



Floristic wealth and its traditional usage in parson's valley dam of Nilgiris, Tamil Nadu, India

Gowri N¹, Arunprasath A^{2*}

^{1,2} Post Graduate and Research, Department of Botany, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India

Abstract

Understanding the diversity of nature in various forms is fundamental goal of ecological research. In addition, investigations into traditional use and management of local flora have demonstrated the existence of extensive local knowledge of not only about the physical and chemical properties of many plant species, but also the phenological and ecological features in the case of domesticated species. In such manner, an exhaustive study was carried out to explore the floristic wealth and traditional usage of the same in Parson's Valley located in Nilgiris of Tamil Nadu, for a period of about 8 months from July, 2018 to February, 2019. By this present investigation, totally 104 species comes under various plant groups were recorded. Among them, 100 species comes under angiosperms, 2 were Gymnosperms and 2 were Pteridophytes. Regarding the habits of total species recorded, 58 species were found as herbs, 26 species were shrubs and 15 species as trees. 5 species of climbers were also recorded from the study site. The family Asteraceae was noted as dominant family. For this current research work, it was also documented that a total of 101 species were used as medicine for various ailments and 3 as fodder. The traditionally used plants in the study region lack phyto-therapeutic evidence. Hence, it is necessary to perform phytochemical or pharmacological studies to explore the potentials of plants used for medicinal purposes. Conservation strategies must also be carried out these species.

Keywords: flora, traditional knowledge, parson's valley, Nilgiris, angiosperms

1. Introduction

Biodiversity brings enormous to mankind from direct harvesting of plants and animals for food, medicine, fuel construction material, and other uses to aesthetic cultural, recreational, and research values. Benefits of ecosystem include climate and water regulation. The creation and protection of soils, helping to reduce floods and soil erosion. Shoreline protection, providing natural controls of agricultural pests and promote creative evolution. People have been using medicinal plants from time immemorial for the treatment of various types of diseases traditionally. Traditional medicinal plants use in India is about 4000 years old. Herbs had been used by all cultures throughout history. It was an integral part of the development. About 80% of the people in developing countries use traditional medicines for their health care ^[1]. In less developed /developing countries 80% of the people still rely only on traditional medicine obtained from local plants and 85% of traditional medicine involve the use of plant extracts ^[2]. Since adequate hospital facilities and allopathic doctors are absent in much of the tropics, any destruction of tropical forests would concomitantly destroy the primary healthcare network involving local plants and traditional 'doctor' ^[3]. About 90% of medicinal plants used in industries are collected from the wild. Over 70% of the plant collection involves destructive harvesting because of the use of the parts like roots, bark, wood, stem and the whole plant in case of herbs. The assessments done so far for the prioritized native medicinal species have resulted in the assignment of threatened status to nearly 200 plant species ^[4]. In view of the tremendously growing world population, increasing anthropogenic activities, rapidly eroding natural ecosystem, etc. The natural habitat for a great number of herbs and trees are dwindling. But rapid fragmentation of natural habitats is

greatly narrowing the distribution of the plant and increasing the risk of losing genetic diversity ^[5]. The ethnobotanical survey can bring out many different clues for the development of drugs to treat human diseases. Herbal medicines are assumed to be of great importance in the primary healthcare of individuals and communities in many developing countries ^[6]. Nilgiris district with its wide range of agro climatic conditions forms a cradle land for the cultivation and maintenance of several medicinal plants. This district is well known for its rich flora and medicinal and economic significance. It is needless to mention here that, the district constitute 60% of medicinal plants in India. The Nilgiris district is one of the smallest district of Tamil Nadu popularly known as Blue Mountains. The present study is aimed to assess the floristic composition and traditional knowledge of Parson's valley dam.

2. Materials and Method

2.1 Study area

The study area Parson's Valley Dam belongs to parson's valley village in Nilgiris. It is small village, it comes under Najanadu Panchayat. It is located nearly 13 km away from Nilgiris district, Tamil Nadu. It is located in northern part of Ooty. Field surveys were made to explore the floristic composition and the ethno medicinal study of parson's valley dam. Geographically Parson's valley lies between 11.4007° N latitude and 76.5994° E longitudes. Altitude is the 2196 meters above sea level.

