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Review Article

PRELIMINARY SURVEY OF ANGIOSPERM FLORA OF SELECTED AREA OF AGASTHEESWARAM TALUK, KANYAKUMARI DISTRICT, SOUTHERN INDIA

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ABSTRACT

The present study was aimed to explore the plant diversity wealth of Agastheeswaram Taluk, which is yet to be botanized to make the flora of Kanyakumari complete. The result of plant diversity of Agastheeswaram taluk 610 species of flowering plants, 367 genera belonging to 101 families and 37 orders under 8 clades /groups were documented. Among the 610 species, 483 species belongs to dicotyledons and 127 species belongs to monocotyledons. The dominant clade is Rosides (230 species from 128 genera) followed by Asterids (187 species from 124 genera), Monocots (127 species from 71 genera), Superasterids (50 species from 31 genera). The most dominant family in the present study area is Fabaceae with 100 species. Next to that Poaceae (59 species), cyperaceae (34 species). The dominant genera is *Cyperus* (14 species) followed by *Senna* (11 species), *Ipomoea* (10 species). The dominant habit of plant species is herbs (326 species) followed by shrubs (135 species), climbers (78 species) and trees (71 species). The most dominant habitat of the plant species are terrestrial plants 299 species followed by wetland plants (130 species), emergent amphibious hydrophytes (80 species). It will be helpful and serve for the conservation and sustainable utilization of plant resources of the study area.

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INTRODUCTION

Natural resources survey like floristic study plays an important role in the economic development of developing country like India. India is one of the mega diversity-rich nations in the world. Floristic study and diversity assessments are necessary to understand the present diversity status and conservation of biodiversity. Floristic study is a necessary prerequisite for much fundamental research in tropical community ecology, such as modelling patterns of species diversity or understanding species distributions (Phillips *et al.*, 2003).

Biodiversity is the total variety of life on earth. It includes all genes, species and ecosystems. In short it reflects the totality of genes, species and ecosystems in a region (FES, 2010). To understand and assess richness of the biodiversity, a taxonomic study of the flora and forests is very much essential. Floristic surveys are the only means by which we can achieve this goal. The floristic studies are considered as the backbone of the assessment of phytodiversity, conservation management and sustainable utilization (Jayanthi and Rajendran, 2013).

Many floristic diversity studies have been conducted in different parts of world (Lawrence, 1959; Whittaker and Niering, 1965; Henry and Swaminathan, 1981; Nair and

Daniel, 1986; Gentry, 1988; Sukumar *et al.*, 1992; Linder *et al.*, 1997; Kennard *et al.*, 2002; Sagar *et al.*, 2003; Devi and Yadav, 2006; Krishnamurthy *et al.*, 2010; Patil and Tayade, 2012; Dabgar, 2012; Ghosh *et al.*, 2012; Ravindra and Ayodhya, 2013; Sinha, 2013; Sukumaran and Parthipan, 2014; Rahman *et al.*, 2014; Johnson *et al.*, 2015; Neelam Kumar, 2015). Thus, it is clear that floristic studies are undertaken by many researchers worldwide in different levels.

In Kanyakumari District some of the floristic researchers have been brought out (Sukumaran and Jeeva, 2008; Sukumaran and Jeeva, 2011; Sukumaran and Parthipan, 2014; Lohidas *et al.*, 2015). The knowledge of the plant community is a prerequisite to understand the overall structure and function of ecosystem. The floristic information of the flora of Agastheeswaram taluk is now available for the first time with this publication.

MATERIALS AND METHODS

Study area

Kanyakumari is the southernmost district of Tamil Nadu. This district lies between 77°07' - 77°35' E, 08°05' - 08°35' N, and it occupies an area of about 1672 sq. km. The District is bound by Tirunelveli District on the north and the east. The South

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Eastern boundary is the Gulf of Mannar. On the South and the South West, the boundaries are the Indian Ocean and the Arabian Sea. On the West and North West it is bound by Kerala. This district is comprised of four taluks namely, Agastheeshwaram, Thovalai, Kalkulam and Vilavancode. In Agastheeswaram Taluk 21 towns and 19 villages were located, Out of these only 12 areas were selected for the study area is given (Table 1 and Fig. 1).

Table 1 Name of the villages and geo co-ordinates in Agastheeswaram taluk, Kanyakumari District, Tamilnadu

S.NO	Place & Name of the wetland	Geo- coordinates
1	Agastheeswaram	N 8° 5.290' - E 77° 30.979'
2	Azhagapapuram	N 8° 9.047' - E 77° 34.613'
3	Eraviputhoor	N 8° 10.224' - E 77° 29.791'
4	Kanyakumari	N 8° 6.619' - E 77° 32.397'
5	Kottaram	N 8° 7.167' - E 77° 30.644'
6	Kulasekarapuram	N 8° 8.694' - E 77° 29.880'
7	Marungoor	N 8° 11.709' - E 77° 30.044'
8	Nagercoil	N 8° 11.857' - E 77° 26.903'
9	Suchindrum	N 8° 8.852' - E 77° 27.435'
10	Thengamputhoor	N 8° 7.132' - E 77° 27.448'
11	Theroor	N 8° 10.922' - E 77° 27.406'
12	Thirupathisaram	N 8° 12.422' - E 77° 27.422'

Department of Scott Christian College, Nagercoil. APG IV system of classification was followed to clarify the species were verified with IPNI (International Plant Name Index). The voucher specimens collected from the field were prepared the herbarium and were deposited in the P.G. & Research Department of Botany, S.T. Hindu College, Nagercoil.

RESULTS AND DISCUSSION

The present study documents a total of 610 taxa distributed in 367 genera, representing 101 families as per APG IV classification. These taxa are distributed in 8 clades/ grades and 37 orders Table 2. 38% of the taxa are reported from Rosids (230 species), 31% from Asterids (187 species), 21% from Monocots (127 species), 8% from Superasterids (50 species) are the major clades/ groups representing a total of 610 taxa that constitute 97% of the flora (Fig. 2). Of the recorded species in the present study area, Dicotyledons (483 species) belonging from 296 genera and 83 families was the largest number of plant groups followed by Monocotyledons (127 species) belonging from 71 genera and 18 families Table 3.

Order Fabales (102 species), Poales (95 species), Lamiales (81 species), Caryophyllales (48 species), Malpighiales and Gentianales (34 species each), Asterales (32 species), Malvales (29 species), Solanales (27 species), Cucurbitales and Myrtales (13 species each), Brassicales and Sapindales (12 species each), Commelinales (10 species) account for about 87% of the species in the villages of Agastheeswaram Taluk (Fig. 3).

Of the 610 taxa most dominant plant species are herbs (326 species) followed by shrubs (135 species), climbers (78 species) and trees (71 species) (Figure 4). The most diverse families in the Agastheeswaram taluk include Fabaceae (100 species), Poaceae (59 species), Cyperaceae (34 species), Asteraceae (29 species), Acanthaceae and Malvaceae (28 species each), Amaranthaceae, Apocynaceae, Lamiaceae (21 species each), Euphorbiaceae (19 species), Convolvulaceae (18 species), Cucurbitaceae (13 species), Rubiaceae (12 species), Phyllanthaceae (10 species), Solanaceae (9 species), Boraginaceae and Commelinaceae (8 species each), Oleaceae and Verbenaceae (6 species), Lythraceae and Rutaceae (5 species each), whereas thirteen families represented by four species each, nine families represented by three species, thirteen families represented by two species, Forty five families represented by a single species (Table 4 and Fig. 5). Family Fabaceae and Poaceae are represented by about 26% of the taxa.

The genus *Cyperus* tops the list with 14 species, followed by *Senna* (11 species), *Ipomoea* (10 species), *Indigofera* (9 species), *Crotalaria* (8 species), *Eragrostis* and *Euphorbia* (7 species each), *Fimbristylis* and *Justicia* (6 species each), *Commelina*, *Hibiscus*, *Jasminum*, *Phyllanthus*, *Solanum* (5 species each) (Fig. 6)

Further the angiosperms classified in morphological groups viz., the dominant one was terrestrial plants (299 species) followed by wetland plants (130 species), emergent amphibious hydrophytes (80 species), border line plants around the wetlands or shore plants (78 species), floating submerged anchored hydrophytes (6 species), submerged anchored hydrophytes (5 species), free floating hydrophytes, floating leaved anchored hydrophytes and submerged suspended hydrophytes (4 species each) (Fig. 7).

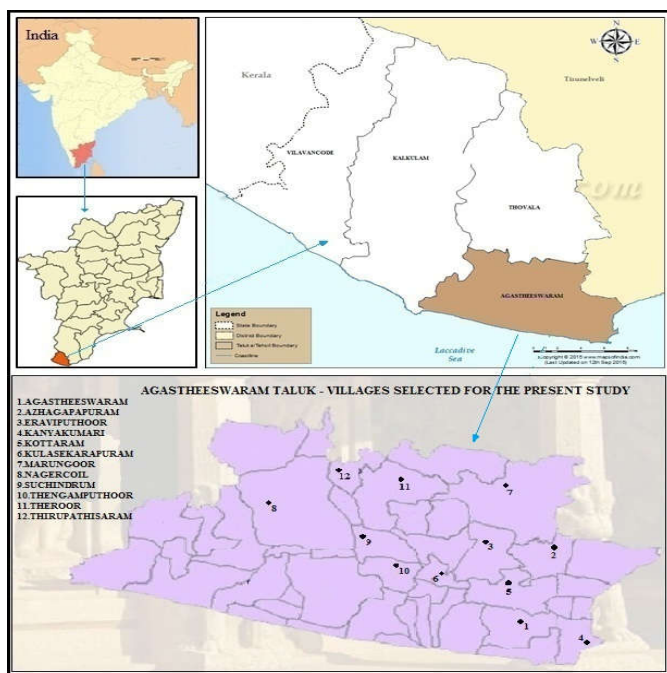


Figure 1 Map indicating the location of Kanyakumari District, Tamilnadu State, where the study area Agastheeswaram Taluk is located.

