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**FLORISTIC DIVERSITY OF THE INDIAN CARDAMOM  
RESEARCH INSTITUTE CAMPUS, MYLADUMPARA,  
WESTERN GHATS, INDIA**

Anoop P. Balan & S. Harikrishnan

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## FLORISTIC DIVERSITY OF THE INDIAN CARDAMOM RESEARCH INSTITUTE CAMPUS, MYLADUMPARA, WESTERN GHATS, INDIA

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### OPEN ACCESS



**Abstract:** A study on the flora of Indian Cardamom Research Institute campus, Myladumpara was carried out during 2012–2015 and a total of 515 taxa were collected during this study. The indigenous or naturalized flora is represented by 392 taxa in 303 genera under 94 families. Dicotyledonous plants dominate with 335 species in 251 genera under 80 families. Monocotyledons are represented by 57 species in 52 genera under 14 families. Among the families, Fabaceae dominates with 29 species followed by Asteraceae (27 spp.) and Euphorbiaceae (22 spp.) and 40 families are represented by single species each. During the study 68 species that are considered as endemic to the Western Ghats could be collected.

**Keywords:** Angiosperms, biodiversity, check list, ICRI Campus.

**Malayalam abstract:** ഇന്ത്യൻ ഏലം ഗവേഷണ കേന്ദ്രത്തിന്റെ ഇടുക്കി, മൈലാടുംപാറ ക്യാമ്പസിലെ പുഷ്പിത സസ്യങ്ങളുടെ വൈവിധ്യത്തെക്കുറിച്ച് 2012-2015 കാലഘട്ടത്തിൽ ഒരു പഠനം നടത്തുകയുണ്ടായി. ഈ പഠനത്തിൽ 515 വ്യത്യസ്തയിനം പുഷ്പിത സസ്യങ്ങളെ ക്യാമ്പസിൽനിന്നും തിരിച്ചറിയാൻ കഴിഞ്ഞു. ഇവയിൽ 94 കുടുംബങ്ങളിൽപ്പെട്ട 392 ഇനം ചെടികൾ തദ്ദേശീയമായി കാണപ്പെടുന്നവയാണ്. ഇതിൽത്തന്നെ 335 ഇനം ചെടികളും ദ്വിബീജപത്രികളാണ്. സസ്യകുടുംബങ്ങളിൽ 29 ഇനം ചെടികളുമായി ഫാബേസിയെ കുടുംബം മുന്തിട്ടു നിൽക്കുന്നു. ആസ്റ്ററസിയെ (27 ഇനം) യൂഫോർബിയെസിയെ (22 ഇനം) കുടുംബങ്ങളും പിന്നാലെയാണ്. ഒറ്റയിനത്തിൽപ്പെട്ട സസ്യങ്ങൾ മാത്രമുള്ള 40 കുടുംബങ്ങളുണ്ട്. പശ്ചിമഘട്ടത്തിൽ മാത്രം കാണപ്പെടുന്ന 68 അത്യപൂർവ്വയിനം ചെടികളെയും ക്യാമ്പസിൽനിന്ന് തിരിച്ചറിഞ്ഞിട്ടുണ്ട്.

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**Author Contribution:** First author conducted the floristic survey and documentation. Second author was very much interested in systematic studies and accompanied in field surveys throughout the period, helped in specimen collection and processing, photography, literature survey etc.

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## INTRODUCTION

Kerala, a narrow strip of land, lies along the southwestern corner of the Indian peninsula and harbours 4,679 taxa of flowering plants of which 1,637 (35%) are endemic to peninsular India, especially the Western Ghats (Sasidharan 2004; Nayar et al. 2014). Indian Cardamom Research Institute (ICRI) is the research wing of Spices Board established in 1978 during the time of Cardamom Board at Myladumpara, near Udumbanchola in the Cardamom Hills of Idukki District, Kerala. Myladumpara is a mist shrouded hill station on the Western Ghats, one of the biodiversity hotspots in India. The pristine tropical evergreen forest ecosystem of this location in the past got withered over a period of time due to the establishment of small and large cardamom plantations. The flora and fauna underwent thorough changes affecting the ecological balance of the area. In this context, ICRI emerges as a model research station for other similar institutions and private plantations in conserving the remaining natural wealth. Apart from cardamom plantations, the campus possesses rich and diverse indigenous flora due to its peculiar position in Western Ghats, topography and climate. The campus has not been subjected to detailed floristic studies and the present attempt is to fill this lacuna.

### Review of earlier works

Plants from the high ranges of Idukki District have been studied and described by workers namely

Beddome (1869–1874), Bourdillon (1908) and Rama Rao (1914), which include many of the species found in the Myladumpara area of Cardamom Hills and their collections were also cited by Hooker (1872–1897) and Gamble & Fischer (1915–1936). Taxonomists from Calicut University botany department have also studied the tree flora of ICRI campus, and identified most of the shade trees in the campus. Balan et al. (2014) reported *Desmodium intortum* (Mill.) Urb. from the campus, which was a new record for India. Balan & Harikrishnan (2016) added a new species to the genus *Ixora* L. from the campus, i.e., *I. predeepii* Anoop & Harikrishnan.

### Study Area

ICRI campus lies between 9°5'N & 77°9'E in Idukki Revenue District of Kerala State. The campus covers an area of 64.60 ha and is divided lengthwise by the Kumily-Munnar state highway. The campus is of undulating terrain with hills and valleys presenting splendid scenery of luxuriant evergreen forests. The altitude of the area ranges from 1,050–1,060 m. For administrative convenience the campus is divided into 19 blocks. All the blocks have cardamom plantations for research purposes except block no. 1, 2 & 17 where the remaining evergreen forest patch is preserved (Fig. 1).

### Climate and Vegetation

The general climatic condition in Myladumpara is humid and cool. The mean maximum temperature for the last 10 years is 25.7°C and the mean minimum is 17.05°C

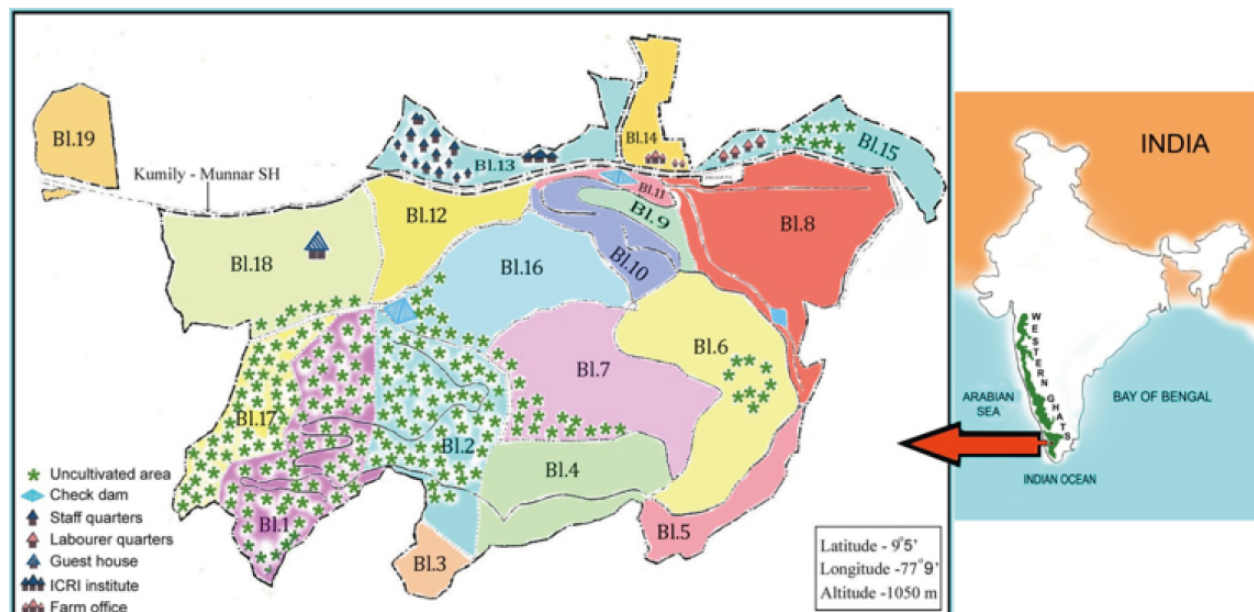


Figure 1. Study area map of ICRI campus.

with April–May the hottest months and December–January the coolest. The data on relative humidity for the past 10 years shows a more or less constant figure, i.e., between 90 and 96. The area receives both the southwest and the northeast monsoons with the maximum rainfall in June–July and the minimum in December–January months. The average rainfall is 2,153mm per year and 2,732.9mm rainfall occurred in the year 2013, which was the highest annually recorded rainfall during the past 10 years. The data showed a regular reduction in rainfall in the alternate years. The climatic data for Myladumpara during 2007–2016 is provided in Table 1.

Champion & Seth (1968) recognized 26 forest types in Kerala of which the major ones are the west coast tropical evergreen, southern hilltop tropical evergreen, tropical semi-evergreen, southern moist mixed deciduous, southern dry mixed deciduous, southern subtropical hill forests, southern montane wet temperate forests, and southern montane wet grasslands. The natural vegetation of ICRI campus is of the west coast tropical evergreen type. The major associations of trees in the campus are *Cullenia-Mesua-Palaquium* association, *Hopea-Dipterocarpus-Vateria* association and *Myristica-Polyalthia-Calophyllum* association.

The top canopy is formed of trees like *Acrocarpus fraxinifolius* Wight & Arn., *Antiaris toxicaria* Lesch., *Artocarpus heterophyllus* Lam., *Bhesa indica* (Bedd.) Ding Hou, *Bischofia javanica* Blume, *Calophyllum calaba* L., *Canarium strictum* Roxb., *Chrysophyllum roxburghii* G. Don, *Cullenia exarillata* Robyns, *Dimocarpus longan* Lour., *Dipterocarpus indicus* Bedd., *Dysoxylum malabaricum* Bedd. ex Hiern, *Elaeocarpus tuberculatus* Roxb., *Hopea parviflora* Bedd., *Litsea oleoides* (Meissn.) Hook.f., *Mesua ferrea* L., *Myristica beddomei* King, *Palaquium ellipticum* (Dalz.) Baill., *Poeciloneuron indicum* Bedd,

*Monoon fragrans* (Dalzell) B. Xue & R.M.K. Saunders, *Syzygium gardneri* Thw., *Vateria indica* L., etc.

The second storey has medium-sized trees adapted to partial shady conditions such as *Actinodaphne bourdillonii* Gamble, *A. wightiana* (Kuntze) Noltie, *Cryptocarya stocksii* Meissn., *Diospyros assimilis* Bedd., *Ficus* spp., *Flacourtia montana* Graham, *Garcinia morella* (Gaertn.) Desv., *Litsea deccanensis* Gamble, *Macaranga peltata* (Roxb.) Muell.-Arg., *Melicope lunu-ankenda* (Gaertn.) Hartley, *Machilus macrantha* Nees, *Prunus zeylanica* (Wight) Miq., *Xanthophyllum arnottianum* Wight, etc.

The third storey possesses small trees and large shrubs like *Acronychia pedunculata* (L.) Miq., *Agrostistachys borneensis* Becc., *Antidesma montanum* Blume, *Callicarpa tomentosa* (L.) L., *Clausena indica* (Dalz.) Oliver, *Chionanthus mala-elengi* (Dennst.) P.S. Green, *Ixora elongata* Heyne ex G. Don, *Ixora predeepii* Anoop & Harikrishnan, *Isonandra perrottetiana* A. DC, *Nothopogia racemosa* (Dalz.) Ramam., etc.

