b>126</b> 17.40% of C)
<b>Under-Storey/ Shrub Layer</b> (Nanophanerophytes)	<b>140</b> (25.64% of A)	<b>00</b>	<b>140</b> (19.34% OF C)
<b>Ground Layer</b> (Chamaephytes, Hemicryptophytes, Geophytes And Therophytes)	<b>227</b> (41.57% of A)	<b>166</b> (94.38% of B)	<b>393</b> (54.56% of C)
<b>TOTAL:</b>	<b>546 (A)</b> <b>(75.41% of C)</b>	<b>176 (B)</b> <b>(24.98% of C)</b>	<b>722 (C)</b>

The study area, as a whole, was found to exhibit more or less distinct stratification. The plant species were found to occupy four horizontal strata/layers viz., the canopy layer, the middle storey, the under-storey/shrub layer and the ground layer (Appendices – I & II). It became evident that the numbers of Angiospermic species belonging to the four layers were 63, 126, 140 and 393, thus depicting a sharp increase from the canopy to the ground layer respectively. Ground layer elements were found to much outnumber those of the remaining layers (Appendix- II; Table - 2; Plate – I: Fig.-1). Dicotyledonous species were found to be much more than the monocotyledonous ones (Appendix – II; Tables - 1, 2). Among the monocotyledonous species, the ground layer elements were found to dominate the other categories and were mostly represented by geophytes. Further, an overview of the Appendix II, Tables – 1 & 2 revealed that the canopy and middle storey had been represented by lesser number of species, thus indicating the overall vegetation of the study area being a much open one. Contrary to that, prevalence of under-storey/shrub and ground layer elements was a clear indication of extensive anthropogenic disturbance especially in the form of agricultural practice in the study area (Plate - I: Figs. 3, 4, 5 & 6).

**Table – 3.** Endemic and threatened taxa in the study area.

Name	Family	Endemic	Threatened
<i>Solanum kurzii</i> Prain	Solanaceae	--	+
<i>Veronica anagalis</i> Linnaeus	Scrophulariaceae	--	+
<i>Glochidion ellipticum</i> Wight	Euphorbiaceae	+	--
<i>Eulophia obtusa</i> (Lindley) Hooker f.	Orchidaceae	--	+
<i>Paspalum longifolium</i> Roxburgh	Poaceae	+	--
<b>Total</b>		<b>2</b>	<b>3</b>

The study area was also found to be relatively rich in RET plant species. In spite of its negligible size in area (Anonymous 2009, 2015), there were recorded 2 endemic and 3 threatened species and infra-specific taxa (Appendix II; Table - 3). This finding authenticated the inclusion of the study area in the 'Himalaya Biodiversity Hotspot' for conservation (Conservation International 2005).

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## APPENDIX - I

### Stratification in Tropical Semi-Evergreen Forests near Mathanguri, MNP (Plate I: Fig. 2).

#### Canopy Layer:

*Dillenia indica* Linnaeus, *Magnolia champaca* (Linnaeus) Baillon ex Pierre, *Garcinia pedunculata* Roxburgh ex Buchanan-Hamilton, *Elaeocarpus hayatae* Kaneh. & Sasaki, *Mangifera indica* Linnaeus, *Butea monosperma* (Lamarck) P. Taubert, *Derris robusta* Bentham, *Samanea saman* (Jacquin) Merrill, *Terminalia bellirica* (Gaertner) Roxburgh, *Duabanga grandiflora* (Roxburgh ex A.P. de Candolle) Walpers, *Stereospermum chelonoides* A.P. de Candolle, *Persea gamblei* (King ex Hooker f.) Kostermans, *Bischofia javanica* Blume, *Bridelia squamosa* (Lamarck) Gehrmann

#### Middle Layer:

*Mesua ferrea* Linnaeus, *Sterculia villosa* Roxburgh, *Micromelum minutum* (Forster f.) Wight & Arnott, *Garuga pinnata* Roxburgh, *Melia azedarach* Linnaeus, *Ampelocissus barbata* (Wallich) Planchon, *Acacia torta* (Roxburgh) Craib, *Mimosa rubicaulis* Lamarck subsp. *himalayana* (Gamble) Ohashi, *Hodgsonia macrocarpa* (Blume) Cogniaux, *Mikania micrantha* Kunth, *Wrightia arborea* (Dennstedt) Mabberley, *Aeschynanthus bracteatus* Wallich ex A.P. de Candolle, *Thunbergia grandiflora* (Roxburgh ex Rottboell) Roxburgh, *Macrosolen cochinchinensis* (Loureiro) Tiegh., *Bridelia stipularis* (Linnaeus) Blume, *Aerides multiflorum* Roxburgh, *Dendrobium fugax* Reichb f., *Papilionanthe teres* (Roxburgh) Schlechter

#### Under-storey/Shrub Layer:

*Cyclea peltata* Hooker f. & Thomson, *Grewia serrulata* A.P. de Candolle, *Glycosmis pentaphylla* (Retzius) A.P. de Candolle, *Natsiatum herpeticum* Buchanan-Hamilton, *Rhamnus napalensis* (Wallich) M.A. Lawson, *C. repens* Lamarck, *Leea alata* Edgeworth, *Leea asiatica* (Linnaeus) Ridsdale, *Flemingia strobilifera* (Linnaeus) W.T. Aiton, *Melastoma malabathricum* Linnaeus, *Coffea benghalensis* B. Heyne ex Schultes, *Paederia foetida* Linnaeus, *Ardisia thomsonii* Mez, *Ichnocarpus frutescens* (Linnaeus) W.T. Aiton, *Tabernaemontana divaricata* (Linnaeus) R. Brown ex Roemer & Schultes, *Smilax ovalifolia* Roxburgh ex D. Don, *Apluda mutica* Linnaeus, *Saccharum narenga* (Nees ex Steudel) Hack

**Ground Layer:**

*Argemone mexicana* Linnaeus, *Cardamine debilis* D. Don, *Rorippa montana* (Wallich ex Hooker f. & T. Anderson) Small, *Cleome rutidosperma* A.P. de Candolle, *Drymaria cordata* (Linnaeus) Willdenow ex Schultes, *Abutilon indicum* (Linnaeus) Sweet, *Corchorus aestuans* Linnaeus, *Reinwardtia indica* Dumort., *Crotalaria prostrata* Willdenow, *Oldenlandia diffusa* (Willdenow) Roxburgh, *Mussaenda incana* Wallich, *Bidens biternata* (Loureiro) Merrill & Sherrif, *Emilia sonchifolia* (Linnaeus) A.P. de Candolle ex A.P. de Candolle, *Acmella paniculata* (Wallich ex A. P. de Candolle) R.K. Jansen, *Mitreola petiolata* (J. F. Gmelin) Torrey & A. Gray, *Buddleja asiatica* Loureiro, *Mazus pumilus* (Burman f.) Steenis, *Dicliptera paniculata* (Forsskal) I. Darbysh, *Rungia himalayensis* C.B. Clarke, *Holmskioldia sanguinea* Retzius, *Boehmeria macrophylla* var. *scabrella* (Roxburgh) D. G. Long, *Dactyloctenium aegypticum* (Linnaeus) Willdenow, *Thysanolaena latifolia* (Roxburgh ex Hornemann) Honda

**Appendix - II****Angiospermic species and infra-specific taxa in different horizontal layers of stratification in the study area as a whole**

