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Floristic composition and phytodiversity status of Sitakunda Ecopark, Chittagong, Bangladesh

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Abstract

The present study dealt with the exploration and documentation of the floristic composition and phyto-diversity of Sitakunda Eco-park, Chittagong, Bangladesh. A total of 412 vascular plant species under 315 genera belonging to 94 plant families have been recorded from the study area during February, 2013 to April, 2015. Out of these recorded taxa, 330 were dicotyledons, 62 were monocotyledons, 5 were gymnosperms and 15 were pteridophytes. Among those, the maximum 144 species belonged to herbs followed by 138, 75 and 55 species as trees, shrubs and climbers, respectively. The species composition among the plant families varied in plant groups. In dicotyledonous group, Euphorbiaceae appeared to be the largest family with 35 species, whereas Poaceae showed the largest family containing 30 species among monocotyledonous group. The highest values of both Shannon-Weiner and Simpson diversity indices have been observed as 3.82 and 0.98, respectively to site D during monsoon season, whereas the lowest values 3.19 and 0.95, respectively of these indices were recorded in site A during summer season.

Key words: Floristic composition, phytodiversity, Sitakunda ecopark.

INTRODUCTION

Bangladesh is located between 20°25′ to 26°38′ North latitude and 88°01′ to 92°42′ East longitude with an area of about 14.4 million hectares (BBS, 1997). The majority of country's land is formed by alluvium soil, which consists mostly of flood plains exceptionally occurring some hilly areas and uplifted land blocks with a sub-tropical monsoon climate (Islam, 2003 and Rashid, 1991). Geographically, Bangladesh is situated near the Indo-Burma region- one of the prime hotspot areas of the world biodiversity (Mittermeier *et al*., 1998). Due to its unique geo-physical location Bangladesh is exceptionally characterized by a rich biological diversity (Nishat *et al*., 2002; Hossain, 2001; Barua *et al*., 2001; Chowdhury, 2001) which harbored approximately 5,000 species of angiosperms (Khan, 1977).

The rich country's biodiversity is increasingly being depleted day by day due to over-extraction and destruction of natural ecosystems owing to multifarious anthropogenic activities as well as natural calamities. Lack of proper management practices in some of the natural ecosystems is also one of the remarkable reasons for this degradation. For the

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conservation of natural habitat and its biological diversity, Bangladesh government has declared several categories of protected areas including national parks, ecoparks and botanical gardens, safari parks, wildlife sanctuaries, game reserves, world heritage site etc. following IUCN management criteria.

The Sitakunda ecopark is very important due to its unique habitat and rich biodiversity as well as religious and ecotourism point of view. Naturally growing habitat of a threatened gymnosperm species- the *Cycas pectinata* is harbored in different locations of Sitakunda ecopark. A number of water falls in this hilly region is the special attraction to the tourists and casual visitors. Few research works on the Sitakunda area were conducted (Alam, 2001; Rahman & Uddin, 1997; Misbahuzzaman & Alam, 2006; Shamsuddoha & Nasir, 2005 etc.). Most of these works covered in the fields of taxonomy, forestry, tourism and management aspects. But the detail ecological research work especially, the floristic composition with their diversity status is still uncompleted. Therefore, the present research on floristic composition and phyto-diversity status of Sitakunda ecopark has been conducted with a view to prepare a comprehensive checklist of vascular plants with their distribution and seasonal fluctuation as well as to assess phyto-diversity status which will help to prepare a plan for sustainable management and eco-friendly conservation of the Sitakunda ecopark.

MATERIALS AND METHODS

Description of the study site: Present research work was conducted in Sitakuunda Ecpark and adjacent Botanical garden. The ecopark is situated between 22°36′ to 22°39′ North latitude and 91°40′ to 91°42′ East longitude and about 15 to 65m above mean sea level. The northern side of the park is Mirsarai upazilla and Pahartali is in the south, Sandwip channel and the Bay of Bengal is in the west and Fatikchari is in the east. Sitakunda ecopark and botanical garden is located along the Dhaka-Chittagong highway in Sitakunda upazilla of Chittagong district. Four main sites were selected covering the whole ecopark area on the bases of gradual hill altitude and geo-spatial location, which were- site-A (Ecopark's office region with an average 220 feet high from the mean sea level), site-B (Suptodhara region with an average 600 feet high from the mean sea level), site-C (Sohosrodhara region with an average 1100 feet high from the mean sea level) and site-D (Chandranath temple region with an average 1400 feet high from the mean sea level). Each site was again divided into three sample area as sub-sites, namely sub-site 1 (upper-slope at the hill top), sub-site 2 (mid-slope of the hill) and sub-site 3 (lower-slope at the hill foot) according to the gradual hill slope. So, a total of 12 sub-sites were selected for the present research investigation.

Field survey, sample collection and identification: A total of nine field trips with seven days duration of each were conducted during three prominent sampling seasons of the year (*viz.*, Rainy, Summer and Winter) from 2013 to 2015. Vascular plants were collected following standard quadrat method (Braun-Blanquet, 1932; Raunkiaer, 1934). The quadrat size, like 2m×2m for herbs and grasses, 5m×5m for shrubs and 10m×10m for trees were standardized on the basis of species-area-curve method (Cain, 1938). In each

sub-site, ten plots with 10m×10m sized-quadrat were selected and other smaller sized-quadrats were placed within the big one for collecting the respective plants group. Collected plant specimens were properly processed using standard herbarium techniques (Hyland, 1972; Jain and Raw, 1977 and Alexiades, 1996) for voucher specimens, which have been preserved in Plant Ecology and Environment Laboratory, Jahangirnagar University. All plant specimens collected from the study area were identified through consulting the experts and matching with relevant voucher specimens preserved at Jahangirnagar University Herbarium (JUH) and Bangladesh National Herbarium (DACB), taxonomic descriptions and keys available in the relevant literatures (Prain, 1903b; Hooker, 1973; Wu *et al.*, 2003; Siddiqui, 2007a, b; Ahmed, 2008a, b, c, d; Ahmed, 2009a, b; and type images available in the websites of different international herbaria). Updated nomenclatural information was incorporated through data bases including IPNI (2008) and TROPICOS (2010). Scientific name with original citation, family name, local name, major plant group, habit, and one representative specimen number have been provided. The genera under each family and the species under each genus are arranged alphabetically.

Vegetation analysis: Simpson's and Shannon-Weiner diversity indices were calculated by the following formulae-

Simpson's diversity index (Simpson, 1949) was calculated by the following formulae described by Kent and Coker (1992)-

$$\text{Simpson's Diversity Index: } 1\text{-}D = 1 - \frac{\Sigma n(n-1)}{N(N-1)}$$

where, n is the total no. of individuals of each species,
N is the total no. of organisms of all species.

The Shannon-Wiener diversity index (Shannon and Wiener, 1963) was calculated by the following formulae described by Kent and Coker (1992)-

$$\text{Shannon-Weiner Diversity Index: } H' = -\Sigma\, pi \ln pi$$

where, pi is the proportion of individuals or the abundance of the ith species expressed as a proportion of total cover,
ln is Log base$_n$.

Statistical Analysis: Data were statistically analyzed using SPSS software (version 16.0). One way ANOVA (DMRT) was used to test for significant differences ($P<0.05$) for marginal means of variables.

