

TREE SPECIES DIVERSITY OF CHITTAGONG UNIVERSITY CAMPUS FLORA IN BANGLADESH

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Abstract

Investigation has been carried out to the flora of Chittagong University Campus from July 2021 to February 2022 to recognize the diversity of wild tree species as well as the species planted in campus area. A total of 304 tree species (both wild and planted) belonging to 201 genera under 69 families was recognized from the Chittagong University Campus flora. These species were categorized as angiosperms (297 species under 196 genera and 64 families) and gymnosperms (7 species under five genera and five families). Furthermore, the angiosperms were classified as dicot (95% species) and monocot (5% species). Among 69 families, top 10 families represented 47% of all species and remaining 59 families represented by 53% of the species. The study revealed that 12% of species were found in natural habitat, 32% in conservation programs, 20% both in natural and conservation areas, and 36% were exotics. Among 304 species, 13% were regarded as Vulnerable, 4% as Endangered and 3% as Critically Endangered, and collectively treated as threatened (20% of all recorded species). A checklist is prepared with updated nomenclature; each species is annotated with local name(s), family name, habitat, status of occurrence (wild/planted), and conservation status.

Key word: Chittagong University Campus flora; Tree species; Threatened categories; Conservation status.

INTRODUCTION

Forest trees are an inexhaustible source of materials, energy, food and nutrition, and income for the community at the national and international level (GoB 2020). There are at least 60,000 tree species in the world, from which 25,000 to 30,000 species have been recorded as forestry or agroforestry tree species; humans and most animals are directly or partially dependent on plants; around 25% of the globally estimated 27,000 vascular plant species are edible for them, and only 3,000 species are regularly used as food (Graudal *et al.* 2021, Hossain *et al.* 2017). Forests cover approximately 31% of the world's land surface of which 93% are natural forests. Only 7% of forests are planted, an integral part of living organisms, providing a range of ecosystem services from community to nation and on a global level (Alfaro *et al.* 2014, BGC I 2021, FAO 2014, Silk *et al.* 2015). Bangladesh is situated between the Indo-Himalayas and Indo-Chinese sub-regions with distinct physiographic characteristics, variations in hydrological and climatological conditions, and differences in the soil properties contributing to develop the diverse forms of ecosystems with rich flora and fauna (DoE 2010). The floristic composition comprises tropical moist deciduous, ever-green and semi-evergreen forests, mangroves and freshwater wetlands (Hossain 2015, Potapov *et al.* 2017, Rahman 2020).

Bangladesh is well known for the comprehensive variety of Forest Genetic Resources (FGRs). Still, unfortunately, these resources have not been well studied and only a few species are assessed in terms of their uses, i.e. medicinal, herbal, horticulture and agricultural perspective (Islam *et al.* 2014). The country encompasses enormous floristic diversity including an estimated 5,700 species of angiosperms alone (Khan 1991) and 1,048 tree species (dicot and monocot) (Basak and Alam 2015). The University of Chittagong, one of the largest educational institutions of Bangladesh in terms of area, has been

encompassed with amusing forest genetic resources, as renowned as biodiversity hotspot zone (Akter *et al.* 2013, Hossain *et al.* 2017). The Institute of Forestry and Environmental Sciences of Chittagong University (IFESCU) is implementing a few projects to conserve the threatened Forest Genetic Resources (FGR) in the University campus. The present study enumerates the tree species in the campus (exotic, indigenous, naturalized, planted, natural) aiming to assess the present tree species diversity in different vegetation blocks of the campus.

MATERIAL AND METHODS

Study area

The campus bounds more than 2,100 acres of land, and it is laid between 22°27'30" and 22°29'0" North latitudes, and 91°46'30" and 91°47'45" East longitudes (Fig .1) along with 65% of this area is covered by small and medium hills of tertiary sedimentary rocks and alluvial sediments (Islam *et al.* 1979).

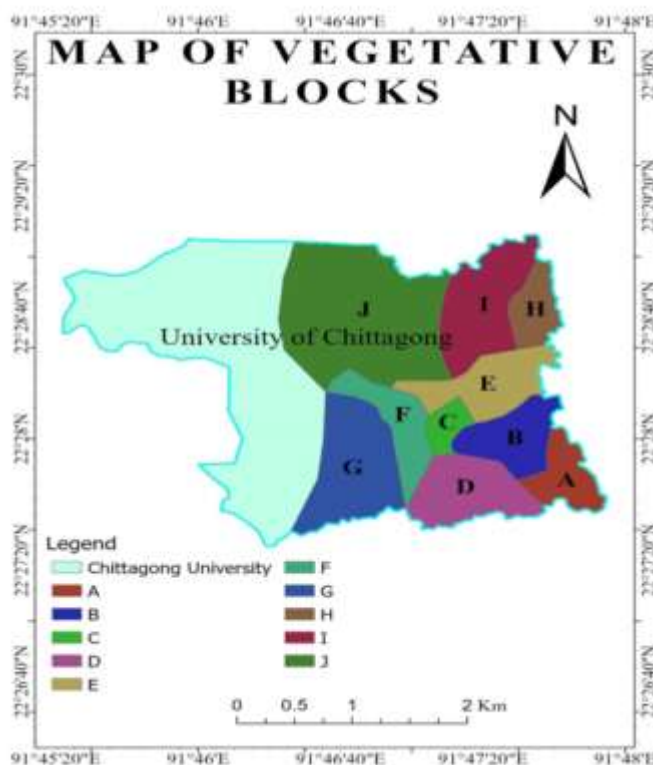


Fig. 1. Map of vegetation blocks of Chittagong University campus.

Reconnaissance survey

Before selecting sample methodologies, the study area of Chittagong university campus was surveyed to determine its topography, hydrology, vegetation composition and accessibility. A block-wise campus map was created for experimental block design. Field enumerators helped in doing transect surveys. Plantation-related secondary data were collected from the Institute of Forestry and Environmental Sciences and the Botanical Garden of the University of Chittagong.

Data Collection by Vegetation Survey

Field observations and plant specimens (leaves, flowers, fruits, seeds, etc.) were collected to evaluate tree diversity at Chittagong University (CU) Campus floral survey was continued until additional species had been recorded and collected. For recording the tree species, a stratified random sampling method was used. The campus was split into ten vegetative blocks including the roadways, residential areas (colonies, faculty and staff quarters), and the green hills. The campus is divided into 10 blocks based on the road layout for experimental and operational purposes. The blocks were numbered and labelled with their position (Fig. 1).

Distribution of vegetative blocks in the University campus (A-J)

The ten vegetative blocks selected for survey in the Chittagong University Campus were:

- A. Teacher's Residence of south campus and IFESCU
- B. Teacher's club and Dola Sarani to Pritilata Hall and its surroundings areas
- C. Vice Chancellors Bungalow and its surroundings
- D. Botanical Garden and its surroundings
- E. Zero point to CU Museum and its surroundings
- F. Science faculty, Jangaliya hill and its surrounding areas
- G. Biological Faculty to Marine Science Faculty and their surroundings
- H. Shah Amanat Hall to WUS School
- I. Social Science Faculty to Central field, and
- J. Behind the Registrar building to Shaheed Abdur Rab Hall to Bangabandhu Hall.

Natural and planted forests with few, medium, and dense tree coverages were chosen for block sites. Plants with $DBH \geq 5\text{cm}$ and at least 5m in height were considered trees. In each block, trees were labelled with local and/or scientific names. The fertile plant samples of unidentified tree species were collected and preserved as herbarium in the laboratory.