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Ranunculaceae	<i>Ranunculus pennsylvanicus</i> ssp. <i>napaulensis</i> (A.P. de Candolle) Riedley							+
	<i>R. sceleratus</i> Linnaeus							+
Dilleniaceae	<i>Dillenia indica</i> Linnaeus							
	<i>D. pentagyna</i> Roxburgh							
Magnoliaceae	<i>Magnolia champaca</i> (Linnaeus) Baillon ex Pierre							
Annonaceae	<i>Annona reticulata</i> Linnaeus							
	<i>Polyalthia longifolia</i> Benth & Hooker f.							
Menispermaceae	<i>Cissampelos pareira</i> var. <i>hirsuta</i> (Buchanan-Hamilton ex A.P. de Candolle) Forman							
	<i>Cyclea peltata</i> Hooker f. & Thomson							
Papaveraceae	<i>Argemone mexicana</i> Linnaeus							+
Brassicaceae	<i>Brassica juncea</i> (Linnaeus) Czernajew-var. <i>cuneifolia</i> (Roxburgh) Kitamura							+
	<i>B. nigra</i> Linnaeus							+
	<i>B. oleracea</i> var. <i>botrytis</i> Linnaeus							+
	<i>Cardamine debilis</i> D. Don							+
	<i>Rorippa indica</i> (Linnaeus) Hiern							+
	<i>R. islandica</i> (Oeder) Borbass							+
	<i>R. montana</i> (Wallich ex Hooker f. & T. Anderson) Small							+
	<i>Crateva magna</i> (Loureiro) A.P. de Candolle							
Cleomaceae	<i>Cleome gynandra</i> Linnaeus							+
	<i>C. rutidosperma</i> A.P. de Candolle							+
	<i>C. viscosa</i> Linnaeus							+



FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Violaceae	<i>Viola betonicifolia</i> J.E. Smith					+		
Flacourtiaceae	<i>Casearia vareca</i> Roxburgh							
Polygalaceae	<i>Polygala arvensis</i> Willdenow							+
	<i>P. longifolia</i> Poiret							+
Caryophyllaceae	<i>Drymaria cordata</i> (Linnaeus) Willdenow ex Schultes							
	<i>Polycarpon prostratum</i> (Forsskal) Aschers & Schweinfurth							+
Portulacaceae	<i>Portulaca oleracea</i> Linnaeus							+
Tamaricaceae	<i>Tamarix dioica</i> Roxburgh ex Roth		+					
Elatinaceae	<i>Bergia ammannioides</i> Roxburgh ex Roth							+
Clusiaceae	<i>Garcinia pedunculata</i> Roxburgh ex Buchanan-Hamilton	+						
	<i>G. xanthochymus</i> Hooker f. & T. Anderson		+					
	<i>Mesua ferrea</i> Linnaeus		+					
Ternstroemiaceae	<i>Camellia sinensis</i> (Linnaeus) Kuntze			+				
Malvaceae	<i>Abelmoschus manihot</i> var. <i>pungens</i> (Roxburgh) Hochreutiner							
	<i>Abutilon indicum</i> (Linnaeus) Sweet							+
	<i>Hibiscus rosa-sinensis</i> Linnaeus		+					
	<i>H. sabdariffa</i> Linnaeus		+					
	<i>H. surattensis</i> Linnaeus							+
	<i>Sida spinosa</i> Linnaeus				+			
	<i>S. cordifolia</i> Linnaeus				+			
	<i>Urena lobata</i> Linnaeus			+				
Bombacaceae	<i>Bombax ceiba</i> Linnaeus	+						
Sterculiaceae	<i>Abroma augusta</i> Linnaeus f.		+					
	<i>Melochia corchorifolia</i> Linnaeus							+
	<i>Sterculia villosa</i> Roxburgh		+					
Tiliaceae	<i>Corchorus aestuans</i> Linnaeus							+
	<i>Grewia serrulata</i> A.P. de Candolle			+				
	<i>G. sapida</i> Roxburgh ex A.P. de Candolle			+				
	<i>Triumfetta rhomboidea</i> Jacquin			+				
Elaeocarpaceae	<i>Elaeocarpus hayatae</i> Kanehira & Sasaki	+						
Linaceae	<i>Linum usitatissimum</i> Linnaeus							+
	<i>Reinwardtia indica</i> Dumortier			+				
Geraniaceae	<i>Biophytum sensitivum</i> (Linnaeus) A.P. de Candolle							+
Oxalidaceae	<i>Oxalis corniculata</i> Linnaeus							+
Averrhoaceae	<i>Averrhoa bilimbi</i> Linnaeus		+					
	<i>A. carambola</i> Linnaeus		+					
Balsaminaceae	<i>Impatiens radicans</i> Benthams ex Hooker f. & Thomson							+
Rutaceae	<i>Aegle marmelos</i> (Linnaeus) Correa	+						
	<i>Glycosmis pentaphylla</i> (Retzius) A.P. de Candolle			+				
	<i>G. cyanocarpa</i> var. <i>simplicifolia</i> Kurz			+				
	<i>Micromelum minutum</i> Wight & Arnott		+					
	<i>Murraya koenigii</i> (Linnaeus) Sprengel		+					
	<i>M. paniculata</i> (Linnaeus) Jack		+					

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Rutaceae	<i>Paramignya scandens</i> Craib		+					
Ochmaceae	<i>Ochna integerrima</i> (Loureiro) Merrill		+					
Burseraeaceae	<i>Garuga pinnata</i> Roxburgh		+					
Meliaceae	<i>Azadirachta indica</i> A. Jussieu	+						
	<i>Melia azedarach</i> Linnaeus		+					
	<i>Toona ciliata</i> M. Roemer	+						
Olacaceae	<i>Olax nana</i> Wallich ex Benth			+				
Icacinaeae	<i>Natsiatum herpeticum</i> Buchanan-Hamilton ex Arnott			+				
Hippocrateaceae	<i>Hippocratea arborea</i> Roxburgh	+						
Rhamnaceae	<i>Gouania tiliifolia</i> Lamarck		+					
	<i>Rhamnus napalensis</i> (Wallich) M.A. Lawson			+				
	<i>Zizyphus mauritiana</i> Herbert		+					
Vitaceae	<i>Ampelocissus barbata</i> (Wallich) Planchon		+					
	<i>Cayratia japonica</i> (Thunberg) Gagnepain		+					
	<i>Cissus adnata</i> Roxburgh		+					
	<i>C. repens</i> Lamarck			+				
	<i>Tetrastigma obovatum</i> Gagnepain		+					
Leeaceae	<i>Leea alata</i> Edgeworth			+				
	<i>L. asiatica</i> (Linnaeus) Ridsdale			+				
	<i>L. compactiflora</i> Kurz		+					
Sapindaceae	<i>Cardiospermum halicacabum</i> Linnaeus			+				
	<i>Lepisanthes erecta</i> (Thwaites) Leenhouts		+					
	<i>L. senegalensis</i> (Poiret) Leenhouts			+				
Sabiaceae	<i>Meliosma simplicifolia</i> (Roxburgh) Walpers	+						
	<i>Sabia paniculata</i> Edgeworth ex Hooker f. & Thomson		+					
Anacardiaceae	<i>Lansea coromandelica</i> (Houttuyn) Merrill	+						
	<i>Mangifera indica</i> Linnaeus	+						
	<i>Spondias pinnata</i> (Linnaeus f.) Kurz	+						
Moringaceae	<i>Moringa oleifera</i> Lamarck		+					
Leguminosae : Faboideae	<i>Aeschynomene americana</i> Linnaeus			+				
	<i>A. indica</i> Linnaeus			+				
	<i>Alysicarpus scariosus</i> (Sprengel) Thwaites			+				
	<i>A. vaginalis</i> (Linnaeus) A.P. de Candolle				+			
	<i>A. rugosus</i> (Willdenow) A.P. de Candolle							+
	<i>Arachis hypogea</i> Linnaeus							+
	<i>Butea monosperma</i> (Lamarck) Taubert	+						
	<i>Cajanus cajan</i> (Linnaeus) Millspaugh		+					
	<i>C. elongatus</i> (Benth) van der Maesen			+				
	<i>Crotalaria albida</i> Roth							+
	<i>C. bialata</i> Schrank			+				
	<i>C. bracteata</i> A.P. de Candolle		+					
	<i>C. juncea</i> Linnaeus							+
	<i>C. laburnifolia</i> Linnaeus			+				
	<i>C. pallida</i> Aiton			+				
	<i>C. prostrata</i> Willdenow							+
	<i>C. cytisoides</i> A.P. de Candolle		+					
	<i>C. sessiliflora</i> Linnaeus							+
	<i>C. tetragona</i> Andrews		+					
	<i>Dalbergia sissoo</i> A.P. de Candolle	+						