RESULTS AND DISCUSSION

A total of 412 vascular plant species under 315 genera belonging to 94 plant families have been documented from the study area (Table 1). Among the enumerated species, 392 are angiosperms, 5 are gymnosperms and rests of 15 are pteridophytes. Out of the recorded

angiospermic flora, the dicotyledons (magnoliopsida) group is represented by 330 species belonging to 252 genera under 67 plant families, whereas the monocotyledons (liliopsida) group occupied 62 species under 49 genera and 14 families. In this study, the gymnosperms consisted of 5 species belonging to 4 genera under 4 families whereas the pteridopytic flora revealed the occurrence of 15 species under 10 genera and 9 families. Among the total species, 144, 138, 75 and 55 species respectively represented as herbs, trees, shrubs and climbers. The number of species in plant families varried from 1 to 35, where 20 families are monospecific representing single species. The most 10 dominant families containing maximum number of plant species of the study area are Euphorbiaceae, Poaceae, Rubiaceae, Fabaceae, Caesalpiaceae, Verbenaceae, Asteraceae, Mimosaceae, Araceae and Arecaceae (Fig. 1). In dicotyledonous group, Euphorbiaceae appeared to be the largest family containing 35 species under 23 genera followed by Rubiaceae (27 sp), Fabaceae (20 sp), Caesalpiniaceae (14 sp), Asteraceae (13 sp), Verbinaceae (09 sp), Scrophulariaceae (09 sp), Moraceae (09 sp), Mimosaceae (08 sp) and Combretaceae (05 sp). In monocotyledonous group, Poaceae is the largest family having with 30 species under 23 genera followed by Araceae (08 sp), Arecaceae (06 sp), Cyperaceae (06 sp), Zingeberaceae (03 sp) and Liliaceae (02 sp). Seven largest genera of dicotyledons are *Ficus* (6 sp.), *Lindernia* (6 sp.), *Senna* (5 sp.), *Syzygium* (5 sp.), *Crotalaria* (4 sp.), *Terminalia* (4 sp.) and *Zyzyphus* (4 sp.); while in monocotyledons important genera are- *Calamuus* (4 species), *Cyperus* (4 sp.), *Setaria* (3 sp.), *Themenda* (3 sp.), and *Sporobolus* (2 sp.). The highest number of species (324) was recorded during monsoon season followed by 256 and 183 species during winter and summer seasons respectively (Fig. 3). Uddin and Rahman (1997) surveyed the angiospermic flora of Sitakunda in Chittagong, Bangladesh. They reported 203 dicotyledones in the area. But no such work has been carried out so far for Sitakunda Eco-park. Uddin and Hassan (2010) recorded 374 species at Lawachara National Park, Arefin *et al.* (2011) recorded 186 species at Satchhari National Forest. Hadi and Rahman (2013) recorded 203 species at Tilagarh Ecopark, Sylhet.

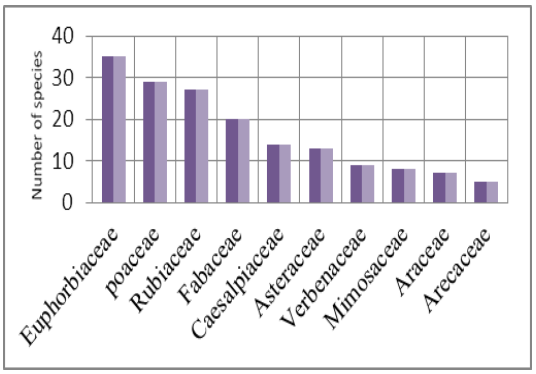

Fig. 1. Ten dominant plant families containing maximum species

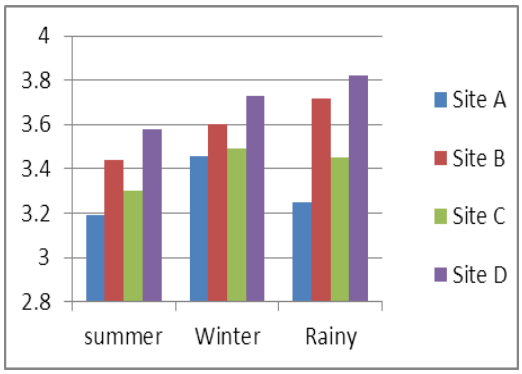

Fig. 2(A). Season-wise Shannon-Weiner diversity index

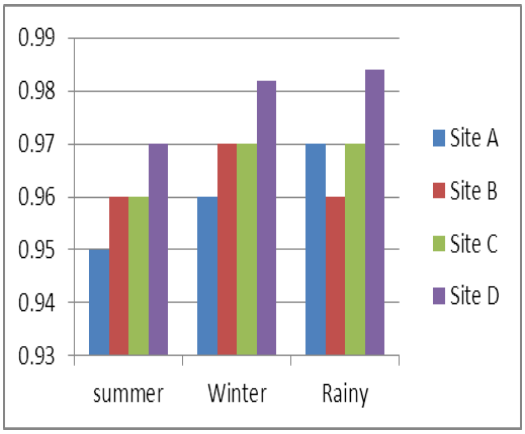

Fig. 2(B). Season-wise Simpson diversity index

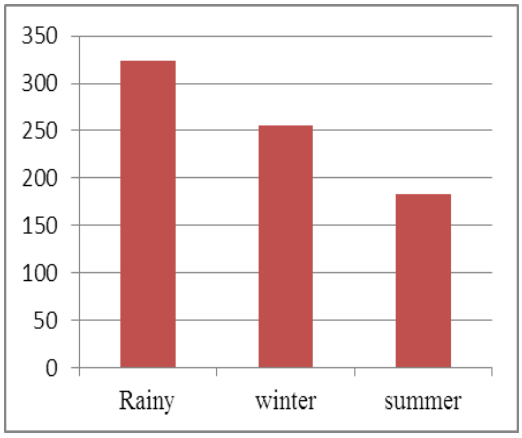

Fig. 3. Seasonal variation of plant species number

The Simpson's and Shannon-Weiner diversity indices in the present study varied from 0.95 to 0.98 and 3.19 to 3.82, respectively. The highest values of Simpson's and Shannon-Weiner diversity indices 0.98 and 3.82 respectively were observed in site-D during monsoon season (Fig. 2a and 2b), whereas the lowest values 0.95 and 3.19 were in site A during summer season. In site B, the highest values of Simpson's and Shannon-Weiner diversity indices (0.96 and 3.72) observed during monsoon season, followed by 0.97 and 3.60, 0.96 and 3.44 during winter and summer seasons respectively. Similarly in site C, the highest value of Simpson's and Shannon-Weiner diversity indices were 0.97 and 3.49 respectively recorded during winter season which was 0.97 and 3.45 during monsoon season and the lowest values were 0.96 and 3.30 respectively during summer season (Fig. 2a and Fig. 2b).

The present findings indicated that the average values of both Simpson's and Shannon-Weiner diversity indices within the selected sites and sub-sites did not show significant difference, whereas these variation among the seasons showed significant difference at 5% ($\alpha = 0.05$) level after DMRT (Table 2). Here, the average values of both the indices during summer season showed the lowest and found significant difference from the average values that observed during winter and rainy reasons. But these values in winter and rainy seasons did not show significant variation at 5% level by DMRT.

Sitakunda is the first eco-park of Bangladesh. It is highly rich in plant diversity. Floristic composition of Sitakunda ecopark was studied to know the present phytodiversity status in this important natural forest ecosystem. Significant difference of diversity of plants was observed in different seasons. Highest number of species was recorded during rainy season because of growing various types of undergrowth in that season, many of which were not found to grow during winter and summer season. The highest diversity index (DI) observed in site D during Rainy season. The lowest diversity index was observed in site A during summer season. Research findings obtained through this piece of research

will be helpful for the sustainable management and conservation of phytodiversity resources of Sitakunda ecopakr of Bangladesh.

Table 2. DMRT analysis of diversity indices of selected sites, sub-sites and seasons

Sites/Subsites/Seasons		Diversity index value	
		Shannon-Weiner	Simpson's
Sites	Site-A	3.36a	0.961a
	Site-B	3.39a	0.958a
	Site-C	3.29a	0.958a
	Site-D	3.49a	0.967a
Subsites	Sub-site-1	3.42a	0.96a
	Sub-site-2	3.36a	0.96a
	Sub-site-3	3.36a	0.96a
Seasons	Summer	3.10a	0.949a
	Winter	3.49b	0.965b
	Rainy	3.55b	0.968b

Note: Values in the same column that do not share common letters are significantly different at 5% ($\alpha = 0.05$) level among the sites and seasons after DMRT.