Identification of the collected sample

The identification of herbarium specimens was checked with published journals and relevant reference books, i.e. Encyclopedia of Flora and Fauna of Bangladesh (Ahmed *et al.* 2008a, b, c, 2009a, b, c, Siddiqui *et al.* 2007a, 2007b), Vascular Flora of Chittagong and the Chittagong Hill Tracts (Uddin and Hassan 2018a, b, c), Red Data Books of Vascular Plants of Bangladesh (Ara *et al.* 2013), Conservation of Threatened Tree species of Chittagong University Campus (Hossain *et al.* 2017) and Biodiversity of Chunar Wildlife Sanctuary: Flora (Hossain and Hossain 2014) etc.

RESULTS AND DISCUSSION

Though the Chittagong University campus is not a Protected Area (PA) based on government declaration, the campus is highly enriched with floral diversity, and that makes the campus a biodiversity hotspot area. This fluorescent composition of the campus has been made by undertaking various afforestation and plantation programs over a few decades. From the study, the campus revealed the presence of 304 tree species, small to large trees. These species belonged to 201 genera under 69

families. Of them, 297 species were recorded as Angiosperm (97.70% of total species) and only 7 species were as Gymnosperm (2.30%). Of 297 species of Angiosperm, 283 species (95% of angiosperm) of 184 genera under 62 families were dicot and 14 species (5% of angiosperm) of 12 genera under 2 families (Arecaceae and Musaceae) were monocot (Fig. 2). Among the total tree species, 59.2% are indigenous and the rest 40.79% were exotic (Fig. 3). Considering the conservation category, 53% tree species were Least Concern (LC), whereas the rest 47% species were fall on different conservation categories (Fig. 4a).

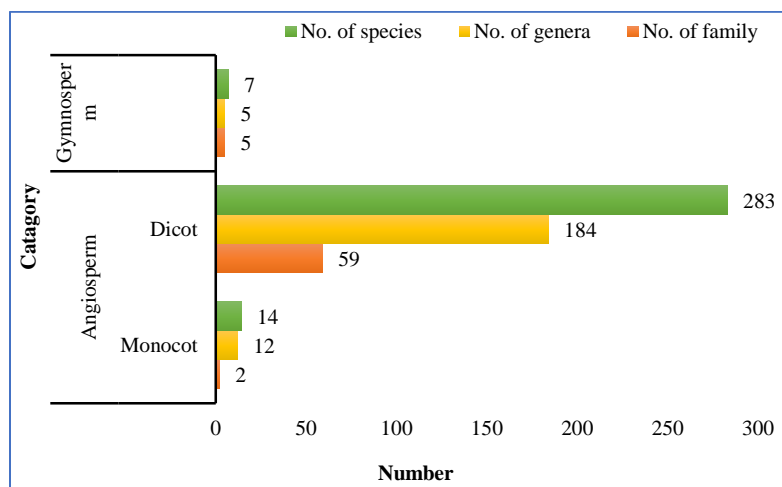


Fig. 2. Category with number of species distribution.

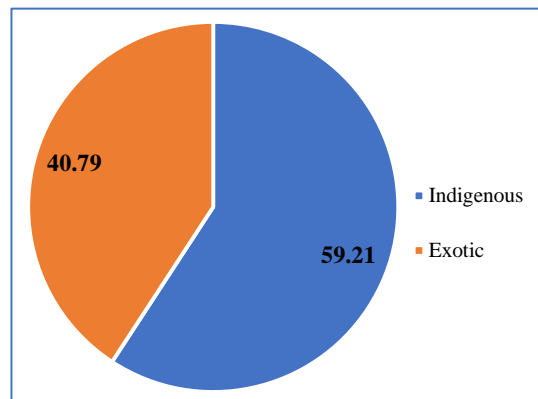


Fig. 3. Indigenous vs Exotic trees in the CU campus.

In this study, seven species of gymnosperms were also recorded that belong to 5 different genera under 5 families. All of the species recorded are shown with their scientific names, local name, families, conservation category (with appropriate references), and nativity (Table 1). About 141 species (46% of total species) of 85 genera (42% of 201 genera) were found in the top ten families, i.e. Moraceae, Euphorbiaceae, Mimosaceae, Fabaceae, Myrtaceae, Arecaceae, Caesalpiniaceae, Meliaceae, Rutaceae and Lauraceae, and 163 species (54% of total species) of 116 genera (58% of 203 genera) were represented as rest of the 59 families (Table 1 and Fig. 4b).

Table 1. List of tree species with scientific name, local name, family, conservation category and nativity status.

ANGIOSPERM (Dicots)					
SL No	Scientific name	Local name	Family	Conservation category*	Nativity (Indigenous/ Exotic) **
1	<i>Abroma augusta</i> (L.) L.f.	Ulatkambal	Sterculiaceae	NT ¹	Indigenous ²
2	<i>Acacia auriculiformis</i> A. Cunn. ex Benth.	Akashmoni	Mimosaceae	LC ¹	Exotic ^{1,2}
3	<i>Acacia catechu</i> (L. f.) Willd.	Khair	Mimosaceae	LC ¹	Indigenous ¹
4	<i>Acacia hybrid</i>	Acacia hybrid	Mimosaceae	LC ¹	Exotic ^{1,2}
5	<i>Acacia mangium</i> Willd.	Mangium	Mimosaceae	LC ¹	Exotic ¹
6	<i>Acacia nilotica</i> ((L.) Willd. ex Del.	Babla	Mimosaceae	DD ¹	Indigenous ¹
7	<i>Acronychia pedunculata</i> (L.) Miq.	Kanta jamir	Rutaceae	NE ¹	Indigenous ¹