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Leguminosae : Faboideae	<i>D. volubilis</i> Roxburgh		+					
	<i>Derris indica</i> (Lamarck) Bennet		+					
	<i>D. robusta</i> (A.P. de Candolle) Benth	+						
	<i>Ohwia caudata</i> (Thunberg) H. Ohashi		+					
	<i>Desmodium gangeticum</i> (Linnaeus) A.P. de Candolle			+				
	<i>Codariocalyx gyroides</i> (Link) Hasskarl			+				
	<i>Desmodium heterocarpon</i> var. <i>strigosum</i> van Meeuwen							+
	<i>D. heterophyllum</i> (Willdenow) A.P. de Candolle							+
	<i>D. laxiflorum</i> A.P. de Candolle			+				
	<i>Codariocalyx motorius</i> (Houtt.) H. Ohashi			+				
	<i>Phyllodium pulchellum</i> (Linnaeus) Desvauz			+				
	<i>Dendrolobium triangulare</i> (Retzius) Schindler			+				
	<i>D. triflorum</i> (Linnaeus) A.P. de Candolle							+
	<i>Tadehagi triquetrum</i> (Linnaeus) H. Ohashi			+				
	<i>D. velutinum</i> (Willdenow) A.P. de Candolle			+				
	<i>Erythrina arborascens</i> Roxburgh			+				
	<i>E. fusca</i> Loureiro			+				
	<i>E. stricta</i> Roxburgh			+				
	<i>Flemingia macrophylla</i> (Willdenow) Merrill				+			
	<i>F. prostrata</i> Roxburgh				+			
	<i>F. strobilifera</i> (Linnaeus) W.T. Aiton				+			
	<i>Indigofera zollingeriana</i> Miquel			+				
	<i>Lathyrus sativus</i> Linnaeus							+
	<i>Lens culinaris</i> Medikus							+
	<i>Millettia pachycarpa</i> Benth			+				
	<i>Mucuna pruriens</i> (Linnaeus) A.P. de Candolle			+				
	<i>Pisum sativum</i> Linnaeus							+
	<i>Pueraria phaseoloides</i> (Roxburgh) Benth				+			
	<i>Rhynchosia viscosa</i> (Roth) A.P. de Candolle				+			
	<i>Sesbania bispinosa</i> (Jacquin) W. Wight							+
	<i>S. grandiflora</i> (Linnaeus) Persoon			+				
	<i>S. sesban</i> (Linnaeus) Merrill			+				
	<i>Smithia grandis</i> Baker			+				
	<i>S. sensitiva</i> Aiton							
	<i>Tephrosia candida</i> (Roxburgh) A.P. de Candolle			+				
	<i>Uraria lagopodoidea</i> (Linnaeus) A.P. de Candolle				+			
	<i>U. picta</i> (Jacquin) A.P. de Candolle				+			
	<i>Vicia hirsuta</i> (Linnaeus) Gray							+
	<i>V. sativa</i> Linnaeus							+
	<i>Vigna mungo</i> (Linnaeus) Hepper							+
<i>V. radiata</i> var. <i>grandiflora</i> (Prain) Niyomdham							+	
<i>V. vexillata</i> (Linnaeus) A. Richard							+	
Leguminosae : Caesalpinioideae	<i>Bauhinia purpurea</i> Linnaeus	+						
	<i>B. variegata</i> Linnaeus		+					
	<i>Senna alata</i> (Linnaeus) Roxburgh		+					
	<i>Cassia fistula</i> Linnaeus	+						
	<i>Senna hirsuta</i> (Linnaeus) H.S. Irwin & Barneby			+				

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					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Leguminosae : Caesalpinioideae	<i>C. javanica</i> Linnaeus	+						
	<i>Chamaecrista mimosoides</i> (Linnaeus) Greene			+				
	<i>Senna occidentalis</i> (Linnaeus) Link			+				
	<i>Senna sophera</i> Linnaeus			+				
	<i>Senna tora</i> Linnaeus			+				
	<i>Delonix regia</i> (Hooker) Rafin	+						
Leguminosae: Mimosoideae	<i>Tamarindus indica</i> Linnaeus	+						
	<i>Acacia auriculiformis</i> Benth	+						
	<i>A. catechu</i> (Linnaeus f.) Willdenow	+						
	<i>A. catechu</i> var. <i>sundra</i> (Roxburgh) Benth		+					
	<i>A. torta</i> (Roxburgh) Craib		+					
	<i>Albizia lucidior</i> (Steudel) I.C. Nielson	+						
	<i>Leucaena leucocephala</i> (Lamarck) de Wit		+					
	<i>Mimosa invisa</i> Colla			+				
	<i>M. pudica</i> Linnaeus			+				
	<i>M. rubicaulis</i> Lamarck		+					
	<i>Pithecellobium dulce</i> (Roxburgh) Benth	+						
Rosaceae	<i>Albizia saman</i> (Jacquin) Merrill							
	<i>Duchesnea indica</i> (Jack) Focke							+
	<i>Potentilla supina</i> Linnaeus							+
	<i>Prunus salicina</i> Lindley		+					
Crassulaceae	<i>Rubus alceifolius</i> Poiret			+				
	<i>Bryophyllum pinnatum</i> (Lamarck) Oken							+
Combretaceae	<i>Terminalia arjuna</i> (Roxburgh ex A.P. de Candolle) Wight & Arnott		+					
	<i>T. bellirica</i> (Gaertner) Roxburgh	+						
	<i>T. chebula</i> Retzius	+						
Myrtaceae	<i>Eucalyptus resinifera</i> Smith	+						
	<i>Psidium guajava</i> Linnaeus		+					
	<i>Syzygium balsameum</i> (Wight) Wallich ex Walpers		+					
	<i>S. cumini</i> (Linnaeus) Skeels	+						
	<i>S. micranthum</i> Thwaites	+						
	<i>S. jambos</i> (Linnaeus) Alston	+						
Lecythidaceae	<i>S. nervosum</i> A. Cunningham ex A.P. de Candolle	+						
	<i>Careya arborea</i> Roxburgh	+						
Barringtoniaceae	<i>Barringtonia acutangula</i> (Linnaeus) Gaertner		+					
Melastomataceae	<i>Melastoma malabathricum</i> Linnaeus			+				
	<i>Osbeckia chinensis</i> Linnaeus			+				
	<i>O. stellata</i> Buchanan-Hamilton ex Ker-Gawler			+				
	<i>O. pulchella</i> Benth		+					
Lythraceae	<i>Ammania multiflora</i> Roxburgh							+
	<i>Cuphea carthagenensis</i> (Jacquin) J.F. Macbr.							+
	<i>C. hyssopifolia</i> Kunth			+				
	<i>Lagerstroemia parviflora</i> Roxburgh	+						
	<i>L. speciosa</i> (Linnaeus) Persoon	+						
	<i>Rotala indica</i> (Willdenow) Koehne							+
	<i>R. macrandra</i> Koehne							+
	<i>R. mexicana</i> Schlechtendal & Chamisso							+
<i>R. serpyllifolia</i> (Roth) Bremekamp							+	