Shrubs like *Allophylus cobbe* (L.) Raeusch., *Atalantia wightii* Tanaka, *Chassalia curviflora* (Wall. ex Kurz) Thw. var. *Longifolia* (Dalz.) Hook.f., *Dichapetalum gelonioides* (Roxb.) Engl., *Justicia santapau* Bennet, *Lepianthes umbellatus* (L.) Rafin., *Lepisanthes erecta* (Thw.) Leenh., *Mussaenda frondosa* L., *Pavetta zeylanica* (Hook.f.) Gamble, *Rauvolfia verticillata* (Lour.) Baill., *Schumannianthus virgatus* (Roxb.) Rolfe, *Solanum torvum* Sw., *Strobilanthes pulneyensis* Hook.f., *Thottea duchartrei* Sivar., Babu & Indu, etc. and herbs like *Acalypha paniculata* Miq., *Achyranthes bidentata* Blume, *Acmella calva* (DC.) R.K. Jansen, *Bidens pilosa* L., *Desmodium repandum* (Vahl) DC., *Dichrocephala integrifolia* (L.f.) O. Ktze., *Drymeria cordata* (L.) Willd. ex Roem. & Schult., *Eragrostis tenella* (L.) P. Beauv. ex Roem. & Schult., *Floscopa scandens* Lour., *Hydrocotyle javanica*

**Table 1.** Climatic data for ICRI campus during 2007–2016.

Year	Maximum temp. (°C)	Minimum temp. (°C)	Relative Humidity (%)	Rainfall (mm)	Rainy days
2007	25.7	16.9	92	2678.1	154
2008	25.7	17.6	92.9	1890.2	142
2009	25.8	17.2	94.5	2177.6	120
2010	26.5	17.5	96.9	1900	119
2011	25.8	16.8	95.3	2418.9	141
2012	25.6	16.9	95.2	1544.8	105
2013	25.3	17	95.7	2732.9	144
2014	25.4	16.6	95.4	1872.9	139
2015	25.7	17.2	94.5	2319.8	141
2016	25.6	17.4	95.3	1992.8	134

Thunb., *Impatiens dasysperma* Wight, *I. Maculata* Wight, *Isodon lophanthoides* (Buch.-Ham. ex D. Don) H. Hara, *Lobelia nicotianifolia* Roth ex Roem. & Schult., *Ophiorhiza mungos* L., *Phaulopsis imbricata* (Forssk.) Sweet., *Phyllanthus rheedei* Wight, *Pilea melastomoides* (Poir.) Blume, *Plantago erosa* Wall., *Rhynchoglossum notonianum* (Wall.) Burt, *Setaria palmifolia* (Koenig) Stapf, *Urena lobata* L., and *Youngia japonica* (L.) DC. constitute the ground flora of the campus.

*Aganosma cymosa* (Roxb.) G. Don, *Ancistrocladus heyneanus* Wall. ex Graham, *Argyrea hirsuta* Wight & Arn., *Cayratia pedata* (Lam.) A. Juss. ex Gagnep., *Derris brevipes* (Benth.) Baker, *Dioscorea oppositifolia* L., *Diplocyclos palmatus* (L.) Jeffrey, *Erythralium scandens* Blume, *Jasminum coarctatum* Roxb., *Naravalia zeylanica* (L.) DC., *Neonotonia wightii* (Graham ex Wight & Arn.) Lackey, *Oxyceros rugulosus* (Thw.) Tirveng., *Piper velayudhanii* E.S.S. Kumar & S.P. Mathew, *Smilax zeylanica* L., *Stephania wightii* (Arn.) Dunn, *Strychnos colubrina* L., etc. are the common climbers. Epiphytes like *Aeschynanthes perrottetii* A. DC., *Aerides ringens* (Lindl.) C.E.C. Fisch., *Bulbophyllum aureum* (Hook. f.) J.J. Smith, *Dendrobium herbaceum* Lindl., *Eria pauciflora* Wight, *Papilionanthe cylindrical* (Lindl.) Seidenf., and *Remusatia vivipara* (Roxb.) Schott are also recorded from the campus.

## MATERIALS AND METHODS

The flora is the result of repeated seasonal collections of plant specimens from the study area and extensive field studies during the year 2012–2015. Herbarium sheets were prepared following Bridson & Forman (1998) and are housed at the herbarium in Department of Botany, ICRI, Myladumpara. Identifications of each taxon was done with pertinent literature like The Flora of British India (Hooker 1872–1897), The Flora of Presidency of Madras (Gamble 1915–1936), Flowering Plants of Travancore (Rao 1914), Flowering Plants of Kerala- Digital Flora (Sasidharan 2013), and consultation of authentic specimens in CALI, KFRI and TBGT and those which needed further confirmation were referred to the experts in concerned groups in Kerala Forest Research Institute, Peechi and Jawaharlal Nehru Tropical Botanic Garden & Research Institute, Thiruvananthapuram. The geographical distribution details of each taxon is provided based on Sasidharan (2013) and Nayar *et al.* (2014)

## RESULTS

During the study 515 taxa of flowering plants belonging to 393 genera under 109 families were collected. The indigenous/ naturalized flora is represented by 392 taxa in 303 genera under 94 families (Table 2) and the rest 123 taxa are introduced ornamental plants and cultivated fruit or spice crops. Out of the 392 taxa dicotyledons are represented by 335 species in 251 genera under 80 families. Monocotyledons have 57 species belonging to 52 genera under 14 families. Life form analysis (Fig. 2) revealed that, out of the 392 taxa identified, the majority are herbs (155) and trees (125) followed by shrubs (58) and climbers (54). Among the herbs, 16 are epiphytes. The legume family Fabaceae with 29 species in 22 genera is the largest followed by Asteraceae (27 species) and Euphorbiaceae (22 species). Including this, there are ten families with more than 10 species in each (Fig. 3). The rest are Rubiaceae (18), Poaceae (17), Orchidaceae (15), Lauraceae (14), Moraceae (13), Acanthaceae (12) and Urticaceae (11). The dominant genera are *Ficus* (12), *Ipomoea* (6), *Litsea* (6) and *Desmodium* (5). As many as 40 families are represented by single species each. Exotic species such as *Ageratina adenophora* (Spreng.) King & Robins., *Conyza Canadensis* (L.) Cronq., *Desmodium intortum* (Mill.) Urb., *Desmodium uncinatum* (Jacq.) DC., *Lantana camera* L., *Mikania micrantha* Kunth, *Parthenium hysterophorus* L., *Tridax procumbens* L., etc. have extensively invaded the degraded forest areas and open wastelands. The block wise analysis shows that block no. 13, the main campus, is the species-rich block owing to the presence of several introduced ornamental plants and shade trees whereas, block no. 12, 6, 1 and 18 are the richest blocks in terms of native plants.

### Economically important plants

ICRI campus is endowed with a large number of economically important plants. About 60 % of the indigenous plants are having recorded utilities, either as medicine, food, timber or as ornamental plant. Medicinal plants include *Acmella calva* (DC.) R.K. Jansen (Tooth ache plant), *Antiaris toxicaria* Lesch. (Upas tree), *Justicia adhatoda* L. (Adhatoda), *Cardiospermum halicacabum* L. (Balloon Vine), *Curculigo orchoides* Gaertn. (Balck Musale), *Dillenia indica* L. (Elephant Apple), *Dioscorea pentaphylla* L. (Fiji Yam), *Diospyros assimilis* Bedd. (Malabar Ebony), *Eleusine indica* (L.) Gaertn. (Crab Grass), *Galinsoga parviflora* Cav. (Quick Weed), *Hedychium flavescens* Carey ex Rosc. (Yellow Ginger), *Morinda citrifolia* L. (Noni), *Rubia cordifolia* L.

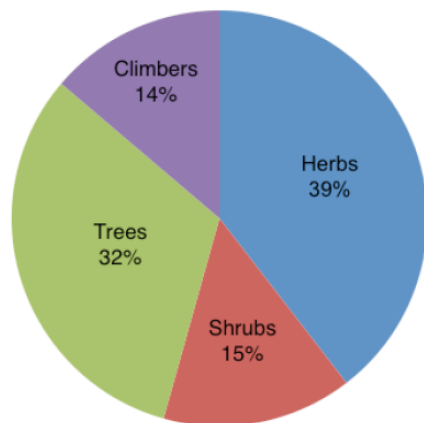


Figure 2. Life form analysis of indigenous/ naturalized flowering plants in ICRI campus

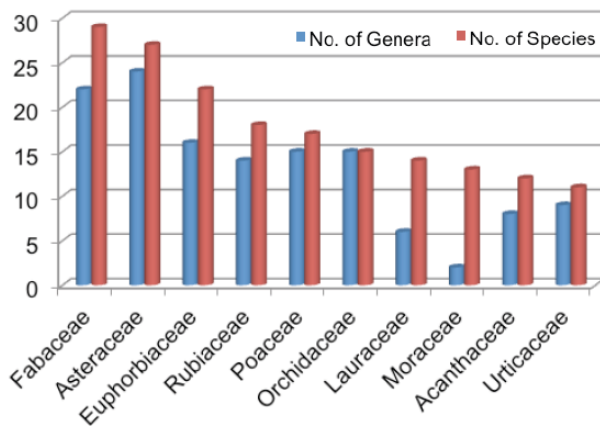


Figure 3. Analysis of dominant flowering plant families in ICRI campus.

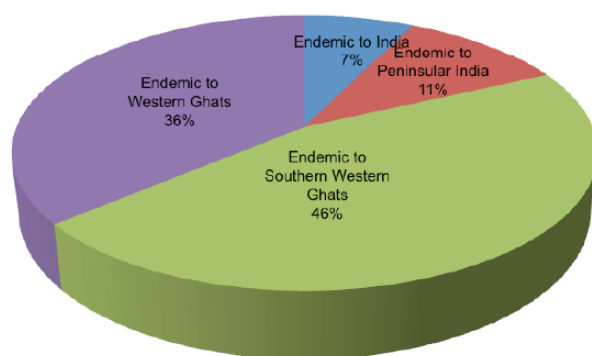


Figure 4. Distribution range wise break up of Indian endemic flowering plants found in ICRI campus

(Indian Madder), *Scoparia dulcis* L. (Liquorice Weed), *Solanum torvum* Sw. (Devils Fig), *Terminalia chebula* Retz. (Gallnut), etc. Trees like *Calophyllum calaba* L., *Dalbergia lanceolaria* L.f., *Gluta travancorica* Bedd.,

*Hopea parviflora* Bedd., *Lophopetalum wightianum* Arn., *Mesua ferrea* L., etc are timber yielding. Gum (*Canarium strictum* Roxb., *Palaquium ellipticum* (Dalz.) Baill., resin (*Vateria indica* L.) and varnish (*Holigarna nigra* Bourd.) yielding trees are also located from the campus.

#### Introduced/ cultivated plants

Out of the 515 plants identified from ICRI campus, about 24% are introduced ornamental plants and cultivated fruit crops like Banana, Mango, Jack fruit or spice crops like Allspice, Cardamom, Clove, Coffee, Ginger, Nutmeg, Pepper, Turmeric, etc (Table 3).

#### DISCUSSION

The Indian Cardamom Research Institute, situated in the Cardamom Hills along the southern Western Ghats in Idukki District, comes under the Anamalai-High Range endemic centre. Owing to its peculiar position in the southern Western Ghats, undulating terrain, rich soil, humid tropical climate endowed with plentiful rainfall together has given rise to a flora of great diversity. Angiosperms, the dominant plant group which the present study dealt with, has a representation of 392 indigenous/ naturalized plants belonging to 303 genera under 94 families. This much genus diversity in a comparatively smaller area of land (0.6060km<sup>2</sup>) is a reflection of the uniqueness of the species rich Western Ghats forest ecosystem. Among the 392 taxa documented, about 60 % of the plants are useful either as medicine, food, timber or as ornamental plant.

