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Floristic Diversity and Ethnobotanical Uses of Vedhagiri Hills in Bhavani, Erode District, Tamil Nadu

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Abstract

Background: The present study was undertaken to enumerate the floristic composition of Vedd-hagiri hills, the Southern Western Ghats of Erode district. It becomes essential to analyze the diversity statically to find out the distribution of plants species in various families. Material and Methods: Several field trips were made from September 2013 to March 2014, covering different seasons, in order to know the phenology of the plants. Results: A total number of 135-species under 40-families with 103-genera were collected from the Angiosperms. Among the Angiosperms, Dicotyledons comprise 120-species under 69-genera and 36-families and the Monocotyledons comprise 15-species belonging to 14-genera and 4-families. On the basis of the habit, the plants have been grouped into trees, shrubs, herbs and climbers. Herbs are more dominated with 50 species, followed by Shrub 31 species, Climber 18 species, Tree 24 species and Grasses 12 species. Some of the plants were used by rural people in many different ways. The principle uses were medicinal, cultural/religious, food, timber and other household purposes. Conclusion: Natural forest areas are shrinking at an alarming rate due to high anthropogenic pressure and climatic change. The need of the hour is to conserve the fragmented repositories of natural forests in this region by implementing stringent conservation methods.

Keywords

Angiosperms, Assessment, Eastern Ghats, Ethno Botanical, Floristic Diversity

Subject Areas: **Plant Science**

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1. Introduction

Biodiversity is the total variety of life on earth. It includes all genes, species and ecosystems. In short it reflects the totality of genus, species and ecosystems in a region [1]. The studies of biodiversity have now assumed greater significance as ecologists try seriously to document global biodiversity in the face of unprecedented perturbation, habit loss and extinction rates [2]. Floristic inventory and diversity status help us understand the species composition and diversity status of forests [3].

A flora is an inventory of the plants of a defined biogeographically region. The floristic studies are considered as the backbone of the assessment of phytodiversity, conservation management and sustainable utilization of bioresearches of a region. They are helpful in providing clues of changing floristic pattern, new invasions, current status, rare, endemic and threatened (RET) taxa in a phytogeographical area.

A through taxonomic study of the flora and forest is essential to understand and assess the richness of their biodiversity [4]. Moreover, quantitative inventories help to identify species that are in different stages of vulnerability [5] as well as the various factors that influence the existing vegetation in any region [6]. Moreover in any resources management programs, continuous updating of data about any vegetation, flora and economically relevant plants of the region is an important component of bio-prospecting tools.

Several studies have been conducted to analyze the floristic composition of the wall habitats in India and abroad. In recent years some research workers have been carried out on the flora of Erode district [7]-[9]. None of the above studies give a detailed account on the floral diversity of vedhagiri hills in Bhavani, Erode district. The study area, Veddhagiri hills, has rich a diverse ecological community performing a variety of functions. This diversity has been modified at times and has tried to sustain itself in changing circumstances. Keeping the above points in mind, the present survey was undertaken to provide an account of the floristic diversity in Veghagiri hills of Erode District Tamil Nadu.

2. Materials and Methods

The present investigation was undertaken to study the floristic diversity of the Vedhagiri hills of Bhavani in Erode district. Several field trips were made from September 2013 to March 2014, covering different seasons, in order to know the phenology of the plants. The collected specimens were identified taxonomically with the help of available monographs, taxonomic revisions and floras [10]-[14] and by using field keys.

The specimen was them poisoned in a saturated solution of mercuric chloride in alcohol. Further processes pressing, mounting and labeling were done following the instruction given by [15]. The voucher specimens were deposited in the Herbarium of Department of Botany, Bharathiar University (BUH), Coimbatore, Tamil Nadu. Further, the local peoples were contacted to get the information about the economic utility of the collected plant species (**Table 1**).

3. Study Area

The study area Vedhagiri hills, Bhavani is situated about 21 Km from Erode town and is a continuation of the Western Ghats lying North to Palghat Gap and to the south-east of the Nilgris. The area comes under the Vedhagiri hills, Bhavani of Erode division which includes the villages namely Kurupanayakanpalayam and Anthiyur. It lies between 11˚28'N and 38˚94'N latitude and 77˚4'E and 27.06˚E longitude.

In this area soil is found to be rather sandy, stony and of the gravel type.

In general it can be classified into two main groups (black and red soils). The climate in general is dry and characterised by insufficient rainfall. During February and March the climate is usually oppressive especially along river Cauvery. In April the weather gets hotter and humidity is at its maximum. The average maximum and minimum temperature is 96˚C and 80˚C. The temperature gradually increases from 85˚C in January to 96˚C in May and reduces gradually to 80˚C in December. Total rainfall is over 100 mm in a year. When monsoon breaks maximum rainfall reaches 30 mm during South West Monsoon in October (**Figure 1**).

4. Results

4.1. Floristic Study

The present study was undertaken to enumerate the floristic composition of Veddhagiri hills, the Southern

Table 1. List of plants economic utility of the present study.