8	<i>Actinodaphne angustifolia</i> Ness	Madan Masta	Lauraceae	NE ¹	Indigenous ¹
9	<i>Adenanthera pavonina</i> L.	Rakta chandan	Fabaceae	LC ¹	Exotic ¹
10	<i>Aegle marmelos</i> (L.) Corr.	Bel	Rutaceae	LC ¹	Exotic ¹
11	<i>Albizia chinensis</i> (Osbeck) Merr.	Chakua koro	Mimosaceae	LC ¹	Indigenous ^{1,2}
12	<i>Albizia lebbek</i> (L.) Benth. & Hook.	Kalo koro	Mimosaceae	LC ¹	Indigenous ¹
13	<i>Albizia odoratissima</i> (L. f.) Benth.	Tentua koro	Mimosaceae	LC ¹	Indigenous ²
14	<i>Albizia procera</i> (Roxb.) Benth.	Sada koro	Mimosaceae	LC ¹	Indigenous ¹
15	<i>Albizia richardiana</i> (Voigt.) King & Prain	Raj koro	Mimosaceae	LC ¹	Exotic ¹
16	<i>Alstonia nerifolia</i> D. Don	Bon chatim	Apocynaceae	EN ⁴	Indigenous ¹
17	<i>Alstonia scholaris</i> (L.) R. Br.	Chatim	Apocynaceae	LC ¹	Indigenous ²
18	<i>Amherstia nobilis</i> Wall.	Raj ashok, Parijat	Fabaceae	CD ¹	Indigenous ²
19	<i>Anacardium occidentale</i> L.	Kaju badam	Anacardiaceae	LC ¹	Exotic ¹
20	<i>Anisoptera scaphula</i> (Roxb.) Pierre	Boilam	Dipterocarpaceae	CR ⁶	Indigenous ²
21	<i>Annona reticulata</i> L.	Ata	Annonaceae	LC ¹	Indigenous ²
22	<i>Annona squamosa</i> L.	Shorifa	Annonaceae	LC ¹	Exotic ¹
23	<i>Antidesma ghaesambilla</i> Gaertn.	Elena	Euphorbiaceae	LC ¹	Indigenous
24	<i>Aphanamixis polystachya</i> (Wall.) Parker	Pitraj	Meliaceae	VU ⁶	Indigenous ²
25	<i>Aporosa dioica</i> (Roxb.) Muell. – Arg.	Paat korulla	Euphorbiaceae	NE ¹	Indigenous
26	<i>Aporosa</i> sp.	Kalo korulla	Euphorbiaceae	NE ¹	Indigenous
27	<i>Aporosa wallichii</i> Hook. F.	Korulla, Castoma	Euphorbiaceae	NE ¹	Indigenous
28	<i>Aquilaria malaccensis</i> Lamk.	Agar	Thymelaeaceae	LC ¹	Indigenous
29	<i>Archidendron clypearia</i> (Jack) I. C. Nielsen	Hukkanali	Mimosaceae	DD ¹	Indigenous
30	<i>Ardisia colorata</i> Roxb.	Seea Barela	Myrsinaceae	VU ⁵	Indigenous
31	<i>Artabotrys hexapetalus</i> (L. f.) Bhandari	Kanthali champa	Annonaceae	LC ¹	Exotic ¹
32	<i>Artocarpus chama</i> Buch. -Ham. ex Wall.	Chapalish	Moraceae	NE but seems to be rare ¹	Indigenous ²
33	<i>Artocarpus heterophyllus</i> Lam.	Kanthal	Moraceae	NE ¹	Exotic ^{1,2}
34	<i>Artocarpus lacucha</i> Buch. -Ham.	Borta, Dewa	Moraceae	LC ¹	Indigenous ²
35	<i>Saraca asoca</i> (Roxb.) de Wilde	Ashok	Caesalpiniaceae	VU ¹	Indigenous ²
36	<i>Averrhoa bilimbi</i> L.	Bilombi	Oxalidaceae	LC ¹	Exotic ¹
37	<i>Averrhoa carambola</i> L.	Kamranga	Oxalidaceae	LC ¹	Exotic ¹
38	<i>Azadirachta indica</i> A. Juss.	Neem	Meliaceae	LC ¹	Indigenous ²
39	<i>Baccaurea ramiflora</i> Lour.	Latkan	Euphorbiaceae	VU ⁶	Indigenous ²
40	<i>Barringtonia acutangula</i> (L.) Gaertn.	Hijal	Lecythidaceae	LC ¹	Indigenous ²
41	<i>Bauhinia acuminata</i> L.	Sheta kanchan	Caesalpiniaceae	DD ¹	Exotic ¹
42	<i>Bauhinia variegata</i> L.	Rakta kanchan	Caesalpiniaceae	DD ¹	Exotic ¹
43	<i>Bhesa robusta</i> (Roxb.) Ding Hou	Bon agar, Shalkachra	Celastraceae	VU ²	Indigenous ²
44	<i>Bischofia javanica</i> Bl.	Kainjal bhadi	Euphorbiaceae	VU ⁶	Indigenous ²
45	<i>Bixa orellana</i> L.	Doigota	Bixaceae	LC ¹	Exotic ¹
46	<i>Bombax ceiba</i> L.	Shimul	Bombacaceae	LC ¹	Indigenous
47	<i>Bombax insigne</i> Wall.	Bon shimul, Pahari Shimul	Bombacaceae	VU ⁶	Indigenous
48	<i>Bouea oppositifolia</i> (Roxb.) Meissn.	Miriam	Anacardiaceae	EN ⁵	Indigenous

49	<i>Brownlowia elata</i> Roxb.	Moos	Tiliaceae	VU ²	Indigenous
50	<i>Butea monosperma</i> (Lam.) Taub.	Polash	Fabaceae	LC ¹	Indigenous ²
51	<i>Caesalpinia pulcherrima</i> (L.) Sw.	Randhachura	Caesalpiniaceae	LC ¹	Exotic ¹
52	<i>Calliandra calothyrsus</i> Meissner.	Caliandra	Mimosaceae	NE ¹	Exotic ¹
53	<i>Calliandra haematocephala</i> Hassk.	Caliandra	Mimosaceae	NE ¹	Exotic ¹
54	<i>Callicarpa macrophylla</i> Vahl	Bormala	Verbenaceae	NE ¹	Indigenous
55	<i>Callistemon citrinus</i> (Curtis) Skeel.	Bottle brush	Myrtaceae	LC ¹	Exotic ¹
56	<i>Calophyllum inophyllum</i> L.	Punial, Sultan Champa	Clusiaceae	LC ¹	Indigenous
57	<i>Calophyllum polyanthum</i> Wall. ex Choisy	Kamdev	Clusiaceae	NE but seems rare ¹	Indigenous ²
58	<i>Camellia sinensis</i> (L.) Ktz.	Tea	Theaceae	NE ¹	Exotic ¹
59	<i>Canarium resiniferum</i> Bruce ex-King	Dhup	Burseraceae	CR ⁶	Indigenous ²
60	<i>Carallia brachiata</i> (Lour.) Merr.	Kiabang	Rhizophoraceae	LC ¹	Indigenous
61	<i>Careya arborea</i> Roxb.	Kumbhi	Lecythidaceae	LC ¹	Indigenous
62	<i>Cassia fistula</i> L.	Sonalu	Caesalpiniaceae	LC ¹	Indigenous
63	<i>Cassia nodosa</i> Buch-Ham.	Bon sonalu	Caesalpiniaceae	LC ¹	Indigenous
64	<i>Castanopsis castanicaarpa</i> (Roxb.) Spach	Kanta batna	Fagaceae	VU ²	Indigenous
65	<i>Casuarina equisetifolia</i> Frost.	Jhau	Casuarinaceae	LC ¹	Indigenous
66	<i>Ceiba pentandra</i> (L.) Gaertn.	Burmis tula	Bombacaceae	LC ¹	Exotic ¹
67	<i>Chukrasia tabularis</i> A. Juss.	Chikrassi	Meliaceae	LC ¹	Indigenous
68	<i>Cinnamomum iners</i> Reinw. Ex Blume	Tejbahal	Lauraceae	VU ⁶	Indigenous
69	<i>Cinnamomum tamala</i> Nees & Eberm.	Tejpata	Lauraceae	NE ¹	Exotic ²
70	<i>Cinnamomum verum</i> J. S. Presl	Daruchini	Lauraceae	LC ¹	Exotic
71	<i>Citrus maxima</i> (Burm)	Jambura	Rutaceae	LC ¹	Exotic ¹
72	<i>Citrus reticulata</i> Bl.	Komola	Rutaceae	LC ¹	Exotic ¹
73	<i>Citrus sinensis</i> (L.) Osbeck.	Malta, Musambi	Rutaceae	LC ¹	Exotic ¹
74	<i>Cordia dichotoma</i> Forst. f.	Bohal, Ball gota	Boraginaceae	VU ⁶	Indigenous
75	<i>Couropita guianensis</i> Aubl.	Naglingam	Lecythidaceae	LC ¹	Exotic
76	<i>Crataeva magna</i> (Lour.) DC.	Barun	Capparaceae	LC ¹	Indigenous
77	<i>Crescentia cujete</i> L.	Thai bel	Bignoniaceae	LC ¹	Exotic ¹
78	<i>Croton tiglium</i> L.	Jamalgota	Euphorbiaceae	CD ¹	Indigenous ²
79	<i>Cryptocarya amygdalina</i> Nees	Bhuiya	Lauraceae	EN ²	Indigenous ²
80	<i>Dalbergia lanceolaria</i> L.f.	Jhunjhuni Koroi	Fabaceae	VU ¹	Exotic ¹
81	<i>Dalbergia latifolia</i> Roxb.	Nepali shisso, Shisum	Fabaceae	NE ¹	Exotic ¹
82	<i>Dalbergia sissoo</i> Roxb.	Shisso	Fabaceae	LC ¹	Indigenous ²
83	<i>Dalbergia sp.</i>	Indian shisso	Fabaceae	DD ¹	Exotic ¹
84	<i>Dehaasia kurzii</i> King	Bagraj, Modon mosto	Lauraceae	VU ²	Indigenous
85	<i>Delonix regia</i> (Boj. ex. Hook.) Rafin.	Krishnachura	Caesalpiniaceae	LC ¹	Exotic ¹
86	<i>Derris robusta</i> (Roxb. ex DC.) Benth.	Juijja, Jhumuijja	Fabaceae	LC ¹	Indigenous ²
87	<i>Dichapetalum gelonoides</i> (Roxb.) Engl.	Jhatarchua	Dichapetalaceae	NT ¹	Indigenous
88	<i>Dillenia indica</i> L.	Chalta	Dilleniaceae	LC ¹	Indigenous
89	<i>Dillenia pentagyna</i> King	Hargoza	Dilleniaceae	VU ⁶	Indigenous ²
90	<i>Dillenia scabrella</i> Roxb. ex Wall.	Bon Chalta	Dilleniaceae	DD ¹	Indigenous

