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RESEARCH ARTICLE

AN ASSESSMENT OF TREE SPECIES DIVERSITY IN TIRUNELVELI CORPORATION AREA, TAMIL NADU

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ABSTRACT

An environment rich in biodiversity offers the broadest array of options for sustainable economic activity, for sustaining human welfare and for adapting to changes. Loss of biodiversity has serious economic and social costs for any country. The experience of the past few decades has shown that industrialization and economic development has resulted in the extinction of species. Trees must be made a mandatory part of the roadside. The study was conducted during June 2019 - January 2020 covering the area of Tirunelveli Corporation, Tamil Nadu. Total number of Angiosperm trees recorded from the Tirunelveli corporation area is 141 species. They belong to 109 genera and 44 families. 124 are Dicot and belong to 93 genera and 38 families; 14 are monocot and belong to 13 genera and 3 families. Totally 46 timber yielding trees, 57 ornamental trees, 20 fruit yielding trees and 22 medicinal trees were recorded in the study area. District Science Centre Tirunelveli recorded with highest number trees and totally 318 individual trees observed during the period of study. The present study used to select better species suitable for urban forestry.

Key words: Tree species, Tirunelveli Municipal Corporation, Conservation.

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INTRODUCTION

Trees are the most important component in an urban environment. It plays an important role in human life. Trees lined along the roadsides, parks, offices and educational institutions give the best impression about the city. People come to a city first impressed by its street landscape. Population of cities is increasing rapidly and two third of world population will reside in cities by 2030 (Anonymous, 2007). Accordingly, the cities in the near future may face many environmental issues. The primary need of a city is to develop a green cover in urban areas, because more than the aesthetic value it provides ecosystem services (Clarke and Thaman, 1993). Diversity of trees in an area maintains the biodiversity and help in interaction of various components of the ecosystem (Colding et al., 2006). Trees filter rainwater and runoff from chemicals, sediment, and other pollutants. The primary role of a tree is the production of fresh air /oxygen for the local residents. Trees also play significant role in the social life of its residents. Fruit yielding tree species are provide a source of income for many people. Trees in the home garden provide both economical and social merit. Tropical home gardens are rich in plant species diversity.

It may act as reservoirs of crop germplasm and serve to conserve rare or threatened species and varieties (Esquivel and Hammer, 1992; Merrick, 1992; Alcorn, 1992; Kimber, 1978; Johnson, 1972; Gomez-pompa, 1996). *In-situ* conservation and sustainable utilization of cultivated plant species is significant advantage in home gardens (Smith, 1996; Jim and Chen, 2009), few studies as yet account for variations in garden composition and plant species richness. The objective of this study was to assess tree species diversity in the Tirunelveli Corporation area, Tamil Nadu, India and their importance.

MATERIALS AND METHODS

Study area: The Tirunelveli Municipal Corporation is located in the world map between 08° 8' and 09° 23' latitude and 77° 09' and 77° 54' longitude. Tirunelveli Municipal Corporation covers an area of 108.65' sq.kms. Tirunelveli is situated 81 kms. to the north to Kanyakumari and 712 kms. to the south of Chennai. Tirunelveli Municipal Corporation (TMC) was constituted in 1994 comprising of Tirunelveli Municipality, Palayamkottai Municipality, Melapalayam Municipality along with 15th villages panchayats and one Town Panchayat. The Corporation is divided into four zonal offices. The river Tamirabarani is the life line of the city and is the main source of drinking water supply for the city. During the course of present study, field trips were carried out in the area during June 2019 to January 2020.

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A primary data about the trees was collected from public parks (PP), college and school campus (CG), District Science Centre campus (DSC), various Government office campuses (OG), road side (RS), temple campus (TE) and home gardens (HG) located in all four municipality region of Tirunelveli Corporation. All the relevant information of each tree species was recorded in an index card. The morphological differences were noted and the plants and their families were arranged according to the Bentham and Hooker's system (1862 – 1883). The plants specimens collected were processed at the laboratory of Botany, Rani Anna Govt. Arts College for Women, Gandhi Nagar, and identified with the help of available literature. The identification and nomenclature of plants was done using The Flora of Tamil Nadu Carnatic (Mathew, 1983 -1988), Flora of Tamil Nadu, (Henry *et al.*, 1987), Flora of Presidency of Madras (Gamble, 1915 – 1936) and Ornamental Plants (Sabina George Thekkayam, 2010).