Table 1. Comprehensive checklist of plant species recorded from Sitakunda ecopark of Bangladesh

S.N.	Scientific name	Local name	Family	Type	Habit	Acc. No.
1	*Abroma augusta* (L.) L. f.	Ulot kombol	Sterculiaceae	D	S	Anwar-0869
2	*Abutilon indicum* (L.) Sweet	Petari	Malvaceae	D	H	Anwar-0949
3	*Abutilon persicum* (Burm. f.) Merr.	Peach abutilon	Malvaceae	D	H	Anwar-0354
4	*Acacia auriculiformis* A. Cunn. *ex* Benth. & Hook.	Akashmoni	Mimosaceae	D	T	Anwar-0870
5	*Acacia nilotica* (L.) Delile subsp.indica (Benth.) Brenan	Babla	Mimosaceae	D	T	Anwar-0891
6	*Acalypha indica* L.	muktajhuri	Euphorbiaceae	D	H	Anwar-0901
7	*Achyranthes aspera* L.	Apang	Amaranthaceae	D	H	Anwar-0872
8	*Actephila excelsa* (Dalz.) Muell.-Arg	Achamasi	Euphorbiaceae	D	S	Anwar-0071
9	*Adenia trilobata* (Roxb.) Engl.	Akandaphal	Passifloraceae	D	CH	Anwar-0311
10	*Adiantum capillus-veneris* L.	Bidda pata	Adiantaceae	F	FH	Anwar-0973
11	*Adiantum philippense* L.	Bidda pata	Adiantaceae	F	H	Anwar-1105
12	*Aegle marmelos* (L.) Corr.	Bel	Rutaceae	D	T	Anwar-0895
13	*Aeschynomene indica* L.	Shola	Fabaceae	D	H	Anwar-0988
14	*Ageratum conyzoides* L.	Fulkuri	Asteraceae	D	H	Anwar-1081
15	*Aglaonema hookerianum* Schott	Aglaonema	Araceae	M	H	Anwar-0618
16	*Albizia chinensis* (Osb.) Merr	Chkua-koroi	Mimosaceae	D	T	Anwar-0902
17	*Albizia lebbeck* (L.) Benth. & Hook	Kalo-koroi	Mimosaceae	D	T	Anwar-0876
18	*Albizia procera* (Roxb.) Benth.	Sada-koroi	Mimosaceae	D	T	Anwar-0899
19	*Aleuritopteris albomarginata* (C. B. Clarke) Ching	Silver fern	Sinopteridaceae	F	FH	Anwar-1058
20	*Aleuritopteris grisea* (Blanford) Panigr	Silver fern	Sinopteridaceae	F	FH	Anwar-1027
21	*Alpinia nigra* (Gaertn.) Burtt.	Kulanjan	Zingiberaceae	M	H	Anwar-1028
22	*Alternanthera philoxeroides* (Mart.) Griseb	Helencha	Amaranthaceae	D	H	Anwar-0897

23	*Alternanthera sessilis* (L.) R. Br. ex Roem. &Schult	Sanchi	Amaranthaceae	D	H	Anwar-0911
24	*Amaranthus spinosus* L.	Kata-notey	Amaranthaceae	D	H	Anwar-0919
25	*Amaranthus viridis* L.	Notey	Amaranthaceae	D	H	Anwar-0294
26	*Amorphophallus bulbifer* (Roxb.) Blume	Jungle Ool	Araceae	M	H	Anwar-1101
27	*Amorphophallus longituberosus* (Engl.) Engl. et Gehrm	Ool	Araceae	M	H	Anwar-0015
28	*Ampelocissus latifolia* (Roxb.) Planch	Gowalia lata	Vitaceae	D	CH	Anwar-1130
29	*Ampelygonum salarkhanii* Hassan	Girishobhon sak	Polygonaceae	D	H	Anwar-0686
30	*Andrographis paniculata* (Burm. f.) Wall	Kalomegh	Acanthaceae	D	H	Anwar-0599
31	*Angiopteris evecta* (G.Forst.) Hoffm.	Dhekia shak	Angiopteridaceae	F	H	Anwar-0093
32	*Anisomeles indica* (L.) O. Kuntze	Gobura	Lamiaceae	D	H	Anwar-0540
33	*Annona reticulata* L.	Sarifa	Annonaceae	D	ST	Anwar-0984
34	*Annona squamosa* L.	Ata-sharifa	Annonaceae	D	ST	Anwar-0082
35	*Antidesma acidum* Retz.	Multa	Euphorbiaceae	D	T	Anwar-0666
36	*Antidesma ghaesembilla* Gaertn	Shialboka	Euphorbiaceae	D	T	Anwar-0937
37	*Antidesma roxburghii* Wall, ex Tulasne	Boro Shialboka	Euphorbiaceae	D	T	Anwar-1125
38	*Aphania danura* (Roxb.) Radlk.	Goda-horina	Sapindaceae	D	ST	Anwar-1077
39	*Aporosa dioica* (Roxb.) Muell.-Arg.	Patkharolla	Euphorbiaceae	D	T	Anwar-1131
40	*Araucaria cookie* Hook.	Cooki pine	Araucariaceae	G	ST	Anwar-1113
41	*Araucaria excels* R. Br.	Cristmas tree	Araucariaceae	G	ST	Anwar-0921
42	*Ardisia solanacea* (Poir.) Roxb.	Chaoldhoa	Myrsinaceae	D	S	Anwar-0989
43	*Argyreia capitiformis* (Poir.) van Cheek Oostr	Doitta lati	Convolvulaceae	D	CH	Anwar-0355
44	*Aristolochia tagala* Cham.	Ishwarmul	Aristolochiaceae	D	CH	Anwar-0864
45	*Artabotrys hexapetalus (L. f.) Bhandari*	Kathalichapa	Annonaceae	D	S	Anwar-1111
46	*Artocarpus chama* Buch. Ham. *ex* Wall.	Chhapalish	Moraceae	D	T	Anwar-1095
47	*Artocarpus heterophyllus* Lamk.	Kathal	Moraceae	D	T	Anwar-0913
48	*Asclepias curassavica* L.	Blood flower	Asclepiadaceae	D	S	Anwar-0097
49	*Atylosia scarabaeoides* (L.) Baker	Banor kolai	Fabaceae	D	CH	Anwar-1121
50	*Averrhoa bilimbi* L.	Bilimbi	Oxalidaceae	D	ST	Anwar-0942
51	*Axonopus compressus* (Sw.) P. Beauv.	Chapra ghas	Poaceae	M	H	Anwar-1129
52	*Azadirachta indica* A. Juss	Neem	Meliaceae	D	T	Anwar-0903
53	*Baccaurea ramiflora* Lour.	Latkon	Euphorbiaceae	D	ST	Anwar-0875
54	*Bambusa balcooa* Roxb.	Borak Bans	Poaceae	M	T	Anwar-0981
55	*Barringtonia acutangula* (L.) Gaertn.	Hijol	Lecythidaceae	D	T	Anwar-1104
56	*Bauhinia purpurea* L.	Rakto kanchon	Caesalpiniaceae	D	T	Anwar-1084
57	*Bauhinia scandens* L.	Swarpa gach	Caesalpiniaceae	D	CS	Anwar-0665
58	*Biophytum reinwardtii* (Zucc.) Klotzsch	Banna ringati	Oxalidaceae	D	H	Anwar-0435
59	*Bischofia javanica* Blume	Kainjal	Euphorbiaceae	D	T	Anwar-0978
60	*Blumea lacera* (Burm. f.) DC.	Kukursunga	Asteraceae	D	H	Anwar-1056
61	*Blumea membranacea* Wall. *ex* DC.	Kukhshi	Asteraceae	D	H	Anwar-1110
62	*Blumea procera* DC.	Not known	Asteraceae	D	H	Anwar-0426
63	*Boehmeria macrophylla* Hornem.	Ulichara	Urticaceae	D	H	Anwar-1117
64	*Bombax ceiba* L.	Shimul	Bombacaceae	D	T	Anwar-1067
65	*Bougainvillea glabra* Choisy	Baganbilash	Nyctaginaceae	D	CS	Anwar-0936
66	*Brachiaria decumbens* Stapf	Songket ghas	Poaceae	M	H	Anwar-0414
67	*Breynia retusa* (Dennst.) Alston	Silpati	Euphorbiaceae	D	S	Anwar-0012

