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Census of Endemic Flowering Plants of Kerala, India

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Abstract: The present study contains the census of endemic flowering plants of Kerala state, India. A total of 344 endemic taxa belong to 175 genera of 65 families are compiled and presented. The distribution and reference to each taxon are provided. Analysis of the families revealed that Poaceae (50) has the highest number of endemic species followed by Rubiaceae (37) and Orchidaceae (24).

Key words: Endemic, flowering plants, biodiversity, Kerala, India

INTRODUCTION

The word endemic is ascribed to any taxon, which has a restricted distribution. Endemics are commonly categorized in four contexts of spatial distribution, (1) site or restricted area, (2) biotope, (3) biogeographical region and (4) political area. India is rich ecologically, biologically and culturally; in biodiversity it is one of the richest in the world being one among the twelve mega-biodiversity countries of the world.

Kerala is considered as one of the most biologically rich state on the tropical Malabar Coast of South Western India. It falls under the Malabar (Western Ghats) region of the nine biogeographic regions of India. Flora of Kerala shows striking similarity with many countries of the Middle East, Central Asia, China and East Africa besides Australia and America. Study of Endemism within the Kerala state has been attempted in past. The first attempt to prepare a list of endemic plants of Kerala was made by Ahmedullah and Nayar (1986) who estimated 132 species. Singh and Subramanyan (1991) enumerated 108 species as endemic to Kerala. Manilal and Raveendrakumar (1998) reviewed the floristic studies in Kerala. According to Mohanan and Nair (1999) there are over 4000 species are found in the state (the source of this estimate is unknown) and they provided a list of 165 endemic taxa, which is also not very exhaustive.

In view of incomplete information and underestimation of endemic plants of Kerala, an attempt of preparation of detailed census of endemic plants was done, based on field studies, taxonomic literature and herbarium collections deposited at Central National Herbarium (CNH), Howrah (CAL), Botanical Survey of India (BSI) Herbarium, Coimbatore (MH) and Kerala Forest Research Institute, Trivandrum (KFRI). The present study brings to light as many as 344 endemic flowering plants of Kerala state.

Study Area

Several field studies were undertaken in Kerala state during Western Ghat Biodiversity project (1999-2003). Kerala is one of the smallest Indian States lies on the south-west corner of the Peninsula between 8° 18' and 12° 48' N latitude and 74° 54' and 77° 12' E longitude. It is bounded Tamil Nadu

and Karnataka on the east and northeast, Indian Ocean and islands of Lakshadweep on south and west, respectively. Kerala is one of four states that comprise the linguistic-cultural region known as South India. The total area is 38, 863 sq km, which is only about 1.8% of the total geographical area of India. Kerala's coast runs for some 580 km, while state itself varies between 35 to 120 km in width. It lies near the center of Indian tectonic plate, as such most of the state is subject to comparatively little seismic and volcanic activity. Geographically, Pre-Cambrian and Pleistocene formations comprise the bulk of Kerala's terrain. The total forest area is 15.577 km², which is about 40% of total geographical area of the state.

Administratively, Kerala has 14 districts: Alappuzha, Ernakulam, Idukki, Kannur, Kasaragod, Kollam, Kottayam, Kozhikode, Malappuram, Palakkad, Pathanamthitta, Kasaragod, Kollam, Kottayam, Kozhikode, Malappuram, Palakkad, Pathanamthitta, Thiruvananthapuram, Thrissur and Waynad. Kerala enjoys a moderately warm-humid tropical climate with very little variation in temperature. The four main seasons are winter (Jan.-Feb.), summer (March-May), south-west monsoon (June-Sept.) and north-east monsoon (Aug.-Dec.). The average annual rainfall in the state varies from 1016 to 7620 mm. The forests of the state are classified into wet evergreen, semi-evergreen, moist deciduous, dry deciduous and thorn forest types. Besides, there are estuarine vegetation, Grasslands and fresh water swamps (*Myristica* swamp) and other seral types spread over limited areas. Major of the portion of the forest area is under Western Ghats, which is one of the known hotspot of the world.

Enumeration

Information about the endemic flowering plant taxa is presented family and genus-wise alphabetically (Table 1). The IUCN threatened category (E: Endangered; V: Vulnerable; R: Rare; I: Indeterminate) is also given in parenthesis after plant name. Additional information such as distribution of the taxon in the state and the reference number to the concerned publication are provided.

Table 1: List of endemic flowering plants of Kerala

Taxon*	Distribution	References
Acanthaceae		
<i>Barleria paniculata</i> Wall.	Cochin, Travancore	Ahmedullah and Nayar, 1986
<i>Justicia ekakusuma</i> Pradeep and Sivar.	Kannur (Malai)	Mohan and Nair, 1999
<i>Kanjarum palghatense</i> Ramamurthy	Palakkad	Pradeep and Sivarajan, 1991
<i>Lepidagathis keralensis</i> Madhu. and Singh	Thrissur (Anthikad)	Madhusoodanan and Singh, 1992
<i>Strobilanthes lawsonii</i> Gamble	Palakkad (Silent Valley)	Ahmedullah and Nayar, 1986
Anacardiaceae		
<i>Buchanania barberi</i> Gamble (E)	Travancore	Ahmedullah and Nayar, 1986
<i>Buchanania lanceolata</i> Wt.	Kollam, Travancore	Ahmedullah and Nayar, 1986
<i>Nothopegia beddomei</i> Gamble var.	Wynad	Ellis and Chandrasekharan, 1970
<i>wynadica</i> Ellis and Chandr.		
Annonaceae		
<i>Orophea malabarica</i> Sasi. and Sivar.	All districts	Sasidharan and Sivarajan, 1990a
<i>Pheanthus malabaricus</i> Bedd. (V)	Travancore	Ahmedullah and Nayar, 1986
<i>Polyalthia shendurunii</i> Basha and Sasi.	Kollam (Shenduruni)	Chandbasha and Sasidharan, 1994
<i>Sage raea grandiflora</i> Dunn (E)	Kollam	Ahmedullah and Nayar, 1986
Apiaceae		
<i>Peucedanum josephianum</i>	Thiruvananthapuram	Wadhwa and Chowdhery, 1990
Wadhwa and Chowdhery	(Agasthyamala)	
Aponogetonaceae		
<i>Aponogeton appendiculatus</i> Bruggen	Alappuzha (Vembanad)	Bruggen, 1968
Aquifoliaceae		
<i>Ilex garchneriana</i> Wight	Palakkad (Silent Valley)	Biju, 1999
Araceae		
<i>Amorphophallus bonaccordensis</i>	Thiruvananthapuram	Sivadasan and Mohanan, 1994
Sivadasan and Mohanan	(Bonaccord)	