#### Endemic plants

The Western Ghats, a chain of mountains of about 1,600km long extending from Tapti River Valley in Gujarat to Kanyakumari, the southernmost tip of the Indian peninsula, is the second largest abode for endemic flowering plants in the whole of India after the Himalayan region (Basha & Nair 1991). Subramanyam & Nayar (1974) phytogeographically analysed the Western Ghats and identified four floristically characteristic regions, namely (i) The Western Ghats from river Tapti to Goa, (ii) Kalinadi to Coorg, (iii) the Nilgiris and (iv) Anamalai, Palani and Cardamom hills. The present study area falls within the iv<sup>th</sup> region. Among the 392 indigenous taxa identified from the campus, 86 are endemic to India of which 68 are strictly confined to the Western Ghats (Fig. 4; Images 1–66).

The campus is located in the core area of the Cardamom Hill Reserves (CHR), blessed with a multitude of flora and fauna, most of which are still unexplored.

Table 2. Check List of indigenous/ naturalized flowering plants in ICRI campus

	Name of taxa	Geographical distribution	Utility
	<b>1. Acanthaceae</b>		
1	<i>Asystasia crispata</i> Benth.	Southern Western Ghats	Not known
2	<i>Dicliptera cuneata</i> Nees	Peninsular India	Not known
3	<i>Justicia adhatoda</i> L.	Indo-Malesia	Medicine (Ambasta, 1986)
4	<i>Justicia procumbens</i> L.	Australia and Indo-Malesia	Medicine (Ambasta, 1986)
5	<i>Justicia santapau</i> Bennet	Western Ghats	Not known
6	<i>Lepidagathis incurva</i> Buch.-Ham. Ex D.Don	China, India, Myanmar	Medicine (Ambasta, 1986)
7	<i>Phaulopsis imbricata</i> (Forssk.) Sweet.	Africa, China and Indo-Malesia	Medicine (Ambasta, 1986)
8	<i>Rungia longifolia</i> Nees & Arn. ssp. <i>latior</i> (Nees) L.H. Cramer	Peninsular India and Sri Lanka	Not known
9	<i>Strobilanthes pulneyensis</i> Hook. f.	Southern Western Ghats	Not known
10	<i>Thunbergia alata</i> Boj. ex Sins	Native of Trop. Africa, naturalised in India	Medicine (Ambasta, 1986); ornamental
11	<i>Thunbergia mysorensis</i> (Wight.) Anders.	Western Ghats	Ornamental
12	<i>Thunbergia tomentosa</i> Wall. ex Nees	Southern Western Ghats	Not known
	<b>2. Amaranthaceae</b>		
13	<i>Achyranthes aspera</i> L.	Pantropical	Medicine (Parrota, 2001)
14	<i>Achyranthes bidentata</i> Blume	Australia, E. Africa and Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
15	<i>Alternanthera bettzickiana</i> (Regel) Voss	Native of Trop. America, naturalised in Asia	Not known
16	<i>Alternanthera brasiliana</i> (L.) Kuntze	Native of Trop. America, naturalised in India	Ornamental
17	<i>Amaranthus viridis</i> L.	Pantropical	Medicine, food (Ambasta, 1986)
18	<i>Cyathula prostrata</i> (L.) Blume	Pantropical	Medicine (Ambasta, 1986)
19	<i>Gomphrena celosioides</i> Mart.	Native of S. America, naturalised in Asia	Not known
	<b>3. Anacardiaceae</b>		
20	<i>Buchanania lanzan</i> Spreng.	India and Myanmar	Medicine (Parrota, 2001)
21	<i>Gluta travancorica</i> Bedd.	Southern Western Ghats	Timber (Rama Rao, 1914)
22	<i>Holigarna nigra</i> Bourd.	Southern Western Ghats	Varnish (Ambasta, 1986)
23	<i>Nothopegia racemosa</i> (Dalz.) Ramam.	Western Ghats	Not known
	<b>4. Ancistrocladaceae</b>		
24	<i>Ancistrocladus heyneanus</i> Wall. ex Graham	S. India and Sri Lanka	Not known
	<b>5. Annonaceae</b>		
25	<i>Meiogyne pannosa</i> (Dalz.) Sinclair	Western Ghats	Not known
26	<i>Monoon fragrans</i> (Dalzell) B. Xue & R.M.K. Saunders	Southern Western Ghats	Soft wood (Ambasta, 1986)
	<b>6. Apiaceae</b>		
27	<i>Centella asiatica</i> (L.) Urban	Africa and Trop. Asia	Medicine (Kirtikar & Basu, 1918)
28	<i>Hydrocotyle conferta</i> Wight	Southern Western Ghats	Not known
29	<i>Hydrocotyle javanica</i> Thunb.	Trop. Asia	Medicine (Ambasta, 1986)
	<b>7. Apocynaceae</b>		
30	<i>Aganosma cymosa</i> (Roxb.) G. Don	Peninsular India and Sri Lanka	Not known
31	<i>Alstonia scholaris</i> (L.) R. Br.	South and South East Asia	Medicine (Ambasta, 1986)
32	<i>Carissa inermis</i> Vahl	Peninsular India	Food (Ambasta, 1986)
33	<i>Rauvolfia verticillata</i> (Lour.) Baill.	S. India and South East Asia	Not known
	<b>8. Araceae</b>		
34	<i>Anaphyllum wightii</i> Schott	Southern Western Ghats	Not known
35	<i>Arisaema leschenaultii</i> Blume	Southern Western Ghats	Not known
36	<i>Colocasia esculenta</i> (L.) Schott	Pantropical	Medicine, food (Ambasta, 1986)
37	<i>Lagenandra ovata</i> (L.) Thw.	India and Sri Lanka	Medicine (Ambasta, 1986)
38	<i>Pothos scandens</i> L.	India to Malesia	Medicine (Parrota, 2001)
39	<i>Remusatia vivipara</i> (Roxb.) Schott	Paleotropics	Medicine (Ambasta, 1986)
	<b>9. Araliaceae</b>		
40	<i>Schefflera wallichiana</i> (Wight & Arn.) Harms	S. India and Sri Lanka	Not known
	<b>10. Aristolochiaceae</b>		
41	<i>Thottea duchartrei</i> Sivar., Babu & Indu	Southern Western Ghats	Not known
	<b>11. Asclepiadaceae</b>		
42	<i>Calotropis gigantea</i> (L.) R. Br.	Trop. Asia	Medicine (Kirtikar & Basu, 1918)
43	<i>Cosmostigma racemosum</i> (Roxb.) Wight	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>12. Asteraceae</b>		
44	<i>Acmella calva</i> (DC.) R.K. Jansen	China and Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
45	<i>Ageratina adenophora</i> (Spreng.) King & Robins.	Native to S. America, naturalised in India	Not known
46	<i>Ageratum conyzoides</i> L.	Pantropical	Medicine (Kirtikar & Basu, 1918)
47	<i>Ageratum houstonianum</i> Mill.	Native to Trop. America, naturalised in India	Not known
48	<i>Bidens pilosa</i> L. var. <i>minor</i> (Blume) Sherff	Pantropical	Medicine (Parrota, 2001)
49	<i>Blumea belangeriana</i> DC.	India and Sri Lanka	Medicine (Kirtikar & Basu, 1918)
50	<i>Chromolaena odorata</i> (L.) King & Robins.	Native to America, naturalised in India	Not known

	Name of taxa	Geographical distribution	Utility
51	<i>Conyza canadensis</i> (L.) Cronq.	Native to N. America, naturalised in India	Not known
52	<i>Crassocephalum crepidioides</i> (Benth.) S. Moore	Africa, China, India and Sri Lanka	Medicine (Ambasta, 1986)
53	<i>Dichrocephala integrifolia</i> (L. f.) O. Ktze.	Africa, Australia and Trop. Asia	Medicine (Ambasta, 1986)
54	<i>Emilia sonchifolia</i> (L.) DC.	Africa and Tropical Asia	Medicine, food (Ambasta, 1986)
55	<i>Galinsoga parviflora</i> Cav.	Native to Trop. America, naturalised in India	Medicine, food (Ambasta, 1986)
56	<i>Gnaphalium polycaulon</i> Pers.	Pantropical	Not known
57	<i>Mikania micrantha</i> Kunth	Pantropical	Not known
58	<i>Parthenium hysterophorus</i> L.	Native to America, naturalised in India	Medicine (Ambasta, 1986)
59	<i>Phyllocephalum phyllolaenum</i> (DC.) Narayana	India	Not known
60	<i>Sigesbeckia orientalis</i> L.	Pantropical	Medicine (Ambasta, 1986)
61	<i>Sonchus oleraceus</i> L.	Native to Europe, naturalised in India	Medicine, food (Ambasta, 1986)
62	<i>Spilanthes ciliata</i> H.B.K.	Native to New world tropics, naturalised in India	Not known
63	<i>Spilanthes radicans</i> Jacq.	Native to Trop. America, naturalised in India	Not known
64	<i>Synedrella nodiflora</i> (L.) Gaertn.	Native to West Indies, naturalised in India	Medicine, food (Ambasta, 1986)
65	<i>Tithonia diversifolia</i> (Hemsl.) A. Gray	Native to Trop. America, naturalised in India	Medicine (Ambasta, 1986)
66	<i>Tridax procumbens</i> L.	Native to Trop. America, naturalised in India	Medicine (Ambasta, 1986)
67	<i>Vernonia arborea</i> Buch-Ham.	Indo-Malesia	Shade tree
68	<i>Vernonia cinerea</i> (L.) Less.	Pantropical	Medicine, food (Ambasta, 1986)
69	<i>Wedelia trilobata</i> (L.) A. S. Hitchc.	Native to Trop. America, naturalised in India	Ornamental
70	<i>Youngia japonica</i> (L.) DC.	Indo-Malesia	Not known
	<b>13. Balsaminaceae</b>		
71	<i>Impatiens dasysperma</i> Wight	Western Ghats	Not known
72	<i>Impatiens maculata</i> Wight	southern Western Ghats	Not known
	<b>14. Begoniaceae</b>		
73	<i>Begonia malabarica</i> Lam.	Peninsular India and Sri Lanka	Food (Ambasta, 1986)

	Name of taxa	Geographical distribution	Utility
	<b>15. Bignoniaceae</b>		
74	<i>Radermachera xylocarpa</i> (Roxb.) K. Schum.	Peninsular India	Medicine, food (Ambasta, 1986)
	<b>16. Bombacaceae</b>		
75	<i>Bombax ceiba</i> L.	Trop. Asia	Medicine, food (Ambasta, 1986)
76	<i>Cullenia exarillata</i> Robyns	Southern Western Ghats	Soft wood (Ambasta, 1986)
	<b>17. Boraginaceae</b>		
77	<i>Cynoglossum zeylanicum</i> (Vahl ex Hornem.) Thunb. ex Lehm.	China and Indo-Malesia	Not known
78	<i>Ehretia canarensis</i> (Clarke) Gamble	Peninsular India	Not known
	<b>18. Brassicaceae</b>		
79	<i>Rorippa indica</i> (L.) Hiern	Africa, China and Indo-Malesia	Medicine (Ambasta, 1986)
	<b>19. Burseraceae</b>		
80	<i>Canarium strictum</i> Roxb.	India and Myanmar	Medicine, gum (Parrota, 2001)
	<b>20. Campanulaceae</b>		
81	<i>Lobelia nicotianifolia</i> Roth ex Roem. & Schult.	Indo-Malesia	Medicine, food (Ambasta, 1986)
	<b>21. Caryophyllaceae</b>		
82	<i>Drymaria cordata</i> (L.) Willd. ex Roem. & Schult. ssp. <i>diandra</i> (Blume) Duke	Paleotropics	Medicine (Ambasta, 1986)
	<b>22. Celastraceae</b>		
83	<i>Bhesa indica</i> (Bedd.) Ding Hou	Indo-Malesia	Shade tree in cardamom plantations
84	<i>Cassine paniculata</i> (Wight & Arn.) Lobl.-Callen	Indo-Malesia	Medicine (Watt, 1972)
85	<i>Lophopetalum wightianum</i> Arn.	Indo-Malesia	Timber (Ambasta, 1986)
	<b>23. Chenopodiaceae</b>		
86	<i>Dysphania ambrosioides</i> (L.) Mosyakin & Clemants	Native of Trop. America, naturalised in India	Medicine, food (Ambasta, 1986)
	<b>24. Clusiaceae</b>		
87	<i>Calophyllum calaba</i> L.	Western Ghats	Medicine, food, timber (Ambasta, 1986; Rama Rao, 1914)
88	<i>Calophyllum polyanthum</i> Wall. ex Choisy	China and Indo-Malesia	Not known
89	<i>Garcinia morella</i> (Gaertn.) Desv.	Indo-Malesia	Medicine, food (Rama Rao, 1914; Kirtikar & Basu, 1918)
90	<i>Mesua ferrea</i> L. var. <i>coromandeliana</i> (Wight) N.P. Singh	Southern Western Ghats	Not known
91	<i>Mesua ferrea</i> L. var. <i>ferrea</i>	Indo-Malesia	Medicine, food, timber (Watt, 1972; Caius, 1986)
92	<i>Poeciloneuron indicum</i> Bedd.	Western Ghats	Timber (Ambasta, 1986)
	<b>25. Combretaceae</b>		
93	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Indo-Malesia	Medicine, timber (Watt, 1972; Parrota, 2001)