2.2 Field survey

The field visit conducted during July 2018 to April 2019. Various plants were identified on the basis of spot identification information was collected from local people and forest officers of parson's valley dam. Ethnobotanical

information such as medicinal properties and part of the plant used medicine was collected. The Botanical identities of the plants have been confirmed with Flora of Presidency of Madras [7]. The collected plants were preserved and stored in Herbarium of PG & Research department of Botany PSG College of Arts and Science.

3. Results

The present study was conducted in Parson's valley dam, Parson's valley, Nilgiris District, Tamilnadu. There were 100 species of angiosperms coming under 98 genus and 41 families, 2 species of Pteridophytes coming under 2 families, 2 species of Gymnosperms under 2 families. The plants listed were distributed as 15 trees(14.42%), 26 shrubs (25%), 58 herbs(56%), 4 climbers (4%), and 1 twiner(1%),(Table 4). Most of the plants present in the Parson's valley dam are medicinally important. All the plants reported in the Parson's valley dam were Monocotyledons, Dicotyledons, Pteridophytes, and Gymnosperms. Floristic composition of the Parson's valley dam has been recorded in this study. Plants were enumerated with botanical names, family, habit and local names (Table 1). Ethnomedicinal uses of plants have been documented and presented in (Table 2). Different parts of the plants such as leaves, roots, bark, fruits, seeds and sometimes the whole plants are used for different medical purposes. Parson's valley dam takes major effort to recognize and conserve biodiversity traditionally. The family Compositae (Asteraceae) is the dominant family: followed by Fabaceae with 9 species; Poaceae with 7 species; Amaranthaceae with 5 species; Rutaceae, Myrtaceae, Convolvulaceae, Polygonaceae with 3 species each. 9 families represented by 2 species, and 28 families represented by single species each. The Parson's valley dam contains large number of floras and faunas. Invasive plants like *Chromolena odorata* L. *Gloriosa superba* L, Is vulnerable and *Melicope Luna-ankenda* (Gaertn) Merr. Least concern.

4. Discussion

Herbal remedies are considered the oldest forms of health care known to mankind on this earth. Prior to the development of modern medicine, the traditional systems of medicine that have evolved over the centuries within various communities, are still maintained as a great traditional knowledge base in herbal medicines [8]. Traditionally, this treasure of knowledge has been passed on orally from generation to generation without any written document [9] and is still retained by various indigenous groups around the world. People use more than one plant either separately or mixed together. They mix several plants as ingredients to cure diseases immediately. Generally, fresh part of the plant is used for the preparation of medicine. When fresh plant parts are not used as simple drugs and some plants are used with some other plant parts. The information collected from this study is in agreement with the previous reports [10] [11] [12] [13] [14]. Common health ailments in the study area were skin problems. Kanitribals in Tirunelveli Hills of Tamil Nadu were using 14 plants for the treatment of skin problems [15].

Tribal of Uttar Karnataka district used 52 herbal preparations from 31 plants for skin diseases, a nearest state of Tamil Nadu [16] and people of Eastern Cape Province, South Africa used 38 plant species for the treatment of wounds [17]. Several studies have enumerated the plants used for wound healing and skin diseases in various parts of the world [18] [19] reported 16 plant species that were used for respiratory diseases and 48 plants for the treatment of gastrointestinal disorders in north Iran. Safety and efficacy of the treatment for respiratory tract infections were reviewed. [21] reported that Traditional healers of Kancheepuram district used nine plant species to treat stomach problems among them 3 plants to treat stomach ache and plants to cure digestive problems has reported the use of 21 medicinal plants from 20 families to treat gastrointestinal complaints by using paliyar community.