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Sonneratiaceae	<i>Duabanga grandiflora</i> (A.P. de Candolle) Walpers	+						
Punicaceae	<i>Punica granatum</i> Linnaeus		+					
Onagraceae	<i>Epilobium angustifolium</i> Linnaeus							+
	<i>Ludwigia hyssopifolia</i> (G. Don) Excell							+
	<i>L. perennis</i> Linnaeus			+				
	<i>L. adscendens</i> (Linnaeus) H. Hara							+
	<i>L. octavalvis</i> (Jacquin) P.H. Raven			+				
	<i>L. prostrata</i> Roxburgh							+
Caricaceae	<i>Carica papaya</i> Linnaeus		+					
Cucurbitaceae	<i>Citrullus lanatus</i> (Thunberg) Matsumara & Nakai							+
	<i>Cucurbita pepo</i> Linnaeus			+				
	<i>Gymnopetalum chinense</i> (Loureiro) Merrill		+					
	<i>Hodgsonia macrocarpa</i> (Blume) Cogniaux		+					
	<i>Luffa cylindrica</i> (Linnaeus) M. Roemer			+				
	<i>Momordica charantia</i> Linnaeus			+				
	<i>M. cochinchinensis</i> (Loureiro) Sprengel			+				
	<i>Mukia maderaspatana</i> (Linnaeus) M. Roemer			+				
	<i>M. scabrella</i> (Linnaeus f.) Arnott			+				
	<i>Solena amplexicaulis</i> (Lamarck) Gandhi			+				
	<i>Thladiantha cordifolia</i> (Blume) Cogniaux			+				
	<i>Trichosanthes pilosa</i> Loureiro			+				
	<i>T. tricuspidata</i> Loureiro			+				
	<i>T. wallichiana</i> (Seringe) Wight				+			
Aizoaceae	<i>Glinus lotoides</i> Linnaeus							+
	<i>G. oppositifolius</i> (Linnaeus) A. de Candolle							+
Apiaceae	<i>Centella asiatica</i> (Linnaeus) Urban				+			
	<i>Coriandrum sativum</i> Linnaeus							+
	<i>Eryngium foetidum</i> Linnaeus							+
	<i>Foeniculum vulgare</i> Miller							+
	<i>Hydrocotyle sibthorpioides</i> Lamarck				+			
	<i>Oenanthe fistulosa</i> Linnaeus							+
	<i>O. javanica</i> (Blume) A.P. de Candolle							+
	<i>Cnidium monnieri</i> (Linnaeus) Cusson							+
	<i>Vicatia conifolia</i> Wallich ex A.P. de Candolle							+
Alangiaceae	<i>Alangium chinense</i> (Loureiro) Harms		+					
Caprifoliaceae	<i>Lonicera macrantha</i> (D. Don) Sprengel		+					
Rubiaceae	<i>Neonauclea purpurea</i> (Roxburgh) Merrill	+						
	<i>Spermacoce articularis</i> Linnaeus f.				+			
	<i>Catunaregam nutans</i> (Roxburgh) Tirveng.		+					
	<i>Coffea benghalensis</i> B. Heyne ex Schultes			+				
	<i>Dentella repens</i> var. <i>serpyllifolia</i> (Wallich ex Craib) Verdcamp				+			
	<i>Oldenlandia corymbosa</i> Linnaeus							+
	<i>O. diffusa</i> (Willdenow) Roxburgh							+
	<i>O. lineata</i> (Roxburgh) Kuntze							+
	<i>H. scandens</i> Roxburgh							+
	<i>O. verticillata</i> Linnaeus							+
	<i>Pavetta corymbosa</i> (A.P. de Candolle) F. N. Williams		+					

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Rubiaceae	<i>Meyna spinosa</i> Roxburgh ex Link		+					
	<i>Morinda angustifolia</i> Roxburgh		+					
	<i>Mussaenda incana</i> Wallich			+				
	<i>Paederia foetida</i> Linnaeus			+				
	<i>P. verticillata</i> Blume		+					
	<i>Pavetta indica</i> Linnaeus		+					
	<i>Richardia scabra</i> Linnaeus							+
Asteraceae	<i>Adenostemma lavenia</i> (Linnaeus) Kuntze							+
	<i>Ageratum conyzoides</i> (Linnaeus) Linnaeus							+
	<i>Artemisia carvifolia</i> Buchanan-Hamilton ex Roxburgh							+
	<i>A. indica</i> Willdenow			+				
	<i>Bidens biternata</i> (Loureiro) Merrill & Sherrif			+				
	<i>Blumea fistulosa</i> (Roxburgh) Kurz							+
	<i>B. hieraciifolia</i> (D. Don) A.P. de Candolle							+
	<i>B. lacera</i> var. <i>glandulosa</i> (Burman f.) A.P. de Candolle							+
	<i>B. axillaris</i> (Lamarck) A.P. de Candolle							+
	<i>B. obliqua</i> (Linnaeus) Druce			+				
	<i>Centipeda minima</i> (Linnaeus) A. Braun & Aschers					+		
	<i>Cirsium arvense</i> (Linnaeus) Scopoli							+
	<i>Erigeron canadensis</i> Linnaeus							+
	<i>Cotula hemispherica</i> (Roxburgh) Babu							+
	<i>Crassocephalum crepidioides</i> (Benth) S. Moore							+
	<i>Chrysanthemum indicum</i> Linnaeus							+
	<i>Dichrocephala integrifolia</i> (Linnaeus f.) Kuntze							+
	<i>Eclipta prostrata</i> (Linnaeus) Linnaeus							+
	<i>Emilia sonchifolia</i> (Linnaeus) A.P. de Candolle ex A.P. de Candolle							+
	<i>Enydra fluctuans</i> A.P. de Candolle					+		
	<i>Erigeron sublyratus</i> Roxburgh ex A.P. de Candolle							+
	<i>Ethulia conyzoides</i> Linnaeus f.							+
	<i>Chromolaena odorata</i> (Linnaeus) R.M. King & H. Robinson				+			
	<i>Helichrysum indicum</i> (Linnaeus) Grierson							+
	<i>G. pensylvanicum</i> Willdenow							+
	<i>G. polycaulon</i> Persoon							+
	<i>Grangea maderaspatana</i> (Linnaeus) Poirlet							+
	<i>Guizotia abyssinica</i> (Linnaeus f.) Cassini							+
	<i>Hemisteptia lyrata</i> (Bunge) Fischer & C. A. Meyer							+
	<i>Ixeridium gracile</i> (A.P. de Candolle) Pak & Kawano							+
	<i>Launaea asplenifolia</i> (Willdenow) Hooker f.							+
	<i>L. procumbens</i> (Roxburgh) Rammaya & Rajagopal					+		
	<i>Mikania micrantha</i> Kunth			+				
<i>Parthenium hysterophorus</i> Linnaeus							+	