RESULTS AND DISCUSSION

Total number of Angiosperm trees recorded from the Tirunelveli corporation area is 141 species. They belong to 109 genera and 44 families.

The total number of plants recorded from study area listed in the Table: 1. 124 are Dicot and belong to 93 genera and 38 families; 14 are monocot and belong to 13 genera and 3 families. Table 2 depict the number of families, genera and species of Dicotyledons and Monocotyledons recorded in the area of study. Among the dicots, 92 species are Polypetalae and family fabaceae is the most dominant with 16 genera and 21 species. In Gamopetalae 7 families covering 26 species are recorded and Bignoniaceae is the most dominant family with 8 species. In Monochlamydeae 4 species covering 3 genera are recorded and Euphorbiaceae is the most dominant family with 2 species. In Monocot 14 species cover 13 genera representing 3 families. Among the monocots, the most dominant family is *Arecaceae* (11 species, 10 genera) (Fig: 5.5). Three species of Gymnosperms are also recorded in the area of study. They belong to 3 genera and 3 families. On the whole there are 19 Angiospermic monotypic families, of which 20 are dicots and 2 monocots. The most dominant family is Fabaceae with 16 genera and 21 species. Family Arecaceae, Caesalpiniaceae and Fabaceae represented with more than 10 species. Totally seven families represented with more than 5 species each. Totally 46 timber yielding trees, 57 ornamental trees, 20 fruit yielding trees and 22 medicinal trees were recorded in the study area.

Table 1. Trees in Tirunelveli Corporation

S.No.	Botanical name	Family	Locality	Use
1.	<i>Acacia auriculiformis</i> A. Cunn. ex Benth.	Fabaceae	DSC	Ornamental
2.	<i>Acacia leucophloea</i> (Roxb.) Wills.	Fabaceae	RS	Timber
3.	<i>Acacia planifrons</i> Wt. & Arn.	Fabaceae	RS	Timber
4.	<i>Acacia nilotica</i> (L.) Willd. ex Delile	Fabaceae	RS	Timber
5.	<i>Adanathera pavoniana</i> L.	Fabaceae	RS, CG, OG	Timber
6.	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	HG, RS, CG	Medicinal
7.	<i>Ailanthes excelsa</i> Roxb.	Simaroubaceae	RS, CG, OG	Timber
8.	<i>Albizia lebbek</i> (L.) Benth.	Caesalpiniaceae	RS, CG, DSC, OG, PP	Timber
9.	<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	RS, CG	Ornamental, Timber
10.	<i>Anacardium occidentale</i> L.	Anacardiaceae	RS	Fruit
11.	<i>Annona reticulata</i> L.	Annonaceae	HG	Fruit
12.	<i>Annona squamosa</i> L.	Annonaceae	HG, RS	Fruit
13.	<i>Araucaria heterophylla</i> (Salisb.) Franco.	Araucariaceae	HG, DSC, CG, OG, PP	Ornamental
14.	<i>Areca triandra</i> Roxb. ex Buch-Hum.	Arecaceae	HG, DSC	Ornamental
15.	<i>Artocarpus altilis</i> (Parkinson) Fosberg.	Moraceae	CG	Fruit
16.	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	HG	Fruit
17.	<i>Averrhoa carambola</i> L.	Averrhoaceae	DSC	Timber, Medicinal
18.	<i>Azadirachta indica</i> A. Kiss.	Meliaceae	HG, RS, TE, OG, PP	Timber, Medicinal
19.	<i>Bambusa vulgaris</i> Schard.	Poaceae	HG, CG	Timber, Ornamental
20.	<i>Bauhinia purpurea</i> L.	Caesalpiniaceae	RS, CG, DSC	Ornamental
21.	<i>Bauhinia tomentosa</i> L.	Caesalpiniaceae	HG, OG	Ornamental
22.	<i>Bauhinia variegata</i> L.	Caesalpiniaceae	HG, RS	Ornamental
23.	<i>Borassus flabifer</i> L.	Arecaceae	RS, CG	Timber
24.	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	RS, CG	Ornamental
25.	<i>Caesalpinia coriaria</i> (Jacq.) Willd.	Caesalpiniaceae	CG	Ornamental
26.	<i>Callistemon lanecolatus</i> (Smith) Sweet.	Myrtaceae	HG, DSC, CG	Ornamental
27.	<i>Calophyllum inophyllum</i> L.	Clusiaceae	CG	Timber, oil
28.	<i>Carica papaya</i> L.	Caricaceae	HG	Fruit
29.	<i>Caryota mitis</i> Lour.	Arecaceae	HG, DSC, CG, OG	Ornamental
30.	<i>Caryota urens</i> L.	Arecaceae	HG, DSC	Ornamental
31.	<i>Cassia fistula</i> L.	Caesalpiniaceae	HG, RS, CG, OG	Ornamental
32.	<i>Cassia javanica</i> L.	Caesalpiniaceae	DSC	Ornamental
33.	<i>Cassia roxburghii</i> DC.	Caesalpiniaceae	RS, OG	Ornamental
34.	<i>Cassia siamea</i> (Lam.) H.S. Irwin & Barneby.	Caesalpiniaceae	RS, CG, OG, PP	Ornamental
35.	<i>Cassine paniculata</i> (Wight & Arn.) Loobr. Callen	Celastraceae	RS, CG, DSC, OG	Timber
36.	<i>Casuarina equisetifolia</i> L.	Casuarinaceae	HG, RS, OG	Timber, Ornamental
37.	<i>Chrysalidocarpus lutescens</i> H. Wendl.	Arecaceae	HG	Ornamental
38.	<i>Cieba pentandra</i> (L.) Gaerten	Malvaceae	RS, CG	Fibre
39.	<i>Citharexylum spinosum</i> L.	Verbenaceae	HG, RS	Timber
40.	<i>Citrus limon</i> (L.) Osbeck.	Rutaceae	HG, TE	Fruit