Preservation and identification of plant materials

Frequent field trips were carried out from Oct 2014 to Oct 2016 to collect different areas in select villages of Agastheeswaram Taluk. The collected specimens are taxonomically identified with the help of various published monographs, taxonomic revisions and floras (Gamble and Fischer, 1915- 1935; Nair and Henry, 1983; Henry *et al.*, 1987; Henry *et al.*, 1989; Matthew, 1993; Mohanan and Henry, 1994; Santapau and Henry, 1994; Kabear and Nair, 2009) and by using the field keys devised by Subramanyam (1962). Authentication of the identity of plant species were confirmed by specimens deposited in Botanical Survey of India, Southern Circle, Coimbatore, Jawaharlal Nehru Tropical Botanical Garden and Research Institute (JNTBGRD) Palode, Trivandrum, Kerala and Botany

Table 2 List of angiosperms from select villages of Agastheeswaram taluk in Kanyakumari District, Tamilnadu

S.No	Class / Clade/ Order	Botanical name	Life form	Habit	Indigenous uses	Fl.&Fr.	STHCH No.
ANA GRADE							
Nymphaeales							
Nymphaeaceae							
1		<i>Nymphaea nouchali</i> Burm. f.	WP	H	M	Throughout	4039
2		<i>Nymphaea pubescens</i> Willd.	FLAH	H	M	Throughout	4093
MAGNOLIDS							
Piperales							
Piperaceae							
3		<i>Peperomia pellucida</i> (L.) Kunth.	WP	H	M	Throughout	4457
4		<i>Piper longum</i> L.		S	M, F	Jul- Mar	4445
Aristolochiaceae							
5		<i>Aristolochia indica</i> L.		C	M	Sep- Mar	4272
Magnoliales							
Magnoliaceae							
6		<i>Michelia champaca</i> (L.) Baill.ex Pierre	TP	T	M	Feb- Sep	4431
Annonaceae							
7		<i>Annona muricata</i> L.	TP	T		Apr- Oct	4442
8		<i>A. reticulata</i> L.	TP	T	M	May- Aug	4439
9		<i>A. squamosa</i> L.	TP	T	M, F	Apr- Oct	4113
10		<i>Polyalthia suberosa</i> (Roxb.) Thwaites	TP	S		Mar-Jan	4110
Laurales							
Lauraceae							
11		<i>Cassytha filiformis</i> L.	TP	C	M	Jun- Sep	4284
MONOCOTS							
Alismatales							
Araceae							
12		<i>Colocasia esculenta</i> (L.) Schott.	WP	H	M, O	Jul-Jan	4024
13		<i>Lemna perpusilla</i> Torr.	FFH	H	FO	Jul-Oct	4135
14		<i>Pistia stratiotes</i> L.	FFH	H	M	Mar-Aug	4089
Hydrocharitaceae							
15		<i>Hydrilla verticillata</i> (L.f.) Royle	SAH	H	M, Fo	Oct- Jan	4502
16		<i>Najas graminea</i> Delile	SAH	H	Ma	Aug- Oct	4494
17		<i>Ottelia alismoides</i> (L.) Pers.	SAH	H	M	Aug-Dec	4016
18		<i>Vallisneria spiralis</i> L.	SAH	H	Fo	Oct- Feb	4070
Aponogetonaceae							
19		<i>Aponogeton natans</i> (L.) Engl.&K.Krause	FLAH	H	M	Throughout	4345
Potamogetonaceae							
20		<i>Potamogeton nodosus</i> Poir.	SAH	H		Oct- Dec	4353
Pandanales							
Pandanaceae							
21		<i>Pandanus odorifer</i> (Forssk.)Kuntze.	WP	S	M	Oct- Apr	4009
Liliales							
Colchicaceae							
22		<i>Gloriosa superba</i> L.	WP	C	M	Jul-Mar	4326
Amaryllidaceae							
23		<i>Crinum asiaticum</i> L.	TP	H		Apr- Jul	4366
Asparagales							
Asparagaceae							
24		<i>Agave vivipara</i> L.	TP	S		Jan-Jun	4433
25		<i>Asparagus gonocladus</i> Baker	TP	C	M	Aug- Oct	4144
26		<i>A. racemosus</i> Willd.	SP	C	M	Aug-Nov	4270
27		<i>Polianthes tuberosa</i> L.	TP	H	O	Cultivated	4425
Arecales							
Areaceae							
28		<i>Borassus flabellifer</i> L. (Palm)	SP	T	M, F	Jan- Aug	4574
29		<i>Phoenix pusilla</i> Gaertn.	TP	S	F	Oct- Mar	4576
30		<i>Cocos nucifera</i> L. (Coconut)	TP	T	M, F	Throughout	4573
Commelinales							
Commelinaceae							
31		<i>Commelina benghalensis</i> L.	WP	H	M	Apr-Nov	4108
32		<i>C. clavata</i> C. B. Clarke	TP	H		Jun-Jan	4330
33		<i>C. diffusa</i> Burm.f.	WP	H	M	Jul-Nov	4231
34		<i>C. erecta</i> L.	WP	H	M	Jul-Jan	4449
35		<i>C. paludosa</i> Blume	EAH	H		Jul-Dec	4444
36		<i>Cyanotis axillaris</i> (L.) D.Don.ex Sweet	EAH	H	M	Jun- Dec	4329
37		<i>C. cristata</i> (L.) D.Don	EAH	H	M	Aug- Dec	4448
38		<i>C. fasciculata</i> (B.Heyne ex Roth) Schult.f	TP	H		Jul- Jan	4207
Pontederiaceae							
39		<i>Eichhornia crassipes</i> (Mart.) Solms.	FFH	H	M, Fo	Throughout	4130
40		<i>Monochoria vaginalis</i> (Burm.f.) C.Presl	EAH	H	M, F	Jul-Nov	4015
Zingiberales							
Heliconiaceae							
41		<i>Heliconia psittacorum</i> L.f	TP	H	O	Cultivated	4327
Cannaceae							
42		<i>Canna indica</i> L.	WP	H	M,O	Throughout	4470
Zingiberaceae							
43		<i>Alpinia calcarata</i> (Haw.) Roscoe.	WP	H	M	Sep- Apr	3999
Poales							
Typhaceae							
44		<i>Typha angustifolia</i> L.	EAH	H	Ma, C	Throughout	4205
Eriocaulaceae							
45		<i>Eriocaulon thwaitesii</i> Korn	WP	H		Jul-Nov	4175
Cyperaceae							

46	<i>Bulbostylis barbata</i> (Rottb.) C.B.Clarke	WP	H	M	Sep-Feb	4523
47	<i>Cyperus arenarius</i> Retz	EAH	H		Nov-Dec	4406
48	<i>C. articulatus</i> L.	EAH	H		Mar-Apr	3966
49	<i>C. bulbosus</i> Vahl	EAH	H		Jul-Dec	4522
50	<i>C. compressus</i> L.	EAH	H		Jul-May	4525
51	<i>C. cyperinus</i> (Retz.) Suringar	TP	H		Throughout	4488
52	<i>C. difformis</i> L.	WP	H	M	Aug-Jan	4536
53	<i>C. exaltatus</i> Retz	EAH	H	Fo	Sep- Dec	4474
54	<i>C. haspan</i> L.	WP	H		Feb-Dec	4588
55	<i>C. iria</i> L.	EAH	H	M	Aug-Jan	4239
56	<i>C. laevigatus</i> L.	WP	H		July	4517
57	<i>C. longus</i> L.	TP	H		Sep-Oct	4515
58	<i>C. michelianus</i> (L.) Delile	WP	H		October	4578
59	<i>C. rotundus</i> L.	EAH	H	M	Throughout	4512
60	<i>C. squarrosus</i> L.	EAH	H		Sep- Feb	4564
61	<i>Eleocharis congesta</i> D.Don	TP	H		Sep-May	4558
62	<i>E. geniculata</i> (L.) Roem.& Schult.	EAH	H		Aug- Feb	4354
63	<i>Fimbristylis aestivalis</i> Vahl.	EAH	H		Dec-Apr	4524
64	<i>F. argentea</i> (Rottb.) Vahl.	EAH	H		Throughout	4242
65	<i>F. cymosa</i> R.Br.	EAH	H		Oct- Mar	4565
66	<i>F. dipsacea</i> (Rottb.) C.B.Clarke	EAH	H		Apr- Aug	4248
67	<i>F. ferruginea</i> (L.) Vahl	EAH	H		Jul-Apr	4566
68	<i>F. quinquangularis</i> (Vahl) Kunth	EAH	H		Aug-Dec	4356
69	<i>Kyllinga brevifolia</i> Rottb.	WP	H	M	Jul-Nov	4003
70	<i>K. bulbosa</i> P.Beauv.	WP	H		Jul-Mar	4516
71	<i>K. melanosperma</i> Nees	WP	H		Aug- Dec	4241
72	<i>K. nemoralis</i> (J.R.Forst& G.Forst.) Dandy ex Hutch.&Dalziel	WP	H	M	Oct- Mar	4389
73	<i>Lipocarpa chinensis</i> (Osbeck) J.Kern.	WP	H		Sep-Jul	4357
74	<i>Pycnus flavescens</i> (L.) P.Beauv. ex Rchb	EAH	H		Sep-Jan	4518
75	<i>P. flavidus</i> (Retz.) T.Koyama	WP	H		Oct-Apr	4572
76	<i>Rhynchospora corymbosa</i> (L.) Britton	EAH	H		Nov- Apr	4000
77	<i>Schoenoplectiella articulata</i> (L.) Lye	EAH	H		Oct-Jan	4030
78	<i>S. juncooides</i> (Roxb.)Lye.	WP	H		Oct-Dec	4555
79	<i>Schoenoplectus litoralis</i> (Schrad.) Palla	WP	H		Sep-Jan	4539
	Poaceae					
80	<i>Apluda mutica</i> L.	EAH	H	M	Throughout	4403
81	<i>Aristida adscensionis</i> L.	EAH	H		Throughout	3946
82	<i>A. setacea</i> Retz	SP	H	M	Throughout	4556
83	<i>Axonopus compressus</i> (sw.) P.Beauv.	WP	H		Throughout	3970
84	<i>Brachiaria semiverticellata</i> (Rottler) Alston	WP	H		Aug- Mar	4188
85	<i>Cenchrus ciliaris</i> L.	TP	H		Throughout	3993
86	<i>Chloris barbata</i> Sw.	EAH	H		Aug-Feb	4526
87	<i>C. montana</i> Roxb.	TP	H		Throughout	3971
88	<i>Chrysopogon fulvus</i> (Spreng.) Chiov.	TP	H		Aug-May	4379
89	<i>Cymbopogon caesius</i> (Hook.& Arn.)	TP	H		Jul-Apr	4364
90	<i>C. citratus</i> (DC.) Stapf	TP	H	M	Jun-Dec	4460
91	<i>Cynodon dactylon</i> (L.) Pers.	WP	H	M	Mar-Oct	4365
92	<i>Dactyloctenium aegyptium</i> (L.) Willd.	EAH	H	M	Throughout	4001
93	<i>Dendrocalamus strictus</i> (Roxb.) Nees	TP	H		Sep-Jul	4229
94	<i>Echinochloa crus -galli</i> (L.)P.Beauv.	WP	H		Jul-Feb	4563
95	<i>E. colona</i> (L.) Link	EAH	H	M	Throughout	4529
96	<i>E. stagnina</i> (Retz.)P.Beauv.	WP	H		Throughout	4586
97	<i>Eleusine indica</i> (L.) Gaertn.	WP	H		Sep-Dec	4521
98	<i>Eragrostis amabilis</i> (L.) Wight & Arn	TP	H		Sep-Mar	4543
99	<i>E. japonica</i> (Thunb.) Trin	WP	H		Throughout	4375
100	<i>E. minor</i> Host	WP	H		Jun-Mar	4514
101	<i>E. pilosa</i> (L.) P.Beauv.	EAH	H		May-Mar	4217
102	<i>E. riparia</i> (Willd.) Nees	EAH	H		Oct-Feb	4387
103	<i>E. unioloides</i> (Retz.) Nees ex Steud	TP	H		Aug-Mar	4315
104	<i>E. viscosa</i> (Retz.) Trin.	TP	H		Throughout	4274
105	<i>Eriochloa procera</i> (Retz.) C.E.Hubb.	EAH	H		Aug-Dec	4060
106	<i>Heteropogon contortus</i> (L.) P.Beauv. ex Roem & Schult	SP	H	M	Aug-Feb	3956
107	<i>Isachne globosa</i> (Thunb.) Kuntze.	WP	H		Throughout	4528
108	<i>Leptochloa panicea</i> (Retz.)Ohwi	EAH	H		Throughout	4410
109	<i>Melinis repens</i> (Willd.) Zizka	WP	H		May-Jan	3994
110	<i>Oryza rufipogon</i> Griff.	EAH	H		Sep-Mar	3990
111	<i>O. sativa</i> L.	EAH	H	M, F	Cultivated	4459
112	<i>Panicum maximum</i> Jacq.	EAH	H		Nov-Feb	3976
113	<i>P. miliaceum</i> L.	WP	H	Fo	Cultivated	4534
114	<i>P. repens</i> L.	WP	H		Throughout	4027
115	<i>P. sumatrense</i> Roth .	WP	H		Aug-Feb	4530
116	<i>Paspalidium flavidium</i> (Retz.) A.Camus	EAH	H		Jul-Dec	4378
117	<i>P. punctatum</i> (Burm.) A.Camus	WP	H		Sep-Feb	4061