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Asteraceae	<i>Laphangium luteoalbum</i> (Linnaeus) Tzvelev							+
	<i>Senecio latiligulatus</i> N.P. Balakrishnan							+
	<i>S. vulgaris</i> Linnaeus							+
	<i>Sphaeranthus senegalensis</i> A.P. de Candolle							+
	<i>Spilanthes iabadicensis</i> A.H. Moore							+
	<i>Acmella paniculata</i> (Wallich ex A.P. de Candolle) R.K.Jansen							+
	<i>Synedrella nodiflora</i> (Linnaeus) Gaertner							+
	<i>Thespis divaricata</i> A.P. de Candolle							+
	<i>Tithonia diversifolia</i> (Hemsley) A. Gray			+				
	<i>Tridax procumbens</i> (Linnaeus) Linnaeus							+
	<i>Acilepis aspera</i> (Buchanan-Hamilton) H. Robinson				+			
	<i>Vernonia conyzoides</i> Hutchinson & Dalziel							+
	<i>Cyanthillium patulum</i> (Dryand ex Dryand) H. Robinson							+
	<i>Vernonia silhetensis</i> (A.P. de Candolle) Craib			+				
<i>Xanthium strumarium</i> Linnaeus				+				
<i>Youngia japonica</i> (Linnaeus) A.P. de Candolle							+	
Campanulaceae	<i>Wahlenbergia marginata</i> (Thunberg) A. de Candolle							+
Myrsinaceae	<i>Ardisia thomsonii</i> Mez			+				
	<i>Maesa indica</i> (Roxburgh) A. de Candolle			+				
Sapotaceae	<i>Manilkara zapota</i> (Linnaeus) P. Royen		+					
	<i>Mimusops elengi</i> Linnaeus	+						
Oleaceae	<i>Jasminum elongatum</i> (P.J. Bergius) Willdenow			+				
	<i>Nyctanthes arbor-tristis</i> Linnaeus		+					
Apocynaceae	<i>Allamanda cathartica</i> Linnaeus			+				
	<i>Alstonia scholaris</i> (Linnaeus) R. Brown	+						
	<i>Cascabela thevetia</i> (Linnaeus) Lippold		+					
	<i>Catharanthus roseus</i> (Linnaeus) G. Don			+				
	<i>Holarrhena pubescens</i> Wallich ex G. Don	+						
	<i>Ichnocarpus frutescens</i> (Linnaeus) W.T. Aiton			+				
	<i>Plumeria rubra</i> Linnaeus	+						
	<i>Rauvolfia serpentina</i> (Linnaeus) Bentham ex Kurz			+				
	<i>R. tetraphylla</i> Linnaeus			+				
	<i>Tabernaemontana divaricata</i> (Linnaeus) R. Brown ex Roemer & Schultes		+					
<i>Wrightia arborea</i> (Dennstedt) Mabberley		+						
Asclepiadaceae	<i>Calotropis gigantea</i> (Linnaeus) Dryander		+					
	<i>C. acea</i> Buchanan-Hamilton			+				
	<i>Marsdenia roylei</i> Wight		+					
	<i>Sarcostemma secamone</i> (Linnaeus) Bennet		+					
Loganiaceae	<i>Mitreola petiolata</i> (J.F. Gmel.) Torrey & A. Gray						+	
Buddleiaceae	<i>Buddleja asiatica</i> Loureiro			+				
Gentianaceae	<i>Exacum tetragonum</i> Roxburgh						+	
	<i>E. teres</i> Wallich						+	
Hydrophyllaceae	<i>Hydrolea zeylanica</i> (Linnaeus) Vahl				+			
Boraginaceae	<i>Cordia dichotoma</i> G. Forster	+						
	<i>Cynoglossum wallichii</i> var. <i>glochidiatum</i> (Wallich ex Bentham) Kazmi						+	

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					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Boraginaceae	<i>C. zeylanicum</i> (Vahl) Brand							+
Heliotropiaceae	<i>Heliotropium indicum</i> Linnaeus							+
Convolvulaceae	<i>Argyrea argentea</i> (Roxburgh) Sweet	+						
	<i>A capitiformis</i> (Poiret) Ooststroom		+					
	<i>A. roxburghii</i> (Wallich) Arnott ex Choisy	+						
	<i>Calystegia hederacea</i> Wallich							+
	<i>Evolvulus nummularius</i> (Linnaeus) Linnaeus					+		
	<i>Ipomoea aquatica</i> Forsskal						+	
	<i>I. carnea</i> Jacquin					+		
	<i>I. obscura</i> (Linnaeus) Ker-Gawler		+					
	<i>I. pes-tigridis</i> Linnaeus							+
	<i>I. quamoclit</i> Linnaeus			+				
	<i>Merremia hederacea</i> (Burman f.) Hallier f.				+			
	<i>M. umbellata</i> (Linnaeus) Hallier f.				+			
	<i>M. vitifolia</i> (Burman f.) Hallier f.				+			
	<i>Operculina turpethum</i> (Linnaeus) Silva Manso.			+				
<i>Porana paniculata</i> Roxburgh			+					
Cuscutaceae	<i>Cuscuta reflexa</i> Roxburgh			+				
	<i>C. reflexa</i> var. <i>anguina</i> (Edgeworth) C.B. Clarke			+				
Solanaceae	<i>Capsicum annuum</i> Linnaeus			+				
	<i>Datura metel</i> Linnaeus			+				
	<i>Nicotiana plumbaginifolia</i> Viviani							+
	<i>Physalis minima</i> Linnaeus							+
	<i>Solanum anguivi</i> Lamarck			+				
	<i>S. kurzii</i> Prain							+
	<i>S. myriacanthum</i> Dunal			+				
	<i>S. americanum</i> Miller							+
	<i>S. spirale</i> Roxburgh			+				
	<i>S. torvum</i> Sweet			+				
<i>S. tuberosum</i> Linnaeus							+	
Scrophulariaceae	<i>Adenosma indianum</i> (Loureiro) Merrill							+
	<i>Linnophila chinensis</i> (Osbeck) Merrill							+
	<i>L. erecta</i> Benth							+
	<i>L. heterophylla</i> (Roxburgh) Benth							+
	<i>L. sessiliflora</i> (Vahl) Blume							+
	<i>Lindernia anagallis</i> (Burman f.) Pennel							+
	<i>L. antipoda</i> (Linnaeus) Alston							+
	<i>L. crustacea</i> (Linnaeus) F. Mueller							+
	<i>L. multiflora</i> (Roxburgh) Mukerjee							+
	<i>L. procumbens</i> (Krock.) Philcox							+
	<i>L. ruellioides</i> (Colsmann) Pennel							+
	<i>Mazus pumilus</i> (Burman f.) Steenis							+
	<i>Mecardonia procumbens</i> (Miller) Small							+
	<i>Scoparia dulcis</i> Linnaeus							+
	<i>Torenia thouarsii</i> (Cham. & Schlechtendal							+
<i>T. violacea</i> (Azaolo ex Blanco) Pennel							+	
<i>Veronica anagallis</i> Linnaeus							+	
Gesneriaceae	<i>Aeschynanthus bracteatus</i> Wallich ex A. de Candolle			+				
Bignoniaceae	<i>Oroxylum indicum</i> (Linnaeus) Kurz		+					

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Bignoniaceae	<i>Stereospermum chelonoides</i> (Linnaeus f.) A.P. de Candolle	+						
Pedaliaceae	<i>Sesamaum indicum</i> Linnaeus							+
Acanthaceae	<i>Andrographis paniculata</i> (Burman f.) Nees							+
	<i>Asystasia gangetica</i> (Linnaeus) T. Anderson							+



FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Bignoniaceae	<i>Stereospermum chelonoides</i> (Linnaeus f.) A.P. de Candolle	+						
Pedaliaceae	<i>Sesamum indicum</i> Linnaeus							+
Acanthaceae	<i>Andrographis paniculata</i> (Burman f.) Nees							+
	<i>Asystasia gangetica</i> (Linnaeus) T. Anderson							+
	<i>Barleria cristata</i> Linnaeus							+
	<i>Dicliptera bupleuroides</i> Nees							+
	<i>Difflugosa colorata</i> (Nees) Bremekamp			+				
	<i>Eranthemum pulchellum</i> Andrews			+				
	<i>Hygrophila polysperma</i> (Roxburgh) T. Anderson							+
	<i>H. ringens</i> (Linnaeus) R. Brown ex Sprengel							+
	<i>Justicia adhatoda</i> Linnaeus			+				
	<i>J. japonica</i> Thunberg							+
	<i>Lepidagathis incurva</i> Buchanan-Hamilton ex D. Don							+
	<i>Nelsonia canescens</i> (Lamarck) Sprengel							+
	<i>Dicliptera paniculata</i> (Forsskal) I. Darbysh							+
	<i>Phaulopsis imbricata</i> (Forsskal) Sweet						+	
	<i>Phlogacanthus thyrsoformis</i> (Roxburgh ex Hardwicke) Mabberley		+					
	<i>Rungia himalayensis</i> C.B. Clarke							+
	<i>R. pectinata</i> (Linnaeus) Nees							+
	<i>R. repens</i> (Linnaeus) Nees							+
<i>Strobilanthes affinis</i> (Griffith) Terao ex J. R.I. Wood & J.R. Benn.							+	
Thunbergiaceae	<i>Thunbergia grandiflora</i> (Roxburgh ex Rottboell) Roxburgh		+					
Verbenaceae	<i>Callicarpa arborea</i> Roxburgh	+						
	<i>C. longifolia</i> Lamarck		+					
	<i>C. macrophylla</i> Vahl			+				
	<i>Clerodendrum glandulosum</i> Lindley			+				
	<i>C. indicum</i> (Linnaeus) Kuntze			+				
	<i>Volkameria inermis</i> Linnaeus			+				
	<i>C. japonicum</i> (Thunberg) Sweet		+					
	<i>C. chinense</i> (Osbeck) Mabberley			+				
	<i>Rothea serrata</i> (Linnaeus) Steane & Mabberley			+				
	<i>C. infortunatum</i> Linnaeus			+				
	<i>Gmelina arborea</i> Roxburgh	+						
	<i>Holmskioldia sanguinea</i> Retzius			+				
	<i>Lantana camara</i> Linnaeus			+				
	<i>Lippia javanica</i> (Burman f.) Sprengel			+				
	<i>Phyla nodiflora</i> (Linnaeus) Greene							+
	<i>Premna barbata</i> Wallich ex Schauer				+			
	<i>P. mollissima</i> Roth			+				
	<i>P. milleflora</i> C.B. Clarke	+						
	<i>Premna herbacea</i> Roxburgh					+		
	<i>Tectona grandis</i> Linnaeus f.	+						
	<i>Vitex glabrata</i> R. Brown			+				
	<i>V. negundo</i> Linnaeus			+				
<i>Platostoma hispidum</i> (Linnaeus) A.J. Paton							+	

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Verbenaceae	<i>Ajuga macrosperma</i> Wallich ex Benth							+
	<i>Anisochilus polystachys</i> Benth			+				
	<i>Anisomeles indica</i> (Linnaeus) Kuntze							+
	<i>Pogostemon crassicaulis</i> (Benth) Presl							+
	<i>P. linearis</i> (Benth) Kuntze							+
	<i>Pogostemon stellatus</i> (Loureiro) Kuntze							+
	<i>Hyptis suaveolens</i> (Linnaeus) Poit							+
	<i>Leonurus sibiricus</i> Linnaeus							+
	<i>Leucas zeylanica</i> (Linnaeus) W. T. Aiton							+
	<i>Mosla dianthera</i> (Buchanan-Hamilton ex Roxburgh) Maxim.							+
	<i>Ocimum gratissimum</i> Linnaeus			+				
	<i>Endostemon viscosus</i> (Roth) M.R. Asby							+
	<i>Isodon ternifolius</i> (D. Don) Kudo		+					
	<i>Pogostemon auricularius</i> (Linnaeus) Hasskarl			+				
<i>Teucrium viscidum</i> Blume							+	
Nyctaginaceae	<i>Boerhaavia diffusa</i> Linnaeus							+
	<i>Bougainvillea spectabilis</i> Willdenow			+				
	<i>Mirabilis jalapa</i> Linnaeus			+				
Amaranthaceae	<i>Achyranthes aspera</i> Linnaeus							+
	<i>Alternanthera paronychioides</i> A. St.- Hilaire				+			
	<i>A. philoxeroides</i> (Martius) Grisebach							+
	<i>A. sessilis</i> (Linnaeus) R. Brown ex A.P. de Candolle				+			
	<i>Amaranthus spinosus</i> Linnaeus							+
	<i>A. viridis</i> Linnaeus							+
	<i>Celosia argentea</i> Linnaeus							+
	<i>Cyathula prostrata</i> (Linnaeus) Blume							+
	<i>Deeringia amaranthoides</i> (Lamarck) Merrill			+				
Chenopodiaceae	<i>Chenopodium album</i> Linnaeus							+
	<i>Dysphania ambrosioides</i> (Linnaeus) Mosyakin & Clemants			+				
Polygonaceae	<i>Polygonum praetermissum</i> Hooker f.			+				
	<i>Persicaria barbata</i> (Linnaeus) H. Hara			+				
	<i>P. chinensis</i> (Linnaeus) H. Gross			+				
	<i>Fallopia dumetorum</i> (Linnaeus) Holub							+
	<i>Persicaria hydropiper</i> (Linnaeus) Delarbre							+
	<i>Polygonum kawagoeanum</i> Makino							+
	<i>P. lapathifolium</i> var. <i>lanatum</i> (Roxburgh) Steward			+				
	<i>Persicaria orientalis</i> (Linnaeus) Spach							+
	<i>Polygonum perfoliatum</i> Linnaeus							+
	<i>P. plebeium</i> R. Brown							+
	<i>P. plebeium</i> var. <i>indica</i> (Heine ex Roth) Hooker f.							+
	<i>P. posumbo</i> Buchanan-Hamilton ex D. Don							+
	<i>Persicaria pulchra</i> (Blume) Sojak			+				
	<i>P. decipiens</i> (R. Brown) K.L. Wilson			+				
	<i>P. strigosa</i> (R. Brown) Nakai							+
	<i>P. rottboellioides</i> Jaub. and Spach							+
	<i>P. viscosum</i> Buchanan-Hamilton ex D. Don							+
	<i>Rumex nepalensis</i> Sprengel							+

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Piperaceae	<i>Peperomia pellucida</i> (Linnaeus) Kunth							+
	<i>Piper longum</i> Linnaeus							+
	<i>P. mullesua</i> Buchanan-Hamilton ex D. Don			+				
	<i>P. rhytidocarpum</i> Hooker f.							+
	<i>P. trioicum</i> Roxburgh							+
Saururaceae	<i>Houttuynia cordata</i> Thunberg				+			
Lauraceae	<i>Litsea elongata</i> (Nees) Hooker f.		+					
	<i>L. glutinosa</i> (Loureiro) C.B. Robinson	+						
	<i>L. salicifolia</i> (Roxburgh ex Nees) Hooker f.		+					
	<i>Persea gamblei</i> (King ex Hooker f.) Kosterm	+						
	<i>Litsea monopetala</i> (Roxburgh) Persoon	+						
Proteaceae	<i>Grevillea robusta</i> A. Cunningham ex R. Brown	+						
Thymelaeaceae	<i>Aquilaria malaccensis</i> Lamarck		+					
Loranthaceae	<i>Helixanthera ligustrina</i> (Wallich) Danser		+					
	<i>Macrosolen cochinchinensis</i> (Loureiro) Tieghel		+					
Euphorbiaceae	<i>Acalypha brachystachya</i> Hornemann							+
	<i>A. indica</i> Linnaeus							+
	<i>A. wilkesiana</i> Mueller-Argoviensis			+				
	<i>Antidesma acidum</i> Retzius		+					
	<i>A. buniis</i> (Linnaeus) Sprengel		+					
	<i>A. ghaesembilla</i> Gaertner		+					
	<i>Baliospermum solanifolium</i> (Burman) Suresh			+				
	<i>Bischofia javanica</i> Blume	+						
	<i>Cleistanthus monoicus</i> (Loureiro) Muell – Argoviensis		+					
	<i>Bridelia stipularis</i> (Linnaeus) Blume		+					
	<i>B. retusa</i> (Linnaeus) A. Jussieu	+						
	<i>Chrozophora rotleri</i> (Geiseler) A. Jussieu ex Sprengel			+				
	<i>Codiaeum variegatum</i> (Linnaeus) Rumphius ex A. Jussieu		+					
	<i>Croton bonplandianus</i> Baillon			+				
	<i>C. tiglium</i> Linnaeus		+					
	<i>Phyllanthus emblica</i> Linnaeus		+					
	<i>Euphorbia hirta</i> Linnaeus							+
	<i>E. indica</i> Lamarck							+
	<i>E. pulcherrima</i> Willdenow ex Klotzsch		+					
	<i>E. thymifolia</i> Linnaeus					+		
	<i>Glochidion ellipticum</i> Wight				+			
	<i>G. multiloculare</i> (Rottler ex Willdenow) Voight				+			
	<i>Jatropha curcas</i> Linnaeus		+					
	<i>Phyllanthusreticulatus</i> Poiret		+					
	<i>Mallotus philippensis</i> (Lamarck) Muell - Argoviensis		+					
	<i>Euphorbia tithymaloides</i> Linnaeus				+			
	<i>Phyllanthus amarus</i> Schumach & Thonn.							+
	<i>P. urinaria</i> Linnaeus							+
	<i>Ricinus communis</i> Linnaeus		+					
	<i>Flueggea virosa</i> (Roxburgh ex Willdenow) Royle				+			
<i>Mallotus nudiflorus</i> (Linnaeus) Kulju & Welzen	+							