S. No.	Binomial name	Family	Uses	Using methods
1	*Cocculus hirsutus* (L.)	Menispermaceae	Medicine	The shade dried powder is mixed with cow's milk or butter milk as a refrigerant twice a day for a period of one week.
2	*Cleome viscosa* L.	Cleomaceae	Medicine	The juice of the leaves is poured into the ear to relieve earache.
3	*Abutilon indicum* (L.)	Malvaceae	Medicine	A leaf paste is taken orally to cure piles.
4	*Hibiscus vitifolius* L.	Malvaceae	Ornamental	Flowers used as ornamental purposes.
5	*Sida acuta* Burm. f.	Malvaceae	Medicine	Paste of leaves is mixed with coconut oil and applied on head regularly for killing dandruff and also for strengthening hair.
6	*Tribulus terrestris* L.	Zygophyllaceae	Medicine.	The plant extract is used to remove kidney stones.
7	*Azadirachta indica* A.Juss.	Meliaceae	Medicine Edible	Flowers, leaves, seed oil is used for curing skin diseases, Purification of blood, cure boils, antiseptic. The fruits are used as edible.
8	*Zizyphus jujuba* (L.)	Rhamnaceae	Edible TImber	The fruits are edible The wood is used as timber.
9	*Cissus quadrangularis* L.	Vitaceae	Timber	A paste of the whole plant is taken for improving the digestion and reducing appetite.
10	*Cardiospermum helicacabum* L.	Sapindaceae	Medicine	A leaf paste is applied for joint pain or leaves are prepared in the form of a soap and consumed to cure rheumatic pain.
11	*Mangifera indica* L.	Anacardiaceae	Medicine	The latex of the plant cures wounds on the legs of livestock.
12	*Clitoria ternatea* L.	Fabaceae	Mediccine	Roots, bark, seed is used to cure chronic bronchitis.
13	*Tephrosia purpurea* (L.)	Fabaceae	Medicine.	A paste of the root bark is taken for stomach pain.
14	*Cassia auriculata* L.	Caesalpiniaceae	Medicine Ornamental	Dried and powdered flowers are used for cleaning the hair and reducing body weight. Flowers are used for ornamental.
15	*Tamarindus indica* L.	Caesalpiniaceae	Medicine Edible	A paste of seed coat is applied to scorpion bite to relieve pain. The fruits are used as edible.
16	*Acacia leucophloea* (Roxb.)	Mimosaceae	Timber	The wood is used as timber product.
17	*Acacia nilotica* (L.)	Mimosaceae	Timber	The wood is used as timber product.
18	*Albizia amara* (Roxb.)	Mimosaceae	Medicine	A shade dried powder is used as shampoo for cleaning the hair and reduction of body heat.
19	*Albizia odoratissima* (L.f.)	Mimosaceae	Timber	The wood is used as timber product.
20	*Prosopis julifera* DC.	Mimosaceae	Timber	The wood is used for fuel.
21	*Passiflora foetida* L.	Cucurbitaceae	Edible	The fruit is used as edible
22	*Coccinia grandis* (L.)	Cucurbitaceae	Medicine	Fruits Used as a medicinal purpose.
23	*Mukia maderaspatena* (L.)	Cucurbitaceae	Medicine	The leaf extract is taken internally to cure piles.
24	*Corollocarpus epigeas* (Rottl. & Willd.)	Cucurbitaceae	Medicine	The leaf extract is taken internally to cure piles.
25	*Oldenlandia umbellata* L.	Rubiaceae	Medicine	A teaspoonful of the dried and powdered plant mixed with water is taken for asthma.