68	*Breynia vitis-idaea* (Burm. f.) C.E.C. Fischer	Vita salpoti	Euphorbiaceae	D	S	Anwar-0286
69	*Bridelia retusa* (L.) A. Juss.	Kata kushui	Euphorbiaceae	D	ST	Anwar-1115
70	*Bridelia stipularis* (L.) Blume	Pat-khowi	Euphorbiaceae	D	SS	Anwar-0508
71	*Bryophyllum pinnatum* (Lamk.) Oken	Pathor kuchi	Crasulaceae	D	H	Anwar-0974
72	*Bursera serrata* Wall. *ex* Colebr.	Bhadi	Burserraceae	D	T	Anwar-0489
73	*Butea monosperma* (Lamk.) Taub.	Polash	Fabaceae	D	T	Anwar-1100
74	*Byttneria pilosa* Roxb.	Harvanga lata	Sterculiaceae	D	SS	Anwar-0758
75	*Caesalpinia crista* L.	Nata	Caesalpiniaceae	D	CS	Anwar-0664
76	*Caesalpinia pulcherrima* (L.) Swartz	Radhachura	Caesalpiniaceae	D	S	Anwar-1061
77	*Calamus erectus* Roxb.	Kadam bet	Arecaceae	M	CS	Anwar-1029
78	*Calamus gracilis* Roxb.	Kiring bet	Arecaceae	M	CS	Anwar-1122
79	*Calamus guruba* Buch.-Ham. *ex* Martius	Jali bet	Arecaceae	M	CS	Anwar-0966
80	*Calamus viminalis* Willd.	Bara bet	Arecaceae	M	CS	Anwar-1033
81	*Callicarpa arborea* Roxb.	Barmala	Verbenaceae	D	T	Anwar-0713
82	*Callistemon citrinus* (Curtis) Skeels	Bottle brush	Myrtaceae	D	T	Anwar-0958
83	*Calophyllum inophyllum* L.	Pipul/ punial	Clusiaceae	D	T	Anwar-1063
84	*Calotropis procera* (Ait.) R. Br.	Akond	Asclepiadaceae	D	S	Anwar-1114
85	*Cananga odorata* (Lamk.) Hook. f. & Thorn	Sugondhi gach	Annonaceae	D	CH	Anwar-1091
86	*Canscora decussata* (Roxb.) Schult	Dhankuni	Gentianaceae	D	H	Anwar-0542
87	*Catharanthus roseus* (L.) G.Don	Nayan tara	Apocynaceae	D	H	Anwar-1088
88	*Canthium angustifolium* Roxb.	Kantanali	Rubiaceae	D	S	Anwar-0826
89	*Cardiospermum halicacabum* L.	Sibjhul	Sapindaceae	D	S	Anwar-1045
90	*Caryota mitis* Lour.	Ban supari	Araceae	M	S	Anwar-1070
91	*Cassia sophera* L.	Chotokolkasundh	Caesalpiniaceae	D	S	Anwar-1102
92	*Casuarina equisetifolia* Forst.	Jhau	Casuarinaceae	D	T	Anwar-0898
93	*Cayratia japonica* (Thunb.) Gagnep.	Japani goalilata	Vitaceae	D	CH	Anwar-1074
94	*Celtis timorensis* Span.	Timur lata	Ulmacae	D	ST	Anwar-0654
95	*Centella asiatica* (L.) Urban	Thankuni	Apiaceae	D	H	Anwar-0877
96	*Centotheca lappacea* (L.) Desv.	Centu ghas	Poaceae	M	H	Anwar-1009
97	*Centrosema pubescens* Benth.	Projapoti lata	Fabaceae	D	CH	Anwar-0305
98	*Ceriscoides turgida* (Roxb.) Tirveng.	Mota boilem	Rubiaceae	D	T	Anwar-0316
99	*Cheilanthes belangeri* (Bory) C.Chr.	Sada dhekia	Pteridaceae	F	FH	Anwar-0016
100	*Chrinum asiaticum* L.	Such dadshon	Liliaceae	M	H	Anwar-1048
101	*Chromolaena odorata* (L.) King & Robinson	German lata	Asteraceae	D	S	Anwar-0726
102	*Chrysalidocarpus lutescens* (Bory) H. Wendl.	Areca palm	Arecaceae	M	S	Anwar-0959
103	*Cissampelos pareira* L.	Tubaki-lata	Menispermaceae	D	CH	Anwar-0766
104	*Cissus adnata* Roxb.	Bhatia-lata	Vitaceae	D	CH	Anwar-1072
105	*Cissus assamica* (Lawson) Craib	Assam lata	Vitaceae	D	CH	Anwar-1062
106	*Cissus javana* DC.	Dukhu lata	Vitaceae	D	CH	Anwar-0579
107	*Clausena suffruticosa* (Roxb.) Wight & Arn.	Pan porag	Rutaceae	D	S	Anwar-0737
108	*Cleome viscose* L.	Hurhurey	Capparaceae	D	H	Anwar-0260
109	*Clerodendrum viscosum* Pers.	Vat	Verbenaceae	D	S	Anwar-0736
110	*Coccinia grandis* (L.) Voigt	Telakucha	Cucurbitaceae	D	CH	Anwar-0896
111	*Codiaeum variegatum* (L.) A. Juss.	Patabahar	Euphorbiaceae	D	S	Anwar-1116
112	*Coffea arabica* L.	Coffee	Rubiaceae	D	S	Anwar-1064

113	*Coffea bengalensis* Roxb. *ex* Schult.	Ban coffee	Rubiaceae	D	S	Anwar-0268
114	*Colocasia esculenta* (L.) Schott	Kachu	Araceae	M	H	Anwar-0889
115	*Combretum acuminatum* Roxb.	Patyuni	Combretaceae	D	S	Anwar-1119
116	*Conyza floribunda* Kunth	Not known	Asteraceae	D	H	Anwar-0038
117	*Conyza semipinnatifida* Wall. *ex* DC.	Adha konyza	Asteraceae	D	H	Anwar-0598
118	*Cordia dichotoma* Forst. F.	Boula bahul	Boraginaceae	D	T	Anwar-0308
119	*Costus speciosus* (Koenig *ex* Retz.) Smith	Keomul	Costaceae	M	H	Anwar-1023
120	*Crescentia cujete* L.	Dugdugi	Bignoniaceae	D	ST	Anwar-1112
121	*Crotalaria acicularis* Buch.-Ham. *ex* Benth. & Hook.	Kata Jhunjhuni	Fabaceae	D	H	Anwar-0061
122	*Crotalaria pallida* Ait.	Jhunjhuni	Fabaceae	D	H	Anwar-0193
123	*Crotalaria sessiliflora* L.	Silai Jhunjhuni	Fabaceae	D	S	Anwar-1090
124	*Crotalaria spectabilis* Roth.	Pipli-Jhunjhun	Fabaceae	D	H	Anwar-0596
125	*Croton bonplandianus* Baill.	Bancroton	Euphorbiaceae	D	H	Anwar-0888
126	*Croton caudatus* Geisel.	Sabagjala	Euphorbiaceae	D	SS	Anwar-0626
127	*Curculigo latifolia* (Dryand.) Ait.	Talmuli	Liliaceae	M	H	Anwar-0630
128	*Curcuma zedoaria* (Christm.) Rose.	Shati	Zingiberaceae	M	H	Anwar-0920
129	*Cuscuta reflexa* Roxb.	Swarnolata	Cuscutaceae	D	H	Anwar-0900
130	*Cycas pectinata* Buch.-Ham.	Moniraj	Cycadaceae	G	ST	Anwar -0941
131	*Cymbopogon citratus* (DC.) Stapf	Dhan sabarang	Poaceae	M	H	Anwar-1053
132	*Cynodon dactylon* (L.) Pers.	Durba	Poaceae	M	H	Anwar-0950
133	*Cyperus cyperoides* (L.) O. Ktze.	Kusha	Cyperaceae	M	H	Anwar-0050
134	*Cyperus distans* L. f.	Pani Malanga	Cyperaceae	M	H	Anwar-0421
135	*Cyperus albostriatus* Schrad.	Not known	Cyperaceae	M	H	Anwar-1097
136	*Cyperus rotundus* Benth.	Mutha/Vadla	Cyperaceae	M	H	Anwar-1093
137	*Cyrtococcum oxyphyllum* (Steud.) Stapf	Coccum ghas	Poaceae	M	H	Anwar-1118
138	*Dalbergia pinnata* (Lour.) Prain	Chakemdia	Fabaceae	D	SS	Anwar-1043
139	*Dehaasia kurzii* King ex Hook. f.	Madanmosto	Lauraceae	D	T	Anwar-0679
140	*Dillenia pentagyna* Roxb.	Hargaza	Dilleniaceae	D	T	Anwar-0947
141	*Delonix regia* Rafin.	Krishnochura	Caesalpiniaceae	D	T	Anwar-0931
142	*Dendrolobium triangulare* (Retz.) Merr.	Bir-jarwar	Fabaceae	D	S	Anwar-1046
143	*Dentella repens* (L.) J. R. & G. Forst	Bhuipat	Rubiaceae	D	H	Anwar-1096
144	*Dentella serpyllifolia* Wall. *ex* Craib	Bhuipat	Rubiaceae	D	H	Anwar-0965
145	*Derris scandens* (Roxb.) Benth.	Amkurchi	Fabaceae	D	CS	Anwar-0894
146	*Desmodium heterophyllum* (Willd.) DC.	Bon-motorsuti	Fabaceae	D	H	Anwar-1120
147	*Desmodium triflorum* (L.) DC.	Kodalia	Fabaceae	D	H	Anwar-0638
148	*Desmos chinensis* Lour.	Sotoyalang	Annonaceae	D	S	Anwar-0568
149	*Desmos dumosus* (Roxb.) Safford	Dumoyalang	Annonaceae	D	CS	Anwar-1106
150	*Dichanthium caricosum* (L.) A. Camus	Detara	Poaceae	M	H	Anwar-0597
151	*Digitaria longiflora* (Retz.) Pers.	Choto fulka ghas	Poaceae	M	H	Anwar-1108
152	*Dillenia indica* L.	Chalta	Dilleniaceae	D	T	Anwar-0884
153	*Dillenia pentagyna* Roxb.	Ajobi gach	Dilleniaceae	D	T	Anwar-0935
154	*Dioscorea pentaphylla* L.	Kanta alu	Dioscoreaceae	M	CH	Anwar-0013
155	*Diospyros blancoi* A. DC.	Bon gub	Ebenaceae	D	T	Anwar-1079
156	*Diospyros malabarica* (Desr.) Kostel.	Deshi gab	Ebnaceae	D	T	Anwar-0886
157	*Dracaena spicata* Roxb.	Gandhok	Agavaceae	M	S	Anwar-0631