91	<i>Diospyros discolor</i> Willd.	Bilati gab	Ebenaceae	LC ¹	Exotic ¹
92	<i>Diospyros malabarica</i> (Desr.)	Gab	Ebenaceae	LC ¹	Exotic ²
93	<i>Diospyros ramiflora</i> Roxb.	Bon gab, Oori gab	Ebenaceae	EN ²	Indigenous
94	<i>Diospyros montana</i> Roxb.	Tomal	Ebenaceae	DD ¹	Exotic ²
95	<i>Dipterocarpus alatus</i> Roxb. ex G. Don	Dhuli garjan, Sada garjan	Dipterocarpaceae	CR ³	Indigenous ²
96	<i>Dipterocarpus costatus</i> Gaertn.	Baitta garjan,	Dipterocarpaceae	CR ³	Indigenous ²
97	<i>Dipterocarpus turbinatus</i> Gaertn.	Teli garjan	Dipterocarpaceae	CR ³	Indigenous ²
98	<i>Duabunga grandiflora</i> (Roxb. ex DC.) Walp.	Banderhola	Sonneratiaceae	VU ¹	Indigenous ²
99	<i>Duranta repens</i> L.	Kanta mehedi	Verbenaceae	LC ¹	Exotic ¹
100	<i>Dysoxylum binectariferum</i> (Roxb.) Hook. f. et. Bedd.	Ban pitraj, Rata	Meliaceae	DD ¹	Indigenous ²
101	<i>Ehretia serrata</i> Roxb.	Kala huja	Boraginaceae	LC ¹	Indigenous ²
102	<i>Elaeocarpus floribundus</i> Bl.	Jalpai	Elaeocarpaceae	LC ¹	Indigenous ²
103	<i>Elaeocarpus tectorius</i> (Lour.) Poir.	Titpai	Elaeocarpaceae	EN ²	Indigenous ²
104	<i>Engelhardtia spicata</i> Leschen ex Bl.	Jhumka bhadi	Juglandaceae	VU ¹	Indigenous ²
105	<i>Erythrina fusca</i> Lour.	Painna mandar	Fabaceae	NE ¹	Indigenous ²
106	<i>Erythrina stricta</i> Roxb.	Kanta mandar	Fabaceae	NT ¹	Indigenous ²
107	<i>Erythroxylum coca</i> Lamk.	Coco	Erythroxylaceae	LC	Exotic
108	<i>Eucalyptus camaldulensis</i> Dehn.	Eucalyptus	Myrtaceae	NE ¹	Exotic ^{1,2}
109	<i>Eucalyptus grandis</i> Hill ex Maid.	Eucalyptus	Myrtaceae	LC ¹	Exotic ¹
110	<i>Eucalyptus citriodora</i> Hook	Eucalyptus	Myrtaceae	LC ¹	Exotic ¹
111	<i>Eucalyptus tereticornis</i> Sm.	Eucalyptus	Myrtaceae	LC ¹	Exotic ¹
112	<i>Fernandoa adenophylla</i> (Wall. ex G. Don) van Steenis	Parul, Kauaturi	Bignoniaceae	VU ⁶	Indigenous ²
113	<i>Ficus auriculata</i> Lour.	Lal dumur, Boro dumur	Moraceae	LC ¹	Indigenous ²
114	<i>Ficus benghalensis</i> L.	Bot	Moraceae	LC ¹	Indigenous ²
115	<i>Ficus benjamina</i> L.	Jhir bot, Pakur	Moraceae	LC ¹	Indigenous ²
116	<i>Ficus carica</i> L.	Dumur	Moraceae	DD ¹	Indigenous
117	<i>Ficus clavate</i> L. f.	Painna dumur	Moraceae	DD ¹	Indigenous ²
118	<i>Ficus elastica</i> Roxb. ex Hornem	Para rubber	Moraceae	LC ¹	Exotic ¹
119	<i>Ficus hispida</i> L. f.	Kak dumur	Moraceae	LC ¹	Indigenous ²
120	<i>Ficus microcarpa</i> L. f.	Jig bot	Moraceae	DD ¹	Indigenous ²
121	<i>Ficus variegata</i> Bl.	Bara dumur	Moraceae	DD ¹	Indigenous
122	<i>Ficus nervosa</i> B. Heyne ex Roth	Bot Dumur	Moraceae	LC ¹	Indigenous
123	<i>Ficus pumila</i> L.	Lota dumur	Moraceae	DD ¹	Indigenous
124	<i>Ficus racemosa</i> L.	Joggo dumur	Moraceae	LC ¹	Indigenous
125	<i>Ficus religiosa</i> L.	Ashwattha	Moraceae	LC ¹	Indigenous
126	<i>Ficus semicordata</i> Buch.-Ham. ex Smith	Juijja dumur	Moraceae	NE ¹	Indigenous ²
127	<i>Firmiana colorata</i> (Roxb.) R. Br.	Naiccha udal	Sterculiaceae	NE ¹	Indigenous
128	<i>Flacourtia indica</i> (Burm.f.) Merr.	Painnagula	Flacourtiaceae	LC ¹	Indigenous
129	<i>Flacourtia jangomas</i> (Lour.) Raeusch	Painnagula	Flacourtiaceae	LC ¹	Indigenous ²
130	<i>Garcinia cowa</i> Roxb. ex DC	Kao	Clusiaceae	VU ⁶	Indigenous ²
131	<i>Gardenia coronaria</i> Buch. -Ham.	Kanyari	Rubiaceae	VU ¹	Indigenous
132	<i>Gardenia resinifera</i> Roht.	Bon kainnary	Rubiaceae	CR ²	Indigenous ²
133	<i>Garuga floribunda</i> Decne.	Jungli bhadi, Bon bhadi	Burseraceae	DD ¹	Indigenous
134	<i>Garuga pinnata</i> Roxb.	Shil bhadi, Pahari bhadi	Burseraceae	LC ¹	Indigenous ²