Continued

26	*Parthenium hysterophorous* L.	Asteraceae	Medicine	Shade dried leaf powder is mixed with cup of water and taken internally to cure diabetes.
27	*Vernonia cinerea* (L.)	Asteraceae	Medicine	The plant is used to cure paralysis.
28	*Xanthium strumarium* L.	Asteraceae	Medicine	Young bud is used for toothache.
29	*Vinca rosea* L.	Apocynaceae	Medicine	Used for cancer.
30	*Wrightia tinctoria* (Roxb.) R.Br.	Apocynaceae	Medicine Ornamental	A paste of leaves mixed with neem oil is applied for eczema. Flowers are used for ornamental purpose.
31	*Nerium undicum* Mill. Gard.	Apocynaceae	Ornamental	Flowers are used for ornamental purpose.
32	*Calotropis gigantea* (L.)	Asclepiadaceae	Medicine	The leaves are tied around wounds made by thorns.
33	*Hemidesmus indicus* (L.) R.Br.	Asclepiadaceae	Medicine	An extract of the whole plant is given in fever.
34	*Gymnema sylvestre* (Retz.) R.Br.	Asclepiadaceae	Medicine	A powder of leaves is used to cure diabtes, reduce sugar level in blood.
35	*Cuscuta chinensis* Lam.	Convolvulaceae	Medicine	The leafless twining stem is made into paste and applied to the broken part of bone in order to promote the joining of the fractured part.
36	*Evolvulus alsinoides* (L.)	Convolvulaceae	Medicine	For all kind of fever, acrid bitter tonic, Leaf juice increase brain power.
37	*Merremia tridentata* (L.)	Convolvulaceae	Medicine	Root is used for toothache.
38	*Solanum xanthocarpum* Schrader & Wendl.	Solanaceae	Edible Medicine	The fruits are used as edible. Seeds are used for gum disorders, tooth pain, dentifrice.
39	*Solanum nigrum* L.	Solanaceae	Edible	The fruits are used as edible.
40	*Millingtonia hortensis* L.	Bignoniaceae	Ornamental	The flowers are used for ornamental purpose.
41	*Tecoma stans* (L.)	Bignoniaceae	Ornamental	The flowers are used for ornamental purpose.
42	*Barleria cristata* L.	Acanthaceae	Ornamental	The flowers are used for ornamental purpose.
43	*Barleria buxifolia* L.	Acanthaceae	Ornamental	The flowers are used for ornamental purpose.
44	*Barleria cuspsidata* Heyne ex Nees	Acanthaceae	Ornamental	The flowers are used for ornamental purpose.
45	*Tectona grandis* L.	Verbenaceae	Timber	The stem part used as timber yeilding.
46	*Ocimum americanum* L.	Lamiaceae	Medicine	The vapor of boiled leaves is inhaled to relieve a headache and fever.
47	*Leucas aspera* (Willd.) Link.	Lamiaceae	Medicine	Antipyretic, insecticide, worms.
48	*Boerhavia diffusa* L.	Nyctaginaceae	Medicine	A decoction of the roots is used for gas troubles.
49	*Aerva lanata* (L.) Juss.	Amaranthaceae	Ornamental Medicinal	The flowers are used for ornamental purpose The decoction of the juice of the whole plant is taken for urinary problem.
50	*Santalum album* L.	Santalaceae	Timber	Stem part used as Timber product.
51	*Acalypha indica* L.	Euphorbiaceae	Medicine	A leaf paste mixed with common salt, is used to cure eczema.
52	*Euphorbia hirta* L.	Euphorbiaceae	Medicine	A paste made from the entire plant, mixed with goat's milk is taken internally for stomach upset for children.
53	*Phyllanthes amarus* Schum. & Thonn.	Euphorbiaceae	Medicine	The whole plant paste is mixed with goat's milk and taken internally for three days to cure jaundice.
54	*Tragia involucrata* L.	Euphorbiaceae	Medicine	A paste of the fruit is applied to the forehead to relieve one-sided headache.
55	*Ficus benghalensis* L.	Moraceae	Medicine Timber	The bark to cure the dental and gum disorders. The stem part used as Timber yielding.
56	*Ficus racemosa* L.	Moraceae	Medicine	Bark is gorgle for sore throat.
57	*Borassus flabellifer* L.	Arecaceae	Medicine Timber	The pectin layer on the leaves is tied around cuts as a styptic. The wood is used for construction purposes.

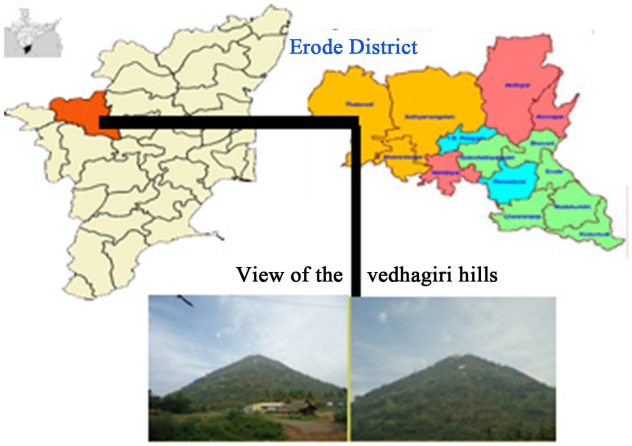

Figure 1. Study area map.

Western Ghats of Erode district, it becomes essential to analyses the diversity statically to find out the distribution of plants species in various families. A total number of 135-species under 40-families with 103-genera were collected from the Angiosperms (**Table 2**). Among the Angiosperms, Dicotyledons comprises 120-species under 69-genera and 36-families and the Monocotyledons comprises 15-species belonging to 14-genera and 4-families (**Table 3**). Out of 120-Dicotyledons, 44-species were belongs to Polypetalae followed by 48-species of Gamopetalae and 28-species of Monochlamydeae.

An analysis were made to find out the dominant families are Euphorbiaceae is the most dominant famlily with 13-species, followed by Amaranthaceae and Poaceae with 11-species each, Mimosaceae with 8-species, Caesalpinaceae, Convolvulaceae and Acanthaceae with 7-species each and Asteraceae with 6-species (**Figure 2**). On the basis of the habit, the plants have been grouped into trees, shrubs, herbs and climbers. Herbs are more dominated with 50 species, followed by Shrub 31 species, Climber 18 species, Tree 24 species and Grasses 12 species (**Figure 3**).