Continue

41	<i>Citrus medica</i> L.	Rutaceae	HG	Fruit
42	<i>Cocos nucifera</i> L.	Arecaceae	HG, TE, CG, OG	Fruit
43	<i>Cordia dichotoma</i> Forst. F	Boraginaceae	RS, CG, DSC	Timber
44	<i>Cordia sebastena</i> L.	Boraginaceae	RS, CG, HG	Ornamental
45	<i>Couroupita guianensis</i> Aubl.	Lecythidaceae	HG, RS, TE	Flower, Timber
46	<i>Cretavea religiosa</i> G. Forst	Capparaceae	RS, CG, TE	Medicinal
47	<i>Crytosta chysrenda</i> Blume.	Arecaceae	HG	Ornamental
48	<i>Cycas revoluta</i> Thumb.	Cycadaceae	HG, DSC, CG	Ornamental
49	<i>Dalbergia latifolia</i> Roxb.	Fabaceae	RS, CG	Timber
50	<i>Dalbergia sissoo</i> Roxb.	Fabaceae	RS, DSC	Timber
51	<i>Delonix elata</i> (L.) Gamb.	Caesalpiniaceae	RS, CG	Timber
52	<i>Delonix regia</i> (Boj. ex Hook.) Rafin.	Caesalpiniaceae	HG, RS, DSC, CG	Ornamental
53	<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	Fabaceae	RS	Timber
54	<i>Dillenia indica</i> L.	Delliniaceae	DSC	Ornamental
55	<i>Dyopsis lutescens</i> (H.Wendl.) Beentje & J. Dransf.	Arecaceae	HG, OG, CG	Ornamental
56	<i>Enterlobium saman</i> (Jacq.) Merr.	Fabaceae	RS, CG, PP	Timber
57	<i>Erythrina variegata</i> L.	Fabaceae	DSC	Medicinal
58	<i>Euclayptus globules</i> Labill.	Myrtaceae	RS, CG, DSC	Medicinal
59	<i>Ficus benghalensis</i> L.	Moraceae	RS, CG, OG	Timber
60	<i>Ficus benamina</i> L.	Moraceae	RS	Ornamental
61	<i>Ficus elastica</i> Roxb. ex Hornem	Moraceae	HG	Ornamental
62	<i>Ficus racemosa</i> L.	Moraceae	RS, CG, OG	Fruit
63	<i>Ficus religiosa</i> L.	Moraceae	RS, CG, TE, OG, PP	Timber, Medicinal
64	<i>Ficus virens</i> Aiton.	Moraceae	RS, HG	Timber
65	<i>Gliricidia sepium</i> (Jacq.) Kunth ex Walp.	Fabaceae	RS, CG, DSC	Fodder
66	<i>Gmelina arborea</i> L.	Verbenaceae	RS, CG, OG	Timber
67	<i>Grewia tiliifolia</i> Vahl.	Tiliaceae	DSC	Timber
68	<i>Grevillea venusta</i> A. Cunn. ex Meissn.	Proteaceae	HG	Ornamental
69	<i>Guazuma ulmifolia</i> Lam.	Sterculiaceae	RS, CG, OG, PP	Timber
70	<i>Guettarda speciosa</i> L.	Rubiaceae	RS	Medicinal
71	<i>Hardwickia binata</i> Roxb.	Caesalpiniaceae	DSC, CG	Timber
72	<i>Holarhene pubescens</i> (Buch.-Ham.) Wall. ex G. Don	Apocynaceae	DSC	Medicinal
73	<i>Holoptelea integrifolia</i> Planch.	Ulmaceae	RS, CG, OG	Timber
74	<i>Ixora pavetta</i> Andr.	Rubiaceae	HG	Ornamental
75	<i>Juniperus communis</i> L.	Cupressaceae	HG, CG	Ornamental
76	<i>Kiglia africana</i> (Lam.) Benth.	Bignoniaceae	RS, CG	Ornamental
77	<i>Lagersroemia indica</i> L.	Lyrthaceae	DSC	Ornamental
78	<i>Lagerstroemia flos-reginae</i> Retz.	Lyrthaceae	DSC	Ornamental
79	<i>Lagerstroemia reginae</i> Roxb.	Lyrthaceae	DSC	Ornamental