118		<i>Paspalum distichum</i> L.	EAH	H		Jul-Mar	4054
119		<i>Pennisetum hohenackeri</i> Hochst.ex Steud.	SP	H		Feb-Aug	4359
120		<i>P. pedicellatum</i> Trin.	SP	H		Jul- Feb	4137
121		<i>P. polystachyon</i> Schult.	TP	H		Jul-Apr	4533
122		<i>P. purpureum</i> Schumach.	TP	H		Oct-Jul	4532
123		<i>Perotis indica</i> (L.) Kuntze.	TP	H		Sep-Feb	4513
124		<i>Saccharum spontaneum</i> L.	EAH	H	Fo, C	Nov-Dec	4542
125		<i>Sacciolepis indica</i> (L.) Chase	EAH	H		Nov-Feb	3962
126		<i>S. interrupta</i> (Willd.) Stapf.	WP	H		Nov-Apr	4041
127		<i>Setaria barbata</i> (Lam.) Kunth.	TP	H		Dec-Apr	4400
128		<i>S. intermedia</i> Roem.& Schult.	WP	H		May- Jan	4540
129		<i>S. pumila</i> (Poir.) Roem.&Schult.	WP	H		Throughout	4531
130		<i>Sporobolus diandrus</i> (Retz.) P. Beauv.	TP	H		Nov-Feb	4538
131		<i>S.indicus</i> (L.) Rr.	EAH	H		Jun-Dec	4537
132		<i>S. spicatus</i> (Vahl) Kunth	TP	H		Throughout	4541
133		<i>Themeda quadrivalis</i> (L.) Kuntze	TP	H		Aug-Jan	4553
134		<i>T. triandra</i> Forssk.	SP	H		Throughout	4281
135		<i>Trachys muricata</i> (L.) Pers. ex Trin	TP	H		Throughout	3968
136		<i>Tragus mongolorum</i> Ohwi	TP	H		Nov-Feb	4362
137		<i>Urochloa panicoides</i> P.Beauv.	WP	H		Throughout	4587
138		<i>Zea mays</i> L.	TP	H	Fo, F	Cultivated	4481
PROBABLE SISTER OF EUDICOTS							
	Ceratophyllales	Ceratophyllaceae					
139		<i>Ceratophyllum demersum</i> L.	SSH	H	M	Oct- Nov	4083
EUDICOTS							
	Ranunculales	Papaveraceae					
140		<i>Argemone mexicana</i> L.	WP	H	M	Throughout	4246
		Menispermaceae					
141		<i>Cissampelos pareira</i> L.	SP	C	M	Oct- July	4394
142		<i>Tinospora cordifolia</i> (Willd.) Miers.	SP	C	M	Aug-Jan	4332
	Proteales	Nelumbonaceae					
143		<i>Nelumbo nucifera</i> Gaertn.	FSAH	H	M, F	Jul- Oct	4022
ROSIDS							
	Vitales	Vitaceae					
144		<i>Cayratia pedata</i> (Lam.) Gagnep.	TP	C		Jun- Dec	4310
145		<i>C. trifolia</i> (L.) Domin	TP	C		Mar- Aug	4193
146		<i>Cissus quadrangularis</i> L.	WP	S	M,F	Jan- May	4142
147		<i>C.vitiginea</i> L.	TP	S		May- Dec	4396
	Zygophyllales	Zygophyllaceae					
148		<i>Tribulus terrestris</i> L.	WP	H	M	Oct-Dec	4104
	Fabales	Fabaceae					
149		<i>Abrus precatorius</i> L.	SP	C	M	Oct- May	4048
150		<i>A. pulchellus</i> Thwaites	TP	C	M	Oct-Mar	4101
151		<i>Acacia planifrons</i> Wight & Arn.	TP	T		Oct- Apr	4269
152		<i>A. auriculiformis</i> Benth.	TP	T		May- Dec	4215
153		<i>A. leucophloea</i> (Roxb.)Willd.	TP	T		Aug- Nov	4306
154		<i>A. nilotica</i> (L.) Delile	SP	T	M	Aug- Feb	4216
155		<i>Aeschynomene aspera</i> L.	EAH	S	M,C	Aug- Dec	4235
156		<i>A. indica</i> L.	EAH	H	M,C	Jul- Jan	4256
157		<i>Albizia lebbek</i> (L.)Benth	SP	T	M	Mar- Dec	4484
158		<i>A. saman</i> (Jacq.) Merr.	TP	T		May- Sep	4076
159		<i>Alysicarpus monilifer</i> (L.) DC	WP	H		Nov-Jan	4010
160		<i>A. vaginalis</i> (L.) DC	WP	H	M	Jul-Jan	4355
161		<i>Arachis hypogaea</i> L.	TP	H		Jul- Dec	4267
162		<i>Bauhinia acuminata</i> L.	TP	S		Throughout	4228
163		<i>B. racemosa</i> Lam.	TP	T	M	Sep- Jun	4461
164		<i>B. tomentosa</i> L.	TP	S	M	Dec Mar	4489
165		<i>B. variegata</i> L.	TP	T	M	Sep- May	4451
166		<i>Caesalpinia bonduc</i> (L.) Roxb.	TP	C	M	Sep- May	4211
167		<i>C. mimosoides</i> Lam.	TP	C		Oct-Apr	4471
168		<i>C. pulcherrima</i> (L.) Sw.	TP	S	M	Cultivated	4289
169		<i>Cajanus scarabaeoides</i> (L.)Thouars	TP	C		Sep-Jan	4454
170		<i>Calliandra haematocephala</i> Hassk.	TP	S		Cultivated	4390
171		<i>Canavalia gladiata</i> (Jacq.) DC.	SP	C		Aug- Mar	4050
172		<i>Cassia fistula</i> L.	SP	T	M	Mar- Nov	4198
173		<i>C. roxburghii</i> DC.	TP	T		Throughout	4486
174		<i>Centrosema pubescens</i> Benth	WP	C		Sep-May	4182
175		<i>Chamaecrista absus</i> (L.) H.S.Irwin &Barneby	TP	H		Aug- Dec	4263
176		<i>C. nictitans</i> (L.) Moench	TP	H		Aug- Nov	4358
177		<i>Clitoria ternatea</i> L.	SP	C	M	Throughout	3981
178		<i>Crotalaria albida</i> Roth.	TP	S	M	Jun- Apr	4028
179		<i>C. angulata</i> Mill.	TP	H		Oct- Mar	4360
180		<i>C. juncea</i> L.	TP	S	M	Jun- Jan	3973