135	<i>Gliricidia sepium</i> (Jacq.) Kunth. ex Walp.	Sepium	Fabaceae	LC ¹	Exotic ¹
136	<i>Glochidion arborescens</i> Blume	Kechuwa	Euphorbiaceae	VU ¹	Indigenous ²
137	<i>Glochidion multiloculare</i> (Roxb. ex Willd.) Muekk.-Arg.	Painnaturi	Euphorbiaceae	LC ¹	Indigenous ²
138	<i>Glycosmis pentaphylla</i> (Retz.) DC.	Datmajani, Matkila	Rutaceae	LC ¹	Indigenous ²
139	<i>Gmelina arborea</i> Roxb.	Gamar	Verbenaceae	LC ¹	Indigenous
140	<i>Grewia nervosa</i> (Lour.) Panigr.	Asargula	Tiliaceae	LC ¹	Indigenous ²
141	<i>Haldina cordifolia</i> (Roxb.) Ridsdale	Haldu	Rubiaceae	CD ¹	Indigenous ²
142	<i>Heritiera fomes</i> Buch. -Ham.	Sundri	Sterculiaceae	LC ¹	Indigenous
143	<i>Hevea brasiliensis</i> Muell.-Arg.	Rubber	Euphorbiaceae	LC ¹	Exotic ¹
144	<i>Hibiscus tiliaceus</i> L.	Balla	Malvaceae	NE ¹	Exotic
145	<i>Hibiscus-mutabilis</i> L.	Sthal padma	Malvaceae	LC ¹	Exotic ¹
146	<i>Holarrhena antidysenterica</i> (L.) Wall. ex Decne	Kalo kuruch	Apocynaceae	LC ¹	Indigenous ²
147	<i>Hopea odorata</i> Roxb.	Telsur	Dipterocarpaceae	LC ¹	Indigenous
148	<i>Hydnocarpus kurzii</i> (King) Warb.	Chalmugra	Flacourtiaceae	VU ⁶	Indigenous ²
149	<i>Hydnocarpus laurifolia</i> (Dennst.)	Huijja, Hiddi	Flacourtiaceae	DD ¹	Indigenous ²
150	<i>Hymenodictyon orixense</i> (Roxb.) Mabberley	Bhutum	Rubiaceae	VU ¹	Indigenous ²
151	<i>Ilex umbellulata</i> (Wall.) Loes.	Lera gach	Aquifoliaceae	NE ¹	Indigenous
152	<i>Indigofera zollingeriana</i> Miq.	Indigofera	Fabaceae	DD ¹	Exotic
153	<i>Khaya anthotheca</i> (Welw.) C.DC.	Lambu	Meliaceae	LC ¹	Exotic ¹
154	<i>Lagerstroemia indica</i> L.	Baitta jarul	Lythraceae	LC1	Exotic ¹
155	<i>Lagerstroemia microcarpa</i> Wall.	Boro jarul	Lythraceae	CD ¹	Exotic ¹
156	<i>Lagerstroemia parviflora</i> Roxb.	Sidha Jarul	Lythraceae	LC ¹	Indigenous
157	<i>Lagerstroemia speciosa</i> (L.) Pres	Jarul	Lythraceae	LC ¹	Indigenous
158	<i>Lannea coromandelica</i> (Houtt.) Merr.	Jiyal bhadi, Kesra bhadi	Anacardiaceae	LC ¹	Indigenous ²
159	<i>Lawsonia inermis</i> L.	Mehedi	Lythraceae	LC ¹	Exotic ¹
160	<i>Leea indica</i> (Burm.f.) Merr.	Achila	Leaceae	LC ¹	Indigenous ²
161	<i>Lepisanthes rubiginosa</i> (Roxb.) Leenhouts	Horinagula, Chagolerleada	Sapindaceae	LC ¹	Indigenous ²
162	<i>Leucaena leucocephala</i> (Lamk.) de Wit	Ipil-ipil	Mimosaceae	LC ¹	Exotic ¹
163	<i>Limonia crenulata</i> Roxb.	Kadbel	Rutaceae	LC ¹	Exotic ¹
164	<i>Litchi chinensis</i> (Gaertn.) Sonn	Litchu	Sapindaceae	LC ¹	Exotic ¹
165	<i>Lithocarpus acuminata</i> (Roxb.) Rehder	Kalo batna	Fagaceae	EN ¹	Indigenous
166	<i>Lithocarpus elegans</i> var. brevipetiolata (A. DC.) Hook. f.	Boro batna	Fagaceae	EN ⁶	Indigenous
167	<i>Lithocarpus thomsonii</i> (Miq.) Rehder.	Sada Batna, Rai batna	Fagaceae	VU ²	Indigenous
168	<i>Litsea glutinosa</i> (Lour.) Robinson	Menda, Karjuki menda	Lauraceae	LC ¹	Indigenous ²
169	<i>Litsea monopetala</i> (Roxb.) Pers.	Boro Menda	Lauraceae	NE1	Indigenous ²
170	<i>Litsea sebifera</i> Pers.	Reshma, Medi	Lauraceae	DD ¹	Indigenous
171	<i>Lophopetalum wightianum</i> Arn.	Raktan	Celastraceae	VU ⁶	Indigenous ²
172	<i>Macaranga denticulata</i> (Blume.) Muell.-Arg.	Sada bura	Euphorbiaceae	LC ¹	Indigenous ²
173	<i>Macaranga indica</i> Wight	Lal bura	Euphorbiaceae	VU ¹	Indigenous ²
174	<i>Madhuca longifolia</i> (Koenig) MacBride	Mahua	Sapotaceae	NE ¹	Exotic ¹