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					Chamaephytes	Hemicyptophytes	Geophytes	Therophytes
Urticaceae	<i>Boehmeria macrophylla</i> var. <i>scabrella</i> (Roxburgh) D.G. Long			+				
	<i>Maclura cochinchinensis</i> (Loureiro) Corner		+					
	<i>Dendrocnide sinuata</i> (Blume) Chew			+				
	<i>Neodistemon indicum</i> (Wedd.) Babu & Henry							+
	<i>Pouzolzia bennetiana</i> Wight							+
	<i>P. zeylanica</i> var. <i>angustifolia</i> C.J. Chen							+
	<i>Gonostegia pentandra</i> (Roxburgh) Miquel							+
	<i>P. zeylanica</i> (Linnaeus) Bennet							+
Moraceae	<i>Sarcochlamys pulcherrima</i> Gaudichaud		+					
	<i>Ficus altissima</i> Blume	+						
	<i>F. heterophylla</i> Linnaeus f.			+				
	<i>F. hispida</i> Linnaeus f.		+					
	<i>F. obscura</i> Blume			+				
	<i>F. racemosa</i> Linnaeus	+						
	<i>F. rumphii</i> Blume		+					
	<i>Morus australis</i> Poirer		+					
Cannabaceae	<i>Streblus asper</i> Loureiro		+					
	<i>Cannabis sativa</i> Linnaeus			+				
Orchidaceae	<i>Aerides multiflorum</i> Roxburgh		+					
	<i>Calanthe odora</i> Griffith							+
	<i>C. triplicata</i> (Willemet) Ames							+
	<i>Eulophia obtusa</i> (Lindley) Hooker f.							+
	<i>Dendrobium fugax</i> Reichenbach f.		+					
	<i>Geodorum densiflorum</i> (Lamarck) Schlechter							+
	<i>Liparis odorata</i> (Willdenow) Lindley							+
	<i>Papilionanthe teres</i> (Roxburgh) Schlechter		+					
	<i>Zeuxine strateumatica</i> (Linnaeus) Schlechter							+
Zingiberaceae	<i>Alpinia nigra</i> (Gaertner) Burt							+
	<i>Curcuma angustifolia</i> Roxburgh							+
	<i>C. aromatica</i> Salisbury							+
	<i>C. longa</i> Linnaeus							+
	<i>C. zedoaria</i> (Christmann) Roscoe							+
	<i>Boesenbergia longiflora</i> (Wallich) Kuntze							+
	<i>Globba racemosa</i> Smith							+
	<i>Zingiber capitatum</i> Roxburgh							+
	Musaceae	<i>Musa acuminata</i> Colla						
<i>M. balbisiana</i> Colla								+
<i>M. x paradisiaca</i> Linnaeus								+
Costaceae	<i>Cheilocostus speciosus</i> (J. Koenig) C.D. Specht							+
Cannaceae	<i>Canna indica</i> Linnaeus							+
Marantaceae	<i>Schumannianthus dichotomus</i> (Roxburgh) Gagnepain							+
	<i>Ophiopogon intermedius</i> D. Don							+
Amaryllidaceae	<i>Crinum asiaticum</i> Linnaeus							+
Hypoxidaceae	<i>Curculigo orchioides</i> Gaertner							+
Dioscoreaceae	<i>Dioscorea alata</i> Linnaeus							+
	<i>D. pubera</i> Blume							+
	<i>D. bulbifera</i> Linnaeus							+
	<i>D. hamiltonii</i> Hooker f.							+
	<i>D. hispida</i> Dennstedt							+

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					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Dioscoreaceae	<i>D. pentaphylla</i> Linnaeus						+	
Liliaceae	<i>Iphigenia indica</i> (Linnaeus) A. Gray ex Kunth						+	
	<i>Ledebouria revoluta</i> (Linnaeus f.) Jessop						+	
Smilacaceae	<i>Smilax ovalifolia</i> Roxburgh ex D. Don						+	
Commelinaceae	<i>Commelina appendiculata</i> C.B. Clarke				+			
	<i>C. benghalensis</i> Linnaeus					+		
	<i>C. diffusa</i> Burman f.					+		
	<i>C. longifolia</i> Lamarck					+		
	<i>C. paludosa</i> Blume					+		
	<i>Cyanotis cristata</i> (Linnaeus) D. Don							+
	<i>Rhopalephora scaberrima</i> (Blume) Faden							+
	<i>Floscopa scandens</i> Loureiro							+
	<i>Murdannia japonica</i> (Thunberg) Faden							+
	<i>M. spirata</i> (Linnaeus) G. Bruckner							+
	<i>M. nudiflora</i> (Linnaeus) Brenan						+	
	<i>Cyanotis axillaris</i> (Linnaeus) D. Don							+
Juncaceae	<i>Juncus wallichianus</i> J. Gay ex Laharpe						+	
Arecaceae	<i>Areca catechu</i> Linnaeus	+						
	<i>Calamus tenuis</i> Roxburgh		+					
	<i>Cocos nucifera</i> Linnaeus	+						
	<i>Phoenix sylvestris</i> (Linnaeus) Roxburgh		+					
Pandanaceae	<i>Pandanus furcatus</i> Roxburgh		+					
Typhaceae	<i>Typha elephantina</i> Roxburgh		+					
Araceae	<i>Alocasia macrorrhizos</i> (Linnaeus) G. Don					+		
	<i>Colocasia esculenta</i> (Linnaeus) Schott						+	
	<i>C. fallax</i> Schott					+		
	<i>Homalomena aromatica</i> (Sprengel) Schott						+	
	<i>Lasia spinosa</i> (Linnaeus) Thwaites					+		
	<i>Rhaphidophora decursiva</i> (Roxburgh) Schott		+					
	<i>Typhonium flagelliforme</i> (Loddiges) Blume						+	
	<i>T. trilobatum</i> (Linnaeus) Schott						+	
Cyperaceae	<i>Kyllingia brevifolia</i> Rottboell						+	
	<i>Cyperus compactus</i> Retzius						+	
	<i>C. compressus</i> Linnaeus						+	
	<i>C. difformis</i> Linnaeus						+	
	<i>C. distans</i> Linnaeus f.						+	
	<i>Pycurus flavidus</i> (Retzius) T. Koyama						+	
	<i>Cyperus fuscus</i> Linnaeus						+	
	<i>C. cruentus</i> Rottboell						+	
	<i>C. imbricatus</i> Retzius						+	
	<i>C. iria</i> Linnaeus						+	
	<i>C. laxus</i> Lamarck						+	
	<i>C. niveus</i> Retzius						+	
	<i>C. nutans</i> var. <i>eleusinoides</i> (Kunth) Haines						+	
	<i>C. paniceus</i> (Rottboell) Boeckeler						+	
	<i>C. pilosus</i> Vahl						+	
	<i>C. pulcherrimus</i> Willdenow ex Kunth						+	
	<i>C. michelianus</i> subsp. <i>pygmaeus</i> (Rottboell) Aschers & Graebner						+	
	<i>C. rotundus</i> Linnaeus						+	
	<i>Kyllingia odorata</i> subsp. <i>cylindrica</i> (Nees) T. Koyama						+	