181	<i>C. laburnifolia</i> L.	SP	S		Sep-Jan	4511
182	<i>C. medicaginea</i> Lam.	TP	H		Sep-Nov	4569
183	<i>C. pallida</i> Aiton	WP	S		Mar- Sep	4585
184	<i>C. retusa</i> L.	TP	S	M	Sep- Nov	4477
185	<i>C. verrucosa</i> L.	SP	H	M	Aug- Nov	4002
186	<i>Dalbergia sissoo</i> DC.	WP	T	M	Feb-Aug	4151
187	<i>Delonix elata</i> (L.) Gamble.	TP	T		Cultivated	4493
188	<i>D. regia</i> (Hook.) Raf.	TP	T		Cultivated	4147
189	<i>Derris scandens</i> (Roxb.) Benth	TP	C		Jun- Dec	4339
190	<i>Desmodium gangeticum</i> (L.) DC.	TP	H		Mar- Nov	4352
191	<i>D. heterophyllum</i> (Willd.) DC.	TP	H		Jul- Mar	4204
192	<i>D. triflorum</i> (L.) DC	WP	H	M	Mar- Nov	4206
193	<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	TP	T	M	Throughout	4253
194	<i>Dolichos trilobus</i> L.	SP	C		Sep- Mar	4412
195	<i>Indigofera aspalathoides</i> DC.	TP	S	M	Mar- Sep	4237
196	<i>I. astragalina</i> DC.	TP	H		Aug- Sep	4479
197	<i>I. caerulea</i> Roxb.	TP	S	M	Nov-Jan	4336
198	<i>I. cassioides</i> DC.	TP	S		Mar- Jun	4580
199	<i>I. colutea</i> (Burm.f.) Merr.	TP	H		Sep- Feb	4509
200	<i>I. glabra</i> L.	TP	H		Jul- Dec	4187
201	<i>I. linnaei</i> Ali	SP	H	M	Jul- Jan	4105
202	<i>I. longiracemosa</i> Baill.	TP	S		Jul- Nov	4305
203	<i>I. trita</i> L.f.	TP	H	M	Sep- Mar	4005
204	<i>Lablab purpureus</i> (L.) Sweet	TP	C	F	Cultivated	4447
205	<i>Leucaena leucocephala</i> (Lam.) dewit	TP	T		Cultivated	4190
206	<i>Macroptilium atropurpureum</i> (DC.) Urb.	TP	C		Mar-Aug	3961
207	<i>Mimosa diplotricha</i> Sauvalle.	TP	C	M	Sep- Mar	4468
208	<i>M. pudica</i> L.	WP	H	M	Throughout	4036
209	<i>Mundulea sericea</i> (Willd.) A. Chev.	TP	S		Apr- Dec	4037
210	<i>Neonotonia wightii</i> (Wight & Arn.) J.A.Lackey	TP	C		Oct-Mar	4466
211	<i>Neptunia oleracea</i> Lour.	FFH	H	M	Aug- Jan	4344
212	<i>Parkinsonia aculeata</i> L.	EAH	S	M	Nov-Mar	4213
213	<i>Peltophorum pterocarpum</i> (DC.) K. Heyne.	TP	T		Feb- Aug	4487
214	<i>Pithecellobium dulce</i> (Roxb.) Benth.	TP	T	M	Jan- Jul	4047
215	<i>Pongamia pinnata</i> (L.) Pierre.	WP	T	M	Dec-Jun	4035
216	<i>Prosopis juliflora</i> (Sw.) DC.	TP	T	M	Sep- Apr	3958
217	<i>Pseudarthria viscida</i> (L.) Wight & Arn.	TP	S		Sep- Mar	4388
218	<i>Rhynchosia capitata</i> (Roth) DC.	TP	C		Dec	4405
219	<i>R. minima</i> (L.) DC.	EAH	C	M	Sep- Jan	4011
220	<i>Rothia indica</i> (L.) Druce	TP	H		Nov-Mar	4498
221	<i>Senna alata</i> (L.) Roxb.	WP	S	M	Sep- Jan	4152
222	<i>S. alexandrina</i> Mill.	TP	S		Dec- Mar	4464
223	<i>S. auriculata</i> (L.) Roxb.	SP	S	M	Mar- oct	4126
224	<i>S. hirsuta</i> (L.) H.S. Irwin & Barneby	TP	S		Oct-Feb	4438
225	<i>S. italica</i> Mill.	TP	S		Nov- Feb	4361
226	<i>S. occidentalis</i> (L.) Link.	SP	S	M	Jul- Mar	3980
227	<i>S. siamea</i> (Lam.) H.S. Irwin & Barneby	TP	T		Throughout	4077
228	<i>S. sophera</i> (L.) Roxb.	SP	S		Sep- Mar	4199
229	<i>S. surattensis</i> (Burm.f.) H.S. Irwin & Barneby	TP	S		Throughout	4308
230	<i>S. tora</i> (L.) Roxb.	WP	S	M	Oct- Dec	3985
231	<i>S. uniflora</i> (Mill.) H.S. Irwin & Barneby	EAH	H		Aug- Nov	4069
232	<i>Sesbania bispinosa</i> (Jacq.) W. Wight	WP	S		Oct- Jan	4583
233	<i>S. grandiflora</i> (L.) Pers.	SP	T	M, F	Cultivated	4348
234	<i>S. javanica</i> Miq.	WP	S		Nov- Feb	4427
235	<i>S. sesban</i> (L.) Merr.	TP	S		Mar- May	4252
236	<i>Stylosanthes fructicosa</i> (Retz.) Alston	TP	H		Jul- Feb	4255
237	<i>Tamarindus indica</i> L.	TP	T	M	Sep- Apr	4136
238	<i>Tephrosia candida</i> (Roxb.) DC.	TP	S		Throughout	4386
239	<i>T. hookeriana</i> Wight & Arn.	TP	S		Nov- Dec	4350
240	<i>T. maxima</i> (L.) Pers.	TP	S		May- Oct	4309
241	<i>T. purpurea</i> (L.) Pers.	SP	H	M	Oct- Mar	3989
242	<i>T. spinosa</i> (L.f.) Pers	TP	S		Aug- Dec	4304
243	<i>T. villosa</i> (L.) Pers.	TP	H	M	Dec- Apr	4295
244	<i>Teramnus labialis</i> (L.f.) Spreng	TP	C	M	Feb-Mar	4381
245	<i>Vigna mungo</i> (L.) Hepper	TP	H	F	Cultivated	4265
246	<i>V. radiata</i> (L.) R. Wilczek	TP	H	F	Jan- Apr	4266
247	<i>V. trilobata</i> (L.) Verdc.	WP	H	F	Apr-Jun	4404
248	<i>V. unguiculata</i> (L.) Walp.	TP	C	F	Cultivated	4264
	Polygalaceae					
249	<i>Polygala arvensis</i> Willd.	EAH	H	M	Aug-Feb	4296
250	<i>P. javana</i> DC.	EAH	H	M	Throughout	4134
	Rosales					
	Rhamnaceae					
251	<i>Ziziphus jujuba</i> Mill.	SP	T	M, F	Jul- Sep	4034

252		<i>Z. oenoplia</i> (L.) Mill	TP	S	M	Nov- Mar	4506
253		<i>Z. xylopyrus</i> (Retz.) Willd.	TP	T		Sep- Apr	4331
		Ulmaceae					
254		<i>Holoptelea integrifolia</i> Planch	SP	T	M	Apr- May	4183
		Cannabaceae					
255		<i>Trema orientalis</i> (L.) Blume	SP	T	M	Aug- May	4440
		Moraceae					
256		<i>Ficus benghalensis</i> L.	SP	T	M, F	Aug- Dec	4140
257		<i>F. religiosa</i> L.	TP	T	M, F	Apr- Oct	4146
258		<i>Morus alba</i> L.	TP	S		Cultivated	4328
	Fagales	Casuarinaceae					
259		<i>Casuarina equisetifolia</i> L.	TP	T	O	Cultivated	4171
	Cucurbitales	Cucurbitaceae					
260		<i>Citrullus colocynthis</i> (L.) Schrad.	SP	C	M	Jul-Oct	4411
261		<i>C. lanatus</i> (Thunb.) Matsum.& Nakai	TP	C		Aug-Apr	4437
262		<i>Coccinia grandis</i> (L.)Voigt	SP	C	M, F	Throughout	4051
263		<i>Ctenolepis garcinii</i> (L.)C.B.Clarke	TP	C		Oct-Dec	4480
264		<i>Cucumis sativus</i> L.	TP	C	F	Cultivated	4277
265		<i>Cucurbita pepo</i> L.	TP	C	F	Cultivated	4158
266		<i>Diplocyclos palmatus</i> (L.) C.Jeffrey.	TP	C	M	Aug- Mar	4434
267		<i>Lagenaria siceraria</i> (Molina) Standl	TP	C		Cultivated	4157
268		<i>Luffa acutangula</i> (L.) Roxb.	TP	C		Throughout	4318
269		<i>Momordia charantia</i> L.	TP	C	M,F	Throughout	4285
270		<i>Mukia maderaspatana</i> (L.) M. Roem.	SP	C	M	Jul- Nov	3983
271		<i>Trichosanthes cucumerina</i> L.	TP	C		Sep- Jun	4300
272		<i>T. tricuspidata</i> Lour	TP	C		Throughout	4435
	Oxalidales	Oxalidaceae					
273		<i>Biophytum sensitivum</i> (L.) DC.	TP	H	M	Aug- Dec	4078
	Malpighiales	Calophyllaceae					
274		<i>Calophyllum inophyllum</i> L.	SP	T	M	Jul-Jan	4181
		Elatinaceae					
275		<i>Bergia capensis</i> L.	EAH	H		Aug-Oct	4232
		Malpighiaceae					
276		<i>Galphimia glauca</i> Cav.	TP	S		Cultivated	4422
		Violaceae					
277		<i>Hybanthus enneaspermus</i> (L.) F.Muell.	WP	H	M	Jun- Aug	4020
		Passifloraceae					
278		<i>Passiflora foetida</i> L.	SP	C	M	Jul- Dec	3982
		Euphorbiaceae					
279		<i>Acalypha fruticosa</i> Forssk.	TP	S	M	Dec- Aug	4458
280		<i>A. indica</i> L.	SP	H	M, F	Jul- Dec	4013
281		<i>Chrozophora rottleri</i> (Geiseler) A.Juss.ex.Spreng	TP	H	M	Feb- Apr	4496
282		<i>Croton bonplandianus</i> Baill.	SP	H		Throughout	3963
283		<i>C. hirtus</i> L'H'er.	TP	H		Throughout	4261
284		<i>Euphorbia cyathophora</i> Murray.	TP	S		Throughout	4508
285		<i>E. heterophylla</i> L.	TP	H		Oct- Mar	4192
286		<i>E. hirta</i> L.	WP	H	M	Oct-Apr	3953
287		<i>E. hypericifolia</i> L.	TP	H		May-Jun	4118
288		<i>E. prostrata</i> Aiton	TP	H		Oct-Dec	4383
289		<i>E. thymifolia</i> L.	EAH	H	M	Dec-Mar	4363
290		<i>E. tortilis</i> Rottler ex Ainslie	TP	S	M	Jun- Aug	4581
291		<i>Jatropha curcas</i> L.	SP	S	M	Apr- Sep	4150
292		<i>J. glandulifera</i> Roxb.	SP	S	M	Throughout	4045
293		<i>J. maheshwarii</i> Subram. & Nayar.	TP	S		Feb- May	4240
294		<i>Manihot esculenta</i> Crantz.	TP	S	M, F	Dec- Mar	4095
295		<i>Micrococca mercurialis</i> (L.) Benth.	TP	H	M	Jun- Feb	4033
296		<i>Ricinus communis</i> L.	TP	S	M	Throughout	4094
297		<i>Tragia involucrata</i> L.	TP	H	M	Throughout	4111
		Phyllanthaceae					
298		<i>Breynia retusa</i> (Dennst.) Alston.	TP	S		Feb- Sep	4584
299		<i>Flueggea leucopyrus</i> Willd.	TP	S		Apr- Nov	4570
300		<i>Phyllanthus acidus</i> (L.) Skeels	TP	T	F	Throughout	4575
301		<i>P. emblica</i> L.	TP	T	M, F	Jul-Feb	4316
302		<i>P. maderaspatensis</i> L.	SP	H	M	Nov- Jan	4012
303		<i>P. niruri</i> L.	WP	H	M	Nov- Jan	4019
304		<i>P. reticulatus</i> Poir.	WP	S		Aug- Sep	3978
305		<i>P. urinaria</i> L.	WP	H		Throughout	4257
306		<i>P. virgatus</i> G. Forst.	TP	H		Aug- Apr	4258
307		<i>Sauropus bacciformis</i> (L.)Airy Shaw	TP	H		Aug- Sep	4119
	Myrtales	Combretaceae					
308		<i>Quisqualis indica</i> L.	SP	C	M	Throughout	4194
309		<i>Terminalia catappa</i> L.	TP	T	M, F	Throughout	4064
		Lythraceae					
310		<i>Ammannia baccifera</i> L.	EAH	H	M	Sep-May	4068