Table 1: Continued

Taxon*	Distribution	References
<i>Amorphophallus nicosianus</i> Sivadasan	Palakkad (Silent Valley) and	Sivadasan, 1986
<i>Amorphophallus smithsonianus</i> Sivadasan	Thiruvananthapuram (Agasthyamala)	Sivadasan, 1989
<i>Arisaema agasthyarum</i> Sivadasan and Sathish.	Thiruvananthapuram (Agasthyamala)	Ahmedullah and Nayar, 1986
<i>Arisaema attenuatum</i> Barnes and Fischer	Idukki (Munnar)	Ahmedullah and Nayar, 1986
<i>Arisaema muricaudatum</i> Sivadasan	Wynad (Vythiri)	Ahmedullah and Nayar, 1986
<i>Arisaema nilamburensis</i> Sivadasan	Malappuram and Wynad	Ahmedullah and Nayar, 1986
<i>Arisaema peltatum</i> Fischer	Idukki (Munnar)	Ahmedullah and Nayar, 1986
<i>Arisaema psittacus</i> Barnes	Travancore (Chumbuvurai)	Ahmedullah and Nayar, 1986
<i>Arisaema sarracenioides</i> Barnes and Fischer	Travancore	Ahmedullah and Nayar, 1986
<i>Lagenandra nairii</i> Ramamurthy and Rajan	Thrissur (Athirapally)	Ahmedullah and Nayar, 1986
<i>Lagenandra toxicaria</i> Dalz. var. <i>barnesii</i> Fischer	Wynad (Nadgani)	Ahmedullah and Nayar, 1986
<i>Pothos crassipedunculatus</i> Sivadasan and Mohanan	Thiruvananthapuram (Agasthyamala)	Ahmedullah and Nayar, 1986
<i>Pothos keralensis</i> Pandurangan and Nair	Idukki (Meenmutty)	Ahmedullah and Nayar, 1986
<i>Thereoponum fischeri</i> Sivadasan	Palakkad (Attapadi)	Sivadasan, 1981
<i>Thereoponum infaustum</i> N.E. Br.	Kerala	Ahmedullah and Nayar, 1986
<i>Typhonium bulbiferum</i> Dalz.	Palakkad	Ahmedullah and Nayar, 1986
Araliaceae		
<i>Schefflera bourdillonii</i> Gamble (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Schefflera chandrasekharanii</i> Ramamurthy and Rajan	Idukki (Munnar)	Ramamurthy and Rajan, 1982
Araceae		
<i>Calamus dransfieldii</i> Renuka	Palakkad (Dhoni hills)	Manilal and Raveendrakumar, 1998; Renuka, 1987
<i>Calamus neelagiricus</i> Renuka	Palakkad (Silent Valley)	Manilal and Raveendrakumar, 1998
<i>Calamus vattayila</i> Renuka	Kollam, Malappuram and Wynad	Manilal and Raveendrakumar, 1998; Renuka <i>et al.</i> , 1997
Asteraceae		
<i>Anaphalis barnesii</i> Fischer (E)	Travancore (High range)	Ahmedullah and Nayar, 1986
<i>Helichrysum wightii</i> Clarke ex Hook.f.	Palakkad (Silent Valley)	Biju, 1999
<i>Vernonia anaimudica</i> Shetty and Vivek.	Idukki (Rajamala)	Ahmedullah and Nayar, 1986
<i>Vernonia beddomei</i> Hook.f.	Travancore	Ahmedullah and Nayar, 1986
<i>Vernonia bourdillonii</i> Gamble	Travancore	Ahmedullah and Nayar, 1986
<i>Vernonia heynei</i> Bedd. ex Gamble	Travancore	Mohanan and Nair, 1999
<i>Vernonia meeboldii</i> Smith	Travancore	Ahmedullah and Nayar, 1986
<i>Vernonia multibracteata</i> Gamble	Idukki (Peerumedu)	Ahmedullah and Nayar, 1986
<i>Vernonia travancorica</i> Hook.f.	Travancore	Ahmedullah and Nayar, 1986
<i>Youngia nilgiriensis</i> Babcock	Palakkad (Silent Valley)	Biju, 1999
Aristolochiaceae		
<i>Aristolochia krisagathra</i> Sivar. and Pradeep	Thiruvananthapuram	Manilal and Raveendrakumar, 1998
<i>Thottea dinghoui</i> Swarup.	Kollam (Muzhiyar)	Manilal and Raveendrakumar, 1998
<i>Thottea duchartrei</i> Sivar., Babu and Indu.	Malappuram (Kottakkal)	Manilal and Raveendrakumar, 1998
<i>Thottea idukkiana</i> Pandurangan and Nair	Idukki (Kanjayar)	Pandurangan and Nair, 1993
<i>Thottea ponnudiata</i> Sivar.	Thiruvananthapuram (Ponmudi)	Manilal and Raveendrakumar, 1998
Asclepiadaceae		
<i>Caralluma procumbens</i> Gr. and Mayur	Travancore	Ahmedullah and Nayar, 1986
<i>Ceropegia beddomei</i> Hook.f.	Travancore	Ahmedullah and Nayar, 1986
<i>Heterostemma vasudevani</i> Swarup. and Mangaly	Thrissur (Peechi)	Sasidharan and Swarupananandan, 1994
<i>Ocianthus beddomei</i> Hook.f.	Wynad	Mohanan and Nair, 1999
<i>Toxocarpus palghatensis</i> Gamble	Malabar	Mohanan and Nair, 1999
Balsaminaceae		
<i>Impatiens anaimudica</i> Fischer (E)	Travancore	Ahmedullah and Nayar, 1986
<i>Impatiens cochinnica</i> Hook.f. (I)	Cochin	Ahmedullah and Nayar, 1986
<i>Impatiens coelotropis</i> Fischer	Travancore	Ahmedullah and Nayar, 1986
<i>Impatiens concinna</i> Hook.f. (I)	Malabar	Ahmedullah and Nayar, 1986
<i>Impatiens denisonii</i> Bedd.	Palakkad (Silent Valley)	Biju, 1999
<i>Impatiens johii</i> Barnes (E)	Idukki (Kallar Valley)	Vivekananthan <i>et al.</i> , 1997