158	*Drynaria quercifolia* (L.) J. Sm.	Chile fern	Polypodiaceae	F	FH	Anwar-0295
159	*Duranta repens* L.	Kata mehedi	Verbenaceae	D	S	Anwar-0628
160	*Dysoxylum excelsum* Blume, Bijdr	Lambu	Meliaceae	D	T	Anwar-0994
161	*Eclipta alba* (L.) Hassk.	Kalo keshi	Asteraceae	D	H	Anwar-0809
162	*Elatostema papillosum* Wedd.	Sila jhara	Urticaceae	D	H	Anwar-1083
163	*Elatostema sesquifolium* (Blume) Hassk.	Seskijhara	Urticaceae	D	H	Anwar-0423
164	*Elaeocarpus floribundus* Blume	Jolpie	Eleocarpaceae	D	T	Anwar-0938
165	*Eleusine indica* (L.) Gaertn.	Ghora dubboher	Poaceae	M	H	Anwar-0854
166	*Eragrostis tenella* (L.) P. Beauv	Koni ghas	Poaceae	M	H	Anwar-0197
167	*Eranthemum album* Nees	Madhuban sak	Acantheceae	D	H	Anwar-0583
168	*Eriochloa procera* (Retz.) C. E. Hubb.	Nalghas	Poaceae	M	H	Anwar-0415
169	*Eucalyptus camaldulensis* Dehnhardt	Eucalyptus	Myrtaceae	D	T	Anwar-0914
170	*Eulalia fastigiata* (Nees *ex* Steud.) Haines	Eulalifasti ghas	Poaceae	M	H	Anwar-0413
171	*Euphorbia antiquorum* L.	Kata gachh	Euphorbiaceae	D	ST	Anwar-1069
172	*Euphorbia hirta* L.	Dudhia	Euphorbiaceae	D	H	Anwar-0202
173	*Euphorbia thymifolia* L.	Dudhiya	Euphorbiaceae	D	H	Anwar-0881
174	*Evolvulus nummularius* (L.) L.	Khetpapri	Convolvulaceae	D	H	Anwar-1051
175	*Ficus hispida* (FH) Linn.	Kakdumur	Moraceae	D	ST	Anwar-0722
176	*Ficus religiosa* L.	Ashwath	Moraceae	D	T	Anwar-1068
177	*Ficus benghalensis* L.	Bot	Moraceae	D	T	Anwar-1008
178	*Ficus lyrata* Warb.	Lyrate bat	Moraceae	D	T	Anwar-1099
179	*Ficus racemosa* L.	Jagyadumur	Moraceae	D	T	Anwar-1127
180	*Ficus virens* Ait.	Pakar	Moraceae	D	T	Anwar-0018
181	*Flacourtia indica* (Burm. f.) Merr.	Beuchi	Flacourtiaceae	D	S	Anwar-1078
182	*Flacourtia jangomas* (Lour.) Raeusch.	Lukluki	Flacourtiaceae	D	ST	Anwar-0668
183	*Flemingia strobilifera* (L.) R. Br. roots.	Sim busak	Fabaceae	D	H	Anwar-0516
184	*Flueggea* virosa (Roxb. *ex* Willd.) Baill.	Shikori	Euphorbiaceae	D	S	Anwar-0106
185	*Garcinia cowa* Roxb. *ex* DC.	Kao	Clusiaceae	D	T	Anwar-0997
186	*Garcinia morella* (Gaertn.) Desr.	Tamal	Clusiaceae	D	T	Anwar-0960
187	*Gardenia coronaria* Bueh.-Ham.	Ankamal	Rubiaceae	D	T	Anwar-1055
188	*Globba multiflora* Wall. *ex* Baker	Shukh globba	Zingiberaceae	M	H	Anwar-1066
189	*Glycosmis pentaphylla* (Retz.) A. DC.	Motkila	Rutaceae	D	S	Anwar-0613
190	*Grewia asiatica* L.	Falsa	Tiliaceae	D	T	Anwar-0034
191	*Grewia nervosa* (Lour.) Panigr.	Datoi	Tiliaceae	D	ST	Anwar-0754
192	*Grewia tilliaefolia* Vahl	Pholsa	Tiliaceae	D	ST	Anwar-0979
193	*Hedyotis corymbosa* (L.) Lamk.	Khet papra	Rubiaceae	D	H	Anwar-1060
194	*Heliotropium indicum* L.	Hatishur	Boraginaceae	D	H	Anwar-0915
195	*Hemidesmus indicus* (L.) R. Br.	Anantomul	Asclepiadaceae	D	CH	Anwar-0735
196	*Hevea brasiliensis* (Willd. *ex* A. Juss.) Muell.-Arg.	Rubber	Euphorbiaceae	D	T	Anwar-0904
197	*Hibiscus surattensis* L.	Lata jaba	Malvaceae	D	CH	Anwar-0597
198	*Hodgsonia macrocarpa* (Blume) Cogn.	Gular	Cucurbitaceae	D	CH	Anwar-0672
199	*Holarrhena antidysenterica* (Linn.)Wall.	Kurchi	Apocynaceae	D	ST	Anwar-0633
200	*Hydnocarpus kurzii* (King) Warb	Chaolmugra	Flacourtiaceae	D	ST	Anwar-0987
201	*Hypobathrum racemosum* (Roxb.)	Narikili	Rubiaceae	D	S	Anwar-1107
202	*Hyptis suaveolens* (L.) Poit.	Tokma	Lamiaceae	D	VH	Anwar-0590
203	*Ichnocarpus frutescens* R. Br.	Dudhilata	Apocynaceae	D	CH	Anwar-0788
204	*Ipomoea fistulosa* Mart. *ex* Choisy	Dholkalmi	Convolvulaceae	D	S	Anwar-0952
205	*Ipomoea hederifolia* L.	Lal-kalmi	Convolvulaceae	D	CH	Anwar-0349
206	*Ipomoea mauritiana* Jacq.	Kolmi	Convolvulaceae	D	H	Anwar-0879
207	*Ixora acuminata* Roxb.	Nata rangan	Rubiaceae	D	S	Anwar-0420