Table 1: List of plants present in the Parson's Valley Dam

S. No	Plant Name	Family	Habit	Common Name Tamil/English
1.	<i>Mahonia lescheaultii</i> Nutt.	Berberidaceae	Shrub	Mullumanjanathi
2.	<i>Corydalis bugeana</i> L.	Papavaraceae	Herb	Bunge corydalis
3.	<i>Cardamine hirsuta</i> L.	Brassicaceae	Herb	Hairy bitter cress
4.	<i>Stellaria media</i> L.	Caryophyllaceae	Herb	Chickweed
5.	<i>Alcea rosea</i> L.	Malvaceae	Herb	Hollyhock
6.	<i>Tropaleum majus</i> L.	Tropalaceae	Herb	Climbing Nasturtium
7.	<i>Oxalis corniculata</i> L.	Oxalidaceae	Herb	Puliyarai
8.	<i>Melicope luna-ankenda</i> (Gaertn) Merr.	Rutaceae	Tree	Kattucampakam
9.	<i>Ruta chalpensis</i> L.	Rutaceae	Herb	Aruvada
10.	<i>Citrus limon</i> (L.) Osbeck	Rutaceae	Tree	Lemon
11.	<i>Nothapodytes nimmonia</i> (J.Grah.) D.J.Mabberley	Icacinaceae	Shrub	Pillipiccu
12.	<i>Rhamnus crenata</i> L.	Rhamnaceae	Shrub	
13.	<i>Cystisus scoparius</i> L.	Fabaceae	Shrub	Scotch Broom
14.	<i>Ulex europaeus</i> L.	Fabaceae	Shrub	Common Gorse
15.	<i>Acacia mernsii</i> (Dewild).	Fabaceae	Tree	Black Wattle
16.	<i>Acacia melanoxylon</i> R.Br.	Fabaceae	Tree	Chimaivel
17.	<i>Trifolium dubium</i> Sibth.	Fabaceae	Herb	Lesser Hop Trefoil
18.	<i>Trifolium repens</i> L.	Fabaceae	Herb	White clover
19.	<i>Sesbania sesban</i> (L.)Merr.	Fabaceae	Shrub	Citakathi
20.	<i>Delonix eleta</i> L.	Fabaceae	Tree	Vadanarayanan
21.	<i>Mimosa pudica</i> L.	Fabaceae	Herb	Thottaccuringi
22.	<i>Parkinsonia aculeta</i> L.	Ceaselpinaceae	Tree	Siniatumana
23.	<i>Rubus ellipticus</i> L.	Rosaceae	Shrub	Yellow himalayan raspberry
24.	<i>Rosa chinensis</i> Jacq.	Rosaceae	Shrub	Rose