Table 1: Continued

Taxon*	Distribution	References
<i>Impatiens kulamavuensis</i> Pandurangan and Nair	Idukki (Kulamavu)	Vivekananthan <i>et al.</i> , 1997
<i>Impatiens rheedii</i> Wt and Arn.	Malabar (low elevations)	Vivekananthan <i>et al.</i> , 1997
<i>Impatiens macrocarpa</i> Hook.f	Idukki (Devicolam)	Ahmedullah and Nayar, 1986
<i>Impatiens munronii</i> Wt	Palakkad (Silent Valley)	Biju, 1999
<i>Impatiens pallidiflora</i> Hook.f. (I)	Idukki (Devicolam)	Ahmedullah and Nayar, 1986
<i>Impatiens pandata</i> Barnes	Idukki (Anamudi)	Ahmedullah and Nayar, 1986
<i>Impatiens platyadena</i> Fischer	Idukki (Nemakad gap)	Ahmedullah and Nayar, 1986
<i>Impatiens verecunda</i> Hook.f.	Travancore	Ahmedullah and Nayar, 1986
<i>Impatiens munnarensis</i> Barnes (E)	Munnar	Ahmedullah and Nayar, 1986
<i>Impatiens sivarajanii</i> Muktesh and Stephen	Palakkad (Silent Valley)	Ahmedullah and Nayar, 1986
Begoniaceae		
<i>Begonia aliciae</i> Fischer (E)	Travancore (Kadalar Valley)	Ahmedullah and Nayar, 1986
Bombacaceae		
<i>Cullenia rosarocana</i> Koster.	Kerala (no exact location specified)	Manilal and Raveendrakumar, 1998; Mohan and Nair, 1999
Burmanniaceae		
<i>Burmammia indica</i> Jonker	Travancore	Ansari <i>et al.</i> , 1982
<i>Haplothysmia exanulata</i> Airy Shaw (I)	Palakkad (Parambikulam)	Manilal and Raveendrakumar, 1998
Caesalpiniaceae		
<i>Dialium travancoricum</i> Bourd. (I)	Thiruvananthapuram (Ponmudi)	Mohan and Nair, 1999
<i>Humboldtia unijuga</i> Bedd. var. <i>trijuga</i> Joseph and Chandr. (E)	Thiruvananthapuram (Bonaccord)	Ahmedullah and Nayar, 1986
Capparaceae		
<i>Capparis tomentolla</i> Dunn	Travancore	Ahmedullah and Nayar, 1986
Caricaceae		
<i>Carica papaya</i> L. var. <i>flava</i> Kumar and Abraham	Travancore	Manilal and Raveendrakumar, 1998
Celastraceae		
<i>Cassine kedarnathii</i> Sasi. and Swarup.	Palakkad (Attapadi)	Manilal and Raveendrakumar, 1998
Chrysobalanaceae		
<i>Atuna travancorica</i> (Bedd.) Kosterm.	Travancore	Ahmedullah and Nayar, 1986
Clusiaceae (Guttiferæ)		
<i>Garcinia echinocarpa</i> Thw. var. <i>monticola</i> Maheswari	Kasaragod (Bela)	Manilal and Raveendrakumar, 1998
<i>Garcinia rubro-echinata</i> Kosterm.	Kasaragod	Manilal and Raveendrakumar, 1998
Commelinaceae		
<i>Cyanotis arcotensis</i> Rolla Rao	Palakkad	Ahmedullah and Nayar, 1986
Convolvulaceae		
<i>Lepistemon verdcourtii</i> P. Mathew and Biju	Pathanamthitta (Konni)	Manilal and Raveendrakumar, 1998
Cordiaceae		
<i>Cordia octandra</i> DC.	Travancore	Ahmedullah and Nayar, 1986
Cucurbitaceae		
<i>Cucumella silentvalleyi</i> Manilal, var. <i>badagarensis</i> Mudaliar	Palakkad (Silent Valley)	Mohan and Nair, 1999
<i>Cucurbita maxima</i> Duch. var. <i>badagarensis</i> Mudaliar	Kozhikode (Badagara)	Manilal and Raveendrakumar, 1998
<i>Luffa umbellata</i> (Klein) Roemer	Mirittupadu	Ahmedullah and Nayar, 1986
<i>Trichosanthes cuspidata</i> Lam.	Travancore	Ahmedullah and Nayar, 1986
<i>Zehneria maysorensis</i> (Wt and Arn.) var. <i>oblonga</i> Prasad and Mini	Idukki (Kumali)	Manilal and Raveendrakumar, 1998
Cyperaceae		
<i>Fimbristylis aestivalis</i> (Retz.) Vahl var. <i>trichopoda</i> Kern.	Malabar	Manilal and Raveendrakumar, 1998
<i>Fimbristylis arnotiana</i> Boeck. (I)	Kannur	Ahmedullah and Nayar, 1986
<i>Fimbristylis dauciformis</i> Govind.	Kerala (no exact location specified)	Govindarajalu, 1985
<i>Fimbristylis hirsutifolia</i> Govind.	Malappuram (Tehnipalam)	Govindarajalu, 1985
<i>Fimbristylis humerosa</i> Govind.	Thrissur (Poringalkuthu)	Govindarajalu, 1985
<i>Fimbristylis hyalina</i> Govind. and Sasi.	Thrissur (Athirapalli)	Manilal and Raveendrakumar, 1998
<i>Fimbristylis manilaliana</i> Govind.	Calicut	Govindarajalu, 1998

Table 1: Continued

Taxon*	Distribution	References
<i>Fimbristylis perspicua</i> Govind. and Sasi.	Thrissur (Peechi)	Manilal and Raveendrakumar, 1998
<i>Fimbristylis pseudomicrocarya</i> Govind.	Palakkad (Nelliampathi)	Manilal and Raveendrakumar, 1998
<i>Fimbristylis swamyii</i> Govind.	Palakkad (Nelliampathi)	Manilal and Raveendrakumar, 1998
<i>Fimbristylis tumida</i> Govind.	Palakkad (Pothundy)	Govindarajalu, 1998
<i>Fuërena pomudiensis</i> Ravi. and Anil.	Thiruvananthapuram (Ponmudi)	Manilal and Raveendrakumar, 1998
<i>Scleria lithosperma</i> var. <i>muricata</i> Govind.	Pallathadka	Ahmedullah and Nayar, 1986
Dipterocarpaceae		
<i>Dipterocarpus bourdillonii</i> Brandis (R)	Malabar and Travancore	Ahmedullah and Nayar, 1986
Ebenaceae		
<i>Diospyros ghatensis</i> Ramesh and DeFranceschi	Kollam (Cheenikkala), Palakkad (Silent valley)	Ramesh and Franceschi, 1993
<i>Diospyros pyrrocarpoides</i> Ramesh and DeFranceschi	Kollam (Shenduruni)	Biju, 1999
<i>Diospyros sulcata</i> Bourd.	Travancore	Ahmedullah and Nayar, 1986
Eriocaulaceae		
<i>Eriocaulon kasaragodense</i> Ansari, Nair and Nair	Kasargod (Bekkal)	Ansari <i>et al.</i> , 1987
<i>Eriocaulon keralense</i> Ansari, Nair and Nair	Kasargod (Bela)	Ansari <i>et al.</i> , 1987
Euphorbiaceae		
<i>Aporosa bourdillonii</i> Stapf	Travancore	Ahmedullah and Nayar, 1986
<i>Cleistanthus sankumianus</i> Sivar. and Indu.	Malappuram (Kottakkal)	Sivarajan and Balachandran, 1985
<i>Cleistanthus travancorensis</i> Jabl.	Travancore	Ahmedullah and Nayar, 1986
<i>Croton caudatus</i> Geisel. var. <i>obovoides</i> Balakr. and Chakraba.	Kollam, Pathanamthitta, Palakkad	Manilal and Raveendrakumar, 1998
<i>Drypetes travancorica</i> (Bourd.) S.K. Jain	Travancore (High range)	Nair and Sreekumar, 1985
<i>Euphorbia katrajensis</i> Gage var. <i>kasaragodensis</i> Nair, Binoj. and Ansari	Kasargod (Bela)	Manilal and Raveendrakumar, 1998
<i>Ostodes integrifolia</i> Airy Shaw	Kerala (no exact location specified)	Manilal and Raveendrakumar, 1998
<i>Reidia megacarpa</i> Gamble	Wynad	Ahmedullah and Nayar, 1986
<i>Sauropus sakseianus</i> Manilal, Kumar and Sivar.	Palakkad (Silent valley)	Mohanan and Nair, 1999
<i>Sauropus vairieri</i> Sivar. and Indu.	Malappuram (Kottakkal)	Sivarajan and Balachandran, 1984
Gentianaceae		
<i>Exacum courtallense</i> Arn. var. <i>bommacordensis</i>	Thiruvananthapuram	Mohanan and Nair, 1999
<i>Exacum courtallense</i> Arn. var. <i>laxiflorum</i> Gamble	Travancore	Ahmedullah and Nayar, 1986
<i>Exacum travancoricum</i> Bedd.	Thiruvananthapuram (Agastyamala)	Mohanan and Nair, 1999
Gesneriaceae		
<i>Didymocarpus macrostachya</i> Barnes	Idukki	Mohanan and Nair, 1999
<i>Didymocarpus missionis</i> Wall.	Travancore	Ahmedullah and Nayar, 1986
Flacourtiaceae		
<i>Casearia rubescens</i> Dalz. var. <i>gamblei</i> Mukh.	Idukki (Peerumedu)	Manilal and Raveendrakumar, 1998
<i>Hydnocarpus penchulus</i> Manilal, Sabu and Sivar.	Palakkad (Silent valley)	Mohanan and Nair, 1999
Gramineae (Poaceae)		
<i>Arundinella cananorica</i> V.J. Nair, Sreekumar and N.C. Nair	Kasargod (Bela)	Manilal and Raveendrakumar, 1998
<i>Arundinella densiflora</i> Munro (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Bhüdeca fischeri</i> Sreekumar and Shetty	Kannur (Mukkarikandam)	Mohanan and Nair, 1999
<i>Bothriochloa parameswaranii</i> Sreekumar, Malathi and V.J. Nair	Idukki (Eravikulam)	Manilal and Raveendrakumar, 1998
<i>Chandrasekharania keralensis</i> V.J. Nair, Ramachandran and Sreekumar	Kannur (Kannoth)	Manilal and Raveendrakumar, 1998
<i>Chrysopogon tadulingamii</i> Sreekumar, V.J. Nair and N.C. Nair	Wynad (Periya)	Manilal and Raveendrakumar, 1998
<i>Chrysopogon purosithamanii</i> Ravi, Mohanan and Kiranraj	Pathanamthitta (Kokkathode)	Ravi <i>et al.</i> , 2000b