80	<i>Lannea coromandelica</i> (Houtt.) Merr.	Anacardiaceae	RS, CG, OG, PP	Timber
81	<i>Leucaena latisiliqua</i> (L.) Gillis.	Fabaceae	HG, RS, OG, PP	Fodder
82	<i>Madhuca longifolia</i> (Koen.) Macbr.	Sapotaceae	RS, CG, DSC	Oil
83	<i>Majidea zanguebarica</i> J.Kirk	Sapindaceae	CG	Ornamental
84	<i>Malpighia glabra</i> L.	Malpighiaceae	DSC	Ornamental
85	<i>Mangifera indica</i> L.	Anacardiaceae	HG, TE, OG	Fruit
86	<i>Melia azedarach</i> L.	Meliaceae	RS, CG	Timber
87	<i>Michelia chembaca</i> L.	Magnoliaceae	HG, DSC	Ornamental
88	<i>Millettia peguensis</i> Ali.	Fabaceae	CG	Ornamental
89	<i>Millingtonia hortensis</i> L.f.	Bignoniaceae	HG, RS, CG, OG	Ornamental
90	<i>Mimosops elengi</i> L.	Sapotaceae	RS, CG, PP	Timber, Medicinal
91	<i>Morinda tinctoria</i> Roxb.	Rubiaceae	HG, RS, TE, OG	Timber, Medicinal
92	<i>Moringa pterygosperma</i> Gaertn	Moringaceae	HG, OG	Fruit
93	<i>Morus alba</i> L.	Moraceae	DSC, CG	Timber
94	<i>Muntingia calabura</i> L.	Muntingiaceae	RS, CG, PP	Timber
95	<i>Murraya paniculata</i> (L.) Jack.	Rutaceae	DSC	Medicinal
96	<i>Murraya koenigii</i> (L.) Spreng	Rutaceae	HG, CG, TE, OG	Leaf
97	<i>Musa paradisiaca</i> L.	Musaceae	HG	Fruit
98	<i>Neolamarckia cadamba</i> (Roxb.) Boss.	Rubiaceae	DSC, CG	Timber, Medicinal
99	<i>Nyctanthus arborteretis</i> L.	Oleaceae	HG	Ornamental
100	<i>Parkia biglandulosa</i> Wt. & Arn	Fabaceae	DSC	Ornamental
101	<i>Peltophorum pterocarpum</i> (DC.) K. Heyne.	Caesalpiniaceae	HG, RS, DSC, CG, OG, PP	Ornamental
102	<i>Phoenix dactylifera</i> L.	Arecaceae	RS, DSC	Ornamental
103	<i>Phyllanthus acidus</i> (L.) Skeels.	Euphorbiaceae	HG, RS	Fruit
104	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	HG, RS, DSC, CG, OG	Fruit
105	<i>Phyllostachys aurea</i> Riviere & C. Riviere	Poaceae	HG, DSC	Ornamental
106	<i>Pisonia grandis</i> R.Br.	Nyctanginaceae	HG, RS, TE, OG, PP	Ornamental
107	<i>Pithecellobium dulce</i> (Roxb.) Benth.	Fabaceae	RS, CG	Fruit
108	<i>Plumeria alba</i> L.	Apocynaceae	HG, RS, PP	Ornamental
109	<i>Plumeria pudica</i> Jacq.	Apocynaceae	HG, RS	Ornamental
110	<i>Plumeria rubra</i> L.	Apocynaceae	HG, RS	Ornamental
111	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Annonaceae	HG, DSC, OG, PP	Ornamental
112	<i>Polyalthia longifolia</i> Hook. & Thoms. var. <i>pendula</i>	Annonaceae	RS, CG, DSC, OG	Ornamental
113	<i>Pongamia glabra</i> Vent.	Fabaceae	HG, RS, OG, PP	Timber, oil
114	<i>Pritchardia pacifica</i> Seem. & H. Wendel.	Arecaceae	HG	Ornamental
115	<i>Prosopis cineraria</i> (L.) Druce.	Fabaceae	TE	Medicinal