25.	<i>Callistemon lanceolatus</i> (Curtis) Dum.Cours.	Myrtaceae	Shurb	English Bottle brush
26.	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Tree	Thailamaram
27.	<i>Eucalyptus citriodora</i> (Hook).	Myrtaceae	Tree	Thailamaram
28.	<i>Oenothera rosea</i> Aiton.	Onagraceae	Herb	Pink Evening Primrose
29.	<i>Ixora coccinea</i> L.	Rubiaceae	Shrub	Vedchi
30.	<i>Hedyotis umbellata</i> L.	Rubiaceae	Herb	Chayam
31.	<i>Santolina chamaecyparissus</i> L.	Asteraceae	Shrub	Lavender Cotton
32.	<i>Erigeron karvinskianus</i> DC.	Asteraceae	Herb	Australian Daisy
33.	<i>Bidens pilosa</i> L.	Asteraceae	Herb	Beggar Tick
34.	<i>Taraxacum javanicum</i> L.	Asteraceae	Herb	Dandelion
35.	<i>Dahlia imperialis</i> Roezl.	Asteraceae	Herb	Tree Dahlia
37.	<i>Acemella paniculata</i> (Wall ex DC.) R. K. Jansen.	Asteraceae	Shrub	Panicled Spot Flower
38.	<i>Coleostephus mycoins</i> L.	Asteraceae	Herb	Tongue-leaved chrysanthemum,
39.	<i>Delairea odorata</i> Lem.	Asteraceae	Tree	Parlor Ivy
40.	<i>Onopordum acanthium</i> L.	Asteraceae	Shrub	Scotch thistle
41.	<i>Syndrella nodiflora</i> L.	Asteraceae	Herb	Pig grass
42.	<i>Ageratum conyzoides</i> L.	Asteraceae	Herb	Pumpmillu
43.	<i>Senecio scandens</i> L.	Asteraceae	Climber	Climbing Senecio
44.	<i>Galinsoga parviflora</i> Cav.	Asteraceae	Herb	Mookuthi Poo
45.	<i>Chromalena odorata</i> L.	Asteraceae	Herb	Bitter bush
46.	<i>Tridax procumbens</i> L.	Asteraceae	Herb	Vettukkaaya-thalai
47.	<i>Veronica cinera</i> Schreb.	Asteraceae	Herb	Naichottepoonde
48.	<i>Parthenium hysterophours</i> L.	Asteraceae	Herb	Carrot Grass
49.	<i>Tithonia diversifolia</i> Hemsl .	Asteraceae	Herb	Tree marigold
50.	<i>Wedelia synensis</i> Jacq .	Asteraceae	Herb	Patalaikayantakarai
51.	<i>Acanthospermum hispidium</i> DC.	Asteraceae	Herb	Kombumul
52.	<i>Sonchus arvensis</i> L.	Asteraceae	Herb	Milk weed
53.	<i>Lobelia leschenaultiana</i> L.	Companulaceae	Shrub	Wild Tobacco
54.	<i>Gaultheria fragrantissima</i> Wall.	Ericaceae	Shrub	Kolakkai
55.	<i>Rhododendron arboreum</i> Sm.	Ericaceae	Tree	Billi
56.	<i>Plumbago auriculata</i> Lam.	Plumbaginaceae	Shrub	Plumbago
57.	<i>Jasminum mesnyi</i> Hance.	Oleaceae	Shrub	Primrose jasmine
58.	<i>Vinca major</i> L.	Apocyanaceae	Herb	Greek Periwinkle
59.	<i>Kniphofia uvaria</i> L.	Asclepidaceae	Herb	Red hot poker
60.	<i>Cynoglossum zeylanicum</i> Lehm.	Boraginaceae	Herb	Picinottarai
61.	<i>Ipomea obscura</i> L.	Convolvulaceae	Climber	Chirutali
62.	<i>Ipomea pes-tigridis</i> L.	Convolvulaceae	Twiner	Pulichovadi
63.	<i>Merrimeia quinquefolia</i> L.	Convolvulaceae	Climber	Atappankoti
64.	<i>Cestrum auranticum</i> Lindl.	Solanaceae	Shrub	Orange Cestrum
65.	<i>Solanum mauritinum</i> Scop.	Solanaceae	Shrub	Tobacco Bush
66.	<i>Calceolaria mexicana</i> L.	Scrophulariaceae	Herb	Nettipottuchedi
67.	<i>Scrophularia nodosa</i> L.	Scrophulariaceae	Herb	Knotted Figwort
68.	<i>Veronica persica</i> Poir.	Scrophulariaceae	Herb	Persian Speedwell
69.	<i>Spathodea companulata</i> p.Beauv.	Bignoniaceae	Tree	Patadi
70.	<i>Justicia betonica</i> L.	Acanthaceae	Shrub	Veli-munkil
71.	<i>Verbana rigida</i> Spreng.	Verbanaceae	Shrub	Slender Vervain
72.	<i>Lantana camera</i> L.	Verbanaceae	Shrub	Unnichedi
73.	<i>Salvia coccinea</i> Buc'hoz.	Lamiaceae	Shrub	Scarlet Sage
74.	<i>Clinopodium umbrosum</i> (M.Bieb.) K.Koch.	Lamiaceae	Herb	Shady Calamint
75.	<i>Boerhavia erecta</i> L.	Nyctaginaceae	Herb	Seemaimookarattai
76.	<i>Amaranthus viridis</i> L.	Amaranthaceae	Herb	Kuppaikkirai
77.	<i>Aerva lanata</i> L.	Amaranthaceae	Herb	Ciru-pulai
78.	<i>Aerva javanica</i> (Burm.f.) Shult.	Amaranthaceae	Shrub	Kapok Bush
79.	<i>Alternethra sessilis</i> L.	Amaranthaceae	Herb	Ponnanganni
80.	<i>Nothosaerva brachiata</i> (L.) Wight.	Amaranthaceae	Herb	Minute Amaranth
81.	<i>Phytalloca octandra</i> L.	Phytalocaceae	Herb	Dye-berry
82.	<i>Persicaria chinensis</i> L.	Polygonaceae	Shrub	Chinese knotweed
83.	<i>Persicaria nepalensis</i> Meisn.	Polygonaceae	Herb	Nepal knotweed
84.	<i>Rumex crispus</i> L.	Polygonaceae	Herb	Yellow dock
85.	<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	Herb	Kaliko plant
86.	<i>Euphorbia pulcherima</i> Wild ex klotzsch.	Euphorbiaceae	Shrub	Poinsettia
87.	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	Tree	Jack fruit
88.	<i>Iris versicolor</i> L.	Iridaceae	Herb	Blueflag
89.	<i>Gloriosa superba</i> L.	Lilliaceae	Climber	Kallappaikilangu
90.	<i>Commelina diffusa</i> Burm f.	Commelinaceae	Herb	Climbing dayflower
91.	<i>Commelina bengalensis</i> L.	Commelinaceae	Herb	Benghal dayflower
92.	<i>Cyperus rotundus</i> L.	Cypreaceae	Herb	Common nut sedge
93.	<i>Briza minor</i> L.	Poaceae	Herb	Lesser quaking-grass