311		<i>A. multiflora</i> Roxb.	EAH	H		Sep- Mar	4057
312		<i>A. octandra</i> L.f.	EAH	H		May-Jun	4577
313		<i>Lawsonia inermis</i> L.	TP	S	M	Cultivated	4160
314		<i>Trapa natans</i> L.	FSAH	H	M, F	Jul- Nov	4156
		Onagraceae					
315		<i>Ludwigia adscendens</i> (L.) H.Hara.	FSAH	H	M, F	Jun- Sep	4290
316		<i>L. octavalis</i> (Jacq.) P.H.Raven	FLAH	H	M	Jul-Mar	3968
317		<i>L. perennis</i> L.	EAH	H	M	Jul- Nov	4025
		Myrtaceae					
318		<i>Eucalyptus globulus</i> Labill.	TP	T	M	Cultivated	4227
319		<i>Psidium guajava</i> L.	TP	T	M, F	Throughout	4510
320	Sapindales	<i>Syzygium cumini</i> (L.)Skeels.	SP	T	M, F	May- Nov	4223
		Anacardiaceae					
321		<i>Anacardium occidentale</i> L.	TP	T	M,F	Nov- Apr	4321
322		<i>Mangifera indica</i> L.	SP	T	M, F	Jan- Jul	4463
		Sapindaceae					
323		<i>Cardiospermum halicacabum</i> L.	SP	C	M	Jul- Feb	4042
324		<i>Dodonaea viscosa</i> (L.)Jacq.	TP	S	M	Throughout	4049
325		<i>Majidea zanguebarica</i> J.Kirk ex Oliv.	TP	T		Jan-Jun	4319
		Rutaceae					
326		<i>Glycosmis pentaphylla</i> (Retz.) DC	TP	S	M	Aug- May	4469
327		<i>Murraya koenigii</i> (L.) Spreng	SP	T	M, F	Apr- May	4210
328		<i>M. paniculata</i> (L.) Jack.	TP	T	M	Mar-Oct	4260
329		<i>Paramignya monophylla</i> Wight	TP	C		Oct-Mar	4340
330		<i>Toddalia asiatica</i> (L.) Lam.	TP	S	M	Sep- Mar	4200
		Meliaceae					
331		<i>Azadirachta indica</i> A.Juss	SP	T	M, F	Feb- Sep	4063
332	Malvales	<i>Melia azedarach</i> L.	SP	T	M	Feb- Aug	4149
		Muntingiaceae					
333		<i>Muntingia calabura</i> L.	WP	T	M, F	Throughout	4180
		Malvaceae					
334		<i>Abelmoschus esculentus</i> (L.) Moench	TP	H	F	Jul- Sep	4559
335		<i>A. ficulneus</i> (L.) Wight&Arn	TP	S		Throughout	4492
336		<i>Abutilon hirtum</i> (Lam.) Sweet.	TP	S		Throughout	4351
337		<i>A. indicum</i> (L.) Sweet	SP	S	M	Sep- Apr	4040
338		<i>A. persicum</i> (Burm.f.) Merr.	TP	S		Dec- Mar	4163
339		<i>Corchorus aestuans</i> L.	EAH	H	M	Jul- Mar	4120
340		<i>C. olitorius</i> L.	WP	H		Aug-Dec	4174
341		<i>C. tridens</i> L.	TP	H		Aug- Dec	4582
342		<i>Decaschistia crotonifolia</i> Wight & Arn.	TP	S		Mar- Nov	4453
343		<i>Hibiscus lobatus</i> (Murray) Kuntze	SP	S		Jul- Feb	4292
344		<i>H. micranthus</i> L.f.	TP	S	F	Dec- Apr	4023
345		<i>H. surrattensis</i> L.	TP	S	M	Aug-Feb	4273
346		<i>H. tiliaceus</i> L.	TP	T		Throughout	4226
347		<i>H. vitifolius</i> L.	TP	S	M	Jan- Sep	4084
348		<i>Kleinhovia hospita</i> L.	TP	T		Mar- Sep	4546
349		<i>Malvastrum coromandelianum</i> (L.) Garcke.	SP	H		Sep- Dec	4398
350		<i>Melochia corchorifolia</i> L.	WP	H	M	Jun- Mar	4209
351		<i>Pavonia odorata</i> Willd.	TP	H	M	Aug- Feb	4554
352		<i>Sida acuta</i> Burm.f.	SP	H	M	Throughout	3965
353		<i>S. cordata</i> (Burm.f.) Borss.Waalk.	SP	H	M	Jan-Aug	3996
354		<i>S. mysorensis</i> Wight & Arn	TP	S		Oct-Mar	4288
355		<i>S. spinosa</i> L.	EAH	S	M	Mar- Dec	4552
356		<i>Thespesia populnea</i> (L.) Sol.ex Correa	TP	T	M	May-Feb	4032
357		<i>Triumfetta annua</i> L.	TP	H		Sep- Dec	4393
358		<i>T. rhomboidea</i> Jacq.	SP	H		Sep- Mar	4218
359		<i>Urena lobata</i> L.	WP	S	M	Throughout	4392
360		<i>U. sinuata</i> L.	TP	S		Sep- Dec	4452
361	Brassicales	<i>Waltheria indica</i> L.	EAH	H	M	Throughout	4549
		Moringaceae					
362		<i>Moringa oleifera</i> Lam.	TP	T	M, F	Nov-Mar	3959
		Caricaceae					
363		<i>Carica papaya</i> L.	TP	S	M, F	Cultivated	4074
		Salvadoraceae					
364		<i>Azima tetracantha</i> Lam.	TP	S		Aug- Sep	4196
		Capparaceae					
365		<i>Cadaba fruticosa</i> (L.) Druce	TP	S		Dec- Apr	4303
366		<i>Capparis divaricata</i> Lam.	TP	S		Jan-Sep	4337
367		<i>C.sepiaria</i> L.	TP	S	M	Mar- Oct	4548
368		<i>Crateva religiosa</i> G. Forst.	TP	T		Mar-Aug	4141
		Cleomaceae					
369		<i>Cleome aspera</i> J.Koenig ex DC.	TP	H		Jun-Dec	4298
370		<i>C. gynandra</i> L.	WP	H	M	Jul- Dec	4138
371		<i>C. rutidosperma</i> DC.	TP	H		Jun-Jul	4117
372		<i>C. viscosa</i> L.	WP	H	M	Mar- Jul	3969

372		<i>C. viscosa</i> L.	WP	H	M	Mar- Jul	3969
		Brassicaceae					
373		<i>Brassica juncea</i> (L.) Czern.	WP	H	M, F	Oct- Mar	4168
		SUPERASTERIDS					
	Santalales	Santalaceae					
374		<i>Santalum album</i> L.	TP	T	M, T	Sep- Mar	4197
		Loranthaceae					
375		<i>Elytranthe parasitica</i> (L.) Danser	TP	S		Oct- Feb	4291
	Caryophyllales	Plumbaginaceae					
376		<i>Plumbago zeylanica</i> L.	SP	S	M	Sep-Feb	3988
		Polygonaceae					
377		<i>Antigonon leptopus</i> Hook.&Arn.	TP	C	O	Nov- Jul	4317
378		<i>Persicaria barbata</i> (L.) H.Hara	EAH	H	M	Throughout	4058
379		<i>P. glabra</i> (Willd.) M.Gomez.	WP	H	M	Throughout	3955
380		<i>Polygonum plebeium</i> R.Br.	EAH	H	M	Feb-Jul	4247
		Amaranthaceae					
381		<i>Achyranthes aspera</i> L.	EAH	H	M	Oct-Mar	3986
382		<i>Aerva javanica</i> (Burm.f.) Juss.ex. Schutt.	TP	H		Sep-Jan	4385
383		<i>A. lanata</i> (L.) Juss	SP	H	M	Sep-Apr	3952
384		<i>Allmania nodiflora</i> (L.) R.Br. ex Wight	TP	H	M	Aug-Nov	4297
385		<i>Alternanthera paronychoides</i> A.st-Hil.	EAH	H		Dec-May	4099
386		<i>A. philoxeroides</i> (Mart.)Griseb.	EAH	H	M, F	Sep-Mar	4485
387		<i>A. pungens</i> Kunth	WP	H	M	Mar-Dec	4121
388		<i>A. sessilis</i> (L.) R.Br. ex DC.	WP	H	M	sep-Feb	3977
389		<i>Amaranthus graecizans</i> L.	WP	H		Cultivated	4368
390		<i>A. hybridus</i> L.	TP	H		Cultivated	4402
391		<i>A. spinosus</i> L.	WP	H	M	Sep- Mar	4312
392		<i>A. viridis</i> L.	WP	H	M, F	Dec-Apr	4053
393		<i>Celosia argentea</i> L.	WP	H	M	Throughout	4085
394		<i>C. polygonoides</i> Retz.	TP	H		Sep- Mar	4499
395		<i>Digera muricata</i> (L.) Mart.	WP	H	M	Dec-Jul	4220
396		<i>Gomphrena celosioides</i> Mart.	EAH	H	M	Aug- Dec	3991
397		<i>G. globosa</i> L.	TP	H	M, O	Cultivated	4191
398		<i>G. serrata</i> L.	TP	H		Jul-Nov	3998
399		<i>Psilotrichum scleranthum</i> Thwaites	TP	H		Aug- Dec	4338
400		<i>Pupalia lappacea</i> (L.) Juss.	TP	H		Nov- Feb	4419
401		<i>Suaeda maritima</i> (L.) Dumort.	EAH	S		Dec- Apr	4279
		Gisekiaceae					
402		<i>Gisekia pharnaceoides</i> L.	TP	H		Oct-Feb	4490
		Aizoaceae					
403		<i>Trianthema portulacastrum</i> L.	TP	H		Dec- Apr	4201
404		<i>T. triquetra</i> Rottler & Wild.	TP	H		Nov- Feb	4544
405		<i>Zaleya decandra</i> (L.) Burm.f.	TP	H		Dec-Apr	4103
		Phytolaccaceae					
406		<i>Petiveria alliacea</i> L.	TP	S		Sep-Dec	4399
407		<i>Rivina humilis</i> L.	TP	S		Sep-Jan	4314
		Nyctaginaceae					
408		<i>Boerhavia chinensis</i> (L.) Rottb.	WP	H		Feb-Dec	4116
409		<i>B. diffusa</i> L.	SP	H	M	Oct-Feb	4062
410		<i>B. erecta</i> L.	SP	H	M	Jan-May	4527
411		<i>Mirabilis jalapa</i> L.		H	M	Sep-Mar	4159
		Molluginaceae					
412		<i>Glinus lotoides</i> L.	WP	H	M	Jul-Sep	4224
413		<i>G. oppositifolius</i> (L.) Aug DC	WP	H	M	Throughout	4243
414		<i>Mollugo nudicaulis</i> Lam.	WP	H	M	Throughout	4234
415		<i>M. pentaphylla</i> L.	WP	H	M	Throughout	4568
		Basellaceae					
416		<i>Basella alba</i> L.	TP	C	M, F	Cultivated	4371
		Talinaceae					
417		<i>Talinum portulacifolium</i> (Forssk.) Asch.ex Schweinf	TP	H	F	Throughout	4179
		Portulacaceae					
418		<i>Portulaca grandiflora</i> Hook.	TP	H		Throughout	4286
419		<i>P. oleracea</i> L.	WP	H	M, F	Throughout	4221
420		<i>P. quadrifida</i> L.	WP	H		Jul- Aug	4346
421		<i>P. wightiana</i> Wall. ex Wight	TP	H		Jul- Oct	4519
		Cactaceae					
422		<i>Opuntia stricta</i> (Haw.) Haw	WP	S		Dec- May	4038
423		<i>Pereskia bleo</i> (Kunth) DC.	TP	S		Throughout	4287
	ASTERIDS						
	Cornales	Cornaceae					
424		<i>Alangium salviifolium</i> (L.f.) Wangerin	SP	T	M	Feb-Jun	4225
	Ericales	Balsaminaceae					
425		<i>Hydrocera triflora</i> (L.) Wight& Arn.	EAH	H	Co	Aug- Nov	4236