4.2. Ethno-Botanical Uses

The importance of conservation and utilization of plant resources in natural environment has long been recognized. Since the very beginning of human civilization, human have always been dependent on plant wealth for their major needs. About 90% of the ailments of ancient aborigines, tribes and local people are being cured by the plant resources [16]. Some of the plants were used by rural people in many different ways in the study area, The principle uses were medicinal, cultural/religious, food, timber and other household purposes. Through most of the plants are useful to mention in one way or other.

Local inhabitants living in villages, particularly in forest areas use a number of wild plants and their parts for curing various diseases. The following species are medicinally important whose curative properties have been well established, of these, 41 plant species were used for medicinal purposes to cure various disorders which ranged from diabetes, ear infections, antiseptics, joint pains, digestive problems and snake bites. Some medicinal plants are *Cocculus hirsutus* L., *Abutilon indicum* (L.), *Tribulus terrestris* L., *Azadirachta indica* L., *Cissus quadrangularis* L., *Cardiospermum helicacabum* (L)., *Coccinia grandis* (L.), *Calotropis gigantea* (L.), *Pedalium murex* L., *Ocimum americanum* L., etc.

4.3. Edible Fruit Yielding Plants

A number of plants provide fruits and other parts, which are eaten raw, cooked or pickled viz., *Zizyphus jujuba* Lam., *Tamarindus indica* L., *Solanum xanthocarpum* Schrader & Wendl., *Coccinia grandis* (L)., *Solanum nigrum* (L.) etc.

4.4. Wild Relatives of Cultivated Plants

The wild plants occurring naturally in the forests have several desirable characters such as resistance to diseases

Table 2. List of plants present in the study area.

S. No.	Binomial name	Vernacular name	Family	Habit
1	*Abutilon indicum* (L.) Sweet.	Thutti	Malvaceae	Shrub
2	*Acacia chundra* (Roxb. *ex* Rottl.) Willd.	Karangali	Mimosaceae	Tree
3	*Acacia ferrunginea* DC.	Velvelam	Mimosaceae	Tree
4	*Acacia leucophloea* (Roxb.) Willd.	Vellavelam	Mimosaceae	Tree
5	*Acacia nilotica* (L.) Willd.	Karuvelam	Mimosaceae	Tree
6	*Acalypha alnifolia* Klein *ex* Willd.	-	Euphorbiaceae	Shrub
7	*Acalypha indica* L.	Kuppaimeni	Euphorbiaceae	Herb
8	*Achyrnthes aspera* L.	Nayuruvi	Amaranthaceae	Herb
9	*Aerva lanata* (L.) Juss.	Sirupulai	Amaranthaceae	Shrub
10	*Aerva persica* (Burm. f.) Merr.	Perumpulai	Amaranthaceae	Shrub
11	*Agaratum conyzoides* L.	Appakoti	Asteraceae	Herb
12	*Albizia amara* (Roxb.) Boivin.	Unjal	Mimosaceae	Tree
13	*Albizia falcateria* (L.) Fosb.	-	Mimosaceae	Tree
14	*Albiziao doratissima* (L.f.) Benth.	-	Mimosaceae	Tree
15	*Alternanthera sessilis* (L.) R.Br.	Ponnanganni	Amaranthaceae	Herb
16	*Alternanthera paronychoides* A. St. Hil.	-	Amaranthaceae	Herb
17	*Amaranthes tricolor* L.	-	Amaranthaceae	Herb
18	*Apluda mutica* L.	Moongilpul	Poaceae	Grass
19	*Aristida setacea* Retz.	Thudappampullu	Poaceae	Grass
20	*Azadirachta indica* A .Juss.	Vembu	Meliaceae	Tree
21	*Barleria acuminate* Nees in Wall.	-	Acanthaceae	Shrub
22	*Barleria buxifolia* L.	-	Acanthaceae	Herb
23	*Barleria cristata* L.	Kattukanagambarm	Acanthaceae	Shrub
24	*Barleria cuspsidata* Heyne ex Nees	Chillimul	Acanthaceae	Shrub
25	*Bauhinia tomentosa* L.	Kanchini	Caesalpiniaceae	Shrub
26	*Boerhavia cripsa* Heyne*ex* Hook.	-	Nyctaginaceae	Herb
27	*Boerhavia diffusa* L.	Mukurattai	Nyctaginaceae	Herb
28	*Borassus flabellifer* L.	Panai	Arecaceae	Tree
29	*Brachiaria distachya* (L.) Stapf.	Marungalpul	Poaceae	Grass
30	*Calotropis gigantean* (L.) R. Br.	Velleruku	Asclepiadaceae	Shrub
31	*Calotropis procera* (Ait.) R.Br.	Erukku	Asclepiadaceae	Shrub
32	*Canthium parviflorum* Lam.	Karaycheddi	Rubiaceae	Shrub
33	*Cardiospermum helicacabum* L.	Mudakkotan	Sapindaceae	Climber
34	*Cassia auriculata* L.	Avaram	Caesalpiniaceae	Shrub
35	*Cassia siamea* Lam.	Manjakonnai	Caesalpiniaceae	Tree

