Article ID: abb150319101

Applied Biology & Biotechnology
ISSN 2320 –7825 (Print); 2320 –7833 (Online)

OPEN ACCESS

Plant Diversity of Sivanthipatti Forest in rainy season, Tirunelveli, Tamil Nadu

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Received: 21 February 2019 / Accepted: 01 March 2019/ Published Online:15 March 2019
http://www.gtrpcompany.com/abb.htm

Citation: Maridass M, Raju G. Plant Diversity of Sivanthipatti Forest in rainy season, Tirunelveli, Tamil Nadu. *Applied Biology and Biotechnology*,2019;7(1):1-4.

Abstract
In the present study, enumeration of plant diversity in Sivanthipatti forest regions of Tirunelveli District, Tamilnadu in the rainy season of October,2008 -January,2009. The collection plants were identified in the standard flora. The results of the present study, a total of 74 plants belonging to 58 genera and 35 families were collected and documented in the rainy season. Most of the species were identified by herbaceous plants. The conclusion of results observed that most of the species are herbs, they were growing on only rainy seasons. The large number of species was observed by Amaranthaceae and Euphorbiaceae family.

Keywords: Biodiversity, Plants, Sivanthipatti forest, Tirunelveli, Tamilnadu

1. INTRODUCTION

Plant diversity is an important component of the ecosystem. India has 12 biogeographical provinces, 5 biomes and 3 bioregion domains [1]. There are 17,527 angiosperm species, under 2991 genera and 251 families in India, representing approximately 7% of the described species in the world [3]. However, the recent estimate accounts a total of 17,926 species of angiosperms in the country [2]. Now, the major threats to plant diversity include habitat loss, fragmentation, and degradation, overexploitation, invasive species, pollution, and anthropogenic climate change. Conservation of plant diversity is a massive task if viewed globally, but the combination of a well-designed and well-managed protected area system and *ex situ* gap-filling and back-up should work anywhere. The most urgent needs are for the completion of the global botanical inventory and an assessment of the conservation status of the 94% of plant species not yet evaluated, so that both *in* and *ex situ* conservation can be targeted efficiently. Globally, the biggest conservation gap is in the hyper diverse lowland tropics and this is where attention needs to be focused. In this paper deal with enumeration and documentation plants were collected form the Sivanthipatti forest regions of Tirunelveli district, Tamil Nadu for the rainy season.

2 MATERIALSAND METHODS

The enumeration of plant materials was randomly collected in the during the periods of rainy seasons of October,2008 -January,2009). The forest regions of Sivanthipatti are scrub jungle and semi-arid region (Longitude altitute: 8°40'23"N; 77°46'0"E). An extensive field survey was conducted to study the area. The plants were identified and recorded and botanically identified by using the "Flora of Presidency of Madras [4] and the "Flora of Tamil Nadu Carnatic [5].

3 RESULTSAND DISCUSSION

In the present study, a total of 74 plants belonging to 58 genera and 35 families were collected and documented in the rainy season of Sivanthipatti forest, Tirunelveli District, Tamilnadu (Table -1). The maximum number of species was identified in the both family Amaranthaceae and Euphorbiaceae. The rainy season plants are growing luxuriantly because of easily availability of moisture and atmosphere. In the present study observed that most of the plants are herbaceous. These plants were gradually died in the three to months, and are replaced by winter season weeds [6]. However, some plants spread rapidly in this part of the state [6]. Similar studies were conducted enumerated in the plants in the sacred groves of Maharashtra [7]. 105 medicinal

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ISSN 2320 –7825 (Print); 2320 –7833 (Online)

plant species recorded from the Chilkigarh sacred grove in Midnapore district in West Bengal [8]. A total of 120 medicinal plants widely used for the treatment of various ailments was reported from the four sacred groves of Manipur [9]. Listed 209 angiosperm species at Gavissidalingeshwar sacred grove of Chintanpalli and opinion that among them 57 are medicinally important and 12 are threatened plants in the grove [10]. The total of 54 species enumerated on a 2-ha scale is closer to that of 51 species recorded on the same scale from Puthupet, another sacred grove dry evergreen forest located 45 km north of the present study site in southern India [11]. The conclusion of the present study observed that most of the herbaceous plants are used for medicinal purposes and which are growing luxuriantly in the rainy season for Tirunelveli District,Tamil nadu.