		Lecythidaceae					
426		<i>Barringtonia acutangula</i> (L.) Gaertn.	EAH	T		Dec- May	4128
		Sapotaceae					
427	Gentianales	<i>Mimosa elengi</i> L.	TP	T	M	Nov- Sep	4262
		Rubiaceae					
428		<i>Benkara malabarica</i> (Lam.) Tirveng.	TP	S		Jul- Oct	4052
429		<i>Canthium coromandelicum</i> (Burm.f.) Alston	TP	S	M	May-Aug	4271
430		<i>Morinda pubescens</i> J.E. Smith	TP	T	M, Fo	Jan-Nov	3979
431		<i>Mussaenda erythrophylla</i> Schumach & Thonn.	TP	S		Cultivated	4421
432		<i>M. frondosa</i> L.	TP	S		May- Mar	4073
433		<i>Oldenlandia biflora</i> L.	TP	H		Feb-May	4004
434		<i>O. corymbosa</i> L.	EAH	H	M	Aug- Nov	4503
435		<i>O. herbacea</i> (L.) Roxb.	TP	H	M	Mar- Apr	4324
436		<i>O. umbellata</i> L.	EAH	H		Apr- Sep	3960
437		<i>Psydrax dicoccos</i> Gaertn.	TP	T		Apr- Oct	4397
438		<i>Spermacoe hispida</i> L.	WP	H	M	Aug- Sep	4230
439		<i>S. ocyroides</i> Burm.f.	WP	H		Aug- Sep	4088
		Gentianaceae					
440		<i>Enicostema axillare</i> (Poir.ex Lam.) A.Raynal.	EAH	H	M	Throughout	4154
		Apocynaceae					
441		<i>Alstonia scholaris</i> (L.) R.Br.	TP	T	M	Nov- Jun	4414
442		<i>Calotropis gigantea</i> (L.) Dryand.	SP	S	M	Throughout	4021
443		<i>Carissa spinarum</i> L.	TP	S		Mar- Sep	4075
444		<i>Cascabela thevetia</i> (L.) Lippold	TP	S		Aug-Oct	4124
445		<i>Catharanthus roseus</i> (L.)G.Don.	SP	S	M	May-Feb	3975
446		<i>Ceropegia candelabrum</i> L.	SP	C	M	Aug- Apr	4086
447		<i>C. juncea</i> Roxb.	SP	C	M	Oct- Jan	4342
448		<i>Dregea volubilis</i> (L.f.) Benth.ex Hook.f.	TP	C		Jul-Feb	4029
449		<i>Hemidesmus indicus</i> (L.) R. Br. var. <i>pubescens</i> (Wight & Arn.) Hook. f.,	TP	C		Jun- Dec	4482
450		<i>H. indicus</i> (L.) R.Br. ex schult	SP	C	M	Nov- Apr	4478
451		<i>Ichnocarpus frutescens</i> (L.) W.T.Aiton	SP	C	M	Jul-Feb	4325
452		<i>Leptadenia reticulata</i> (Retz.) Wight & Arn.	TP	C	M	Throughout	4395
453		<i>Nerium oleander</i> L.	TP	S	M	Cultivated	4091
454		<i>Oxystelma esculentum</i> (L.f.) Sm.	WP	C	M	May- Feb	3957
455		<i>Pentatropis capensis</i> (L.f.) Bullock	SP	C	M	Jun-Dec	4408
456		<i>Pergularia daemia</i> (Forssk.) Chiov.	WP	C	M	Jun-Dec	4066
457		<i>Rauvolfia tetraphylla</i> L.	TP	S	M	Cultivated	4391
458		<i>Sarcostemma acidum</i> (Roxb.) Voigt	TP	C	M	Aug- Jan	4195
459		<i>Tabernaemontana divaricata</i> (L.) R.Br.ex Roem.&Schult.	TP	S	M, O	Cultivated	4311
460		<i>Tylophora indica</i> (Burm.f.) Merr.	SP	C	M	Throughout	4550
461	Boraginales	<i>Wrightia tinctoria</i> R.Br.	TP	T	M	May-Dec	4169
		Boraginaceae					
462		<i>Coldenia procumbens</i> L.	WP	H	M	Apr-May	4131
463		<i>Cordia obliqua</i> Willd.	TP	T	M	Jan- Jun	4145
464		<i>C. sebestena</i> L.	TP	T		Cultivated	4301
465		<i>Ehretia laevis</i> Roxb.	TP	T	M	Sep-Jan	4491
466		<i>E. microphylla</i> Lam.	TP	S		Jun- Jan	4090
467		<i>Heliotropium curassavicum</i> L.	EAH	H		Throughout	4280
468		<i>H. indicum</i> L.	WP	H	M	Throughout	4114
469	Solanales	<i>Trichodesma indicum</i> (L.) Lehm.	TP	H	M	Oct- Feb	4212
		Convolvulaceae					
470		<i>Cressa cretica</i> L.	WP	S		Throughout	4071
471		<i>Cuscuta reflexa</i> Roxb.	TP	C	M	Nov- Jun	4483
472		<i>Evolvulus alsinoides</i> (L.) L.	WP	H	M	Oct- Feb	4293
473		<i>E. nummularius</i> (L.) L.	WP	H	M	Jul-Dec	4244
474		<i>Hewittia malabarica</i> (L.) Suresh.	TP	C		Aug- Apr	4170
475		<i>Ipomoea aquatica</i> Forssk.	FSAH	H	M	Jul- Apr	4166
476		<i>I. cairica</i> (L.) Sweet.	TP	C	M	Oct- Apr	4162
477		<i>I. carnea</i> Jacq	EAH	S	M	Throughout	4092
478		<i>I. hederifolia</i> L.	WP	C		Nov- Mar	4430
479		<i>I. indica</i> (Burm.) Merr.	TP	C		Jul-Jan	4450
480		<i>I. marginata</i> (Desr.) Verdc.	TP	C		Jul-Mar	4164
481		<i>I. nil</i> (L.) Roth.	TP	C	M, O	Nov- Dec	4415
482		<i>I. obscura</i> (L.) Ker Gawl.	FLAH	C	M	Nov- Jan	4161
483		<i>I. pes- tigridis</i> L.	WP	C	M	Apr- Jan	4299
484		<i>I. quamoclit</i> L.	TP	C	M,O	Throughout	4384
485		<i>Merremia dissecta</i> (Jacq.) Hallier f.	WP	C		Nov- Mar	4185
486		<i>M. tridentata</i> (L.) Hallier f.	WP	H	M	Mar- Oct	4283
487		<i>Rivea hypocrateriformis</i> Choisy	TP	C	M	Jun- Feb	4046
		Solanaceae					
488		<i>Capsicum annum</i> L.	TP	H	M,F	Throughout	4429
489		<i>Datura metel</i> L.	SP	S	M	Aug- Dec	4132
490		<i>Lycopersicon esculentum</i> Mill.	TP	H	F	Cultivated	4423

491		<i>Physalis angulata</i> L.	WP	H	M	Aug-Jan	4251
492		<i>Solanum americanum</i> Mill.	TP	S	M	Throughout	4115
493		<i>S. pubescens</i> Willd.	TP	S		Nov- Feb	4424
494		<i>S. surattense</i> Burm.f.	TP	H	M	Dec- Jun	4044
495		<i>S. torvum</i> Sw.	WP	S	M	Oct- Jun	4148
496		<i>S.trilobatum</i> L.	SP	S	M	Dec- Jun	4065
	Lamiales	Oleaceae					
497		<i>Jasminum auriculatum</i> Vahl.	TP	C		Nov- Mar	4333
498		<i>J. breviflorum</i> DC.	TP	C		Oct- Dec	4372
499		<i>J. grandiflorum</i> L.	TP	S	M, O	Cultivated	4455
500		<i>J. malabaricum</i> Wight.	TP	C	Co	Feb- Nov	4184
501		<i>J. sambac</i> (L.) Sol	TP	C		Mar- May	4456
502		<i>Nyctanthes arbor-tristis</i> L.	TP	S	M,O	Cultivated	4276
		Plantaginaceae					
503		<i>Bacopa monnieri</i> (L.) Wettst.	WP	H	M	Throughout	4006
504		<i>Limnophila heterophylla</i> (Roxb.) Benth.	SSH	H	M	Aug- Feb	4334
505		<i>L. indica</i> (L.) Druce.	EAH	H	M	Aug- Apr	4067
506		<i>Scoparia dulcis</i> L.	EAH	H	M	Aug- Feb	4189
		Linderniaceae					
507		<i>Lindernia anagallis</i> (Burm.f.) Pennell	WP	H	M	Sep- May	4072
508		<i>L. antipoda</i> (L.) Alston	EAH	H		Nov- Mar	4233
509		<i>L. crustacea</i> (L.) F.Muell	EAH	H	M	Aug- Jan	4208
510		<i>L. hyssopoides</i> (L.) Haines	EAH	H		Aug-Mar	4500
		Martyniaceae					
511		<i>Martynia annua</i> L.	WP	S	M	Jul-Mar	4153
		Pedaliaceae					
512		<i>Pedaliium murex</i> L.	SP	H	M	Aug- Dec	4133
513		<i>Sesamum alatum</i> Thonn.	TP	H		Jan-May	4031
514		<i>S. indicum</i> L.	SP	H	M, F	Cultivated	4369
515		<i>S. radiatum</i> Schumach. & Thonn.	TP	H		Throughout	4420
		Acanthaceae					
516		<i>Andrographis echiioides</i> (L.) Nees	SP	H	M	Apr- Jul	4278
517		<i>A. paniculata</i> (Burm.f.)Nees.	SP	H	M	Jun-Aug	4082
518		<i>Asystasia gangetica</i> (L.) T.Anderson	SP	H	M	Aug-Dec	4096
519		<i>Barleria buxifolia</i> L.	SP	S	M	Oct- Apr	4102
520		<i>B. cristata</i> L.	TP	S	M	Nov- Mar	4343
521		<i>B. cuspidata</i> F.Heyne ex Nees	TP	S	M	Throughout	3992
522		<i>B. noctiflora</i> L.f.	TP	S		Dec- Feb	4374
523		<i>B. prionitis</i> L.	TP	S	M	Sep- Feb	4173
524		<i>Blepharis maderaspatensis</i> (L.) B.Heyne ex Roth	TP	H	M	Nov- Mar	4107
525		<i>Crossandra infundibuliformis</i> (L.) Nees.	TP	S	M,O	Sep- May	4313
526		<i>Dicliptera paniculata</i> (Forssk.) I.Darbysh.	TP	S		Oct- Mar	3967
527		<i>Dyschoriste litoralis</i> (L.f.) Nees.	TP	S		Mar- Jun	4302
528		<i>Ecbolium viride</i> (Forssk.) Alston	SP	S		May- Feb	4139
529		<i>Hygrophila auriculata</i> (Schumach.) Heine	EAH	H	M	Sep- Mar	4007
530		<i>Justicia adhatoda</i> L.	TP	S	M	Throughout	4254
531		<i>J. betonica</i> L.	WP	S		Throughout	4547
532		<i>J. diffusa</i> Willd.	TP	H		May-Oct	4579
533		<i>J. gendarussa</i> Burm.f.	TP	S	M	Apr- Nov	4413
534		<i>J. japonica</i> Thunb.	WP	H		Feb-Dec	4097
535		<i>J. tranquebariensis</i> L f.	WP	H	M	Nov- Feb	4100
536		<i>Rhinacanthus nasutus</i> (L.) Kurz.	TP	S	M	Oct- Apr	4446
537		<i>Ruellia patula</i> Jacq.	TP	H		Aug- Feb	4112
538		<i>R. rivularis</i> (Benoist) Boivin ex Benoist	TP	H		Throughout	4349
539		<i>R. tuberosa</i> L.	TP	H		Sep- May	4127
540		<i>Rungia repens</i> (L.) Nees.	WP	S		Mar- Nov	4497
541		<i>Thunbergia erecta</i> (Benth.) T. Anderson	TP	S	O	Cultivated	4008
542		<i>T. fragrans</i> Roxb.	WP	C	M	Sep- Mar	4443
543		<i>T. grandiflora</i> (Roxb. ex Rottl.) Roxb.	TP	C		Throughout	4465
		Bignoniaceae					
544		<i>Millingtonia hortensis</i> L.f	TP	T	O	Cultivated	4320
545		<i>Spathodea campanulata</i> P.Beauv.	TP	T	O	Cultivated	4441
546		<i>Tecoma stans</i> (L.) Juss. ex Kunth	TP	S	M,O	Throughout	4214
		Lentibulariaceae					
547		<i>Utricularia aurea</i> Lour.	SSH	H	M	Oct- Jan	4081
548		<i>U.stellaris</i> L.f.	SSH	H		Oct-Jan	4335
		Verbenaceae					
549		<i>Clerodendrum infortunatum</i> L.	TP	S	M	Jun- Nov	4275
550		<i>Lantana camara</i> L.	SP	S	M	Aug- Dec	3947
551		<i>L.veronicifolia</i> Hayek	TP	S		Oct	4307
552		<i>Phyla nodiflora</i> (L.) Greene	WP	H	M,C	Throughout	4098
553		<i>Priva cordifolia</i> (L.f.) Druce	TP	H		Sep- Jul	4426
554		<i>Stachtarpheta urticifolia</i> (Salisb.) Sims.	WP	S	M	Jun-Mar	3987
		Lamiaceae					