	Name of taxa	Geographical distribution	Utility
94	<i>Terminalia chebula</i> Retz.	South Asia	Medicine, timber (Kirtikar & Basu, 1918)
95	<i>Terminalia paniculata</i> Roth	Peninsular India	Medicine, timber (Kirtikar & Basu, 1918; Parrota, 2001)
	<b>26. Commelinaceae</b>		
96	<i>Belosynapsis vivipara</i> (Dalz.) C.E.C. Fisch.	Western Ghats	Not known
97	<i>Commelina benghalensis</i> L.	Africa and Asia	Medicine, food (Ambasta, 1986)
98	<i>Commelina paludosa</i> Blume	India and Himalayas	Medicine (Ambasta, 1986)
99	<i>Cyanotis cristata</i> (L.) D. Don	Paleotropics	Fodder (Ambasta, 1986)
100	<i>Floscopa scandens</i> Lour.	Indo-Malesia	Medicine (Ambasta, 1986)
101	<i>Murdannia pauciflora</i> (Wight) Brueck.	Indo-Malesia	Not known
102	<i>Rhopalephora scaberrima</i> (Blume) Faden	Indo-Malesia	Not known
	<b>27. Convolvulaceae</b>		
103	<i>Argyrea hirsuta</i> Wight & Arn.	S. India and Sri Lanka	Not known
104	<i>Ipomoea alba</i> L.	Native of Trop. America, naturalised in India	Medicine, food (Ambasta, 1986)
105	<i>Ipomoea cairica</i> (L.) Sweet	Paleotropics	Medicine (Ambasta, 1986)
106	<i>Ipomoea deccana</i> Austin	India and Sri Lanka	Not known
107	<i>Ipomoea hederifolia</i> L.	Native of Trop. America, naturalised in India	Medicine (Ambasta, 1986)
108	<i>Ipomoea purpurea</i> (L.) Roth	Native of Trop. America, naturalised in India	Medicine (Ambasta, 1986)
109	<i>Ipomoea triloba</i> L.	Native of Trop. America, naturalised in India	Not known
	<b>28. Costaceae</b>		
110	<i>Costus speciosus</i> (Koenig) J.E. Smith	Indo-Malesia	Medicine, food (Ambasta, 1986)
	<b>29. Cucurbitaceae</b>		
111	<i>Cucumis sativus</i> L. f.var. <i>hardwickii</i> (Royle) W.J.de Wilde & Duyffjes	Paleotropics	Medicine (Ambasta, 1986)
112	<i>Cucumis silentvalleyi</i> (Manilal, Sabu & Mathew) Ghebret. & Thulin	Southern Western Ghats	Not known
113	<i>Diplocyclos palmatus</i> (L.) Jeffrey	Africa, China and Indo-Malesia	Medicine, food (Ambasta, 1986)
114	<i>Zehneria maysorensis</i> (Wight & Arn.) Arn.	India to S.E. Asia	Not known
	<b>30. Cyperaceae</b>		
115	<i>Cyperus cyperinus</i> (Retz.) Sur.	Tropics and subtropics	Not known
116	<i>Cyperus dubius</i> Rottb.	Asia and Trop. Africa	Not known

	Name of taxa	Geographical distribution	Utility
117	<i>Kyllinga nemoralis</i> (J. R & G. Forst.) Dandy ex Hutch. & Dalz.	Pantropical	Medicine (Ambasta, 1986)
118	<i>Kyllinga squamulata</i> Vahl	Africa and Trop. Asia	Not known
	<b>31. Dichapetalaceae</b>		
119	<i>Dichapetalum gelonioides</i> (Roxb.) Engl.	Indo-Malesia	Timber (Watt, 1972)
	<b>32. Dilleniaceae</b>		
120	<i>Dillenia indica</i> L.	Indo-Malesia	Medicine, food (Ambasta, 1986)
	<b>33. Dioscoreaceae</b>		
121	<i>Dioscorea oppositifolia</i> L.	China and Indo-Malesia	Medicine, food (Ambasta, 1986)
122	<i>Dioscorea pentaphylla</i> L.	China and Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
	<b>34. Dipterocarpaceae</b>		
123	<i>Dipterocarpus indicus</i> Bedd.	Western Ghats	Medicine, timber (Ambasta, 1986)
124	<i>Hopea parviflora</i> Bedd.	Western Ghats	Timber (Ambasta, 1986)
125	<i>Vateria indica</i> L.	Western Ghats	Medicine, food , resin (Ambasta, 1986)
	<b>35. Ebenaceae</b>		
126	<i>Diospyros assimilis</i> Bedd.	Western Ghats	Medicine, timber (Rama Rao, 1914)
	<b>36. Elaeocarpaceae</b>		
127	<i>Elaeocarpus tuberculatus</i> Roxb.	Indo-Malesia	Medicine, soft wood (Ambasta, 1986)
	<b>37. Eriocaulaceae</b>		
128	<i>Eriocaulon thwaitesii</i> Koernicke	Peninsular India and Sri Lanka	Not known
	<b>38. Erythralaceae</b>		
129	<i>Erythralum scandens</i> Blume	Indo-Malesia	Not known
	<b>39. Euphorbiaceae</b>		
130	<i>Acalypha brachystachya</i> Hornem.	Indo-Malesia and W. Asia	Not known
131	<i>Acalypha paniculata</i> Miq.	Indo-Malesia and Trop. Africa	Medicine (Kirtikar & Basu, 1918)
132	<i>Agrostistachys borneensis</i> Becc.	Indo-Malesia	Thatching (Ambasta, 1986)
133	<i>Antidesma montanum</i> Blume	Eastern Himalayas and Indo-Malesia	Food (Ambasta, 1986)
134	<i>Aporosa acuminata</i> Thw.	Peninsular India and Sri Lanka	Paper pulp (Ambasta, 1986)
135	<i>Bischofia javanica</i> Blume	Indo-Malesia	Medicine, timber (Kirtikar & basu, 1918; Ambasta, 1986)
136	<i>Breynia retusa</i> (Dennst.) Alston	India, Indo-China and Sri Lanka	Medicine (Ambasta, 1986)
137	<i>Breynia vitis-idaea</i> (Burm. f.) C.E.C. Fisch.	Indo-Malesia	Medicine, food (Ambasta, 1986)
138	<i>Briedelia retusa</i> (L.) A. Juss.	Indo-Malesia	Medicine, food (Ambasta, 1986)
139	<i>Dimorphocalyx glabellus</i> Thw. var. <i>lawianus</i> (Muell.-Arg.) Chakrab. & Balakr.	Western Ghats	Not known

	Name of taxa	Geographical distribution	Utility
140	<i>Euphorbia heterophylla</i> L.	Native of C. America, naturalised in India	Not known
141	<i>Euphorbia hirta</i> L.	Native of Trop. America, naturalised in India	Medicine, food (Ambasta, 1986)
142	<i>Euphorbia thymifolia</i> L.	Trop. Asia	Medicine (Kirtikar & Basu, 1918)
143	<i>Excoecaria oppositifolia</i> Griff. var. <i>crenulata</i> (Wight) Chakrab. & Gangop.	Peninsular India and Sri Lanka	Poison (Ambasta, 1986)
144	<i>Glochidion hohenackeri</i> (Muell.-Arg.) Bedd.	Peninsular India	Medicine (Ambasta, 1986)
145	<i>Macaranga indica</i> Wight	South and south East Asia	Medicine (Caius, 1986)
146	<i>Macaranga peltata</i> (Roxb.) Muell.-Arg.	India and Sri Lanka	Medicine, food (Ambasta, 1986)
147	<i>Mallotus philippensis</i> (Lam.) Muell.-Arg.	Australia and Indo-Malesia	Medicine, food (Ambasta, 1986; Parrota, 2001)
148	<i>Mallotus tetracoccus</i> (Roxb.) Kurz,	China, India and Sri Lanka	Medicine (Ambasta, 1986)
149	<i>Margaritaria indica</i> (Dalz.) Airy Shaw	Australia and Indo-Malesia	Timber (Ambasta, 1986)
150	<i>Paracroton pendulus</i> (Hassk.) Miq. ssp. <i>zeylanicus</i> (Thw.) Balakr. & Chakrab.	India and Sri Lanka	Not known
151	<i>Phyllanthus airy-shawii</i> Brunel & Roux	India and Sri Lanka	Not known
152	<i>Phyllanthus rheedei</i> Wight	India and Sri Lanka	Medicine (Ambasta, 1986)
	<b>40. Fabaceae</b>		
153	<i>Acacia caesia</i> (L.) Willd.	Indo-Malesia	Medicine (Kirtikar & basu, 1918)
154	<i>Acacia sinuata</i> (Lour.) Merr.	Indo-Malesia	Medicine (Ambasta, 1986)
155	<i>Acrocarpus fraxinifolius</i> Wight & Arn.	Indo-Malesia	Shade tree in cardamom plantations
156	<i>Adenanthera pavonina</i> L.	Asia	Medicine (Parrota, 2001)
157	<i>Albizia amara</i> (Roxb.) Boivin	E. Africa, India and Sri Lanka	Medicine, timber (Parrota, 2001)
158	<i>Alysicarpus vaginalis</i> (L.) DC.	Paleotropics	Medicine (Watt, 1972)
159	<i>Calopogonium mucunoides</i> Desv.	Native of Trop. America, naturalised in India	Green manure (Ambasta, 1986)
160	<i>Centrosema molle</i> Benth.	Native of America, naturalised in India	Cover crop (Ambasta, 1986)
161	<i>Chamecrista mimosoides</i> (L.) E. Greene	Paleotropics	Medicine (Rama Rao, 1914)
162	<i>Crotalaria pallida</i> Dryand.	Pantropical	Medicine (Rama Rao, 1914)
163	<i>Crotalaria walkerii</i> Arn.	S. India and Sri Lanka	Not known
164	<i>Dalbergia lanceolaria</i> L.f. ssp. <i>paniculata</i> (Roxb.) Thoth.	India and Myanmar	Medicine, timber (Bourdillon, 1908)
165	<i>Derris brevipes</i> (Benth.) Baker	Western Ghats	Not known