Table 1: Continued

Taxon*	Distribution	References
<i>Cymbopogon travancorensis</i> Bor	Travancore	Ahmedullah and Nayar, 1986
<i>Cymbopogon martinii</i> (Roxb.) Wats var. <i>sofia</i> Gupta	Not specified by the collectors	Manilal and Raveendrakumar, 1998
<i>Dimeria copeana</i> Sreekumar, V.J. Nair and N.C. Nair	Alappuzha (Thrikkunnapuzha)	Manilal and Raveendrakumar, 1998
<i>Dimeria jainii</i> Sreekumar, V.J. Nair and N.C. Nair	Kozhikode (Pokkunnamala)	Manilal and Raveendrakumar, 1998
<i>Dimeria chelariensis</i> Ravi	Malappuram (Chelari)	Manilal and Raveendrakumar, 1998
<i>Dimeria eradii</i> Ravi	Malappuram (Thenhipalam)	Manilal and Raveendrakumar, 1998
<i>Dimeria kanjirapalliana</i> Jacob	Idukki (Peerumedu)	Ravi <i>et al.</i> , 2000a
<i>Dimeria keralae</i> N.C. Nair, Sreekumar and V.J. Nair	Kannur (Parumba)	Nair <i>et al.</i> , 1983a,b
<i>Dimeria nambodiriana</i> Ravi and Mohanan	Pathanamthitta (Ponnambalamedu)	Ravi and Mohanan, 1997
<i>Dimeria raizadae</i> V.J. Nair, Sreekumar and N.C. Nair	Kozhikode (Pokkunnamala)	Nair <i>et al.</i> , 1983c
<i>Dimeria kurumthotticalana</i> Jacob	Idukki (Peerumedu)	Mohanan and Nair, 1999
<i>Dimeria sivarajanii</i> Mohanan and Ravi	Pathanamthitta (Kochu Pampa hills)	Mohanan and Ravi, 1996
<i>Garnotia puchiparensis</i> Bor	Palakkad (Silent Valley)	Ahmedullah and Nayar, 1986
<i>Eragrostis uniloides</i> Nees var. <i>tremula</i> Jacob	Kottayam (Thiruvalla)	Ravi <i>et al.</i> , 2000a
<i>Isachne fischeri</i> Bor (R)	Idukki (Anaimudi)	Ahmedullah and Nayar, 1986
<i>Isachne henryi</i> Srinivasan and Sreekumar	Wynad (Poothumula)	Mohanan and Nair, 1999
<i>Ischaemum agastyamalayanum</i> Sreekumar, Janarthanam and Henry	Thiruvananthapuram (Agastyamala), Idukki	Manilal and Raveendrakumar, 1998
<i>Ischaemum calicutensis</i> Sreekumar, V.J. Nair and N.C. Nair	Kozhikode (Pokkunnamala)	Manilal and Raveendrakumar, 1998
<i>Ischaemum camnanorensis</i> Sreekumar, V.J. Nair and N.C. Nair	Kannur (Parumba)	Manilal and Raveendrakumar, 1998
<i>Ischaemum copeanum</i> Sreekumar, V.J. Nair and N.C. Nair	Kannur (Cherkala)	Manilal and Raveendrakumar, 1998
<i>Ischaemum indicum</i> (Houtt.) Merrill var. <i>longipilum</i> (Hack.) Bor	Kannur (Chandanthode)	Manilal and Raveendrakumar, 1998
<i>Ischaemum keralensis</i> Sreekumar, V.J. Nair and N.C. Nair	Not specified by the collectors	Manilal and Raveendrakumar, 1998
<i>Ischaemum malabaricum</i> Sreekumar, V.J. Nair and N.C. Nair	Kozhikode, Kannur	Manilal and Raveendrakumar, 1998
<i>Ischaemum jayachandranii</i> Ansari, Ramach. and Sreekumar	Kannur (Nileswar)	Ansari <i>et al.</i> , 1984
<i>Ischaemum kumarakodiensis</i> Ravi, Mohanan and Kiranraj	Alappuzha (Pallana riverbank)	Ravi and Mohanan, 1997
<i>Ischaemum nairii</i> V.J. Nair and Sreekumar	Kozhikode (Kanjirakavadi)	Ahmedullah and Nayar, 1986
<i>Ischaemum quilonensis</i> Ravi and Shaju	Kollam (Perumkulam ela)	Ravi and Mohanan, 1997
<i>Ischaemum pappinisseriensis</i> Ravi, Mohanan and Rajesh	Kannur (Pappinisseri)	Ravi and Mohanan, 1997
<i>Ischaemum pushpangadanii</i> Ravi, Mohanan, Kiranraj and Rajesh	Kozhikode (Kokkayam)	Ravi <i>et al.</i> , 2000a
<i>Ischaemum lanatum</i> Ravi, Mohanan and Shaju	Kasaragod	Ravi <i>et al.</i> , 2000b
<i>Ischaemum rangacharianum</i> Fischer	Malabar	Ahmedullah and Nayar, 1986
<i>Ischaemum tadulingamii</i> N.C. Nair and Sreekumar	Idukki (Eravikulam)	Manilal and Raveendrakumar, 1998
<i>Ischaemum travancorensis</i> Stapf ex Fischer	Travancore	Ahmedullah and Nayar, 1986
<i>Ischaemum vembacadeense</i> Patil and DC'ruz	Allepey	Patil and D'Cruz, 1974
<i>Limnopoia meboldii</i> (Fischer) Hubb.	Ernakulam, Kasaragod	Mohanan and Nair, 1999
<i>Ochlandra ebracteata</i> Raizada and Chatterjee (R)	Thiruvananthapuram (Punalur)	Ahmedullah and Nayar, 1986
<i>Ochlandra travancorica</i> Benth. ex Gamble var. <i>hirsuta</i>	Travancore	Mohanan and Nair, 1999
<i>Oxytenanthera bourdillonii</i> Gamble	Travancore	Ahmedullah and Nayar, 1986