175	<i>Maesa indica</i> (Roxb.) A. DC.	Moricha	Myrsinaceae	CD ¹	Indigenous ²
176	<i>Maesa ramentacea</i> (Roxb.) A. DC.	Lal Moricha	Myrsinaceae	LC ¹	Indigenous ²
177	<i>Magnolia grandiflora</i> L.	Magnolia	Magnoliaceae	LC ¹	Exotic ¹
178	<i>Mallotus philippensis</i> (Lamk.) Muell.-Arg.	Sinduri	Euphorbiaceae	CD ¹	Indigenous ²
179	<i>Mangifera indica</i> L.	Aam	Anacardiaceae	LC ¹	Indigenous ²
180	<i>Mangifera sylvatica</i> Roxb.	Uri aam	Anacardiaceae	VU ¹	Indigenous ²
181	<i>Manilkara achras</i> (L.) P. van Royen	Safeda	Sapotaceae	LC ¹	Exotic ¹
182	<i>Manilkara zapota</i> (L.) P. van Royen	Safeda	Sapotaceae	LC ¹	Exotic ¹
183	<i>Melaleuca leucadendra</i> L.	Melaleuca	Myrtaceae	LC ¹	Exotic ¹
184	<i>Melaleuca quinquenervia</i> (Cav.) S. T. Blake.	Melaleuca	Myrtaceae	DD ¹	Exotic ¹
185	<i>Melia azedarach</i> L.	Bokain, Ghora neem	Meliaceae	LC ¹	Exotic ¹
186	<i>Mesua nagassarium</i> (Burm. f.) Kosterm	Nageshwar	Clusiaceae	LC ¹	Exotic ¹
187	<i>Michelia champaca</i> L.	Champa	Magnoliaceae	LC ¹	Indigenous ²
188	<i>Micromelum minutum</i> (G.Forst.) Wight & Arn.	Unknown	Rutaceae	NE ¹	Indigenous ²
189	<i>Miliusa longiflora</i> (Hook. f. & Thom.) Finet & Gagnep.	Pesi kao	Annonaceae	EN ⁵	Indigenous
190	<i>Miliusa velutina</i> (Dunal) Hook.f. et Thoms.	Gandhi-gazari	Annonaceae	LC ¹	Indigenous ²
191	<i>Mimusops elengi</i> L.	Bakul	Sapotaceae	LC ¹	Exotic ¹
192	<i>Mitragyna rotundifolia</i> (Roxb.) Kuntze.	Jat Goda, Dakrum	Rubiaceae	NT ¹	Indigenous ²
193	<i>Moringa oleifera</i> Lamk.	Sajina	Moringaceae	LC ¹	Exotic
194	<i>Moringa pterygosperma</i> Gaertn.	Sajina	Moringaceae	DD ¹	Indigenous
195	<i>Morus indica</i> L.	Tuntphal	Moraceae	LC ¹	Exotic ¹
196	<i>Murraya paniculata</i> (L.) Jack	Kamini	Rutaceae	LC ¹	Exotic ¹
197	<i>Myristica linifolia</i> Roxb.	Am Barela	Myristicaceae	VU ⁶	Indigenous ²
198	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	Kadam	Rubiaceae	LC ¹	Indigenous ²
199	<i>Neonauclea sessilifolia</i> (Roxb.) Merr.	Kom	Rubiaceae	CD ¹	Indigenous
200	<i>Nephelium lappaceum</i> L.	Rambutan	Sapindaceae	DD ¹	Exotic ¹
201	<i>Nyctanthes arbor-tristis</i> L.	Shewli	Verbenaceae	LC ¹	Exotic ¹
202	<i>Ormosia robusta</i> (Roxb.) Baker	Ormosia,Ghora chokha shim	Fabaceae	VU ¹	Indigenous ³
203	<i>Oroxylum indicum</i> (L.) Benth. ex Kurz	Kanaidinga	Bignoniaceae	LC ¹	Indigenous ³
204	<i>Palaquium polyanthum</i> (Wall. ex DC.) Engler.	Tali	Sapotaceae	NE but seems to be rare ¹	Indigenous ³
205	<i>Paraserianthes falcataria</i> (L.) Nielsen	Malacana koro	Mimosaceae	DD ¹	Exotic ¹
206	<i>Peltophorum pterocarpum</i> (DC) Backer ex. Heyne	Kanakchura	Caesalpiniaceae	LC ¹	Exotic ¹
207	<i>Phoebe lanceolata</i> Nees.	Chuangiri	Lauraceae	NE ¹	Indigenous ³
208	<i>Phyllanthus acidus</i> Skeels	Arboroi	Phyllanthaceae	LC ¹	Exotic ¹
209	<i>Phyllanthus emblica</i> L.	Amloki	Phyllanthaceae	LC ¹	Indigenous
210	<i>Pithecellobium dulce</i> (Rosb.) Benth.	Khay Babla	Mimosaceae	DD ¹	Exotic ¹
211	<i>Plumeria rubra</i> L.	Kath golap	Apocynaceae	LC ¹	Exotic ¹

212	<i>Polyalthia longifolia</i> (Sonn.) Thw.	Debdaru	Annonaceae	LC ¹	Exotic ¹
213	<i>Polyalthia obliqua</i> Hook. f. & Thom.	Debdaru	Annonaceae	NE ¹	Exotic
214	<i>Pongamia pinnata</i> (L.) Pierre	Kerong	Fabaceae	LC ¹	Indigenous ⁴
215	<i>Protium serratum</i> (Wall. ex DC.) Engler.	Gutgutia	Burseraceae	VU ⁶	Indigenous ⁴
216	<i>Prunus avium</i> L.	Cherry	Rosaceae	DD ¹	Exotic ¹
217	<i>Psidium chinensis</i> Lodd. ex Loud.	Chinese peyara	Myrtaceae	DD ¹	Exotic ¹
218	<i>Psidium guajava</i> L.	Peyara	Myrtaceae	LC ¹	Exotic ¹
219	<i>Pterocarpus indicus</i> Willd.	Paduk	Fabaceae	LC ¹	Indigenous ²
220	<i>Pterospermum acerifolium</i> (L.) Willd.	Muskanda	Sterculiaceae	LC ¹	Indigenous ²
221	<i>Pterospermum semisagittatum</i> Buch. –Ham. ex Roxb.	Lana assar	Sterculiaceae	VU ⁶	Indigenous ²
222	<i>Pterygota alata</i> (Roxb.) R. Br.	Buddho narikel	Sterculiaceae	LC ¹	Indigenous ²
223	<i>Putranjiva roxburghii</i> Wall.	Jiyapati	Putranjivaceae	DD ¹	Indigenous ²
224	<i>Quercus gomeziana</i> A. Camus	Pahari Batna	Fagaceae	DD ¹	Indigenous ²
225	<i>Ricinus cummunis</i> L.	Varenda	Euphorbiaceae	LC ¹	Exotic ¹
226	<i>Samanea saman</i> (Jacq.) Merrill	Raintree	Mimosaceae	LC ¹	Exotic ¹
227	<i>Santalum album</i> L.	Sheta Chandan	Santalaceae	NE ¹	Exotic ¹
228	<i>Sapindus saponaria</i> L.	Ritha	Sapindaceae	NT ¹	Exotic ²
229	<i>Sapium indicum</i> L.	Mel gota	Euphorbiaceae	VU ¹	Indigenous ²
230	<i>Saraca asoca</i> (Roxb.) de Wilde	Ashok	Caesalpiniaceae	VU ⁶	Exotic ¹
231	<i>Sarcochlamys pulcherrima</i> (Roxb.) Gaud.	Bon korobi	Urticaceae	NE but seems to be rare ¹	Exotic ¹
232	<i>Scaphium scaphigerum</i> (Wall. ex G. Don) G.Planch.	Shampan	Sterculiaceae	VU ²	Indigenoous
233	<i>Schima wallichii</i> (DC.) Korth.	Kanak	Theaceae	LC ¹	Indigenous
234	<i>Schleichera oleosa</i> (Lour.) Oken.	Kusum, Joyna	Sapindaceae	NE ¹	Indigenous
235	<i>Semecarpus subpanduriformis</i> Wall. ex Hook.f.	Behula	Anacardiaceae	CD ¹	Indigenous
236	<i>Senna siamea</i> (Lamk.) Irwin & Barneby	Minjiri	Caesalpiniaceae	LC ¹	Indegenous ^{2,4}
237	<i>Sesbania grandiflora</i> Pers	Bokful	Fabaceae	LC ¹	Exotic ¹
238	<i>Shorea robusta</i> Roxb. ex Gaertn. f.	Sal	Dipterocarpaceae	LC ¹	Indigenous ²
239	<i>Spondias purpurea</i> L.	Bilati amra	Anacardiaceae	LC ¹	Exotic ¹
240	<i>Spondias pinnata</i> (L.f.) Kurz.	Bon amra	Anacardiaceae	LC ¹	Indigenous ²
241	<i>Sterculia foetida</i> L.	Box badam, Jangli badam	Sterculiaceae	NE ¹	Exotic ²
242	<i>Sterculia villosa</i> Roxb. ex. Smith.	Udal, Fashya udal, Bara udal	Sterculiaceae	LC ¹	Indigenous
243	<i>Stereospermum colais</i> (Buch. - Ham. ex Dillw.)	Dharmara	Bignoniaceae	NE but seems to be rare ¹	Indigenous
244	<i>Stereospermum suaveolens</i> (Hassk.) Chatterjee	Parul	Bignoniaceae	VU ¹	Indigenous ²
245	<i>Streblus asper</i> Lour.	Shewra	Moraceae	LC ¹	Indigenous
246	<i>Suregada multiflora</i> (A. Juss.) Bail.	Bon-naranga	Euphorbiaceae	LC ¹	Indigenous
247	<i>Swietenia macrophylla</i> King	Mahagoni	Meliaceae	LC ¹	Exotic ¹
248	<i>Swietenia mahagoni</i> (L.) Jacq.	True Mahagoni	Meliaceae	LC ¹	Exotic ¹
249	<i>Swintonia floribunda</i> Griff.	Civet, Amchandul	Anacardiaceae	VU ¹	Indigenous ^{2,3}
250	<i>Syzygium cumini</i> (L.) Skeels	Kalo Jam	Myrtaceae	LC ¹	Indigenous
251	<i>Syzygium firmum</i> Thw.	Dhaki Jam	Myrtaceae	LC ¹	Indigenous
252	<i>Syzygium formosum</i> (Wall.)	Painna Jam	Myrtaceae	LC ¹	Indigenous
253	<i>Syzygium fruticosum</i> DC.	Puti Jam	Myrtaceae	LC ¹	Indigenous