	Name of taxa	Geographical distribution	Utility
166	<i>Desmodium wynaadense</i> (Bedd. ex Gamble) Ohashi	Southern Western Ghats	Not known
167	<i>Desmodium intortum</i> (Mill.) Urb.	Native of America, naturalised in Kerala	Cover crop
168	<i>Desmodium repandum</i> (Vahl) DC.	Paleotropics	Not known
169	<i>Desmodium triflorum</i> (L.) DC.	Australia and Indo-Malesia	Medicine, fodder (Ambasta, 1986)
170	<i>Desmodium uncinatum</i> (Jacq.) DC.	Native of Trop. America, naturalised in S. India	Fodder
171	<i>Dolichos trilobus</i> L.	Africa and Asia	Medicine (Rama Rao, 1914)
172	<i>Erythrina variegata</i> L.	Africa, China and Indo-Malesia	Medicine, fodder (Ambasta, 1986)
173	<i>Mimosa diplotricha</i> C. Wight ex Sanvalle	Native of Trop. America, naturalised in India	Green manure (Ambasta, 1986)
174	<i>Mimosa pudica</i> L.	Native of S. America, naturalised in India	Medicine (Kirtikar & Basu, 1918)
175	<i>Neonotonia wightii</i> (Graham ex Wight & Arn.) Lackey	Africa, India and Sri Lanka	Not known
176	<i>Pterocarpus marsupium</i> Roxb.	India and Sri Lanka	Medicine, timber (Ambasta, 1986)
177	<i>Pueraria phaseoloides</i> (Roxb.) Benth.	Trop. Asia	Cover crop
178	<i>Senna hirsuta</i> (L.) Irwin & Barneby	Native of Trop. America, naturalised in India	Not known
179	<i>Smithia bigemina</i> Dalz.	India and Pakistan	Not known
180	<i>Vigna dalzelliana</i> (O. Kzte.) Verdc.	Western Ghats	Food (Ambasta, 1986)
181	<i>Zornia gibbosa</i> Span.	Indo-Malesia to Australia	Medicine, fodder (Ambasta, 1986)
	<b>41. Flacourtiaceae</b>		
182	<i>Casearia graveolens</i> Dalz.	India, Indo-China and Pakistan	Not known
183	<i>Casearia rubescens</i> Dalz.	Southern Western Ghats	Not known
184	<i>Flacourtia montana</i> Graham	India	Medicine, food (Ambasta, 1986)
185	<i>Hydnocarpus alpina</i> Wight	S. India and Sri Lanka	Medicine (Ambasta, 1986)
186	<i>Scolopia crenata</i> (Wight & Arn.) Clos	Indo-Malesia	Food (Bourdillon, 1908)
	<b>42. Gesneriaceae</b>		
187	<i>Aeschynanthus perrottetii</i> A. DC.	Western Ghats	Not known
188	<i>Rhynchoglossum notonianum</i> (Wall.) Burt	India and Sri Lanka	Not known
	<b>43. Haemodoraceae</b>		
189	<i>Ophiopogon intermedius</i> D. Don	India	Medicine (Ambasta, 1986)
	<b>44. Hypoxidaceae</b>		
190	<i>Curculigo orchoides</i> Gaertn.	Indo-Malesia	Medicine (Parrota, 2001)

	Name of taxa	Geographical distribution	Utility
	<b>45. Icacinaceae</b>		
191	<i>Nothapodytes nimmoniana</i> (Graham) Mabb.	China and Indo-Malesia	Medicine, food (Ambasta, 1986)
	<b>46. Lamiaceae</b>		
192	<i>Isodon lophanthoides</i> (Buch.-Ham. ex D. Don) H. Hara	Western Ghats	Not known
193	<i>Ocimum gratissimum</i> L.	Pantropical	Medicine (Kirtikar & Basu, 1918)
194	<i>Pogostemon benghalensis</i> (Burm. f.) O. Ktze.	India	Medicine (Caius, 1986)
195	<i>Scutellaria violacea</i> Heyne ex Benth.	S. India and Sri Lanka	Ornamental (Rama Rao, 1914)
	<b>47. Lauraceae</b>		
196	<i>Actinodaphne bourdillonii</i> Gamble	Southern Western Ghats	Not known
197	<i>Actinodaphne wightiana</i> (Kuntze) Noltie	Southern Western Ghats	Not known
198	<i>Cinnamomum macrocarpum</i> Hook. f.	Western Ghats	Not known
199	<i>Cryptocarya beddomei</i> Gamble	Southern Western Ghats	Not known
200	<i>Cryptocarya stocksii</i> Meissn.	Southern Western Ghats	Not known
201	<i>Litsea coriacea</i> (Heyne ex Nees) Hook. f.	Peninsular India	Soft wood (Ambasta, 1986)
202	<i>Litsea deccanensis</i> Gamble	South India	Soft wood (Ambasta, 1986)
203	<i>Litsea keralana</i> Kosterm.	Western Ghats	Not known
204	<i>Litsea laevigata</i> (Nees) Gamble	Southern Western Ghats	Not known
205	<i>Litsea oleoides</i> (Meissn.) Hook. f.	Southern Western Ghats	Not known
206	<i>Litsea wightiana</i> (Nees) Hook. f.	Western Ghats	Not known
207	<i>Machilus macrantha</i> Nees	India and Sri Lanka	Medicine (Ambasta, 1986)
208	<i>Neolitsea cassia</i> (L.) Kosterm.	Indo-Malesia	Medicine, timber (Ambasta, 1986)
209	<i>Neolitsea foliosa</i> (Nees) Gamble	Western Ghats	Not known
	<b>48. Leeaceae</b>		
210	<i>Leea indica</i> (Burm. f.) Merr.	Australia, China and Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
	<b>49. Lentibulariaceae</b>		
211	<i>Utricularia aurea</i> Lour.	Indo-Malesia to Australia	Not known
	<b>50. Liliaceae</b>		
212	<i>Asparagus racemosus</i> Willd.	Paleotropics	Medicine (Parrota, 2001)
	<b>51. Loganiaceae</b>		
213	<i>Strychnos colubrina</i> L.	Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
	<b>52. Loranthaceae</b>		
214	<i>Taxillus tomentosus</i> (Heyne ex Roth) Tieghem	India and Sri Lanka	Not known
	<b>53. Lythraceae</b>		
215	<i>Lagerstroemia microcarpa</i> Wight	Western Ghats	Medicine (Ambasta, 1986)

	Name of taxa	Geographical distribution	Utility
	<b>54. Malvaceae</b>		
216	<i>Abutilon persicum</i> (Burm.f.) Merr.	China and Indo-Malesia	Not known
217	<i>Sida acuta</i> Burm. f.	Pantropical	Medicine (Caius, 1986)
218	<i>Sida alnifolia</i> L.	Indo-Malesia	Not known
219	<i>Sida rhombifolia</i> L.	Pantropical	Medicine (Kirtikar & Basu, 1918)
220	<i>Sida rhomboidea</i> Roxb. ex Fleming	Peninsular India	Not known
221	<i>Urena lobata</i> L.	Pantropical	Medicine (Caius, 1986)
	<b>55. Marantaceae</b>		
222	<i>Schumannianthus virgatus</i> (Roxb.) Rolfe	S. India and Sri Lanka	Not known
	<b>56. Melastomaceae</b>		
223	<i>Clidemia hirta</i> (L.) D. Don	Native of S. America, naturalised in India	Not known
224	<i>Memecylon angustifolium</i> Wight	S. India and Sri Lanka	Medicine (Ambasta, 1986)
	<b>57. Meliaceae</b>		
225	<i>Aglaia barberi</i> Gamble	Western Ghats	Not known
226	<i>Aphanamixis polystachya</i> (Wall.) Parker	Indian subcontinent	Medicine (Kirtikar & Basu, 1918)
227	<i>Cipadessa baccifera</i> (Roth) Miq.	Indo-Malesia	Medicine (Parrota, 2001)
228	<i>Dysoxylum malabaricum</i> Bedd. ex Hiern	southern Western Ghats	Medicine (Ambasta, 1986)
229	<i>Toona ciliata</i> Roem.	India and Myanmar	Medicine, timber (Parrota, 2001)
230	<i>Trichilia connaroides</i> (Wight & Arn.) Benth.	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>58. Menispermaceae</b>		
231	<i>Cyclea peltata</i> (Lam.) Hook.	Indo-Malesia	Not known
232	<i>Diploclisia glaucescens</i> (Blume) Diels	China and Indo-Malesia	Medicine (Ambasta, 1986)
233	<i>Stephania wightii</i> (Arn.) Dunn	Indo-Malesia	Not known
	<b>59. Moraceae</b>		
234	<i>Antiaris toxicaria</i> Lesch.	Paleotropics	Medicine (Kirtikar & Basu, 1918)
235	<i>Ficus beddomei</i> King	Western Ghats	Not known
236	<i>Ficus callosa</i> Willd.	Indo-Malesia	Soft wood (Ambasta, 1986)
237	<i>Ficus heterophylla</i> L.f.	China and Indo-Malesia	Medicine (Ambasta, 1986)
238	<i>Ficus hispida</i> L. f.	Indo-Malesia to Australia	Medicine (Parrota, 2001)
239	<i>Ficus laevis</i> Blume var. <i>macrocarpa</i> (Miq.) Corner	Southern Western Ghats	Not known
240	<i>Ficus mollis</i> Vahl	India and Sri Lanka	Not known
241	<i>Ficus nervosa</i> Heyne ex Roth	Indo-Malesia to Australia	Not known
242	<i>Ficus pumila</i> L.	Asia	Ornamental
243	<i>Ficus rigida</i> Jack var. <i>bracteata</i> (Corner) Bennet	Southern Western Ghats	Not known

	Name of taxa	Geographical distribution	Utility
244	<i>Ficus tinctoria</i> G. Forst. ssp. <i>gibbosa</i> (Blume) Corner var. <i>cuspidifera</i> (Miq.) Chithra	Indo-Malesia	Not known
245	<i>Ficus tinctoria</i> G. Forst. ssp. <i>parasitica</i> (Koen. ex Willd.) Corner	Indo-Malesia	Medicine (Ambasta, 1986)
246	<i>Ficus tsihela</i> Burm. f.	India and Sri Lanka	Soft wood (Ambasta, 1986)
	<b>60. Myristicaceae</b>		
247	<i>Knema attenuata</i> (Hook. f. & Thoms.) Warb.	Western Ghats	Soft wood (Ambasta, 1986)
248	<i>Myristica beddomei</i> King	India and Sri Lanka	Soft wood (Ambasta, 1986)
	<b>61. Myrsinaceae</b>		
249	<i>Maesa indica</i> (Roxb.) DC.	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>62. Myrtaceae</b>		
250	<i>Meteoromyrtus wynaadensis</i> (Bedd.) Gamble	Western Ghats	Not known
251	<i>Syzygium cumini</i> (L.) Skeels	Indo-Malesia	Medicine, food (Watt, 1972)
252	<i>Syzygium gardneri</i> Thw.	India and Sri Lanka	Not known
253	<i>Syzygium salicifolium</i> (Wight) Graham	Southern Western Ghats	Food (Ambasta, 1986)
	<b>63. Oleaceae</b>		
254	<i>Chionanthus mala-elengi</i> (Dennst.) P. S. Green ssp. <i>linocieroides</i> (Wight) P. S. Green	southern Western Ghats	Not known
255	<i>Chionanthus mala-elengi</i> (Dennst.) P. S. Green	Peninsular India	Not known
256	<i>Jasminum coarctatum</i> Roxb.	India and Sri Lanka	Ornamental
257	<i>Jasminum flexile</i> Vahl	India and Sri Lanka	Ornamental (Ambasta, 1986)
258	<i>Jasminum multiflorum</i> (Burm. f.) Andr.	Indo-Malesia and China	Medicine, ornamental (Ambasta, 1986)
259	<i>Ligustrum robustum</i> (Roxb.) Blume ssp. <i>walkerii</i> (Decne.) P. S. Green	India and Sri Lanka	Not known
260	<i>Olea dioica</i> Roxb.	India	Medicine (Ambasta, 1986)
	<b>64. Onagraceae</b>		
261	<i>Ludwigia hyssopifolia</i> (G. Don) Exell	Pantropical	Medicine (Ambasta, 1986)
262	<i>Ludwigia octovalvis</i> (Jacq.) Raven ssp. <i>sessiliflora</i> (Michx.) Raven	Pantropical	Medicine (Rama Rao, 1914)
	<b>65. Orchidaceae</b>		
263	<i>Aerides ringens</i> (Lindl.) C.E.C. Fisch.	S. India and Sri Lanka	Ornamental
264	<i>Bulbophyllum aureum</i> (Hook. f.) J.J. Smith	Southern Western Ghats	Not known
265	<i>Cottonia peduncularis</i> (Lindl.) Rchb.f.	India and Sri Lanka	Not known
266	<i>Dendrobium herbageum</i> Lindl.	Bangladesh and India	Not known
267	<i>Disperis neilgherrensis</i> Wight	S. Asia	Not known
268	<i>Eria pauciflora</i> Wight	Southern Western Ghats	Not known