555		<i>Anisochillus carnosus</i> (L.f.) Wall.	TP	H		Sep- Dec	4347
556		<i>Anisomeles indica</i> (L.) Kuntze.	TP	S	M	Oct-Jul	4436
557		<i>A. malabarica</i> (L.)R.Br.ex Sims	SP	H	M	Sep- Jan	3945
558		<i>Basilicum polystachyon</i> (L.) Moench	TP	H		Jul-Oct	4056
559		<i>Clerodendrum indicum</i> (L.) Kuntze	TP	S		Jul- Dec	4417
560		<i>C. inerme</i> (L.) Gaertn	WP	S	M	May-Dec	4043
561		<i>C. phlomidis</i> L.	TP	S	M	Oct- Mar	4129
562		<i>Endostemon viscosus</i> (Roth)M.R.Ashby	TP	S		Nov-Mar	4367
563		<i>Gmelina asiatica</i> L.	TP	C	M	Throughout	4268
564		<i>Hyptis suaveolens</i> (L.) Poit.	EAH	S	M	Aug- Feb	3949
565		<i>Leucas aspera</i> (Willd.) Link	WP	H	M	Jun-Mar	4018
566		<i>L. biflora</i> (Vahl) R.Br. ex Sm.	WP	H	M	Throughout	4401
567		<i>L. chinensis</i> (Retz.) Sm.	TP	H		Aug- Dec	4178
568		<i>L. wightiana</i> Wall. ex Benth.	TP	H		Jan-Oct	4373
569		<i>Ocimum americanum</i> L.	SP	H	M	Throughout	4017
570		<i>O. gratissimum</i> L.	TP	S	M	Jul- Oct	4165
571		<i>O. tenuiflorum</i> L.	SP	H	M	Throughout	4087
572		<i>Orthosiphon aristatus</i> (Blume) Miq.	SP	H	M	Sep- Dec	4203
573		<i>Tectona grandis</i> L.f.	TP	T	M	Jun- Dec	4155
574		<i>Vitex negundo</i> L.	TP	T	M	Jul- Oct	4026
575		<i>V. trifolia</i> L.	TP	S		Aug- Feb	4495
		Orobanchaceae					
576		<i>Sopubia delphinifolia</i> G.Don.	EAH	H		Sep- Dec	4322
577		<i>Striga angustifolia</i> (D.Don) C.J.Saldanha	TP	H		Aug- Dec	4245
	Asterales	Campanulaceae					
578		<i>Lobelia alsinoides</i> Lam	WP	H		Throughout	4323
		Menyanthaceae					
579		<i>Nymphoides hydrophylla</i> (Lour.) Kuntze	FSAH	H	M	Jul-Apr	4109
580		<i>N. indica</i> (L.) Kuntze	FSAH	H	M	Aug-Apr	4560
		Asteraceae					
581		<i>Acanthospermum hispidum</i> DC.	WP	H	M	Jan-Jun	4222
582		<i>Acmella paniculata</i> (Wall.ex.DC.) R.K.Jansen	EAH	H	M	May- Oct	4416
583		<i>A.radicans</i> (Jacq.) R.K.Jansen	WP	H		Oct- May	4472
584		<i>Ageratum conyzoides</i> (L.) L.	TP	H	M	Jan-Apr	4462
585		<i>Artemisia japonica</i> Thunb.	TP	H	M	Aug- Feb	4428
586		<i>Bidens pilosa</i> L.	TP	H	M	Mar- Oct	3972
587		<i>Blainvillea acmella</i> (L.) Philipson	TP	H		Aug- Nov	4432
588		<i>Blumea axillaris</i> (Lam.) DC.	WP	H		Jun- Jan	3995
589		<i>Centratherum intermedium</i> Less.	EAH	H		Cultivated	4567
590		<i>Chromolaena odorata</i> (L.)R.M.King& H.Rob.	TP	S	M	Nov-Jul	3974
591		<i>Conyza bonariensis</i> (L.) Cronquist	TP	H		May- Sep	4202
592		<i>Cosmos sulphureus</i> Cav.	TP	H		Feb-Nov	4176
593		<i>Eclipta prostrata</i> (L.) L.	WP	H	M	Aug- Dec	3954
594		<i>Emilia sonchifolia</i> (L.) DC. ex. DC.	WP	H	M,F	Aug- Feb	4505
595		<i>Guizotia abyssinica</i> (L.f.) Cass	TP	H		Cultivated	4249
596		<i>Kleinia grandiflora</i> (Wallich ex DC.) N.Rani	TP	H	M	Aug- Mar	4106
597		<i>Lagascea mollis</i> Cav.	TP	H		Jun- Dec	4123
598		<i>Launaea sarmentosa</i> (Willd.) Sch. Bip. ex Kuntze	TP	H		Sep- Dec	4407
599		<i>Mikania micrantha</i> Kunth	WP	C	M	Throughout	4473
600		<i>Parthenium hysterophorus</i> L.	WP	H	M	Sep-Mar	3964
601		<i>Sphaeranthus africanus</i> L.	WP	H		Nov-Apr	4282
602		<i>S. indicus</i> L.	WP	H	M	Sep-Mar	4079
603		<i>Synedrella nodiflora</i> (L.) Gaertn.	WP	H	M	Aug- Nov	3950
604		<i>Tithonia diversifolia</i> (Hemsl.) A.Gray.	TP	S		Sep-Mar	4376
605		<i>Tridax procumbens</i> (L.) L.	WP	H	M	Throughout	3948
606		<i>Vernonia cinerea</i> (L.) Lees	WP	H	M	Throughout	3984
607		<i>Wedelia chinensis</i> (Osbeck) Merr.	WP	H	M	Sep-May	4125
608		<i>Xanthium strumarium</i> L.	WP	H	M	Throughout	4014
609		<i>Zinnia elegans</i> Jacq.		H		Cultivated	4571
	Apiales	Apiaceae					
610		<i>Centella asiatica</i> (L.) Urb.	WP	T	M,F	Jul- Sep	4122

Habitat: EAH- Emergent amphibious hydrophytes, FLAH- Floating leaved anchored hydrophytes, FSAH- Floating submerged anchored hydrophytes, FFH- Free floating hydrophytes, SP- Shore plants, SAH- Submerged anchored hydrophytes, SSH- Submerged suspended hydrophytes, WP- Wetland plants, TP- Terrestrial plants; **Habit:** C- Climber, H- Herb, S- Shrub, T- Tree; **Indigenous uses:** C- Craft, Co- Cosmetics, F- Food, Fo- Fodder, Ma- Manure, M- Medicine, O- Ornamental, T- Timber.

In the study, ethnobotanically used plants were also identified and are grouped in to medicinal (307 species) followed by food (51 species), ornamental (18 species), fodder (9 species), craft (4 species), cosmetics (3 species), manure (2 species) and timber (1 species) (Fig. 8).

Plants like *Hydrocera triflora*, *Phyla nodiflora* and *Jasminum malabaricum* are used for cosmetics preparations. *Najas graminea* and *Typha angustifolia* used as manure.

Eichhornia crassipes, *Lemna perpusilla*, *Cyperus exaltatus*, *Hydrilla verticillata*, *Morinda pubescens*, *Vallisneria spiralis*, *Panicum miliaceum*, *Saccharum spontaneum*, *Zea mays* are used as fodder.

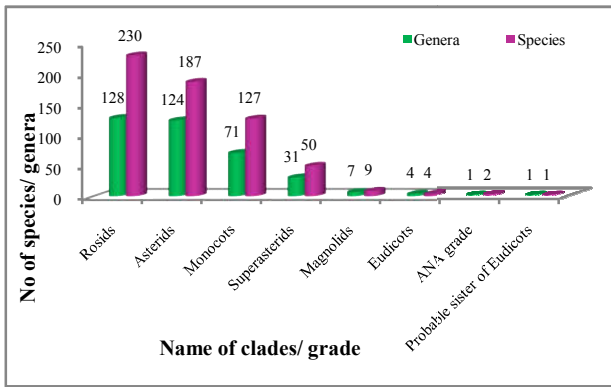


Figure 2 Distribution of species in clades/ grades as per APG IV

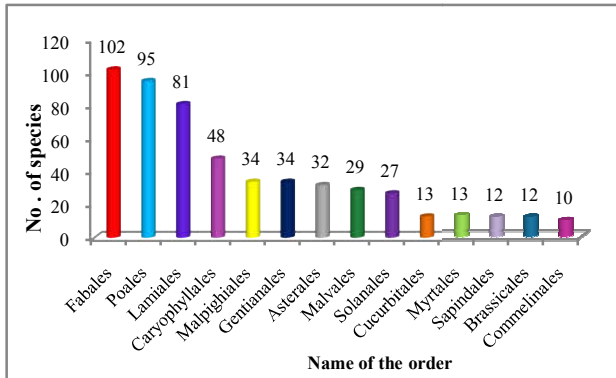


Figure 3 Distribution of species in dominant order as per APG IV

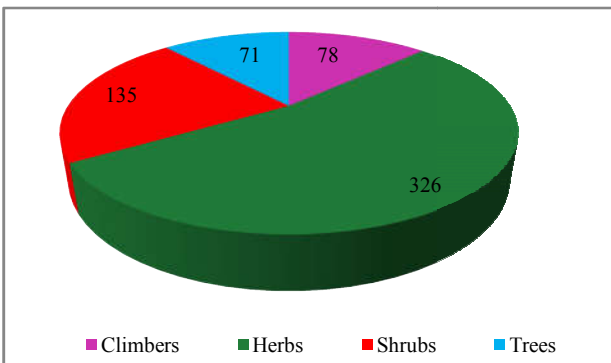


Figure 4 Life form class of angiosperms collected from the present study area

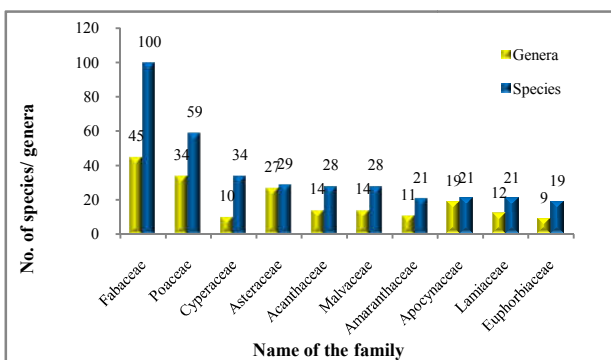


Figure 5 Dominant plant families in Agasheeswaram Taluk

Santalum album is used as timber. *Aeschynomene aspera*, *A. indica*, *Saccharum spontaneum* and *Typha angustifolia* are used as craft work. Out of 610 plant species from the present study area 102 plant species available throughout the year.