Continued

36	*Cassia sophrea* L.	Ponnavarai	Caesalpiniaceae	Shrub
37	*Catharanthes roseus* L.	Nithyakalyani	Apocynaceae	Shrub
38	*Celosia argentea* L.	Kolikondai	Amaranthaceae	Herb
39	*Celosia cristata* L.	-	Amaranthaceae	Shrub
40	*Cenchrus ciliaris* L.	Kolukkaaipullu	Poaceae	Grass
41	*Cerapegia juncea* Roxb.		Asclepiadaceae	Herb
42	*Cereus pterogonus* Lemaire.	Otthakalli	Cactaceae	Shrub
43	*Chloris barbata* Sw.	Kodaipullu	Poaceae	Grass
44	*Chrysopogon fulvus* (Spreng.) Chiov.	Cholapullu	Poaceae	Grass
45	*Cissus quadrangularis* L.	Perandai	Vitaceae	Climber
46	*Cleome gynandra* L.	Nallavelai	Cleomaceae	Herb
47	*Cleome viscosa* L.	Manjakadugu	Cleomaceae	Herb
48	*Clitoria ternatea* L.	Karkakartum	Fabaceae	Climber
49	*Coccinia grandis* (L.) Voight.	Kovai	Cucurbitaceae	Climber
50	*Cocculus hirsutus* (L.) Diels.	Kaatukodi	Menispermaceae	Climber
51	*Commelina benghalensis* L.	Adutinnathalai	Commelinaceae	Herb
52	*Commelina diffusa* Burm.f.	-	Commelinaceae	Herb
53	*Corollocarpus epigaeus* (Rottl. & Willd.) Hooker.	Akashagarudan	Cucurbitaceae	Climber
54	*Croton bonplandianum* Bail.	Reilpoondu	Euphorbiaceae	Herb
55	*Cuscuta chinensis* Lam.	-	Convolvulaceae	Climber
56	*Cyperus difformis* L.	-	Cyperaceae	Grass
57	*Dactyloctenium aegypticum* (L.) Willd.	-	Poaceae	Grass
58	*Dalbergia sissoo* Roxb.	Sisu-itti	Fabaceae	Tree
59	*Datura metal* L.	Oomatha poo	Solanaceae	Shrub
60	*Delonix regia* (Boij. *ex* Hook.) Raf.	-	Caesalpiniaceae	Tree
61	*Digera muricata* Forssk.	Thoyyakeerai	Amaranthaceae	Herb
62	*Dodonea viscosa* (L.) Jacq.	Virali	Sapindaceae	Shrub
63	*Ecbolium viride* (Forrsk.) Alston.	Nilambari	Acanthaceae	Shrub
64	*Echinocola colona* (L.) Link .	Karumpullu	Poaceae	Grass
65	*Eclipta prostrata* (L.) L.	Kavanthkara	Asteraceae	Herb
66	Eragrostiella brachyphylla (Stapf) Bor.	-	Poaceae	Grass
67	*Euphorbia hirta* L.	Amampatcharisi	Euphorbiaceae	Herb
68	*Euphorbia tirukalli* L.	Tiru-kalli	Euphorbiaceae	Shrub
69	*Euphorbia tortilis* Rottl. *ex* Ainslie.	Thirugakalli	Euphorbiaceae	Herb
70	*Euphorbia thymifolia* L.	-	Euphorbiaceae	Herb
71	*Evolvulus alsinoides* (L.) L.	Vishnukrandi	Convolvulaceae	Climber