Table 1: List of plants recorded in Plant Diversity of Sivanthipatti Forest in rainy season, Tirunelveli District

Sl. No.	Plant Name	Family	No.of Genus	No. of Species
1.	*Abelmoschus esculentus* (L.) Moench.	Malvaceae	3	5
2.	*Abelmoschus moschatus* Medic			
3.	*Abutilon indicum* (L.) Sweet			
4.	*Sida cordata* (Burm. f.) Borssum			
5.	*Sida acuta Burm*.f			
6.	*Evolvulus alsinoides* (L.)	Convolvulaceae	1	1
7.	*Abrus precatorius* L.	Fabaceae	5	5
8.	*Alysicarpus monilifer* (L.) DC			
9.	*Tephrosia purpurea* (L.) Pers.			
10.	*Vigna mungo* (L.) Hepper.			
11.	*Clitoria ternatea* L.			
12.	*Acacia sinuta* (Lour.) Merr	Mimosaceae	1	1
13.	*Acalypha ciliata* Forssk.	Euphorbiaceae	4	6
14.	*Acalypha indica* L.			
15.	*Jatropha curcas* L			
16.	*Croton bonplandianus* Baill.			
17.	*Phyllanthus reticulatus* Poir			
18.	*Phyllanthus amaraus* Schum.& Thonn.			
19.	*Acanthospermum hispidum* DC	Compositae	3	3
20.	*Ageratum conyzoides* L.			
21.	Tridax procumbens L.			
22.	*Achyranthes* aspera L.	Amaranthaceae	4	6
23.	*Aerva persica* (Burm. f.) Merr.			
24.	*Aerva lanata* (L.) Juss. ex Schult.			
25.	*Amaranthus spinosus* L.			
26.	*Amaranthus viridis* L			
27.	*Alternanthera pungens* Kunth.			
28.	*Alocasia indica* (Roxb.) Schott.	Araceae	3	3
29.	Theriophonum manickamii			
30.	Theriophonum danielii			
31.	*Aloe vera* (L.) Burm. f.	Liliaceae	2	2
32.	*Gloriosa superba* L.			
33.	*Ammannia baccifera* L.	Lythraceae	1	1
34.	*Andrographis paniculata* (Burm.F.) Wall. ex Nees.	Acanthaceae	1	1
35.	*Anisomeles malabarica* (L.) R.Br	Lamiaceae	2	3
36.	*Ocimum americanum* L.			

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ISSN 2320 –7825 (Print); 2320 –7833 (Online)

37.	*Ocimum bacillicum* L.			
38.	*Aponogeton natans* (L.) Engler & K. Krause	Aponogetanaceae	1	1
39.	*Apulda mutica* L.	Poaceae	4	4
40.	*Arundo donax* L.			
41.	*Aristida adscensionis* L.			
42.	*Cynodon dactylon* (L.) Pers			
43.	*Argimone mexicana* L.	Papaveraceae	1	1
44.	*Argyreia elliptica* (Roth) Choisy.	Convolvulaceae	1	1
45.	*Aristolochia bracteolata* Lam	Aristolochiaceae	1	1
46.	*Oldenlandia umbellata* L.	Rubiaceae	1	1
47.	*Passiflora foetida* L.	Passifloraceae	1	1
48.	*Physalis minima* L	Solanaceae	3	5
49.	*Solanum nigrum* L			
50.	*Solanum trilobatum* L.			
51.	*Solanum surattense* Burm. f			
52.	*Datura metal* L.			
53.	*Tinospora cordifolia* (Willd.) Miers ex Hook.f. & Thoms.	Menispermaceae	1	1
54.	*Senna auriculata* (L.) Roxb.	Caesalpiniaceae	2	2
55.	*Senna alata* (L.) Roxb.			
56.	*Lindernia crustacea* (L.) F. V. Muell.	Scorphulariaceae	1	2
57.	*Lindernia antipoda* (L.) Alston			
58.	*Hemidesmus indicus* (L.) R. Br. var. *indicus*	Periplocaceae	1	1
59.	*Coccinia grandis* (L.) Voigt.	Cucurbitaceae	2	3
60.	*Cucumis melo* L			
61.	*Cucumis sativus L.*			
62.	*Cardiospermum halicacabum* L	Sapindaceae	1	1
63.	*Cissus quadrangularis* L.	Vitaceae	1	1
64.	*Cleome viscosa* L.	Cleomaceae	1	1
65.	*Catharanthus roseus* G. Don	Apocyanaceae	1	1
66.	*Calotropis gigantea* (L.) Dryand.	Asclepiadaceae	1	1
67.	*Cleome gynandra* L.	Capparaceae	1	1
68.	*Curculigo orchioides* Gaertn	Hypoxidaceae	1	1
69.	*Cyperus articulatus* L.	Cyperaceae	1	4
70.	*Cyperus distans* L.f			
71.	*Cyperus pilosus* Vahl			
72.	*Cyperus rotundus* L.			
73.	*Eclipta prostrata* (L.) L.	Asteraceae	1	1
74.	*Hybanthus enneaspermus* (L.) F. Muell	Violaceae	1	1

Applied Biology & Biotechnology
ISSN 2320 –7825 (Print); 2320 –7833 (Online)

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