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116	<i>Prosopis julifera</i> (SW.) DC.	Fabaceae	RS, CG	Timber
117	<i>Psidium guajava</i> L.	Myrtaceae	HG	Fruit
118	<i>Pterocarpus marsupium</i> Roxb.	Fabaceae	CG	Timber
119	<i>Pterocarpus santalinus</i> L.f.	Fabaceae	CG	Timber
120	<i>Pterospermum acerifolium</i> (L.) Wild.	Malvaceae	DSC	Ornamental, Timber
121	<i>Pterospermum xylocarpum</i> (Gaertn.) Oken.	Malvaceae	RS, CG, PP	Timber
122	<i>Roystonea regia</i> (Kunth) O. F. Cook	Arecaceae	HG, RS, OG	Ornamental
123	<i>Santalum album</i> L.	Santalaceae	HG, DSC, CG	Timber, Medicinal
124	<i>Sapindus emarginatus</i> Vahl.	Sapindaceae	CG	Medicinal
125	<i>Saraca asoka</i> (Roxb.) Wilde	Caesalpiniaceae	HG, CG	Medicinal
126	<i>Sesbania grandiflora</i> (L.) Pets.	Fabaceae	HG	Fodder, Food
127	<i>Simarouba glauca</i> DC.	Simaroubaceae	HG, RS	Ornamental
128	<i>Spathodea campanulata</i> P. ex Beauv.	Bignoniaceae	RS, CG, DSC, OG	Ornamental
129	<i>Sterculia foetida</i> L.	Sterculiaceae	HG, RS, CG	Ornamental
130	<i>Strychnos nux-vomica</i> L.	Loganiaceae	CG	Medicinal
131	<i>Swertia mahagoni</i> (L.) Jacq.	Meliaceae	HG, RS, OG, pp	Timber
132	<i>Syzygium cumini</i> (L.) Skeels.	Myrtaceae	RS, CG, DSC, OG, pp	Fruit
133	<i>Tabebuia pallida</i> (L.) Miers	Bignoniaceae	RS, CG, DSC, OG	Ornamental
134	<i>Tabebuia rosea</i> DC.	Bignoniaceae	RS	Ornamental
135	<i>Tamarindus indica</i> L.	Caesalpiniaceae	HG, RS, OG	Fruit, Timber
136	<i>Tecoma stans</i> (L.) Kunth.	Bignoniaceae	RS, CG, DSC, HG, OG, pp	Ornamental
137	<i>Tecomella undulata</i> (Sm.) Seem.	Bignoniaceae	HG, CG	Ornamental
138	<i>Terminalia arjuna</i> Roxb. ex DC.) At.& Arn.	Combretaceae	RS, CG, OG	Medicinal, Timber
139	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Combretaceae	RS, CG	Medicinal
140	<i>Terminalia cattapa</i> L.	Combretaceae	HG, RS, OG, pp	Timber
141	<i>Thespesia populanea</i> (L.) Sol. ex Correa.	Malvaceae	HG, RS, TE, OG, pp	Timber
142	<i>Vitex altissima</i> L.f.	Verbenaceae	DSC	Medicinal
143	<i>Vitex negundo</i> L.	Verbenaceae	RS, CG	Medicinal
144	<i>Wrightia tintoria</i> R.Br.	Apocynaceae	RS, CG	Medicinal
145	<i>Ziziphus mauritiana</i> Lam.	Rhamnaceae	RS, CG	Fruit