208	*Ixora cuneifolia* Roxb.	Ban rangon	Rubiaceae	D	S	Anwar-0721
209	*Jasminum sambac* (L.) Ait.	Beli	Oleaceae	D	S	Anwar-0640
210	*Jatropha glandulifera* Roxb.	Lal verenda	Euphorbiaceae	D	S	Anwar-0870
211	*Justicia gendarussa* Burm. f.	Bish-jarul	Acantheceae	D	S	Anwar-0910
212	*Kopsia fruticosa* (Ker.) A. DC	Dakur	Apocynaceae	D	S	Anwar-0129
213	*Kyllinga nemoralis* (J. R. Forst. & G Forst.) Dandy	Subasinir bishi	Cyperaceae	M	H	Anwar-0916
214	*Lagerstroemia indica* L.	Choto jarul	Lythraceae	D	T	Anwar-0885
215	*Lagerstroemia speciosa* (L.) Pers	Jarul	Lythraceae	D	T	Anwar-0313
216	*Lannea coromandelica* (Houtt.) Merr.	Jiga	Anacardiaceae	D	T	Anwar-0993
217	*Lantana camara* L.	Kutush kata	Verbenaceae	D	S	Anwar-0612
218	*Laportea interrupta* (L.) Chew	Chutra	Urticaceae	D	H	Anwar-0573
219	*Leea rubra* Royle	Lal leea	Leeaceae	D	H	Anwar-0637
220	*Lepisanthes senegalensis* (Poir.) Leenh.	Sagol ladi	Sapindaceae	D	ST	Anwar-0760
221	*Leucaena leucocephala* (Lamk.) de Wit.	Ipil ipil	Mimosaceae	D	T	Anwar-0706
222	*Leucas aspera* (Willd.) Link	Sheto drawn	Lamiaceae	D	H	Anwar-0190
223	*Lindenbergia muraria* (Roxb. *ex* D. Don) P.	Bashanti	Scrophulariaceae	D	H	Anwar-0601
224	*Lindernia multiflora* (Roxb.)	Muli chapra	Scrophulariaceae	D	H	Anwar-0906
225	*Lindernia procumbens* (Krocker) Philcox	Bakpuspa	Scrophulariaceae	D	H	Anwar-0999
226	*Lindernia antipoda* (L.) Alston	Zaighas	Scrophulariaceae	D	H	Anwar-0985
227	*Lindernia ciliata* (Colsra.) Pennell	Bhui	Scrophulariaceae	D	H	Anwar-0874
228	*Lindernia crustacea* (L.) F. Muell.	Chapraghas	Scrophulariaceae	D	H	Anwar-0998
229	*Lindernia hyssopioides* (L.) Haines	Sopi chapra	Scrophulariaceae	D	H	Anwar-0917
230	*Litchi chinensis* Sonn.	Lechu	Sapindaceae	D	T	Anwar-0990
231	*Litsea glutinosa* (Lour.) Robinson	Kukur chita	Lauraceae	D	T	Anwar-0078
232	*Litsea monopetala* (Roxb.) Pers.	Pipulti	Lauraceae	D	T	Anwar-0750
233	*Lygodium flexuosum* (Linn) Sw.	Lata dhekia	Lygodiaceae	F	CH	Anwar-0141
234	*Lygodium giganteum* Tagawa & K. Iwatsuki	Lata dhekia	Lygodiaceae	F	CH	Anwar-0869
235	*Lygodium japonicum* (Thunb.) Sw	Lata dhekia	Lygodiaceae	F	CH	Anwar-0976
236	*Macaranga indica* Wight	Gulli	Euphorbiaceae	D	ST	Anwar-0112
237	*Madhuca longifolia* (Koenig) MacBride	Mahua	Sapotaceae	D	T	Anwar-0983
238	*Maesa chisia* F. Ham. *ex* D. Don	Gangu-loda	Myrsinaceae	D	VS	Anwar-0753
239	*Mallotus tetracoccus* (Roxb.) Kurz.	Kumaribura	Euphorbiaceae	D	T	Anwar-0275
240	*Mallotus philippensis* (Lamk.) Muell.-Arg.	Sinduri	Euphorbiaceae	D	ST	Anwar-0684
241	*Mallotus repandus* (Willd.) Muell.-Arg.	Chot sinduri	Euphorbiaceae	D	SS	Anwar-0871
242	*Mangifera indica* L.	Am	Anacardiaceae	D	T	Anwar-0996
243	*Mangifera sylvatica* Roxb.	Uri am	Anacardiaceae	D	T	Anwar-0883
244	*Manihot esculenta* Crantz	Kasava	Euphorbiaceae	D	S	Anwar-0127
245	*Marsilea minuta* L.	Sunsi shak	Marsileaceae	F	FH	Anwar-0882
246	*Mecardonia procumbens* (Mill.) Small	Mikardan	Scrophulariaceae	D	H	Anwar-0885
247	*Melastoma malabathricum* L.	Dat ranga	Melastomaceae	D	S	Anwar-0319
248	*Melia azedarach* L.	Ghoranim	Meliaceae	D	T	Anwar-0908
249	*Melocanna baccifera* (Roxb.) Kurz	Muli	Poaceae	D	SS	Anwar-0961
250	*Melochia corchorifolia* L.	Ban pat	Sterculiaceae	D	H	Anwar-0808
251	*Merremia vitifolia* (Burm. f.) Hallier f.	Kargolata	Convolvulaceae	D	CH	Anwar-0657
252	*Mesua ferrea* L.	Nagessor	Clusiaceae	D	ST	Anwar-0227
253	*Micromelum minutum* (G. Forster) Wight & Arn.	Bankunch	Rutaceae	D	ST	Anwar-0956
254	*Mikania cordata* (Burm. f.) Robinson	Jessri lata	Asteraceae	D	CH	Anwar-0730
255	*Mimosa diplotricha* C. Wright *ex* Sauvalle	Borolazzaboti	Mimosaceae	D	H	Anwar-0594
256	*Mimosa pudica* L.	Lozzaboti	Mimosaceae	D	H	Anwar-0972