Table 1: Continued

Taxon*	Distribution	References
<i>Silentvalleya nairii</i> V.J. Nair, Sreekumar, Vajravelu and Bhargavan	Palakkad (Silent Valley)	Nair <i>et al.</i> , 1982; Nayar, 1980
<i>Themeda sabarimalayana</i> Sreekumar and V.J. Nair	Pathanamthitta (Sabarimala)	Manilal and Raveendrakumar, 1998
<i>Tripogon anantaswamianus</i> Sreekumar, V.J. Nair and N.C. Nair	Idukki (Eravikulam)	Ahmedullah and Nayar, 1986
<i>Tripogon narayani</i> Sreekumar, V.J. Nair and N.C. Nair	Idukki (Eravikulam)	Mohan and Nair, 1999
<i>Zenkeria jainii</i> Nair, Sreekumar and Nair	Idukki (Eravikulam)	Ahmedullah and Nayar, 1986
Lamiaceae		
<i>Gomphostemma keralensis</i> Vivek., Gopalan and Ansari	Idukki (Eravikulam)	Manilal and Raveendrakumar, 1998
<i>Leucas vestita</i> Benth. var. <i>devicolamensis</i> Shetty and Vivek.	Idukki (Vavavurii)	Chandrabose and Srinivasan, 1975; Shetty and Vivekananthan, 1968
<i>Pogostemon travancoricus</i> Bedd. var. <i>devicolamensis</i> Shetty and Vivek.	Idukki (Anamudi)	Manilal and Raveendrakumar, 1998
<i>Pogostemon travancoricus</i> Bedd. var. <i>travancoricus</i> (R)	Travancore	Mohan and Nair, 1999
Lauraceae		
<i>Actinodaphne campanulata</i> Hook.f. var. <i>obtusata</i> Gamble (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Actinodaphne lawsonii</i> Gamble	Wynad	Ahmedullah and Nayar, 1986
<i>Cinnamomum chemungianum</i> Mohan. and Henry	Thiruvananthapuram (Chemungi)	Mohan and Henry, 1991
<i>Cinnamomum keralense</i> Kosterm.	Kannur	Mohan and Nair, 1999
<i>Cinnamomum travancoricum</i> Gamble (V)	Thiruvananthapuram	Ahmedullah and Nayar, 1986
<i>Cinnamomum nicolsianum</i> Manilal and Shylaja	Malabar	Mohan and Nair, 1999
<i>Litsea travancorica</i> Gamble (I)	Travancore	Ahmedullah and Nayar, 1986
Lentibulariaceae		
<i>Utricularia malabarica</i> Janarthanam and Henry	Kasaragod (Mulleriyar)	Manilal and Raveendrakumar, 1998
<i>Utricularia nayarii</i> Janarthanam and Henry	Idukki (Rajamala)	Manilal and Raveendrakumar, 1998
<i>Utricularia subtramanii</i> Janarthanam and Henry	Pathanamthitta	Manilal and Raveendrakumar, 1998
Lythraceae		
<i>Rotala cookii</i> Joseph and Sivar.	Malappuram (Parapanagadi)	Manilal and Raveendrakumar, 1998
<i>Rotala malabarica</i> Pradeep, Joseph and Sivar.	Kannur (Adathila)	Manilal and Raveendrakumar, 1998
<i>Rotala malampuzhensis</i> R.V. Nair (I)	Ernakulam, Palakkad, Kozhikode	Manilal and Raveendrakumar, 1998
<i>Rotala vasudevanii</i> Joseph and Sivar.	Ernakulam (Alwaye)	Manilal and Raveendrakumar, 1998
Malvaceae		
<i>Hibiscus sreenarayananus</i> Anil. and Ravi	Kollam (Palkulangara)	Anilkumar and Ravi, 1994
<i>Julostylis ampumalensis</i> Pradeep. and Sivar.	Kozhikode (Ambumala)	Manilal and Raveendrakumar, 1998
<i>Julostylis polyandra</i> Ravi and Anil.	Thiruvananthapuram, Pathanamthitta	Manilal and Raveendrakumar, 1998
<i>Sida fryxelli</i> Sivar. and Pradeep	Kozhikode (Beyepore)	Sivarajan and Pradeep, 1990
Melastomataceae		
<i>Memecylon sisparensis</i> Gage	Palakkad (Silent Valley)	Biju, 1999
<i>Osbeckia abrahamii</i> Giri and Nayar	Thrissur	Mohan and Nair, 1999
<i>Osbeckia lineolata</i> Gamble var. <i>anomalayana</i> Giri and Nayar	Idukki, Palakkad	Mohan and Nair, 1999
<i>Osbeckia lawsonii</i> Gamble	Travancore	Mohan and Nair, 1999
<i>Osbeckia minor</i> Triana	Travancore	Mohan and Nair, 1999
<i>Osbeckia mehrana</i> Giri and Nayar	Thiruvananthapuram (Chemungi)	Mohan and Nair, 1999
<i>Sonerila barnesii</i> Fischer	Travancore	Ahmedullah and Nayar, 1986
<i>Sonerila kannanorensis</i> Giri and Nayar	Kannur (Chandanthode)	Giri and Nayar, 1984a,b
<i>Sonerila devicolamensis</i> Giri and Nayar	Idukki (Devicolam)	Nayar, 1969