CG – College garden; TE- Temple; RS- road side; DSC- District science centre; HG – Home garden OG – Office garden; PP – Public park

Table 2. Diversity of Dicots and Monocots

Taxa	Dicot		Monocot		Total Number	Ratio	
	Number	Percentage	Number	Percentage		Dicot	Monocot
Families	38	92.68	3	7.32	41	1	0.078
Genera	93	87.8	13	12.2	106	1	0.139
Species	124	89.85	14	10.15	138	1	0.112

Leaves of trees such as *Gliricidia sepium*, *Leucaena latisiliqua* and *Sesbania grandiflora* are used as fodder. Leaves of *Sesbania grandiflora*, *Pisonia grandis* and *Murrya koengii* are edible and used in food preparation. *Cieba pentandra* is a fibre yielding tree. Fruits of *Calophyllum inophyllum*, *Madhuca longifolia* and *Pongamia glabra* yield oil. *Aegle marmelos*, *Couroupita guianensis*, *Cretavea religiosa*, *Ficus religiosa*, *Azadirachta indica* and *Prosopis cineraria* are common sacred tree grown in the gardens of temples. Flowers of *Couroupita guianensis*, *Nyctanthus arborteretis* and *Michelia chembaca* are used to worship God. District Science Centre Tirunelveli recorded with highest number trees. Totally 338 trees observed during the period of study. Two endanger tree *Saraca asoka* also grown in the District Science Centre. The District Science Centre campus has 80 different varieties of tree species. They belong to 68 genera and 35 families. The Collector Office campus, Tirunelveli has recorded with 54 different varieties tree species belonging to 38 genera representing 25 families. The most dominant species on the campus are *Azadirachta indica* followed by the *Pongamia pinnata* and *Samanea saman*. In the Collector Office campus 318 trees were counted during the study period. Very old trees were recorded on this campus. 43 trees belonging to 7 families were measured over 200 cms in girth. Totally 67 different varieties of trees are recorded in Rani Anna Govt. College campus, Tirunelveli. Totally 61 different varieties of trees are recorded on the St. Xavier's College campus, Palayamkottai. Totally 38 different varieties of trees are recorded on the Tirunelveli Medical College campus, Palayamkottai and 45 different varieties of trees were recorded on the Government Engineering College campus, Tirunelveli.

Fruit yielding tree such as *Mangifera indica*, *Annona squamosa*, *Cocos nucifera*, *Carica papaya*, *Phyllanthus acidus*, *Phyllanthus emblica*, *Psidium guajava*, *Musa paradisiaca* and *Citrus limon* are common in home garden. The drumstick tree *Moringa pterygosperma* recorded almost 75% of home garden. People from Maharaja Nagar, Perumalpuram, Santhi Nagar and N.G.O colony are interested in growing many plants in home gardens. Palayamkottai, Tirunelveli town and Pettai recorded with less number of trees in the home garden as well as roadsides. The most common road side trees in Tirunelveli Corporation area *Azadirachta indica*, *Pongamia pinnata* and *Albizia lebbek*. 58 different varieties of vascular trees recorded from roadside in Tirunelveli Corporation area. Of these 58, dicots are 54 and monocot 4.

More number of dry deciduous forest trees found in the study area. Similar to present study, previous report on Bangalore urban forest also recorded occurrence of more number of deciduous species and observed 10 out of 15 as most common in street tree population and 7 out of 10 in parks of the city. On the other hand, present results are not in similar with the findings of Nowak (1993) and Nagendra and Gopal (2011) who reported predominance of alien species from the urban forests of Oakland, USA and Bangalore. Home owners planted many non-native trees in the home gardens. Urban forests are continuously losing a large proportion of their indigenous species due to ongoing competition between the natives and exotics (Drayton and Primack, 1996).

Conclusion

Tirunelveli Local forest department and Pollution control board have taken up tree planting and greening of school,

Government office campus and roadsides. In the last couple of years, these Department workers have planted saplings and taken good care of them. Each year the Government works with citizens to plant new trees. In Tirunelveli a Greening Action Plan is prepared annually with targets and goals. Saplings are provided free from nurseries, and students partake in tree planting drive along with NGOs. However, when these trees are suddenly and silently axed, they become 'Government property!' While neighborhoods are transformed, no one is asking, told or consulted even though such transport could take years to plan. A consultative process can in fact reap good results.

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