257	*Mimusops elengi* L.	Bakul	Sapotaceae	D	T	Anwar-0930
258	*Mitracarpus hirtus* (L.) DC.	Tupi kadam	Rubiaceae	D	H	Anwar-0281
259	*Mitragyna parvifolia* (Roxb.) Korth.	Phuti kadam	Rubiaceae	D	T	Anwar-1001
260	*Modecca trilobata* Roxb.	Rakhal sasha	Passifloraceae	D	CH	Anwar-0667
261	*Morinda angustifolia* Roxb.	Daru horidra	Rubiaceae	D	S	Anwar-0099
262	*Mucuna pruriens* (L.) DC.	Khamach	Fabaceae	D	VH	Anwar-1032
263	*Muntingia calabura* L.	China clesri	Tiliaceae	D	ST	Anwar-1109
264	*Murraya paniculata* (L.) Jack	Kamini	Rutaceae	D	ST	Anwar-0139
265	*Musa acuminata* Colla	Pahari kola	Musaceae	M	H	Anwar-0924
266	*Mussaenda glabra* Vahl	Patra lekha	Rubiaceae	D	S	Anwar-0957
267	*Mussaenda roxburghii* Hooker f.	Chauri-chaonri	Rubiaceae	D	S	Anwar-1005
268	*Mussaenda frondosa* L.	Ban mussaenda	Rubiaceae	D	S	Anwar-0986
269	*Mycetia longifolia* (Wall.) K. Schum.	Mycetelon	Rubiaceae	D	S	Anwar-0620
270	*Myxopyrum smilacifolium* (Wall.) Blume	Panta lata	Oleaceae	D	CS	Anwar-0007
271	*Nelsonia canescens* (Lamk.) Spreng.	Paramul	Acantheceae	D	S	Anwar-1041
272	*Neolamarckia cadamba* (Roxb.) Bosser	Kodom	Rubiaceae	D	T	Anwar-0926
273	*Nyctanthes arbor-tristis* L.	Sheuli	Verbenaceae	D	ST	Anwar-0571
274	*Ocimum americanum* L.	Bantulsi	Lamiaceae	D	S	Anwar-0892
275	*Ocimum sanctum* L.	Tulsi	Lamiaceae	D	S	Anwar-1035
276	*Olea dioica* Roxb.	Atajam	Oleaceae	D	T	Anwar-0954
277	*Operculina turpethum* (L.) S. Manso	Teurimul	Convolvulaceae	D	CH	Anwar-0513
278	*Ophiorrhiza mungos* L.	Kalashona	Rubiaceae	D	S	Anwar-1011
279	*Oroxylum indicum* (L.) Kurz	Sona dinga	Bignoniaceae	D	T	Anwar-0929
280	*Oxalis corniculata* L.	Amrul shak	Oxalidaceae	D	H	Anwar-0469
281	*Oxalis corymbosa* DC.	Golapi amrul	Oxalidaceae	D	H	Anwar-0880
282	*Pedilanthus tithymaloides* Poit.	Rangchita	Euphorbiaceae	D	S	Anwar-1022
283	*Paederia foetida* L.	Gondhovedu li	Rubiaceae	D	CH	Anwar-0187
284	*Pandanus fascicularis* Lamk.	Keya	Pandanaceae	M	S	Anwar-0953
285	*Panicum maximum* Jacq	Gini ghas	Poaceae	M	H	Anwar-1039
286	*Paspalidium flavidum* (Retz.) A. Camus	Bolai mandi	Poaceae	M	H	Anwar-0060
287	*Paspalum longifolium* Roxb.	Lamtafuli	Poaceae	M	H	Anwar-0673
288	*Passiflora foetida* L.	Jhumka lata	Passifloraceae	D	CH	Anwar-0272
289	*Pavetta assamica* Bremek	Assami bonomali	Rubiaceae	D	S	Anwar-0878
290	*Pavetta indica* L.	Banamali	Rubiaceae	D	S	Anwar-0711
291	*Peliosanthes teta* Andr.	Napigach	Haemoderaceae	M	H	Anwar-0023
292	*Peltophorum pterocarpum* (DC.) K. Heyrie	Halud krishnochura	Caesalpiniaceae	D	T	Anwar-0728
293	*Peperomia pellucida* (L.) H. B. & K.	Luchi pata	Peperomiaceae	D	H	Anwar-0912
294	*Pericampylus glaucus* (Lamk.) Merr.	Goria loti	Menispermacea e	D	CH	Anwar-0746
295	*Persicaria flaccida* (Meissn.) H. Gross	Lata bashkatali	Polygonaceae	D	H	Anwar-0615
296	*Phaulopsis imbricate* (Forssk.) Sweet	Kantasi	Acanthaceae	D	H	Anwar-0762
297	*Phoenix sylvestris* Roxb.	Deshi Khejur	Arecaceae	M	T	Anwar-1017
298	*Phyllanthus emblica* L.	Amlaki	Euphorbiaceae	D	T	Anwar-0732
299	*Phyllanthus niruri* L.	Bhui amla	Euphorbiaceae	D	H	Anwar-1030
300	*Phyllanthus reticulatus* Poir.	Sitka	Euphorbiaceae	D	S	Anwar-0716
301	*Physalis minima* L.	Phutka	Solanaceae	D	H	Anwar-0320
302	*Pilea melastomoides* (Poir.) Wedd.	Mela	Urticaceae	D	H	Anwar-0940

		moricha				
303	*Pinus kesiya* Royle *ex* Grodon	saral	Pinaceae	G	T	Anwar-0990
304	*Piper peepuloides* Roxb.	Pipal	Piperaceae	D	H	Anwar-0052
305	*Piper sylvestre* Lamk.	Ban pipul	Piperaceae	D	CH	Anwar-1026
306	*Plumeria rubra* L.	Champa	Apocynaceae	D	ST	Anwar-1002
307	*Pogonatherum crinitum* (Thunb.) Kunth	Nitu banch	Poaceae	M	H	Anwar-0024
308	*Polyalthia longifolia* (Sonn.) Thw	Debdaru	Annonacea	D	T	Anwar-0923
309	*Pongamia pinnata* (L.) Pierre	Karamcha	Fabaceae	D	T	Anwar-0135
310	*Portulaca grandiflora* Hook.	Time ful	Portulacaceae	D	H	Anwar-0925
311	*Pothos scandens* L.	Kala-lata	Araceae	M	CH	Anwar-1036
312	*Premna herbacea* Roxb.	Bhuijam	Verbenaceae	D	H	Anwar-1000
313	*Protium serratum* (Wall. *ex* Coelbr.) Engl.	Gutgutya	Bursseraceae	D	T	Anwar-0887
314	*Psidium guajava* L.	Peyara	Myrtaceae	D	T	Anwar-1014
315	*Pteris longifolia* L.	Dhekia	Pteridaceae	F	FH	Anwar-0216
316	*Pteris vitifolia* L.	Dhekia	Acrostichaceae	F	FH	Anwar-0932
317	*Pterospermum semisagittatum* Buch.-Ham. *ex* Roxb.	Bara Assar	Sterculiaceae	D	T	Anwar-0158
318	*Putranjiva roxburghii* Wall.	Jiapura	Euphorbiaceae	D	T	Anwar-0126
319	*Randia longiflora* Lamk.	Kutmal	Rubiaceae	D	S	Anwar-0922
320	*Rauvolfia serpentina* (L.) Benth. *ex* Kurz	Swarpo gondha	Apocynaceae	D	H	Anwar-0639
321	*Rhaphidophora hookeri* Schott	Taka lata	Araceae	M	CH	Anwar-1040
322	*Ricinus communis* L.	Reri	Euphorbiaceae	D	S	Anwar-0905
323	*Rottboellia cochinchinensis* (Lour.) W. D.Clayton	Bara swati	Poaceae	M	H	Anwar-0119
324	*Rungia pectinata* (L.) Nees.	Pindi	Acanthaceae	D	H	Anwar-0593
325	*Saccharum arundinaceum* Retz.	Teng	Poaceae	M	H	Anwar-0893
326	*Sacrochlamys pulcherrima* Gaudich	Maricha	Urticaceae	D	S	Anwar-0045
327	*Santalum album* L.	Chandan kath	Santalaceae	D	T	Anwar-1042
328	*Saraca asoca* (Roxb.) de Wild	Ashok	Caesalpiniaceae	D	ST	Anwar-0177
329	*Sauropus androgynus* (L.) Merr.	Mitha patri	Euphorbiaceae	D	S	Anwar-0021
330	*Schefflera bengalensis* Gamble	Not known	Araliaceae	D	CH	Anwar-1019
331	*Schefflera elliptica* (Blume) Harms	Jeng jil	Araliaceae	D	S	Anwar-0046
332	*Scindapsus officinalis*	Gaj-pipul	Araceae	M	CH	Anwar-0221
333	*Scleria terrestris* (L.) Fassett	Dharal ghasi	Cyperaceae	M	H	Anwar-0964
334	*Scoparia dulcis* L.	Mushri dana	Scrophulariaceae	D	H	Anwar-0846
335	*Scurrula parasitica* L.	Parash pargacha	Loranthaceae	D	S	Anwar-0928
336	*Senna fistula* L.	Badarlati	Caesalpiniaceae	D	ST	Anwar-0328
337	*Senna sophera* (L.) Roxb.	Kolkasundha	Caesalpiniaceae	D	H	Anwar-0655
338	*Senna tora* (L.) Roxb.	Choto kolkasundhe	Caesalpiniaceae	D	H	Anwar-0831
339	*Senna alata* (L.) Roxb.	Dadmordan	Caesalpiniaceae	D	S	Anwar-0909
340	*Senna siamea* (Lamk.) Irwin & Barneby	Mingiri	Caesalpiniaceae	D	T	Anwar-0951
341	*Setaria palmifolia* (Koen.) Stapf	Urodhan	Poaceae	M	H	Anwar-0838
342	*Setaria pumila* (Poir.) Roem. & Schult.	Holdey kawn	Poaceae	M	H	Anwar-0982
343	*Setaria sphacelata* (Schum.) Stapf & C. E. Hubb.	Motapata kawn	Poaceae	M	H	Anwar-0046
344	*Smilax macrophylla* Roxb.	Kumarica	Smilaceae	M	CH	Anwar-0651
345	*Smilax ovalifolia* Roxb.	Kumari kata	Smilaceae	M	CH	Anwar-0293
346	*Solanum nigrum* L.	Tit begun	Solanaceae	D	H	Anwar-0863
347	*Solanum torvum* Swartz	Gothbegun	Solanaceae	D	H	Anwar-0434
348	*Solena amplexicaulis* (Lamk.) Gandhi	Rakhal sasha	Cucurbitaceae	D	CH	Anwar-0674