Table 1: Continued

Taxon*	Distribution	References
<i>Sonerila elegans</i> Wt. var. <i>beddomei</i>	Palakkad Giri and Nayar	Manilal and Raveendrakumar, 1998
<i>Sonerila gamblei</i> Giri and Nayar	Idukki (Anamudi)	Manilal and Raveendrakumar, 1998
<i>Sonerila nemakadensis</i> Fischer (I)	Idukki	Mohan and Nair, 1999
<i>Sonerila sadasivani</i> Nayar	Not specified by the collectors	Manilal and Raveendrakumar, 1998
<i>Sonerila sahyadrica</i> Giri and Nayar	Thiruvananthapuram, Palakkad	Manilal and Raveendrakumar, 1998
<i>Sonerila wynaadensis</i> Nayar	Wynad	Ahmedullah and Nayar, 1986
Meliaceae		
<i>Dysoxylum beddomei</i> Kosterm. (I)	Idukki (Peerumedu-Cardamom hills)	Ahmedullah and Nayar, 1986
Menyanthaceae		
<i>Nymphoides krishnakesara</i> Joseph and Sivar.	Kannur (Mada)	Joseph and Sivarajan, 1990
<i>Nymphoides macrospermum</i> Vasudevan	Ernakulam, Kozhikode	Manilal and Raveendrakumar, 1998
<i>Nymphoides sivarajanii</i> Joseph	Malappuram (Parappanagadi)	Manilal and Raveendrakumar, 1998
Mimosaceae		
<i>Calliandra cynometroides</i> Bedd.	Travancore	Ahmedullah and Nayar, 1986
<i>Entada monostachya</i> DC.	Travancore	Ahmedullah and Nayar, 1986
Musaceae		
<i>Musa ochracea</i> Shepherd	Travancore, Kannur	Ahmedullah and Nayar, 1986
Myrsinaceae		
<i>Ardisia amplexicaulis</i> Bedd.	Travancore, Wynad	Ahmedullah and Nayar, 1986
<i>Ardisia stonei</i> Sasi. and Sivar.	Kollam, Thrissur	Madhusoodanan and Singh, 1992
<i>Embelia gardneriana</i> Wt	Palakkad (Silent Valley)	Ahmedullah and Nayar, 1986
Myrtaceae		
<i>Eugenia argentea</i> Bedd. (E)	Wynad	Ahmedullah and Nayar, 1986
<i>Jambusa mundagam</i> Gamble	Travancore	Ahmedullah and Nayar, 1986
<i>Syzygium chavaran</i> (Bourd.) Gamble (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Syzygium microphyllum</i> Gamble	Travancore	Ahmedullah and Nayar, 1986
<i>Syzygium occidentale</i> (Bourd.) Gandhi (I)	Idukki (Periyar)	Ahmedullah and Nayar, 1986
<i>Syzygium palghatense</i> Gamble (E)	Malabar	Ahmedullah and Nayar, 1986
<i>Syzygium parameswaranii</i> Mahan and Henry	Thiruvananthapuram (Agasthyamala)	Mohan and Nair, 1999
<i>Syzygium periyarensis</i> Jomy and Sasidharan	Idukki (Periyar)	Sasidharan and Augustine, 1999
<i>Syzygium travancoricum</i> Gamble (E)	Travancore	Ahmedullah and Nayar, 1986
Oleaceae		
<i>Chionanthus ramiflorus</i> Roxb. var. <i>peninsularis</i> Ravikumar and Lakshmanan	Idukki (Devicolam)	Ravikumar and Lakshmanan, 1989
<i>Jasminum flexile</i> Vahl var. <i>silentvalliensis</i> Sharma and Srivastava	Palakkad (Silent Valley)	Biju, 1999
Orchidaceae		
<i>Bulbophyllum silentvalliensis</i> Sharma and Srivastava	Palakkad (Silent Valley)	Biju, 1999
<i>Bulbophyllum rheedei</i> Manilal and Sathish.	Thiruvananthapuram, Kollam	Manilal and Raveendrakumar, 1998
<i>Cheirostylis seidenfadeniana</i> Sathish. and Rasmu.	Kerala (location not mentioned)	Manilal and Raveendrakumar, 1998; Singh and Subramanian, 1991
<i>Eria muscicola</i> (Lindl.) Lindl. var. <i>brevilinguis</i> Joseph and Chandr.	Thiruvananthapuram, Idukki	Manilal and Raveendrakumar, 1998
<i>Eria muscicola</i> (Lindl.) Lindl. var. <i>ponmudiana</i> Mohan and Henry	Thiruvananthapuram (Ponmudi)	Manilal and Raveendrakumar, 1998
<i>Eria tiagii</i> Manilal, Sathish and Wood	Palakkad (Silent Valley)	Manilal and Sathishkumar, 1984a
<i>Eulophia hirsuta</i> Joseph and Vajravelu	Palakkad (Nemmara)	Mohan and Nair, 1999
<i>Habenaria periyarensis</i> Sasi., Rajesh and Jomy	Idukki (Periyar reserve)	Sasidharan <i>et al.</i> , 1998
<i>Ipsa malabarica</i> (Reichb.f.) Hook.f. (E)	Palakkad (Silent Valley), Wynad	Ahmedullah and Nayar, 1986
<i>Kingidium niveum</i> Sathish.	Thrissur, Palakkad	Manilal and Raveendrakumar, 1998