94.	<i>Arundinella pumila</i> (Hochst. ex A.Rich.) Steud.	Poaceae	Herb	Dwarf Reedgrass
95.	<i>Bambusa vulgaris</i> Schrad.	Poaceae	Tree	Moongil
96.	<i>Eragrostis bifaria</i> (Vahl) Bor.	Poaceae	Herb	Canegrass
97.	<i>Poa annua</i> L.	Poaceae	Herb	Meadow grass
98.	<i>Dactyloctenium aegyptium</i> (L.) Willd.	Poaceae	Herb	Egyptian crowfoot grass
99.	<i>Paspalum distichum</i> L.	Poaceae	Herb	Burr grass
100.	<i>Tragus roxburgii</i> Ohwi.	Poaceae	Herb	Bur gras
Pteridophytes				
101.	<i>Selaginella involvens</i> (Sw.) Spring.	Selaginellaceae	Herb	
102.	<i>Dicranopteris linearis</i> (Burm.f.) Underw.	Gleicheniaceae	Herb	Fern
Gymnosperms				
103.	<i>Cupressus macrocarpa</i> Hartw.	Cupressaceae	Tree	Monterey cypress
104.	<i>Pinus wallichiana</i> A. B. Jacks.	Pinaceae	Tree	Blue pine

Table 2: Ethnomedicinal uses of the species present in the Parson's valley dam

S. No	Botanical Name	Parts Used	Medicinal Uses
1.	<i>Mahonia lescheaultii</i> Nutt.	Fruits, Root	The berries are edible, and in postnatal conditions, jaundice, fever
2.	<i>Corydalis bungeana</i> Turcz.	Whole plant	Anti inflammetry
3.	<i>Cardamine hirsuta</i> L.	Leaf	Indigestion
4.	<i>Stelleria media</i> L.	Whole plant	The plant is used to plasters employed on broken bones and swellings.
5.	<i>Alcea rosea</i> L.	Flowers	Antimicrobial, Antibacterial.
6.	<i>Tropaleum majus</i> L.	Leaves	Antihypertensive
7.	<i>Oxalis corniculata</i> L.	Whole plant	The juice of the plant is given by stomach trouble. Decoction of roots is useful for forms, also used clean rusted vessels.
8.	<i>Melicope luna-ankenda</i> (Gaertn) Merr.	Roots, leaves, and flowers.	Colds, rheumatism, menstrual disorders, fever.
9.	<i>Ruta chalpensis</i> L.	Aerial parts	Treatment of diverse ailments.
10.	<i>Citrus limon</i> (L.) Osbeck	Stem, Fruit	Stomachic tonic, Carminative.
11.	<i>Nothapodyte nimmonia</i> (J.Grah.) D.J.Mabberley	Leaves	Prevent heart attacks, skin cancer, and blood pressure.
12.	<i>Rhamnus crenata</i> L.	Leaves, Stem	Fever, antifungal, constipation
13.	<i>Cystisus scopariouus</i> L.	Whole plant	Conjunction with Convallariamajalis, Diuretic, stimulating urine problems.
14.	<i>Ulex europaeus</i> L.	Flowers, Seeds	Jaundice, scarlet fever in children, diarrhoea and stones
15.	<i>Acacia mernsii</i> (Dewild).	Stem	Diarrhoea and haemorrhoids
16.	<i>Acacia melanoxylon</i> R Br.	Stem	Wounds and other skin problems, haemorrhoids, perspiring feet,
17.	<i>Trifolium dubium</i> Sibth.	Whole plant	Stop bleeding, haemostatic
18.	<i>Trifolium repens</i> L.	Leaves	Analgesia and dermal discords
19.	<i>Sesbania sesban</i> (L.) Merr.	Roots, Leaves	Scorpion stings, antibiotic, anthelmintic, antitumor and contraceptive.
20.	<i>Delonix eleta</i> L.	Stem, Leaves	Antiinflammatory, Mouth ulcers.
21.	<i>Parkinsonia aculeta</i> L.	Leaf, fruit, stem	Fever, atony and malaria