Continued

72	*Ficus benghalensis* L.	Aalamaram	Moraceae	Tree
73	*Ficus racemosa* L.	Atthi	Moraceae	Tree
74	*Gomphrena celosoides* C. Martius.	Pacha-vadamalli	Amaranthaceae	Herb
75	*Gomphrena globosa* L.	Vadamalli	Amaranthaceae	Herb
76	*Gymnema sylvestre* (Retz.) R.Br.	Shirukurinja	Asclepiadaceae	Climber
77	*Hedyotis puberula* G. Don.	Chayaver	Rubiaceae	Herb
78	*Hemidesmus indicus* (L.) R.Br.	Nannari	Asclepiadaceae	Climber
79	*Hibiscus vitifolius* L.	-	Malvaceae	Shrub
80	*Indigofera linnae* Ali in Bot.	Seppunerunji	Fabaceae	Herb
81	*Indoneesiella echinoides* (L.) Sreemadh.	Koburamthanki	Acanthaceae	Herb
82	*Ipomoea obscura* (L.) Ker-Gewl.	Siruttalai	Convolvulaceae	Climber
83	*Ipomoea pes-tigridis* L.	Punaikkirai	Convolvulaceae	Climber
84	*Ipomoea staphylina* Roem. & Shultes.	Onnankodi	Convolvulaceae	Climber
85	*Jatropha gossipifolia* L.	Adalai	Euphorbiaceae	Shrub
86	*Justicia neesii* Raman.	-	Acanthaceae	Herb
87	*Lantana camara* L.	Unichedi	Verbenaceae	Shrub
88	*Leucas aspera* (Willd.) Link.	Thumbai	Lamiaceae	Herb
89	*Mangifera indica* L.	Maamaram	Anacardiaceae	Tree
90	*Martynia annua* L.	Thelkodukkai	Martyniaceae	Herb
91	*Merremia dissecta* (Jacq.) Hall.	-	Convolvulaceae	Climber
92	*Merremia tridentate* (L.) Hall.	-	Convolvulaceae	Herb
93	*Millingtonia hortensis* L.	Mara-malli.	Bignoniaceae	Tree
94	*Mollugo pantaphylla* L.	Parpadagam	Molluginaceae	Herb
95	*Mukia maderaspatena* (L.) M.Roem.	Mumusukkai	Cucurbitaceae	Climber
96	*Muntingia calabura* L.	-	Elaeocarpaceae	Tree
97	*Nerium indicum* Mill.	Arali	Apocynaceae	Shrub
98	*Ocimum americanum* L.	Naithulasi	Lamiaceae	Herb
99	*Ocimum basilicum* L.	Karunthulasi	Lamiaceae	Herb
100	*Ocimum tenuiflorum* L.	Thulasi	Lamiaceae	Herb
101	*Parthenium hysterophorous* L.	Mookuthi poo	Asteraceae	Herb
102	*Passiflora foetida* L.	Sirupunaikkali	Passifloraceae	Climber
103	*Pavonia procumbens* Wall *ex* Wight & Arn.	-	Malvaceae	Shrub
104	*Pavonia zeylanica* (L.) Cav.	Mammati	Malvaceae	Shrub
105	*Pedalium murex* L.	Perunerunji	Pedaliaceae	Herb
106	*Pergularia daemia* (Forssk.) Chiov.	Velipparuthi	Asclepiadaceae	Climber
107	*Peristophe paniculata* (Forssk.) Brummit.	-	Acanthaceae	Herb

Continued

108	Perotis indica (L.) Kuntze.	Thopparaaipullu	Poaceae	Grass
109	*Phyla nodiflora* (L.) Greene.	Poduthalai	Verbenaceae	Herb
110	*Phyllanthes virgatus* Forst. f.	-	Euphorbiaceae	Herb
111	*Phyllanthe samaras* Schum. &Thonn.	Kila-nelli	Euphorbiaceae	Herb
112	*Phyllanthes maderapatensis* L.	Mela-nalli	Euphorbiaceae	Herb
113	*Plectranthes barbatus* Andr.	Poolankilangu	Lamiaceae	Herb
114	*Polycarpa corymbosa* (L.) Lam.	Nilaichedachi	Caryophyllaceae	Herb
115	*Prosopis julifera* DC.	Mulumaram	Mimosaceae	Tree
116	*Rhynchosia minima* (L.) DC.	Chittavarai	Fabaceae	Climber
117	*Ricinis communis* L.	Aamanaku	Euphorbiaceae	Shrub
118	*Santalum album* L.	Sndhanam	Santalaceae	Tree
119	*Sida acuta* Burm. f.	Ariva-mookukeerai	Malvaceae	Shrub
120	*Solanum surettense* Burm . f.	Kandangattiri	Solanaceae	Herb
121	*Solanumnigrum* L.	Mliaguthakali	Solanaceae	Herb
122	*Tamarindus indica* L.	Puli	Caesalpiniaceae	Tree
123	*Tecoma stans* (L.) Kunth.	Sonnapatti	Bignoniaceae	Shrub
124	*Tectona grandis* L.	Thekku	Verbenaceae	Tree
125	*Tephrosia purpurea* (L.) Pers.	Katu-kolingi	Fabaceae	Shrub
126	*Tragia involucrata* L.	Mapatan	Euphorbiaceae	Shrub
127	*Tragus roxbhurgii* Panigrahi.	Ootarampullu	Poaceae	Grass
128	*Trianthema triquetra* Rottl. *Ex* Willd.	-	Aizoaceae	Herb
129	*Tribulus terrestris* L.	Nerunji	Zygophyllaceae	Herb
130	*Tridax procumbens* L.	Vettukaya-thalai	Asteraceae	Herb
131	*Vernonia cinerea* (L.) Less.	Mukuttipoo	Asteraceae	Herb
132	*Vitex negundo* L.	Nochi	Verbenaceae	Tree
133	*Wrightia tinctoria* (Roxb.) R.Br.	Nilapalai	Apocynaceae	Tree
134	*Xanthium indicum* L.	Marlumutta	Asteraceae	Herb
135	*Zizyphus mauritiana* Lam.	Yellande	Rhamnaceae	Tree

Table 3. Numerical data from the present study area.