	Name of taxa	Geographical distribution	Utility
269	<i>Liparis viridiflora</i> (Blume) Lindl.	Indo-Malesia	Not known
270	<i>Luisia evangeline</i> Blatt. & McCann	India and Sri Lanka	Not known
271	<i>Oberonia chandrasekharanii</i> V.J. Nair, V.S. Ramach. & R. Ansari	Southern Western Ghats	Not known
272	<i>Papilionanthe cylindrica</i> (Lindl.) Seidenf.	S. India and Sri Lanka	Not known
273	<i>Polystachya wightii</i> Rchb.f.	Southern Western Ghats	Not known
274	<i>Schoenorchis nivea</i> (Lindl.) Schltr.	S. India and Sri Lanka	Not known
275	<i>Sirhookera latifolia</i> (Wight) O. Ktze.	S. India and Sri Lanka	Not known
276	<i>Thelasis pygmaea</i> (Griff.) Lindl.	South and S. E. Asia	Not known
277	<i>Trias stocksii</i> Benth. ex Hook. f.	Southern Western Ghats	Not known
	<b>66. Oxalidaceae</b>		
278	<i>Biophytum sensitivum</i> (L.) DC.	Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
279	<i>Oxalis corniculata</i> L.	Pantropical	Medicine (Ambasta, 1986)
280	<i>Oxalis corymbosa</i> DC.	Native of Peru, naturalised in India	Green manure (Ambasta, 1986)
	<b>67. Piperaceae</b>		
281	<i>Lepianthes umbellata</i> (L.) Rafin.	Paleotropics	Not known
282	<i>Peperomia blanda</i> (Jacq.) Kunth	Peninsular India	Not known
283	<i>Peperomia tetraphylla</i> (G.Forst.) Hook. & Arn.	Pantropical	Medicine (Ambasta, 1986)
284	<i>Piper argyrophyllum</i> Miq.	India and Sri Lanka	Not known
285	<i>Piper mullesua</i> Buch.-Ham. ex D. Don	India	Medicine (Watt, 1972)
286	<i>Piper velayudhanii</i> E.S.S. Kumar & S.P. Mathew	Southern Western Ghats	Not known
	<b>68. Plantaginaceae</b>		
287	<i>Plantago erosa</i> Wall.	Pantropical	Medicine (Ambasta, 1986)
	<b>69. Poaceae</b>		
288	<i>Alloteropsis cimicina</i> (L.) Stapf	Paleotropics	Not known
289	<i>Axonopus compressus</i> (Sw.) P. Beauv.	Pantropical	Fodder (Ambasta, 1986)
290	<i>Bambusa bambos</i> (L.) Voss	India and Sri Lanka	Medicine, food, fodder (Ambasta, 1986)
291	<i>Cynodon dactylon</i> (L.) Pers.	Pantropical	Medicine (Parrota, 2001)
292	<i>Cyrtococcum longipes</i> (Wight & Arn. ex Hook.f.) A. Camus	Western Ghats	Not known
293	<i>Digitaria longiflora</i> (Retz.) Pers.	Paleotropics	Fodder (Ambasta, 1986)
294	<i>Eleusine indica</i> (L.) Gaertn.	Pantropical	Medicine (Ambasta, 1986)
295	<i>Eragrostis tenella</i> (L.) P. Beauv. ex Roem. & Schult.	Paleotropics	Not known
296	<i>Eragrostis uniolioides</i> (Retz.) Nees ex Steud.	Africa, South and S.E. Asia	Not known

	Name of taxa	Geographical distribution	Utility
297	<i>Melinis repens</i> (Willd.) Zizka	Africa and India	Not known
298	<i>Oplismenus compositus</i> (L.) P. Beauv.	Pantropical	Not known
299	<i>Panicum brevifolium</i> L.	Paleotropics	Not known
300	<i>Pennisetum polystachyon</i> (L.) Schult.	Paleotropics	Fodder (Ambasta, 1986)
301	<i>Pseudechinolaena polystachya</i> (HBK) Stapf	Paleotropics	Fodder (Ambasta, 1986)
302	<i>Setaria palmifolia</i> (Koenig) Stapf	Paleotropics	Medicine, food (Ambasta, 1986)
303	<i>Setaria pumila</i> (Poir.) Roem. & Schult.	Paleotropics	Not known
304	<i>Themeda triandra</i> Forssk.	Paleotropics	Medicine, food (Ambasta, 1986)
	<b>70. Polygalaceae</b>		
305	<i>Xanthophyllum arnotianum</i> Wight	Western Ghats	Green manure (Ambasta, 1986)
	<b>71. Polygonaceae</b>		
306	<i>Persicaria chinensis</i> (L.) Gross	China and Indo-Malesia	Medicine (Ambasta, 1986)
307	<i>Persicaria glabra</i> (Willd.) Gomez	Paleotropics	Medicine, food (Ambasta, 1986)
308	<i>Persicaria nepalensis</i> (Meisner) Gross	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>72. Portulacaceae</b>		
309	<i>Portulaca oleracea</i> L.	Pantropical	Medicine (Parrota, 2001)
310	<i>Talinum portulacifolium</i> (Forssk.) Aschers & Schweinf	Pantropical	Medicine, food (Ambasta, 1986)
	<b>73. Ranunculaceae</b>		
311	<i>Naravelia zeylanica</i> (L.) DC.	S.E. Asia	Medicine (Ambasta, 1986)
	<b>74. Rhamnaceae</b>		
312	<i>Smythea bombaiensis</i> (Dalz.) Banerjee & P.K. Mukh.	Western Ghats	Not known
313	<i>Ziziphus rugosa</i> Lam.	Bangladesh, India, Myanmar and Sri Lanka	Medicine, food (Ambasta, 1986)
	<b>75. Rhizophoraceae</b>		
314	<i>Carallia brachiata</i> (Lour.) Merr.	Australia and Indo-Malesia	Medicine, timber (Ambasta, 1986)
	<b>76. Rosaceae</b>		
315	<i>Prunus ceylanica</i> (Wight) Miq.	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>77. Rubiaceae</b>		
316	<i>Chassalia curviflora</i> (Wall. ex Kurz) Thw. var. <i>longifolia</i> (Dalz.) Hook.f.	Indo-Malesia	Not known
317	<i>Chassalia curviflora</i> (Wall. ex Kurz) Thw. var. <i>ophioxylodes</i> (Wall.) Deb & Krishna	Indo-Malesia	Not known
318	<i>Haldina cordifolia</i> (Roxb.) Ridsd.	India, Indo-China, Myanmar and Sri Lanka	Medicine (Parrota, 2001)
319	<i>Ixora coccinea</i> L.	India and Sri Lanka	Medicine, ornamental (Ambasta, 1986)
320	<i>Ixora elongata</i> Heyne ex G. Don	India	Not known

	Name of taxa	Geographical distribution	Utility
321	<i>Ixora predepii</i> Anoop & Harikrishnan	Southern Western Ghats	Ornamental
322	<i>Mitracarpus hirtus</i> (L.) DC.	Native of Trop. Africa and America, naturalised in India	Not known
323	<i>Morinda citrifolia</i> L.	Indo-Malesia to Australia	Medicine, food (Ambasta, 1986)
324	<i>Mussaenda frondosa</i> L.	Peninsular India	Medicine (Ambasta, 1986)
325	<i>Neanotis decipiens</i> (Hook. f.) Lewis	Western Ghats	Not known
326	<i>Neanotis tubulosa</i> (G. Don) Mabb.	India and Sri Lanka	Not known
327	<i>Oldenlandia corymbosa</i> L.	Pantropical	Medicine (Parrota, 2001)
328	<i>Ophiorhiza barberi</i> Gamble	Southern Western Ghats	Not known
329	<i>Ophiorrhiza mungos</i> L.	India, Myanmar and Sri Lanka	Medicine (Ambasta, 1986)
330	<i>Oxyceros rugulosus</i> (Thw.) Tirveng.	S. India and Sri Lanka	Not known
331	<i>Pavetta indica</i> L.	India and Sri Lanka	Medicine (Kirtikar & Basu, 1918)
332	<i>Pavetta zeylanica</i> (Hook. f.) Gamble	S. India and Sri Lanka	Not known
333	<i>Richardia scabra</i> L.	Native of Trop. America, naturalised in India	Medicine (Ambasta, 1986)
334	<i>Rubia cordifolia</i> L.	Africa, Asia and Europe	Medicine (Kirtikar & Basu, 1918)
335	<i>Spermacoce latifolia</i> Aubl.	Native of Trop. America, naturalised in India	Not known
336	<i>Spermacoce ocymoides</i> Burm.f.	Indo-Malesia to Trop. Africa	Not known
	<b>78. Rutaceae</b>		
337	<i>Acronychia pedunculata</i> (L.) Miq.	Indo-Malesia and China	Medicine (Ambasta, 1986)
338	<i>Atalantia wightii</i> Tanaka	Indo-Malesia	Not known
339	<i>Clausena indica</i> (Dalz.) Oliver	India and Sri Lanka	Food (Ambasta, 1986)
340	<i>Glycosmis pentaphylla</i> (Retz.) DC.	Indo-Malesia	Medicine (Watt, 1972)
341	<i>Limonia acidissima</i> L.	Indo-Malesia	Medicine, food (Ambasta, 1986)
342	<i>Melicope lunu-ankenda</i> (Gaertn.) Hartley	Indo-Malesia	Medicine, soft wood (Ambasta, 1986)
343	<i>Murraya paniculata</i> (L.) Jack	Australia and Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
	<b>79. Sabiaceae</b>		
344	<i>Meliosma pinnata</i> (Roxb.) Maxim. ssp. <i>barbulata</i> (Cufod.) Beus.	China and Indo-Malesia	Medicine (Ambasta, 1986)
	<b>80. Santalaceae</b>		
345	<i>Scleropyrum pentandrum</i> (Dennst.) Mabb.	India and Sri Lanka	Not known
	<b>81. Sapindaceae</b>		
346	<i>Allophylus cobbe</i> (L.) Raeusch.	S. India and S.E. Asia	Medicine, food (Ambasta, 1986)