Table 1: Continued

Taxon*	Distribution	References
<i>Liparis indiraii</i> Manilal and Sathish.	Palakkad (Silent Valley)	Manilal and Raveendrakumar, 1998
<i>Luisia abrahami</i> Vatsala	Kollam (Thenmala)	Ahmedullah and Nayar, 1986
<i>Oberonia agastyamalayana</i> Sathish.	Thiruvananthapuram (Agasthyamala)	Manilal and Raveendrakumar, 1998
<i>Oberonia bisaccata</i> Manilal and Sathish.	Palakkad (Silent Valley)	Manilal and Sathishkumar, 1984b
<i>Oberonia chandrasekharanii</i> V.J. Nair, Ramachandran and Ansari	Kannur (Chandanthode)	Manilal and Raveendrakumar, 1998
<i>Oberonia sebastianiana</i> Shetty and Vivek.	Idukki (Anamudi)	Shetty and Vivekananthan, 1975
<i>Oberonia wynadensis</i> Sivadasan and Balakrishnan	Wynad	Sivadasan and Balakrishnan, 1989
<i>Paphiopedilum druryi</i> (Bedd.) Stein (E)	Travancore (Extinct in wild)	Ahmedullah and Nayar, 1986
<i>Porpax chandrasekharanii</i> Bhargavan and Mohanan	Palakkad (Silent Valley)	Manilal and Raveendrakumar, 1998
<i>Robiquetia josephiana</i> Manilal and Sathish	Palakkad (Silent Valley)	Manilal and Raveendrakumar, 1998
<i>Seidenfadeniella chrysantha</i> (Alston) Sathish	Idukki (Devicolam, Munnar)	Manilal and Raveendrakumar, 1998
<i>Seidenfadeniella roseus</i> (Wt.) Sathish	Ernakulam, Palakkad	Manilal and Raveendrakumar, 1998
<i>Taeniophyllum scaberulum</i> Hook.f.	Kottayam	Ahmedullah and Nayar, 1986
<i>Trias bonaccordensis</i> Sathish.	Thiruvananthapuram (Bonaccord)	Sathishkumar, 1989
Orobanchaceae		
<i>Christisonia keralensis</i> Erady	Palakkad (Nelliampathi)	Erady, 1967
Oxalidaceae		
<i>Biophytum congestiflorum</i> Govind.	Idukki (Peerumedu)	Manilal and Raveendrakumar, 1998
<i>Biophytum longipedunculatum</i> Govind.	Thrissur (Anakayam, Poringalkuthu)	Manilal and Raveendrakumar, 1998
<i>Biophytum veldkampii</i> Shanavas <i>et al.</i>	Thiruvananthapuram (Nedumangad)	Shanavas <i>et al.</i> , 1998
Papilionaceae		
<i>Dalbergia beddomei</i> Thoth.	Palakkad (Silent valley)	Mohanan and Nair, 1999
<i>Dalbergia benthamii</i> Thoth.	Ernakulam (Muvattupuzha)	Manilal and Raveendrakumar, 1998
<i>Dalbergia horrida</i> (Dennst.) Mabblerley var. <i>glabrescens</i> (Prain) Thoth. and Nair	Kollam (Thenmala)	Manilal and Raveendrakumar, 1998
<i>Dalbergia travancorica</i> Thoth.	Travancore (High range)	Manilal and Raveendrakumar, 1998
<i>Derris brevipes</i> Baker var. <i>travancorensis</i> Thoth.	Thiruvananthapuram (Vellevamala)	Manilal and Raveendrakumar, 1998
<i>Geissapsis tenella</i> Benth. var. <i>malabarica</i> Sivar. and Babu	Malappuram (Tenhipalam)	Manilal and Raveendrakumar, 1998
<i>Kunstleria keralensis</i> Mohanan and N.C. Nair	Pathanamthitta (Adoor)	Manilal and Raveendrakumar, 1998
<i>Mucuna pruriens</i> (L.) DC. var. <i>thekkadiensis</i> Thoth. and Ravikumar	Idukki (Thekkadi)	Manilal and Raveendrakumar, 1998
<i>Smithia venkobarrowii</i> Gamble (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Tephrosia travancorica</i> Thoth. and Das	Kerala (Not specified by the collectors)	Manilal and Raveendrakumar, 1998
<i>Tephrosia wynadensis</i> Drum. (R)	Wynad	Ahmedullah and Nayar, 1986
<i>Zornia quiloneensis</i> Ravi	Kollam	Ahmedullah and Nayar, 1986
Periplocaceae		
<i>Janakia arayalpathra</i> Joseph and Chandr.	Kottayam (Kurisumala)	Ahmedullah and Nayar, 1986
Phytolaccaceae		
<i>Petiveria alliacea</i> L.	Thiruvananthapuram	Ahmedullah and Nayar, 1986
Piperaceae		
<i>Peperomia cochinchinensis</i> DC.	Ernakulam (Cochin)	Ahmedullah and Nayar, 1986
<i>Piper nigrum</i> L. var. <i>hirtellousum</i>	Palakkad (Silent Valley)	Ahmedullah and Nayar, 1986
Asokan and Ravindran		
<i>Piper pseudonigrum</i> Velayudhan and Amalraj	Palakkad (Silent Valley, Parambikulam),	Mohanan and Nair, 1999
<i>Piper silentvalleyensis</i> Ravindran, Nair and Asokan	Palakkad (Silent Valley)	Biju, 1999
Podostemaceae		
<i>Dicraea filifolia</i> Ramamurthy and Joseph	Palakkad (Parambikulam)	Ramamurthy and Joseph, 1964

Table 1: Continued

Taxon*	Distribution	References
<i>Polypleurum munnarensense</i> Nagendran and Arekal	Palakkad, Kozhikode	Manilal and Raveendrakumar, 1998
<i>Willisia arekaliana</i> Shivamurthy and Sadanant.	Palakkad (Silent Valley)	Sivamurthy and Sadanand, 1997
Polygalaceae		
<i>Polygala ramaswamiana</i> Mukherjee	Idukki (Peerumedu)	Manilal and Raveendrakumar, 1998
Ranunculaceae		
<i>Clematis bourdillonii</i> Dunn (V)	Thiruvananthapuram	Ahmedullah and Nayar, 1986
Rhamnaceae		
<i>Colubrina travancorica</i> Bedd.	Travancore	Ahmedullah and Nayar, 1986
Rubiaceae		
<i>Agrostemma anupama</i> Sivar.	Malappuram (Parappanagadi)	Manilal and Raveendrakumar, 1998
<i>Borreria eradii</i> Ravi	Kollam	Manilal and Raveendrakumar, 1998
<i>Borreria malabarica</i> Sivar. and Manilal	Kozhikode	Manilal and Raveendrakumar, 1998
<i>Borreria stricta</i> (L.f.) Schum. var. <i>rosea</i> Sivar. and Manilal	Kozhikode	Manilal and Raveendrakumar, 1998
<i>Hedyotis beddomei</i> Hook.f.	Palakkad	Ahmedullah and Nayar, 1986
<i>Hedyotis devicolamensis</i> Deb and Dutta	Idukki (Devicolam)	Ahmedullah and Nayar, 1986
<i>Hedyotis erecta</i> Manilal and Sivar.	Malappuram (Idimuzhikkal)	Manilal and Raveendrakumar, 1998
<i>Hedyotis ramarowii</i> (Gamble) Rolla Rao and Hemadri	Travancore	Ahmedullah and Nayar, 1986
<i>Hedyotis santapau</i> Shetty. and Vivek	Idukki (Devicolam)	Manilal and Raveendrakumar, 1998
<i>Hedyotis silent-valleyensis</i> Vajravelu, Rathak. and Bhargavan	Palakkad (Silent Valley)	Manilal and Raveendrakumar, 1998
<i>Hedyotis villostipulata</i> (Gamble) Rolla Rao and Hemadri	Travancore	Ahmedullah and Nayar, 1986
<i>Hedyotis wynaadensis</i> (Gamble) Rolla Rao and Hemadri	Wynad (Chambra peak)	Ahmedullah and Nayar, 1986
<i>Hedyotis silent-valleyensis</i> Vajravelu, Rathak. and Bhargavan	Palakkad (Silent Valley)	Ahmedullah and Nayar, 1986
<i>Hedyotis sisparensis</i> Gage	Palakkad (Silent Valley)	Biju, 1999
<i>Ixora agasthyamalayanum</i> Sivadasan and Mohanan	Thiruvananthapuram (Agasthyamala)	Sivadasan and Mohanan, 1991
<i>Ixora johnsonii</i> Hook.f. (I)	Cochin, Ernakulam, Travancore	Ahmedullah and Nayar, 1986
<i>Ixora manantoddi</i> Hussain and Paul	Wynad (Mananthavadi)	Hussain and Paul, 1991
<i>Ixora sivarajiana</i> Pradeep	Kozhikode (Vellarimala)	Pradeep, 1997
<i>Lasianthus obovatus</i> Bedd. (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Morinda reticulata</i> Gamble (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Oldenlandia hygrophila</i> Brem.	Palakkad	Ahmedullah and Nayar, 1986
<i>Ophiorrhiza barnesii</i> Fischer (E)	Idukki	Ahmedullah and Nayar, 1986
<i>Ophiorrhiza brunonis</i> Wt and Am. var. <i>johnsonii</i>	Cochin hills	Ahmedullah and Nayar, 1986
<i>Ophiorrhiza munnarensis</i> Fischer	Idukki (Munnar)	Ahmedullah and Nayar, 1986
<i>Ophiorrhiza nairii</i> Ramamurthy and Rajan	Idukki (Adimali)	Ramamurthy and Rajan, 1985
<i>Pavetta nemoralis</i> Bremek. (I)	Cochin	Ahmedullah and Nayar, 1986
<i>Pavetta oblanceolata</i> Bremek. (I)	Cochin	Ahmedullah and Nayar, 1986
<i>Pavetta siphonantha</i> Dalz.	Travancore	Ahmedullah and Nayar, 1986
<i>Pavetta travancorica</i> Bremek.	Travancore	Ahmedullah and Nayar, 1986
<i>Plectronia pergracilis</i> (Bourd.) Gamble (I)	Travancore	Ahmedullah and Nayar, 1986
<i>Psilanthus bababudanii</i> Sivar., Biju and P. Mathew	Wynad (Chundale)	Manilal and Raveendrakumar, 1998
<i>Psilanthus bridsoniae</i> Sivar., Biju and P. Mathew	Thrissur (Peechi)	Manilal and Raveendrakumar, 1998
<i>Psilanthus malabaricus</i> Sivar., Biju and P. Mathew	Malabar hills	Manilal and Raveendrakumar, 1998
<i>Psychotria keralensis</i> Deb and Gang.	Kannur (Chandanthode)	Deb and Gangopadhyay, 1983
<i>Psychotria sekharana</i> Ramamurthy and Rajan	Thrissur	Manilal and Raveendrakumar, 1998
<i>Spermacoce ramani</i> Sivar. and R.V. Nair	Malappuram (Thenhipalam)	Manilal and Raveendrakumar, 1998
<i>Tarenna trichurensis</i> Sasi. and Sivar.	Thrissur	Sashidharan and Sivarajan, 1990b