Group	Sub-class		Families	Genus	Species
Angiosperms	Dicotyledons	Polypetalae	19	34	44
		Gamopetalae	12	38	48
		Monochlamydeae	5	17	28
	Monocotyledons		4	14	15
	Total		**40**	**103**	**135**

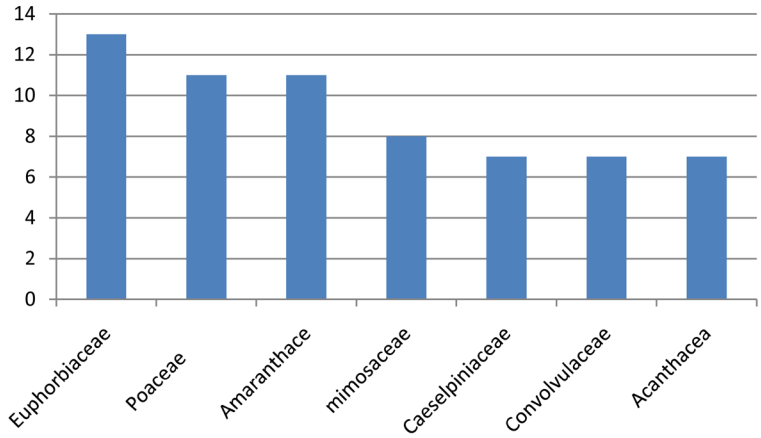

Figure 2. Dominant families from the study.

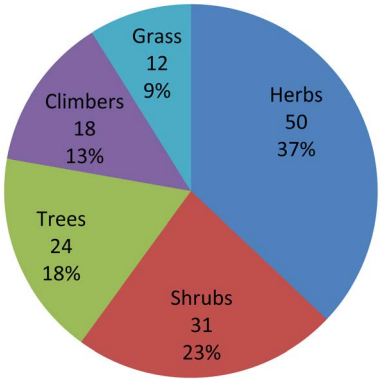

Figure 3. Life form analysis from the study.

and pests, drought tolerant, high yield etc. These characters can be used in plant breeding. Some of the wild plants collected during investigation are *Mangifera indica* L., *Ocimum americanum* L., *Ocimum basilicum* L., *Tectona grandis* L., *Solanum nigrum* (L.).

4.5. Ornamental Potential Species

Ornamental plants can be developed as a cottage industry in Erode district particularly act as several places in general along the Western Ghats. House wives, farmers and entrepreneurs could be engaged to develop horticulture as available commercial activity. In this aspect, the following species can be utilized. *Hibiscus vitifolius* L., *Cassia auriculata* L., *Wrightia tinctoria* (Roxb.), *Millingtonia hortensis* L., *Tecoma stans* L., *Barleria cristata* L., *Barleria cuspidata* (L.), *Aerva lanata* (L.) etc.

Hence, proper documentation and preservation of traditional skills and technology of medicinal plants is a vital necessity. Further investigation on pharmacological importance of these plants and their diversity may add new knowledge to the traditional medicinal and cultural system.

5. Discussion

During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of India and there are some reports on the use of plants in traditional healing by either tribal people or indigenous communities of Erode district. The *Irula* tribes of Hasanur Hill of the Erode District used 70 wild valuable plant species used and utilization by the local tribal people for different human ailments. The common diseases treated by the herbal practitioner were asthma, digestive problems, paralyzes, skin diseases and diabetes [17]. *Hooralis* Tribes in Kadambur Hills (Kalkadmbur), used that 68 species to be used to cure skin diseases, poison bites, stomachache, cough, cold and diabetes, the indigenous knowledge of

medicinal plants has great potential for research and the discover of new drugs [18].

50 popular medicinal plants frequently used by the local villagers for minor ailments such as boils, cuts, wounds, diarrhoea, head-ache, jaundice, skin infection and general debility [19]. The traditional healers used 93 species were used to treat various diseases. The documented medicinal plants were used to cure different ailments such as skin problems, cold, fever, cough, headache, diarrhea, fertility problems, toothache, stomach ache, wounds, diabetes, rheumatism, asthma, dysentery, small pox, bone fractures, ear ache, hair loss and poison (snake, scorpion and insect) bites etc., and showed that the tribes and villagers still continue to depend on medicinal plants [20].

In the present was the first attempt Floristic Diversity and Ethno botanical Uses of Vedhagiri Hills in Bhavani, Erode District. Documenting the patterns of species diversity and their distribution creates a valuable database, useful for implementing better management and conservation of tropical forests. Presently, many forest sites of Eastern Ghats are subjected to various anthropogenic pressures. Data of plant diversity, such as presented in the current study on trees and shrubs will be useful in highlighting the importance of these forests for species conservation and forest management.