	Name of taxa	Geographical distribution	Utility
347	<i>Cardiospermum halicacabum</i> L.	Pantropical	Medicine (Parrota, 2001)
348	<i>Dimocarpus longan</i> Lour.	Indo-Malesia	Medicine (Ambasta, 1986)
349	<i>Filicium decipiens</i> (Wight & Arn.) Thw.	India and Sri Lanka	Timber (Ambasta, 1986)
350	<i>Lepisanthes erecta</i> (Thw.) Leenh.	India, Myanmar and Sri Lanka	Not known
351	<i>Schleichera oleosa</i> (Lour.) Oken	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>82. Sapotaceae</b>		
352	<i>Chrysophyllum roxburghii</i> G. Don	Trop. Asia	Food, soft wood (Ambasta, 1986)
353	<i>Isonandra perrottetiana</i> A.DC.	Southern Western Ghats	Not known
354	<i>Palaquium ellipticum</i> (Dalz.) Baill.	Western Ghats	Gum (Ambasta, 1986)
	<b>83. Scrophulariaceae</b>		
355	<i>Artanema longifolium</i> (L.) Vatke	Indo-Malesia	Not known
356	<i>Lindernia rotundifolia</i> (L.) Mukerjee	Paleotropics	Not known
357	<i>Mazus pumilus</i> (Burm. f.) Steenis	Trop. Asia	Not known
358	<i>Mecardonia procumbens</i> (Mill.) Small	Native of Trop. America, naturalised in India	Not known
359	<i>Scoparia dulcis</i> L.	Native of Trop. America, naturalised in India	Medicine (Ambasta, 1986)
	<b>84. Smilacaceae</b>		
360	<i>Smilax zeylanica</i> L.	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>85. Solanaceae</b>		
361	<i>Nicandra physalodes</i> (L.) Gaertn.	Native of S. America, naturalised in India	Medicine (Ambasta, 1986)
362	<i>Physalis angulata</i> L.	Africa, Australia and Trop. Asia	Medicine (Ambasta, 1986)
363	<i>Physalis peruviana</i> L.	Native of S. America, naturalised in India	Medicine (Ambasta, 1986)
364	<i>Solanum americanum</i> Mill., Gard.	Tropics	Not known
365	<i>Solanum erianthum</i> D. Don	South and S.E. Asia	Medicine (Ambasta, 1986)
366	<i>Solanum torvum</i> Sw.	Native of West Indies, naturalised in India	Medicine (Ambasta, 1986)
367	<i>Solanum virginianum</i> L.	Australia and Trop. Asia	Medicine (Ambasta, 1986)
	<b>86. Staphyleaceae</b>		
368	<i>Turpinia malabarica</i> Gamble	S. India and Sri Lanka	Not known
	<b>87. Sterculiaceae</b>		
369	<i>Helicteres isora</i> L.	Indo-Malesia	Medicine (Kirtikar & Basu, 1918)

	Name of taxa	Geographical distribution	Utility
370	<i>Sterculia balanghas</i> L.	Indo-Malesia	Medicine (Ambasta, 1986)
371	<i>Sterculia guttata</i> Roxb. ex DC.	Indo-Malesia	Food (Rama Rao, 1914)
	<b>88. Symplocaceae</b>		
372	<i>Symplocos cochinchinensis</i> (Lour.) Moore ssp. <i>laurina</i> (Retz.) Nooteb.	India to Indo-China	Medicine (Ambasta, 1986)
	<b>89. Tiliaceae</b>		
373	<i>Grewia tilifolia</i> Vahl	India, Myanmar, Sri Lanka and Trop. Africa	Medicine (Kirtikar & Basu, 1918)
374	<i>Triumfetta rhomboidea</i> Jacq.	Pantropical	Not known
	<b>90. Ulmaceae</b>		
375	<i>Trema orientalis</i> (L.) Blume	Asia, Australia and Trop. Africa	Medicine (Parrota, 2001)
	<b>91. Urticaceae</b>		
376	<i>Boehmeria glomerulifera</i> Miq.	Indo-Malesia	Not known
377	<i>Debregeasia longifolia</i> (Burm. f.) Wedd.	Indo-Malesia	Not known
378	<i>Elatostema lineolatum</i> Wight	India, Myanmar and Sri Lanka	Not known
379	<i>Girardinia diversifolia</i> (Link) Friis	Trop. Asia	Medicine (Ambasta, 1986)
380	<i>Laportea interrupta</i> (L.) Chew	Paleotropics	Medicine (Ambasta, 1986)
381	<i>Oreocnide integrifolia</i> (Gaud.) Miq.	India, Myanmar and Sri Lanka	Not known
382	<i>Pilea kingii</i> C.E.C. Fisch.	Southern Western Ghats	Not known
383	<i>Pilea melastomoides</i> (Poir.) Blume	Indo-Malesia	Not known
384	<i>Pilea microphylla</i> (L.) Liebm.	Native of S. America, naturalised in India	Medicine (Ambasta, 1986)
385	<i>Pouzolzia wightii</i> Bennett	Southern Western Ghats	Soap (Ambasta, 1986)
386	<i>Procris crenata</i> Robins.	Africa and Indo-Malesia	Not known
	<b>92. Verbenaceae</b>		
387	<i>Callicarpa tomentosa</i> (L.) L.	India and Sri Lanka	Medicine (Parrota, 2001)
388	<i>Clerodendrum infortunatum</i> L.	Indo-Malesia	Medicine (Kirtikar & Basu, 1918)
389	<i>Gmelina arborea</i> Roxb.	Indo-Malesia	Medicine (Ambasta, 1986)
390	<i>Stachytarpheta jamaicensis</i> (L.) Vahl	Pantropical	Medicine (Ambasta, 1986)
	<b>93. Vitaceae</b>		
391	<i>Cayratia pedata</i> (Lam.) A. Juss. ex Gagnep	Indo-Malesia	Medicine (Ambasta, 1986)
	<b>94. Zingiberaceae</b>		
392	<i>Hedychium flavescens</i> Carey ex Rosc.	India and Sri Lanka	Not known

Table 3. Check List of introduced/ cultivated flowering plants in ICRI campus

	Name of taxa	Family
1	<i>Acalypha amentacea</i> Roxb. ssp. <i>wilkesiana</i> (Muell.-Arg.) Fosb.	Euphorbiaceae
2	<i>Adenocalymna alliaceum</i> Miers	Bignoniaceae
3	<i>Agave salmiana</i> var. <i>ferox</i> (K.Koch) Gentry	Agavaceae
4	<i>Albizia chinensis</i> (Osbeck) Merr.	Fabaceae
5	<i>Albizia saman</i> (Jacq.) F. Muell.	Fabaceae
6	<i>Allamanda cathartica</i> L.	Apocynaceae
7	<i>Alpinia galanga</i> (L.) Sw.	Zingiberaceae
8	<i>Alternanthera tenella</i> Colla var. <i>versicolor</i> (Lem.) Veldkamp	Amaranthaceae
9	<i>Ammomum subulatum</i> Roxb.	Zingiberaceae
10	<i>Areca catechu</i> L.	Arecaceae
11	<i>Aristolochia ringens</i> Vahl	Aristolochiaceae
12	<i>Averrhoa carambola</i> L.	Oxalidaceae
13	<i>Bambusa vulgaris</i> Schrad.	Poaceae
14	<i>Bidens sulphurea</i> (Cav.) Sch.-Bip.	Asteraceae
15	<i>Bixa orellana</i> L.	Bixaceae
16	<i>Bougainvillea spectabilis</i> Willd.	Nyctaginaceae
17	<i>Brugmansia arborea</i> (L.) Steud.	Solanaceae
18	<i>Brugmansia suaveolens</i> (Humb. & Bonpl. ex Willd.) Bercht. & Presl	Solanaceae
19	<i>Cajanus cajan</i> (L.) Millsp.	Fabaceae
20	<i>Canna indica</i> L.	Cannaceae
21	<i>Capsicum annum</i> L.	Solanaceae
22	<i>Capsicum frutescens</i> L.	Solanaceae
23	<i>Catharanthus roseus</i> (L.) G. Don	Apocynaceae
24	<i>Bambusa vulgaris</i> Schrad.	Poaceae
25	<i>Cassia fistula</i> L.	Fabaceae
26	<i>Ceiba pentandra</i> (L.) Gaertn.	Bombacaceae
27	<i>Cestrum nocturnum</i> L.	Solanaceae
28	<i>Chrysophyllum cainito</i> L.	Sapotaceae
29	<i>Cinnamomum verum</i> Presl	Lauraceae
30	<i>Citrus maxima</i> (Burm.f.) Merr.	Rutaceae
31	<i>Citrus reticulata</i> Blanco	Rutaceae
32	<i>Cleome speciosa</i> Kunth	Capparaceae
33	<i>Cocos nucifera</i> L.	Arecaceae
34	<i>Codiaeum variegatum</i> (L.) A. Juss.	Euphorbiaceae
35	<i>Coffea arabica</i> L.	Rubiaceae
36	<i>Coffea robusta</i> Lind.	Rubiaceae
37	<i>Corypha umbraculifera</i> L.	Arecaceae
38	<i>Costus pictus</i> D. Don ex Lindl.	Costaceae
39	<i>Crossandra infundibuliformis</i> (L.) Nees	Acanthaceae
40	<i>Cuphea hyssopifolia</i> Kunth	Lythraceae
41	<i>Curcuma longa</i> L.v	Zingiberaceae
42	<i>Cyphomandra betacea</i> (Cav.) Sendt.	Solanaceae
43	<i>Cyrtostachys renda</i> Blume	Arecaceae
44	<i>Delonix regia</i> (Boj. ex Hook.) Rafin.	Fabaceae
45	<i>Duranta erecta</i> L.	Verbenaceae
46	<i>Dyopsis lutescens</i> (Wendl.) Beentje & Dransf.	Arecaceae
47	<i>Elaeocarpus sphaericus</i> (Gaertn.) K. Schum.	Elaeocarpaceae
48	<i>Elettaria cardamomum</i> (L.) Maton	Zingiberaceae
49	<i>Epipremnum pinnatum</i> c. v. <i>Aureum</i> Nicolson	Araceae
50	<i>Erigeron karvinskianus</i> DC.	Asteraceae
51	<i>Erythrina subumbrans</i> (Hassk.) Merr.	Fabaceae
52	<i>Etilingera elatior</i> (Jack) R. M. Smith	Zingiberaceae
53	<i>Eucalyptus grandis</i> Hill ex Maid.	Myrtaceae
54	<i>Eugenia uniflora</i> L.	Myrtaceae
55	<i>Euphorbia milii</i> Desmoul	Euphorbiaceae
56	<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch	Euphorbiaceae
57	<i>Ficus elastica</i> Roxb. ex Hornem.	Moraceae
58	<i>Furcraea foetida</i> (L.) Haworth	Agavaceae
59	<i>Garcinia gummi-gutta</i> (L.) Robs.	Clusiaceae
60	<i>Gardenia resinifera</i> Roth	Rubiaceae
61	<i>Gliricidia sepium</i> (Jacq.) Kunth ex Walp.	Fabaceae
62	<i>Graptophyllum pictum</i> (L.) Griff.	Acanthaceae
63	<i>Grevillea robusta</i> Cunn.	Proteaceae
64	<i>Hedychium flavescens</i> Carey ex Rosc.	Zingiberaceae
65	<i>Hemerocallis fulva</i> (L.) L. var. <i>aurantiaca</i> (Baker) M. Hotta	Xanthorrhoeaceae
66	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae
67	<i>Hibiscus schizopetalus</i> (Dyer) Hook.f.	Malvaceae
68	<i>Hippeastrum vittatum</i> (L'Hér.) Herb.	Amaryllidaceae
69	<i>Hymenocallis littoralis</i> (Jacq.) Salisb.	Amaryllidaceae
70	<i>Hypoestes sanguinolenta</i> Hook.	Acanthaceae
71	<i>Ixora javanica</i> (Blume) DC.	Rubiaceae
72	<i>Jacaranda mimosifolia</i> D. Don	Bignoniaceae
73	<i>Jasminum sambac</i> (L.) Ait.	Oleaceae
74	<i>Lagerstroemia speciosa</i> (L.) Pers.	Lythraceae
75	<i>Leucaena leucocephala</i> (Lam.) de Wit	Fabaceae
76	<i>Licuala grandis</i> Wendl.	Arecaceae
77	<i>Livistona chinensis</i> (Jacq.) R.Br. ex Mart.	Arecaceae
78	<i>Lycopersicon esculentum</i> Mill.	Solanaceae
79	<i>Macadamia integrifolia</i> Maiden & Betche	Proteaceae
80	<i>Macrotyloma uniflorum</i> (Lam.) Verdc.	Fabaceae
81	<i>Maesopsis eminii</i> Engl.	Rhamnaceae
82	<i>Malvaviscus penduliflorus</i> DC.	Malvaceae
83	<i>Mangifera indica</i> L.	Anacardiaceae
84	<i>Manihot carthaginensis</i> (Jacq.) Müll. Arg. ssp. <i>glaziovii</i> (Muell.-Arg.) Allem	Euphorbiaceae
85	<i>Mirabilis jalapa</i> L.	Nyctaginaceae
86	<i>Molineria capitulata</i> (Lour.) Hebert	Hypoxidaceae