Table 1: Continued

Taxon*	Distribution	References
Rutaceae		
<i>Atalantia racemosa</i> Wt. var. <i>boudillonii</i> K.N. Nair and M.P. Nayar	Kollam, Thrissur	Nair and Nayar, 1990
Sapotaceae		
<i>Madhuca boudillonii</i> (Gamble) Lam. (E)	Kollam, Thrissur	Ahmedullah and Nayar, 1986
<i>Palaquium boudillonii</i> Brandis	Travancore	Ahmedullah and Nayar, 1986
<i>Palaquium ravii</i> Sasi. and Vink	Thrissur (Peechi)	Manilal and Raveendrakumar, 1998
Scrophulariaceae		
<i>Adenosma malabaricum</i> Hook.f. (I)	Malabar and Kottayam	Ahmedullah and Nayar, 1986
<i>Limnophila glandulifera</i> Philcox	Travancore	Manilal and Raveendrakumar, 1998
<i>Lindernia manildiana</i> Sivar.	Malabar	Manilal and Raveendrakumar, 1998
<i>Lindernia tenuifolia</i> var. <i>pygmaea</i> Sivar. and P. Mathew	Kozhikode (Kallai)	Manilal and Raveendrakumar, 1998
<i>Torenia lindernioides</i> Saldanha	Wynad (Chundale)	Manilal and Raveendrakumar, 1998
Vitaceae		
<i>Tetrastigma gamblei</i> Shetty and P. Singh	Wynad (Chundale)	Manilal and Raveendrakumar, 1998
Zingiberaceae		
<i>Alpinia smithiae</i> Sabu and Mangaly	Palakkad	Mohanan and Nair, 1999
<i>Curcuma cannanorensis</i> Ansari, V.J. Nair and N.C. Nair	Kannur (Karimbam)	Ansari <i>et al.</i> , 1982
<i>Curcuma cannanorensis</i> var. <i>lutea</i> Ansari, V.J. Nair and N.C. Nair	Kannur (Kalliassery)	Ansari <i>et al.</i> , 1982
<i>Curcuma coriacea</i> Mangaly and Sabu	Kerala (throughout)	Mangaly and Sabu, 1988
<i>Curcuma ecalcarata</i> Sivar. and Indu.	Kerala (throughout)	Manilal and Raveendrakumar, 1998
<i>Curcuma malabarica</i> Velayudhan, Amalraj and Murali	Thrissur, Wynad	Manilal and Raveendrakumar, 1998
<i>Curcuma peethapushpa</i> Sasi. and Sivar.	Kannur	Sasidharan and Sivarajan, 1988
<i>Curcuma raktakanta</i> Mangaly and Sabu	Ernakulam, Thrissur	Mangaly and Sabu, 1992
<i>Curcuma vamanana</i> Sabu and Mangaly	Kollam, Palakkad	Manilal and Raveendrakumar, 1998

*IUCN threat category (R: Rare; V: Vulnerable; E: Endangered; I: Indeterminate)

RESULTS AND DISCUSSION

Kerala harbours significant biodiversity, most of which is concentrated in the east. The present study records 344 endemic taxa pertaining to 175 genera of 65 families of flowering plants. Out of 65 families, dicots are having 56 families and monocots with 9 families. Kerala is represented with seven endemic genera, *Kanjarum* (Acanthaceae), *Haplothismia* (Burmanniaceae), *Chandrasekharania*, *Limnopoa* and *Silentvalleya* (Poaceae), *Seidenfadeniella* (Orchidaceae) and *Janakia* (Periplocaceae). The district-wise analysis shows that Palakkad with 55 reports tops the list, followed by Idukki with 49 and Thiruvananthapuram with 31. The large number of new reports (endemics) from the above districts may be due to more botanical explorations. It is observed that high concentration of endemism is found in Silent Valley (Palakkad dist.) with 38 taxa, followed by Agasthyamala (12), Devicolam (11), Peerumedu (10) and Eravikulam (9). The maximum number of endemic taxa belongs to Poaceae (50) followed by Rubiaceae (37), Orchidaceae (24) and Araceae (17). Of the estimated 175 genera of endemic taxa *Ischaemum* is dominant with 18 species followed by *Impatiens* (16), *Fimbristylis* (11), *Dimeria* (10), *Hedyotis* (10), *Sonerila* (9), *Curcuma* (8), *Arisaema* (7), *Syzygium* (7) and *Vernonia* (7). A total of 50 species are found in IUCN threatened category (Nayar and Sastry, 1987; 1988; 1990). Out of those threatened species, 5 species are rare, 4 are vulnerable, 16 are endangered and 25 are indeterminate category.

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