6. Conclusion

The result of the present study revealed the knowledge about the edibility; the preservation of this knowledge appears to be the result of continued reliance of local communities, medicinal and edible plants. The medicinal plants used by the rural people to cure different diseases also reveal that many wild species are under growing pressures from various anthropogenic factors. The natural health care system is getting a great attention these days. Therefore, documentation of information on indigenous knowledge and practices will help in conserving the knowledge.

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References

[1] FES (2010) Assessment of Biodiversity in Sitamata Wildlife Sanctuary. A Conservation Perspective. Report of Foundation for Ecological Sercurity, Gujarat, India.

[2] Rajendran, A., Aravindhan, V. and Sarvalingam, A. (2014) Biodiversity of the Bharathiar University Campus, India: A Floristic Approach. *International Journal of Biodiversity and Conservation*, **6**, 308-319. http://dx.doi.org/10.5897/IJBC2014.0679

[3] Phillips, O.L., Martinez, R.V., Vargas, P.N., Monteagudo, A.L., Zans, M.E.C., Sanchez, W.G., Cruz, A.P., Timana, M., Yli-Halla, M. and Rose, S. (2003) Efficient Plot-Based Floristic Assessment of Tropical Forests. *Journal of Tropical Ecology*, **19**, 629-645. http://dx.doi.org/10.1017/S0266467403006035

[4] Sindhu, R., Rajendran, A. and Jayanthi, P. (2012) Herbaceous Life Forms of Maruthamalai Hills, Southern Western Ghats, India. *International Journal of Medicinal and Aromatic Plants*, **4**, 625-631.

[5] Padalia, H., Chauhan, N., Porwal, M.C. and Roy, P.S. (2004) Phytosociological Observations on Tree Species Diversity of Andaman Islands, India. *Current Science*, **87**, 799-806.

[6] Parthasarathy, N. (1999) Tree Diversity and Distribution in Distributed and Human-Impacted Sites of Tropical Wet Evergreen Forest in Southern Western Ghats, India. *Biodiversity and Conservation*, **8**, 1365-1381. http://dx.doi.org/10.1023/A:1008949407385

[7] Thilagavathi, S. (2011) Flora of Xerophytes in Sathyamangalam Reserve Forest, Erode District, Tamil Nadu. M.Sc., Dissertation, Bharathiar University.

[8] Poongodi, A., Thilagavathi, S., Aravidhan, V. and Rajendran, A. (2011) Observation on Some Ethnomedicinal Plants in Sathyamangalam Forests of Erode Distict, Tamil Nadu, India. *Journal of Medicinal Plants Research*, **5**, 4709-4714.

[9] Gamble, J.S. (1915-36) Fischer CEC. Flora of the Presidency of Madras. Vol. 1-3, Adlard and Son Ltd., London.

[10] Henry, A.N., Chithra, V.N. and Balakrishnan, P. (1989) Flora of Tamil Nadu India. Series 1: Analysis. Vol. III. Botanical Survey of India, Coimbatore.

[11] Henry, A.N., Kumari, G.R. and Chitra, V. (1987) Flora of Tamil Nadu India. Series 1: Analysis. Vol. 2, Botanical Survey of India, Coimbatore.

[12] Kabeer, A.K. and Nair, V.J. (2009**)** Flora of Tamil Nadu Grasses. Botanical Survey of India, Kolkatta.

[13] Mathew, K.M. (1983**)** The flora of Tamil Nadu Carnatic, Parts (1-3). Rapient Herbarium, Tirudhirapalli.

[14] Santapau, H. (1955**)** Instructions for Field Collators of the Botanical Survey of India. Ministry of Natural Resources & Scientific Research, New Delhi.

[15] Jain, S.K. and Rao, R.R. (1976**)** A Hand Book of Field and Herbarium Methods. Today and Tomorrow's Printers and Publishers, New Delhi.

[16] Srivastava, S.K. (2011**)** Plant Diversity and Conservation Strategies of Uttar Pradesh. *Phtotaxonomy*, **11**, 45-62.

[17] Sindhu, S., Uma, G. and Kumudha, P. (2012) Survey of Medicinal Plants in Chennimallai Hills, Erode Districts, Tamil Nadu. *Asian Journal of Plant Science and Research*, **2**, 712-717.

[18] Revathi, P. and Parimelazhagan, T. (2010) Traditional Knowledge on Medicinal Plants Used by the Irula Tribes of Hasanur Hill, Erode District, Tamil Nadu. *Ethnobotanical Leaflets*, **14**, 136-160.

[19] Arnachalam, K. and Parimelzhagan, T. (2011) Ethnomedicnal Onservation among Hooralis Tribes in Kadambur Hills, (Kalkadmbur) Erode District, Tamil Nadu. *Global Journal of Pharmacology*, **5**, 117-121.

[20] Sathiyaraj, R., Sarvalingam, A. and Arulbalachandran, R.K.R. (2015) Diversity of Ethnomedicinal Plants in Bodamalai Hills Eastern Ghats, Namakkal District, Tamil Nadu. *Journal of Plant Sciences*, **3**, 77-84. http://dx.doi.org/10.11648/j.jps.20150302.16