254	<i>Syzygium jambosa</i> (L.) Alston	Golap Jam	Myrtaceae	LC ¹	Exotic ¹
255	<i>Syzygium oblatum</i> (Roxb.) Wall. ex A.M. Cowan & Cowan.	Guti Jam, Gola jam	Myrtaceae	DD ¹	Indigenous
256	<i>Syzygium samarangense</i> (Bl.) Merr. & Perry	Jamrul	Myrtaceae	LC ¹	Exotic ¹
257	<i>Tamarindus indica</i> L.	Tentul	Caesalpiniaceae	LC ¹	Exotic ¹
258	<i>Tamarindus</i> sp.	Misht tentul	Caesalpiniaceae	DD ¹	Exotic ¹
259	<i>Tectona grandis</i> L. f	Segun	Verbenaceae	LC ¹	Exotic ¹
260	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wt. et Arn.	Arjun	Combretaceae	VU ¹	Indigenous ³
261	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Bohera	Combretaceae	LC ¹	Indigenous ^{2,4}
262	<i>Terminalia catappa</i> L.	Kath badam	Combretaceae	LC ¹	Exotic ¹
263	<i>Terminalia chebula</i> Retz.	Haritaki	Combretaceae	VU ¹	Indigenous
264	<i>Terminalia citrina</i> (Gaertn) Roxb. ex. Fleming	Gol haritaki	Combretaceae	VU ¹	Indigenous
265	<i>Tetrameles nudiflora</i> R. Br.	Chandul	Daticaceae	NE ¹	Indigenous
266	<i>Thevetia peruviana</i> (Pers.) K. Schum.	Halud korobi	Apocynaceae	LC ¹	Exotic ¹
267	<i>Toona ciliata</i> M. Roem	Toon	Meliaceae	CD ¹	Indigenous ²
268	<i>Toona microcarpa</i> (C. DC.) Harms	Toon	Meliaceae	LC ¹	Indigenous
269	<i>Trema orientalis</i> (L.) Blume	Naricha, Jinal	Ulmaceae	LC ¹	Indigenous
270	<i>Trema tomentosa</i> (Roxb.) Hara, Fl. E. Himal.	Jiban, Jinal	Ulmaceae	LC ¹	Indigenous
271	<i>Trevesia palmata</i> (Roxb. ex Lindl.) Vis.	Bon pepe	Araliaceae	LC ¹	Indigenous
272	<i>Trewia nudiflora</i> L.	Pitali	Euphorbiaceae	LC ¹	Indigenous ²
273	<i>Uvaria cordata</i> (Dunal) Alston	Euveria	Annonaceae	DD ¹	Indigenous ³
274	<i>Vitex glabrata</i> R.Br.	Horina, Arshal, Goda	Verbenaceae	LC ¹	Indigenous ³
275	<i>Vitex limonifolia</i> Wall. ex C.B. Clarke.	Sada goda	Verbenaceae	NE ¹	Indigenous
276	<i>Vitex peduncularis</i> Wall. ex Schauer	Goda	Verbenaceae	VU ⁶	Indigenous ³
277	<i>Vitex pinnata</i> L.	Pahari goda	Verbenaceae	NE but seems to be rare ¹	Indigenous
278	<i>Walsura robusta</i> Roxb.	Bon lichu	Meliaceae	VU ¹	Indigenous ³
279	<i>Wrightia arborea</i> Roxb.	Sada kuruch	Apocynaceae	EN ⁴	Indigenous ³
280	<i>Xylia xylocarpa</i> Roxb.	Lohakath	Mimosaceae	LC ¹	Exotic ¹
281	<i>Zanthoxylum rhetsa</i> (Roxb.) DC.	Bajna	Rutaceae	LC ¹	Indigenous ²
282	<i>Ziziphus rugosa</i> Lamk.	Bon boro	Rhamnaceae	NE ¹	Indigenous
283	<i>Ziziphus mauritiana</i> Lamk.	Boro	Rhamnaceae	LC ¹	Exotic ¹
ANGIOSPERM (Monocots)					
284	<i>Areca catechu</i> L.	Supari	Arecaceae	LC ¹	Exotic ¹
285	<i>Borassus flabellifer</i> L.	Tal	Arecaceae	LC ¹	Exotic ¹
286	<i>Caryota urens</i> L.	Fishtail palm	Arecaceae	EN ⁶	Indigenous ²
287	<i>Cocos nucifera</i> L.	Narikel	Arecaceae	LC ¹	Exotic ¹
288	<i>Corypha taliera</i> Roxb.	Tali, Talipot palm	Arecaceae	CR ³	Indigenous ²
289	<i>Elaeis guineensis</i> Jacq.	Oil palm	Arecaceae	NE ¹	Exotic
290	<i>Licuala grandis</i> H. Wendl.	Fan palm	Arecaceae	NE ¹	Exotic ¹
291	<i>Livistona chinensis</i> R. Br.	Chinese palm, Chinese fan palm	Arecaceae	NE ¹	Exotic ¹
292	<i>Phoenix acaulis</i> Roxb.	Bon khejur,	Arecaceae	EN ²	Indigenous ^{2,4}