87	<i>Morus alba</i> L.	Moraceae
88	<i>Mucuna bracteata</i> DC. ex Kurz	Fabaceae
89	<i>Musa paradisiaca</i> L.	Musaceae
90	<i>Myristica fragrans</i> Houtt.	Myristicaceae
91	<i>Nicotiana tabacum</i> L.	Solanaceae
92	<i>Nymphaea omarana</i> Hort. ex Gard.	Nymphaeaceae
93	<i>Paraserianthes falcataria</i> (L.) Neils.	Fabaceae
94	<i>Persea americana</i> Mill.	Lauraceae
95	<i>Phyllanthus emblica</i> L.	Euphorbiaceae
96	<i>Phyllanthus myrtifolius</i> Moon	Euphorbiaceae
97	<i>Pimenta dioica</i> (L.) Merr.	Myrtaceae
98	<i>Piper nigrum</i> L.	Piperaceae
99	<i>Portulaca grandiflora</i> Hook.f.	Portulacaceae
100	<i>Pouteria campechiana</i> (Kunth) Baehni	Sapotaceae
101	<i>Psidium guajava</i> L.	Myrtaceae
102	<i>Punica granatum</i> L.	Proteaceae
103	<i>Racosperma melanoxylo</i> n (R.Br.) Pedley	Fabaceae
104	<i>Ravenala madagascarensis</i> Sonner.	Sterlitziaceae
105	<i>Ricinus communis</i> L.	Euphorbiaceae
106	<i>Rosa multiflora</i> Thunb.	Rosaceae
107	<i>Sambucus canadensis</i> L.	Caprifoliaceae
108	<i>Sanchezia speciosa</i> J. Wash.	Acanthaceae
109	<i>Scadoxo multiflorus</i> (Martyn) Raf.	Amaryllidaceae
110	<i>Schefflera arboricola</i> (Hayata) Merr.	Araliaceae
111	<i>Spathodea campanulata</i> P. Beauv.	Bignoniaceae
112	<i>Strobilanthes hamiltoniana</i> (Steud.) Bosser & Heine	Acanthaceae
113	<i>Swietenia macrophylla</i> King	Meliaceae
114	<i>Syzygium aromaticum</i> (L.) Merr. & Perry	Myrtaceae
115	<i>Syzygium jambos</i> (L.) Alston	Myrtaceae
116	<i>Syzygium malaccense</i> (L) Merr. & Perry	Myrtaceae
117	<i>Tagetes erecta</i> L.	Asteraceae
118	<i>Tamarindus indica</i> L.	Fabaceae
119	<i>Terminalia catappa</i> L.	Combretaceae
120	<i>Theobroma cacao</i> L.	Sterculiaceae
121	<i>Thunbergia erecta</i> (Benth.) Anders.	Acanthaceae
122	<i>Zephyranthes minuta</i> (Kunth) D. Dietr.	Amaryllidaceae
123	<i>Zingiber officinale</i> Rosc.	Zingiberaceae

The CHR, comprises the cardamom plantations and adjoining grasslands, sholas and forested areas of great biodiversity, is notified as a reserve forest by the erstwhile Travancore Government. However, large areas of the CHR were leased out for cardamom cultivation since the land was most suitable for the spice crop. The cardamom rules lay down that nothing except cardamom should be grown on the leased land and the tree canopy should be maintained, failing which, the land should revert to the government. However, large number of cases of tree felling, large-scale encroachments, illegal sale of land, deforestation for resort construction and other tourism related activities, etc., have taken place from the beginning, which is still continuing.

The indiscriminate human interactions in the delicate ecosystem of CHR in the form of loggers, poachers and grabbers, the uncontrolled application of harmful insecticides and pesticides in the cardamom plantations, etc., have severely affected the local climate of the area and even its unique micro-environment. The climatic changes in the form of rise in temperature, uneven rainfall, etc., may ultimately affect the productivity of our wonder spice queen, the Cardamom (Kerala state Biodiversity Board, 2011).

Apart from the human activities, fast-spreading invasive alien species like *Alternanthera brasiliana* (L.) Kuntze, *Chromolaena odorata* (L.) King & Robins., *Desmodium intortum* (Mill.) Urb., *Ipomoea purpurea* (L.) Roth, *Lantana camera* L., *Mimosa diplotricha* C. Wight ex Sanvalle, *Parthenium hysterophorus* L., etc. are also a threat to the native flora of CHR (Kerala state Biodiversity Board, 2011).

In this scenario, ICRI campus bears a key role in the protection of the invaluable biological wealth in the CHR and is in fact a refuge for several threatened plants of that area. In the present study, only Angiosperms were covered. ICRI campus is also rich in lower group plants like Algae, Fungi, Bryophytes and Pteridophytes. Apart from the diverse flora, the campus is home to animals like Barking Deer, Wild Boar, Indian Porcupine, Monitor Lizard, Nilgiri Marten, Bonnet Macaque, Giant Squirrel, among others. A rich variety of birds including the Malabar Grey Hornbill, Ceylon Frog Mouth and Brahmini Kite can be seen in the campus. Butterflies and insects are another unexplored group. It is very important to study the non-flowering plants and fauna of the campus to have an in-depth knowledge of the biodiversity of the campus.

Moreover, the remnants of natural vegetation endowed with biodiversity preserved throughout the campus, cool and pleasant climate, splendid scenery of



cardamom growing hills and valleys makes the campus an ideal place for ecotourism projects.

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*Asystasia crispata*



*Justicia santapau*



*Strobilanthes pulneyensis*



*Thunbergia mysorensis*



*Thunbergia tomentosa*



*Gluta travancorica*



*Holigarna nigra*



*Nothopegia racemosa*



*Meiogyne pannosa*



*Monoon fragrans*



*Hydrocotyle conferta*



*Arisaema leschnaultii*



*Thottea duchartrei*



*Impatiens dasysperma*



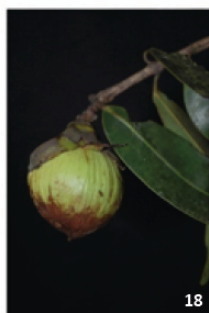
*Impatiens maculata*



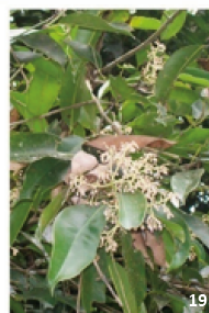
*Cullenia exarillata*



*Calophyllum calaba*



*Mesua ferrea*  
var. *coromandeliana*



*Poeciloneuron indicum*



*Belosynopsis vivipara*



*Cucumis silentvalleyi*



*Dipterocarpus indicus*



*Hopea parviflora*



*Vateria indica*



*Diospyros assimilis*

Image 1–25. Indian endemic plants found in ICRI campus



26  
*Dimorphocalyx glabellus*  
var. *lawianus*



27  
*Derris brevipes*



28  
*Desmodium wynaadense*



29  
*Vigna dalzelliana*



30  
*Casearia rubescens*



31  
*Aeschynanthus perrottetii*



32  
*Isodon lophanthoides*



33  
*Actinodaphne bourdillonii*



34  
*Actinodaphne wightiana*



35  
*Cinnamomum macrocarpum*



36  
*Cryptocarya beddomei*



37  
*Cryptocarya stocksii*



38  
*Litsea keralana*



39  
*Litsea laevigata*



40  
*Litsea oleoides*



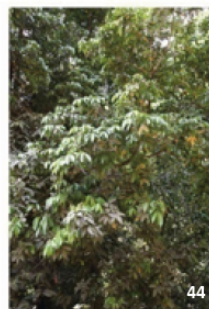
41  
*Litsea wightiana*



42  
*Neolitsea foliosa*



43  
*Lagerstroemia microcarpa*



44  
*Aglaia barberi*



45  
*Dysoxylum malabaricum*



46  
*Ficus beddomei*



47  
*Ficus laevis*  
var. *macrocarpa*



48  
*Ficus rigida*  
var. *bracteata*



49  
*Knema attenuata*



50  
*Meteromyrtus wynaadensis*

Image 26–50. Indian endemic plants found in ICRI campus



*Syzygium salicifolium*



*Chionanthus mala-elengi*  
ssp. *linocieroides*



*Bulbophyllum aureum*



*Eria pauciflora*



*Oberonia chandrasekharanii*



*Polystachya wightii*



*Trias stocksii*



*Piper velayudhanii*



*Cyrtococcum longipes*



*Ixora predeepii*



*Neanotis decipiens*



*Ophiorhiza barberi*



*Isonandra perrottetiana*



*Palaquium ellipticum*



*Pilea kingii*



*Pouzolzia wightii*

Image 51–66. Indian endemic plants found in ICRI campus





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#### Articles

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-- A.J. Solomon Raju & K. Venkata Ramana, Pp. 10757–10770

#### Communications

**Feeding habits and behaviour of *Bagre bagre* and *Genidens barbatus*, two ariid catfishes (Pisces: Siluriformes) from southeastern Brazil**

-- Maria Thereza Manhães Tavares & Ana Paula Madeira Di Benedetto, Pp. 10771–10775

**The Odonata (Insecta) of northern and central Oman**  
-- Elaine M. Cowan & Peter J. Cowan, Pp. 10776–10791

**Illustrated description and notes on biology of *Dicranocephalus lateralis* (Signoret) (Coreoidea: Stenocephalidae) from Maharashtra State, India**  
-- Balasaheb V. Sarode, Nikhil U. Joshi, Swapnil S. Boyane, Subodh S. Gaikwad, Pratik P. Pansare & Hemant V. Ghate, Pp. 10792–10803

**Floristic diversity of the Indian Cardamom Research Institute campus, Myladumpara, Western Ghats, India**  
-- Anoop P. Balan & S. Harikrishnan, Pp. 10804–10822

#### Short Communications

**Mammals of Papikonda Hills, northern Eastern Ghats, India**  
-- Vikram Aditya & Thyagarajan Ganesh, Pp. 10823–10830

**New records of the subfamily Stratiomyinae (Diptera: Stratiomyidae) from Pakistan**

-- Muhammad Asghar Hassan, Imran Bodlah, Zafar Iqbal & Rubina Jabeen, Pp. 10831–10834

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-- Sreetama Bhadra & Maumita Bandyopadhyay, Pp. 10835–10838

**A note on the population status and threats on two endemic and Endangered species of *Garcinia* of Agasthyamalai Biosphere Reserve, Tamil Nadu, India**

-- G. Manikandan & R. Ramasubbu, Pp. 10839–10845

**Feasibility study on the vegetative propagation of four endemic rare balsams (*Impatiens* spp.) through stem cuttings for conservation and management in Idukki District, Kerala, India**

-- G. Prasad, P. Rajan & N. Bhavadas, Pp. 10846–10849

#### Notes

**Observation of Shaheen Falcon *Falco peregrinus peregrinator* (Aves: Falconiformes: Falconidae) in the Nilgiris, Tamil Nadu, India**

-- Arockianathan Samson, Balasundaram Ramakrishnan, Palanisamy Santhoshkumar & Sivaraj Karthick, Pp. 10850–10852

**A first report of *Redigobius oyensi* (de Beaufort, 1913) (Teleostei: Gobionellinae) from Car Nicobar Island, India**

-- J. Praveenraj, R. Kiruba-Sankar, Lohith Kumar, J. Raymond Jani Angel & S. Dam Roy, Pp. 10853–10855

**New butterfly records from the Jammu Shiwaliks, Jammu & Kashmir, India**

-- Shakha Sharma & Neeraj Sharma, Pp. 10856–10859

**Range extension of the Indian Tortoiseshell *Aglais caschmirensis aesis* (Fruhstorfer, 1912) (Lepidoptera: Nymphalidae) into the hills of Manipur, India**

-- Jatishwor Singh Irungbam, Harmenn Huidrom & Baleshwar Singh Soibam, Pp. 10860–10864