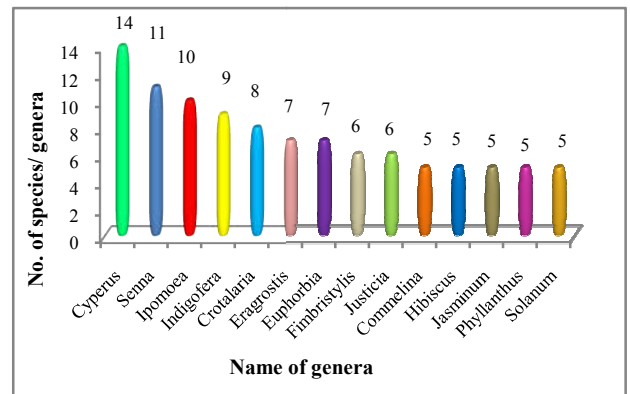


Figure 6 Dominant plant genera in wetlands of Agasheeswaram Taluk

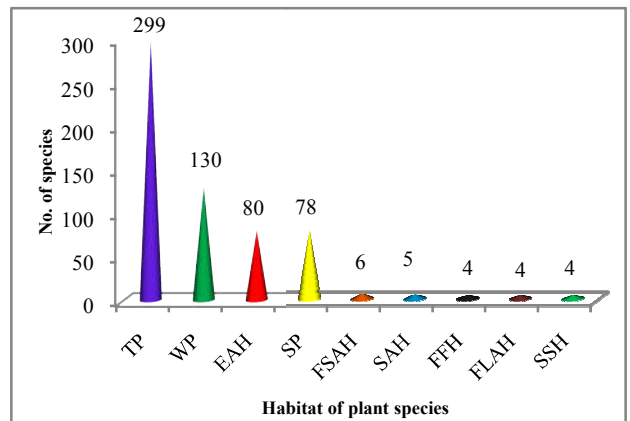


Figure 7 Habitat wise distributions of Angiosperms in the present study area

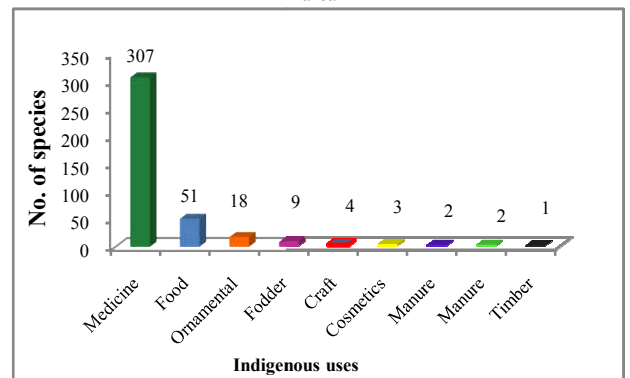


Figure 8 Economically important plants collected to the present study area

Table 3 Details of vascular plants collected from the of present study area

Class	Sub class	No. of family	No. of genera	No. of species
Dicots	Polypetalae	43	31	233
	Gamopetalae	23	121	176
	Monochlamydeae	17	44	74
Total		83	296	483
Monocots	-	18	71	127
Total		101	367	610

Some of the species are utilized as fruit-yielding like *Annona squamosa*, *Anacardium occidentale*, *Carica papaya*, *Mangifera indica*, *Psidium guajava*, *Phyllanthus emblica*, *Syzygium cumini*, *Ziziphus jujube*.

Table 4 List of families with number of genera and species

Family Rank	Family	Genera	Species
1	Fabaceae	45	100
2	Poaceae	34	59
3	Cyperaceae	10	34
4	Asteraceae	27	29
5	Acanthaceae	14	28
6	Malvaceae	14	28
7	Amaranthaceae	11	21
8	Apocynaceae	19	21
9	Lamiaceae	12	21
10	Euphorbiaceae	9	19
11	Convolvulaceae	7	18
12	Cucurbitaceae	11	13
13	Rubiaceae	7	12
14	Phyllanthaceae	4	10
15	Solanaceae	5	9
16	Boraginaceae	5	8
17	Commelinaceae	2	8
18	Oleaceae	2	6
19	Verbenaceae	5	6
20	Lythraceae	3	5
21	Rutaceae	4	5
22	Annonaceae	2	4
23	Asparagaceae	3	4
24	Capparaceae	3	4
25	Cleomaceae	1	4
26	Hydrocharitaceae	4	4
27	Linderniaceae	1	4
28	Molluginaceae	2	4
29	Nyctaginaceae	2	4
30	Pedaliaceae	2	4
31	Plantaginaceae	3	4
32	Polygonaceae	3	4
33	Portulacaceae	1	4
34	Vitaceae	2	4
35	Aizoaceae	2	3
36	Araceae	3	3
37	Arecaceae	3	3
38	Bignoniaceae	3	3
39	Moraceae	2	3
40	Myrtaceae	3	3
41	Onagraceae	1	3
42	Rhamnaceae	1	3
43	Sapindaceae	3	3
44	Anacardiaceae	2	2
45	Cactaceae	2	2
46	Combretaceae	2	2
47	Lentibulariaceae	1	2
48	Meliaceae	2	2
49	Menispermaceae	2	2
50	Menyanthaceae	1	2
51	Nymphaeaceae	1	2
52	Orobanchaceae	2	2
53	Phytolaccaceae	2	2
54	Piperaceae	2	2
55	Polygalaceae	1	2
56	Pontederiaceae	2	2
57	Amaryllidaceae	1	1
58	Apiaceae	1	1
59	Aponogetonaceae	1	1
60	Aristolochiaceae	1	1
61	Balsaminaceae	1	1
62	Basellaceae	1	1
63	Brassicaceae	1	1
64	Calophyllaceae	1	1
65	Campanulaceae	1	1
66	Cannabaceae	1	1
67	Cannaceae	1	1
68	Caricaceae	1	1
69	Casuarinaceae	1	1
70	Ceratophyllaceae	1	1
71	Colchicaceae	1	1
72	Cornaceae	1	1
73	Elatinaceae	1	1

74	Eriocaulaceae	1	1
75	Gentianaceae	1	1
76	Gisekiaceae	1	1
77	Heliconiaceae	1	1
78	Lauraceae	1	1
79	Lecythidaceae	1	1
80	Loranthaceae	1	1
81	Magnoliaceae	1	1
82	Malpighiaceae	1	1
83	Martyniaceae	1	1
84	Moringaceae	1	1
85	Muntingiaceae	1	1
86	Nelumbonaceae	1	1
87	Oxalidaceae	1	1
88	Pandanaceae	1	1
89	Papaveraceae	1	1
90	Passifloraceae	1	1
91	Plumbaginaceae	1	1
92	Potamogetonaceae	1	1
93	Salvadoraceae	1	1
94	Santalaceae	1	1
95	Sapotaceae	1	1
96	Talinaceae	1	1
97	Typhaceae	1	1
98	Ulmaceae	1	1
99	Violaceae	1	1
100	Zingiberaceae	1	1
101	Zygophyllaceae	1	1
Total		367	610

Amaranthus graecizans, *A. hybridus*, *Basella alba*, *Caesalpinia pulcherrima*, *Calliandra haematocephala*, *Casuarina equisetifolia*, *Centratherum intermedium*, *Cordia sebestena*, *Cucumis sativus*, *Cucurbita pepo*, *Delonix elata*, *D. regia*, *Eucalyptus globulus*, *Galphimia glauca*, *Gomphrena globosa*, *Guizotia abyssinica*, *Heliconia psittacorum*, *Jasminum grandiflorum*, *Lablab purpureus*, *Lagenaria siceraria*, *Lawsonia inermis*, *Leucaena leucocephala*, *Lycopersicon esculentum*, *Millingtonia hortensis*, *Morus alba*, *Mussaenda erythrophylla*, *Nerium oleander*, *Nyctanthes arbor-tristis*, *Oryza sativa*, *Polianthes tuberosa*, *Panicum miliaceum*, *Rauwolfia tetraphylla*, *Sesamum indicum*, *Sesbania grandiflora*, *Spathodea campanulata*, *Tabernaemontana divaricata*, *Thunbergia erecta*, *Vigna mungo*, *V. unguiculata*, *Zea mays*, *Zinnia elegans* are the some of the cultivated species.

Some of the plant species used as ornamental purposes such as *Antigonon leptopus*, *Canna indica*, *Casuarina equisetifolia*, *Colocasia esculenta*, *Crossandra infundibuliformis*, *Heliconia psittacorum*, *Ipomoea nil*, *Ipomoea quamoclit*, *Jasminum grandiflorum*, *Millingtonia hortensis*, *Nyctanthes arbor-tristis*, *Polianthes tuberosa*, *Spathodea campanulata*, *Thunbergia erecta*, *Tabernaemontana divaricata*, *Tecoma stans*.

The knowledge of the vegetation structure of an area is the major requirement for any ecological and biodiversity conservation strategies (Yavari and Shahgolzari, 2010). Floristic data are integral requirement for any biodiversity conservation and management programmes (Mace, 2004). Such floristic studies may act as a positive force for biodiversity (Novacek, 2008 and Webb *et al.*, 2010). Significance of taxonomic data for biodiversity conservation has been highlighted and discussed at scientific level by Wheeler, 2004; Raczkowski and Wenzel, 2007 and Mayo *et al.*, 2008.

CONCLUSION

The baseline information in the form of floristic inventory may be highly useful for future ecological work such as rehabilitation and conservation of the flora of the area. We

firmly believe that a vast increase in biodiversity exploration is necessary, if we are to even begin to document species and their distribution in the region before they become extinct. There is an urgent need for conservation of these plant species as many of them are able to unknown cures for modern day diseases. Hence, the results of the present study paved a pathway for the botanist and other biologist for sustainable utilization of the natural resources. This study provides the further scope of research on the biological properties of the medicinal plants and extension activities required to develop the usage of ethnomedicinal plants of the society.

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