		Khudi khejur			
293	<i>Phoenix roebelenii</i> Roxb.	Khejuri palm	Arecaceae	NE ¹	Exotic ¹
294	<i>Phoenix sylvestris</i> Roxb.	Khejur	Arecaceae	LC ¹	Exotic ¹
295	<i>Ptychosperma macarthurii</i> (Becc. ex Rader Macher) H. Wendl.	Supari palm	Arecaceae	NE ¹	Exotic ¹
296	<i>Ravenala madagascariensis</i> Gmel.	Panthapadap	Musaceae	LC ¹	Exotic ¹
297	<i>Roystonea regia</i> (H. B. & K.) O.F.Cooke	Bottle palm	Arecaceae	NE ¹	Exotic ¹
GYMNOSPERM					
298	<i>Araucaria columnaris</i> (Frost. F.) Hook.	Chrismass tree	Araucariaceae	LC ¹	Exotic ¹
299	<i>Araucaria cunninghamii</i> Sw.	Chrismass tree	Araucariaceae	LC ¹	Exotic ¹
300	<i>Cycas pectinata</i> Buch. -Ham.	Cycas, Maniraj cycas	Cycadaceae	EN ¹	Indigenoous ²
301	<i>Cycas revoluta</i> Thunb.	Cycas, Sago Palm	Cycadaceae	LC ¹	Exotic
302	<i>Pinus caribaea</i> Morelet	Pine	Pinaceae	LC ¹	Exotic ¹
303	<i>Platyclusus orientalis</i> L.	Thuja	Cupressaceae	LC ¹	Exotic ¹
304	<i>Podocarpus neriifolius</i> D. Don	Banshpata	Podocarpaceae	CR ¹	Indegenous ^{2,4}

¹ *Abbreviations: **NE**- Not Evaluated, **DD**- Data Deficient, **LC**- Least Concern, **NT**- Near Threatened, **VU**- Vulnerable, **EN**- Endangered, **CR**- Critically Endangered, **CD**- Conservation Dependent, **NE** but seems to be rare- Not Evaluated but appears to be rare.

*Uppercase: **1.** Ahmed *et al.* 2009a, b, c, 2008a, b, c, Siddiqui *et al.* 2007a, b, **2.** Ara *et al.* 2013, **3.** GoB 2020, **4.** Harun-Ur-Rashid *et al.* 2014, **5.** Hossain *et al.* 2020.

**Exotic- the species is from outside the country; Indigenoous- the species naturally found in Bangladesh and CU camps.

Reference for exotic and indigenoous- **1.** Hossain and Pasha 2004, **2.** Dutta *et al.* 2014, **3.** Hossain *et al.* 2022, **4.** Hossain 2015.

During the survey, a total number of 304 tree species belonging to 201 genera under 69 families were found in the University campus. It is an extensive collection in a small area. Conserving forest genetic resources is vital for a nation, as they are unique and irreplaceable resources for future generations (Loo *et al.* 2014, Pritchard *et al.* 2014). Trees are the essential structural element in forests and several other terrestrial ecosystems (agroforestry, woodlands, and gardens), intercepting much of the radiant sunlight, dominating photosynthetic processes and carbon flows, and sequestering large proportion of carbon in its above and below-ground biomass (FAO 2014a, b).

Ex-situ conservation of forest tree genetic resources is mainly concerned with sampling and maintaining as much of the genetic variations as possible that resides within and among populations of selected target species (FAO, FLD, IPGRI, 2004). Bangladesh has obligations to fulfil the commitments of the international agreements for the conservation of the natural forest resources (DoE 2010). The government is committed to conserve its natural resources through international treaties, conventions and by its constitution. The country has 49 PAs in an aim to conserve the natural resources. According to a recent survey (GoB 2020), the number of tree species identified is 390 in Bangladesh. Some PAs and botanical gardens possess remarkable number of tree species, e.g. 238 tree species in Bangladesh Forest Research Institute (Alam *et al.* 2015), 240 tree species in Chunati WS (Hossain and Hossain 2014), 182 in Dudhpukuria-Dopachari WS (Feeroz *et al.* 2012, Hossain *et al.* 2017), 90 tree species in

Lawachara National Park (Uddin and Hassan 2010), 140 in Madhupur National Park (Rahman *et al.* 2017), 142 in Rema-Kalenga WS (Feeroz *et al.* 2011), and 141 in Teknaf WS (Feeroz 2013).

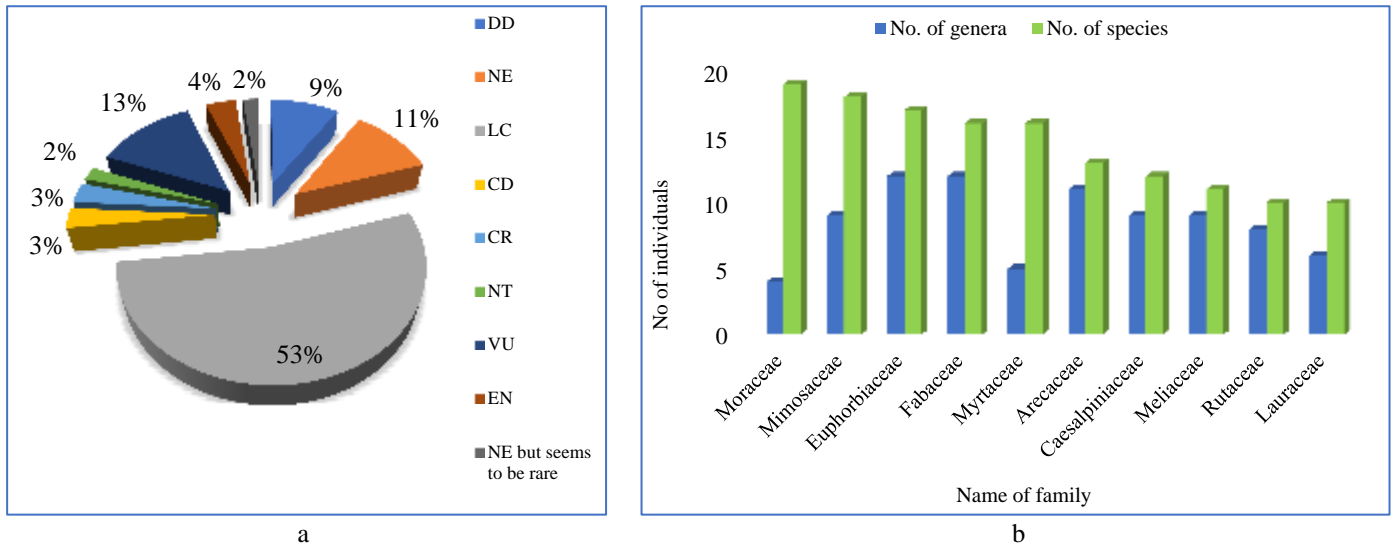


Fig. 4. (a) Conservation category; (b) top ten family.

According to Alam *et al.* (2015), Bangladesh Forest Research Institute campus has 238 tree species. Though the size of both institute campus area varies and every year the plantation programs taken by the IFESCU has increased the number of tree species in the campus. However, the number of tree species in the protected areas mentioned have a smaller number of tree species than the Chittagong University campus. This may be due to the different conservation programs taken in the university campus, proper silvicultural practices and management, low rate of illegal felling of trees and almost zero encroachment in the campus area. The number of tree species in the campus was only 184 in 2006 (Momen *et al.* 2006) but it reached to 304 because of the implementation some conservation projects of Arannayk Foundation, Bangladesh Agricultural Research Council through which IFESCU collect the native tree species from natural forests and conserve it in the campus (Hossain *et al.* 2017, Hossain *et al.* 2022).

Chittagong University campus with an area of 2,312.32 acres is rich with tree species composition and diversity representing 304 tree species (190 indigenous and 114 exotic) of 201 genera under 69 families. These tree diversity, density, dominance and composition are much higher than any Protected Areas or other Institutions in Bangladesh. The campus is also a suitable for conserving threatened and endangered tree species (60 species in threatened category viz., Vulnerable, Endangered and Critically Endangered). The resources may be useful to the faculties and students of biological and natural resources departments and conservation of the threatened tree species from extinction.

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