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					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Cyperaceae	<i>Pycreus sulcinus</i> (C.B. Clarke) C.B. Clarke						+	
	<i>Cyperus tenuispica</i> Steudel						+	
	<i>Eleocharis acutangula</i> (Roxburgh) Schultes					+		
	<i>E. congesta</i> D. Don					+		
	<i>E. ovata</i> (Roxburgh) Roemer & Schultes					+		
	<i>E. variegata</i> (Poiret) C. Presl						+	
	<i>Fimbristylis aestivalis</i> Vahl					+		
	<i>F. dichotoma</i> (Linnaeus) Vahl					+		
	<i>F. quinquangularis</i> (Vahl) Kunth						+	
	<i>F. squarrosa</i> Vahl					+		
	<i>F. tristachya</i> R. Brown						+	
	<i>Rhynchospora hookeri</i> Boeckeler						+	
	<i>Schoenoplectiella articulata</i> (Linnaeus) Lye						+	
	<i>Actinoscirpus grossus</i> (Linnaeus f.) Goetgh.						+	
	<i>Schoenoplectiella supina</i> (Linnaeus) Lye						+	
	<i>S. erecta</i> (Poiret) Lye						+	
<i>Scleria levis</i> Retzius					+			
Poaceae	<i>Polypogon monspeliensis</i> (Linnaeus) Desfontaines							+
	<i>Arundo donax</i> Linnaeus					+		
	<i>Arundinella bengalensis</i> (Sprengel) Druce					+		
	<i>A. khasiana</i> Nees ex Steudel					+		
	<i>A. nepalensis</i> Trinius						+	
	<i>A. setosa</i> Trinius						+	
	<i>Bambusa assamica</i> Barooah & Borthakur					+		
	<i>B. balcooa</i> Roxburgh					+		
	<i>B. bambos</i> (Linnaeus) Voss					+		
	<i>B. tulda</i> Roxburgh					+		
	<i>B. vulgaris</i> Schrader					+		
	<i>Cynodon dactylon</i> (Linnaeus) Persoon					+		
	<i>Dactyloctenium aegypticum</i> (Linnaeus) Willdenow							+
	<i>Eleusine indica</i> (Linnaeus) Gaertner							+
	<i>Eragrostis atrovirens</i> (Desfontaines) Trinius ex Steudel							+
	<i>E. japonica</i> (Thunberg) Trinius							+
	<i>E. gangetica</i> (Roxburgh) Steudel							+
	<i>E. amabilis</i> (Linnaeus) Wight & Arnott							+
	<i>E. zeylanica</i> Nees & Meyen							+
	<i>Leersia hexandra</i> Sweet							+
	<i>Oryza sativa</i> Linnaeus							+
	<i>Sporobolus diandrus</i> P. Beauvois							+
	<i>S. indicus</i> R. Brown							+
	<i>Thysanolaena latifolia</i> (Roxburgh ex Hornemann) Honda					+		
	<i>Acroceras zizanioides</i> (Kunth) Dandy							+
	<i>Axonopus compressus</i> (Sweet) P. Beauvois					+		
	<i>Cyrtococcum patens</i> var. <i>latifolia</i> (Honda) Ohwi							+
	<i>Digitaria abludens</i> (Roemer & Schultes) Veldkamp							+
	<i>D. compacta</i> (Roth ex Roemer & Schultes) Veldkamp							+

FAMILY	SPECIES/INFRA-SPECIFIC TAXA	Canopy Layer Mesophanerophytes	Middle Storey Microphanerophytes	Under-Storey/ Shrub Layer Nanophanerophytes	GROUND LAYER			
					Chamaephytes	Hemicryptophytes	Geophytes	Therophytes
Poaceae	<i>D. longiflora</i> (Retzius) Persoon						+	
	<i>D. setigera</i> Roth						+	
	<i>D. thwaitesii</i> (Hackel) Henrard						+	
	<i>Echinochloa colona</i> (Linnaeus) Link							+
	<i>E. crus-galli</i> (Linnaeus) P. Beauvois					+		
	<i>E. crus-pavonis</i> (Kunth) Schultes					+		
	<i>E. stagnina</i> (Retzius) P. Beauvois					+		
	<i>Eriochloa procera</i> (Retzius) C. E. Hubbard							+
	<i>Hymenachne amplexicaulis</i> (Rudge) Nees					+		
	<i>H. assamica</i> (Hooker f.) Hitchcock							+
	<i>Oplismenus compositus</i> (Linnaeus) P. Beauvois							+
	<i>Ottochloa nodosa</i> (Kunth) Dandy						+	
	<i>Panicum paludosum</i> Roxburgh							+
	<i>P. repens</i> Linnaeus						+	
	<i>P. humile</i> Mez						+	
	<i>Paspalum conjugatum</i> P. J. Bergius					+		
	<i>P. longifolium</i> Roxburgh						+	
	<i>P. scrobiculatum</i> Linnaeus						+	
	<i>Pennisetum purpureum</i> Schumacher					+		
	<i>Pseudoraphis spinescens</i> (R. Brown) Vickery					+		
	<i>Sacciolepis indica</i> (Linnaeus) A. Chase					+		
	<i>S. interrupta</i> (Willdenow) Stapf					+		
	<i>Pennisetum glaucum</i> (Linnaeus) R. Brown					+		
	<i>S. palmifolia</i> (J. Koenig) Stapf					+		
	<i>Brachiaria mutica</i> (Forsskal) Stapf					+		
	<i>B. villosa</i> (Lamarck) A. Camus					+		
	<i>Andropogon munroi</i> C.B. Clarke							+
	<i>Apluda mutica</i> Linnaeus							+
	<i>Capillipedium parviflorum</i> (R. Brown) Stapf							+
	<i>Chrysopogon aciculatus</i> (Retzius) Trinius					+		
	<i>C. zizanioides</i> (Linnaeus) Roberty					+		
	<i>Cymbopogon exsertus</i> (Hackel) A. Camus							+
	<i>C. jwarancusa</i> (Jones) Schultes					+		
	<i>C. khasianus</i> (Hackel) Stapf ex Bor					+		
	<i>Eulalia fastigiata</i> (Nees ex Steudel) Haines							+
	<i>Hemarthria compressa</i> (Linnaeus f.) R. Brown					+		
	<i>H. protensa</i> Steudel							+
	<i>Imperata cylindrica</i> (Linnaeus) Raeuschel							+
	<i>Ischaemum rugosum</i> Salisbury							+
	<i>Microstegium vimineum</i> (Trinius) A. Camus					+		
	<i>Ophiuros megaphyllus</i> Stapf ex Haines					+		
	<i>Phacelurus zea</i> (C.B. Clarke) Clayton					+		
	<i>Saccharum arundinaceum</i> Retzius							+
	<i>S. narenga</i> (Nees ex Steudel) Hackel							+
	<i>S. ravemae</i> (Linnaeus) Linnaeus							+
	<i>S. spontaneum</i> Linnaeus							+
	<i>Miscanthus fuscus</i> (Roxburgh) Bentham							+
	<i>Themeda arundinacea</i> (Roxburgh) A. Camus					+		
	<i>Coix lacryma-jobi</i> Linnaeus							+