349	*Spatholobus acuminatus* Benth.	Palashi lata	Fabaceae	D	CS	Anwar-0329
350	*Spermacoce latifolia* Aublet	Ghuiojhi	Rubiaceae	D	H	Anwar-1006
351	*Spilanthes calva* DC.	Surja konnya	Asteraceae	D	H	Anwar-0962
352	*Spondias pinnata* (L. f.) Kurz	Amra	Anacardiaceae	D	T	Anwar-1031
353	*Sporobolus diander* (Retz.) P. Beauv.	Bina joni	Poaceae	M	H	Anwar-0049
354	*Sporobolus indicus* (L.) R Br.	Lamba joni	Poaceae	M	H	Anwar-0412
355	*Stemona tuberosa* Lour.	Lalgurania alu	Stemoniaceae	M	H	Anwar-0205
356	*Stenochlaena palustris* (Burm. f.) Bedd	Dhekia lata	Blechnaceae	F	H	Anwar-1016
357	*Stephania glabra* (Roxb.) Miers	Thanda manik	Menispermacea e	D	CH	Anwar-0733
358	*Sterculia villosa Roxb.* ex Smith	Udal	Sterculiaceae	D	T	Anwar-0890
359	*Stereospermum suaveolens* (Roxb.) DC	Muskanda	Bignoniaceae	D	T	Anwar-0934
360	*Streblus asper* Lour.	Shewra	Moraceae	D	T	Anwar-0683
361	*Strobilanthes scaber* Nees	Kashkasatoit a	Acanthaceae	D	H	Anwar-0680
362	*Suregada multiflora* (A. Juss.) Baill	Ban latkon	Euphorbiaceae	D	T	Anwar-0450
363	*Swintonia floribunda* Griff.	Boilam	Dipterocarpaceae	D	T	Anwar-1028
364	*Synedrella nodiflora* (L.) Gaertn	Nakphul	Asteraceae	D	H	Anwar-0820
365	*Syzygium cumini* (L.) Skeels	Kalojam	Myrtaceae	D	T	Anwar-1007
366	*Syzygium balsameum* (Wight) Walp	Khudijam	Myrtaceae	D	ST	Anwar-0761
367	*Syzygium cerasoides* (Roxb.) Raizada	Boti jam	Myrtaceae	D	ST	Anwar-0939
368	*Syzygium formosum* (Wall.) Masamune	Paniya jam	Myrtaceae	D	ST	Anwar-0980
369	*Syzygium fruticosum* DC.	Khudijam	Myrtaceae	D	T	Anwar-0051
370	*Tabernaemontana crispa* Roxb. *ex* Wall.	jangli tagar	Apocynaceae	D	S	Anwar-0017
371	*Tabernaemontana divaricata* (L). R. Br	Tagar	Apocynaceae	D	S	Anwar-0011
372	*Tacca integrifolia* Ker-Gawl.	Bat lily	Taccaceae	M	H	Anwar-0617
373	*Tamarindus indica* L.	Tatul	Caesalpiniaceae	D	T	Anwar-1038
374	*Tamilnadia uliginosa* (Retz.) Tirveng. *& Sastre*	Pedalu	Rubiaceae	D	T	Anwar-0967
375	*Tectona grandis* L. f.	Segun	Verbenaceae	D	T	Anwar-0933
376	*Tecoma stans* (L.) Juss. *ex* Kunth	Holdey tecoma	Bignoniaceae	D	S	Anwar-0029
377	*Tectaria chattagramica* (Clarke) Ching & Sinensia	Jungli dhekia	Tectariaceae	F	FH	Anwar-0026
378	*Tephrosia alba* Du Puy & Labat	Ban nil	Fabaceae	D	S	Anwar-1022
379	*Terminalia arjuna* (Roxb. *ex* DC.) Wight & Arn.	Arjun	Combretaceae	D	T	Anwar-0975
380	*Terminalia bellirica* (Gaertn.) Roxb.	Bohera	Combretaceae	D	T	Anwar-1020
381	*Terminalia catappa* L.	Katbadam	Combretaceae	D	T	Anwar-0992
382	*Terminalia chebula* Retz.	Haritoki	Combretaceae	D	T	Anwar-0907
383	*Tetrastigma leucostaphyllum* (Dennst.) Alston *ex* Mabb	Horina lata	Vitaceae	D	CH	Anwar-0764
384	*Themeda arundinacea* (Roxb.) Ridl.	Arunmeda ghas	Poaceae	M	H	Anwar-1004
385	*Themeda tremula* (Steud.) Hack**.**	Mulameda ghas	Poaceae	M	H	Anwar-1024
386	*Themeda strigosa* (Ham. *ex* Hook.f.) A.Camus	Gosameda ghas	Poaceae	M	H	Anwar-0918
387	*Thevetia peruviana* (Pers.) K. Schum	Kolkephul	Apocynaceae	D	ST	Anwar-0014
388	*Thuja orientalis* L.	Thuja	Cupressaceae	G	S	Anwar-1003
389	*Thunbergia grandiflora* (Roxb. *ex* Rottler) Roxb.	Nilghonto	Acanthaceae	D	C	Anwar-0773
390	*Thysanolaena maxima* (Roxb.) O. Kuntze	Jharu ful	Poaceae	M	H	Anwar-0759

391	*Tinospora crispa* (L.) Hook. f. & Thorns	Gulancha	Menispermiaceae	D	CH	Anwar-1025
392	*Tinospora sinensis* (Lour.) Merr	Padma gulancha	Menispermiacee	D	CH	Anwar-0943
393	*Tournefortia viridiflora* C. B. Clarke	Shamshog	Boraginaceae	D	H	Anwar-0585
394	*Tragia involucrata* L.	Bichuti	Euphorbiaceae	D	S	Anwar-1015
395	*Trema orientalis* (L.) Blume	Banjiga	Ulmaceae	D	T	Anwar-0944
396	*Trema tomentosa* (Roxb.) Hara	Jinal	Ulmaceae	D	T	Anwar-1013
397	*Tridax procumbens* L.	Tridhara	Asteraceae	D	H	Anwar-0301
398	*Triumfetta rhomboidea* Jacq.	Ban okra	Tiliacea	D	H	Anwar-0576
399	*Urena lobata* L.	Banghagra	Malvaceae	D	S	Anwar-0740
400	*Vernonia cinerea* (L.) Less.	Shial muti	Asteraceae	D	H	Anwar-0810
401	*Vetiveria zizanioides* (L.) Nash	Bena	Poaceae	M	H	Anwar-0948
402	*Vigna pilosa* (Willd.) Baker	Jikhrai	Fabaceae	D	CH	Anwar-0541
403	*Vitex peduncularis* Wall. *ex* Schauer	Harina	Verbenaceae	D	T	Anwar-0117
404	*Vitex negundo* L.	Nishinda	Verbenaceae	D	ST	Anwar- 0136
405	*Woodfordia fruticosa* (L.) Kurz	Dhatriphul	Rubiaceae	D	S	Anwar-0605
406	*Wrightia arborea* (Dennst.) Mabb.	Ruigach	Apocynaceae	D	ST	Anwar-0719
407	*Xylia dolabriformis* Benth	Loha kat	Fabaceae	D	T	Anwar-0955
408	*Zanthoxylum rhetsa* (Roxb.) DC.	Bajna	Rutaceae	D	T	Anwar-1034
409	*Zizyphus glabrata* Heyne *ex* Roth	Jangli-kul	Rhamnaceae	D	T	Anwar-0971
410	*Zizyphus mauritiana* Lamk	Boroi	Rhamnaceae	D	T	Anwar-1037
411	*Zizyphus xylopyrus* (Retz.) Willd.	Jangli boroi	Rhamnaceae	D	S	Anwar-0968
412	*Zizyphus oenoplia* (L.) Mill.	Ban boroi	Rhamnaceae	D	S	Anwar-0977

Legend: C=Climber, CH=Climbing Herb, CS=Climbing Shrub, D=Dicot, F=Fern, FH=Fern Herb, G=Gymnosperm, M=Monocot, SS=Scandens Shrub, ST=Small Tree, T=Tree.

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