22.	<i>Mimosa pudica</i> L.	Root, seed	Leprosy, dysentery, vaginal, Strong emetic.
23.	<i>Rubus ellipticus</i> L.	Whole plant	Astringent and febrifuge, fever, colic, coughs and sore throat.
24.	<i>Rosa chinensis</i> Jacq	Leaf, fruit	Arthritis, boils, coughs
25.	<i>Callistemon lanceolatus</i> (Curtis) Dum.Cours.	Whole plant	Anti inflammatory, antifungal.
26.	<i>Eucalyptus globulus</i> Labill.	Leaves	Antibiotic
27.	<i>Eucalyptus citriodora</i> (Hook).	Leaves	Cold remedies, Skin infection, essential oils.
28.	<i>Oenathera rosea</i> Aiton.	Whole plant	Anti-inflammatory
29.	<i>Ixora coccinea</i> L.	Leaves, bark	Diarrhoea, treat sores, ulcers.
30.	<i>Hedyotis umbellata</i> L.	Leaves, bark	Bronchitis, tuberculosis and asthma
31.	<i>Santolina chamaecyparissis</i> L.	Leaves, flowers	Antispasmodic, disinfectant, emmenagogue, stimulant and vermifuge
32.	<i>Erigeron karvinskianus</i> DC.	Leaves	Cuts or wounds as an astringent.
33.	<i>Bidens pilosa</i> L.	Whole plant	Antirheumatic, antiinflammatory, carminative, styptic and vermifuge.
34.	<i>Taraxacum javanicum</i> L.	Root	Diabetics, jaundice and kidney disorders.
35.	<i>Dahlia imperials</i> Roegl.	Flowers	Itchy sore spot on skins
36.	<i>Helichyrysum bracteatum</i> Roegl.	Flowers, aerial parts	Anti-inflammatory, antimicrobial, antispasmodic, antitussive, astringent, diuretic,
37.	<i>Acemella paniculata</i> (Wall ex DC.) R. K.Jansen.	Whole plant	Antibacterial, antimicrobial.
38.	<i>Coleostephus mycoins</i> L.	Whole plant	Antispasmodic, antihypertensive.

39.	<i>Delairea odorata</i> Lem.	Whole plant	Traditional medicine
40.	<i>Onopordum acanthium</i> L.	Whole plant	Anti inflammatory, urinary problems
41.	<i>Syndrella nodiflora</i> L.	Whole plant	Anti inflammatory, anti pyretic
42.	<i>Ageratum conyzoides</i> L.	Root, whole plant	Antilithic, cuts, wounds and bruises
43.	<i>Senecio scandens</i> L.	Whole plant	Depurative, febrifuge and ophthalmic
44.	<i>Galinsoga parviflora</i> Cav.	Whole plant	Wounds.
45.	<i>Chromolaena odorata</i> L.	Leaves	Eye pain, antibiotic, antimalarial
46.	<i>Tridax procumbens</i> L.	Leaves	Swelling of haemorrhoids and to stop bleeding, antiseptic
47.	<i>Vernonia cinerea</i> Schreb.	Leaves	Anti inflammatory
48.	<i>Parthenium hysterophorus</i> L.	Whole plant	Fever, diarrhoea, neurologic disorders, urinary tract infections, dysentery, malaria
49.	<i>Tithonia diversifolia</i> Hemsl.	Leaves	wounds and haematomas, Bitter essential oil
50.	<i>Wedelia chinensis</i> Jacq.	Leaves	Skin problems, jaundice, Cardio
51.	<i>Acanthospermum hispidum</i> DC.	Whole plant	Diuretic and soporific
52.	<i>Sonchus arvensis</i> L.	Leaves	Anti –inflammatory, cacked breasts
53.	<i>Lobelia leschenaultiana</i> L.	Leaves	Insects bite
54.	<i>Gaultheria fragrantissima</i> Wall.	Leaves	Antiseptic, carminative and stimulant
55.	<i>Rhododendron arboreum</i> Sm.	Leaves	Ant diabetic, antipyretic, anti inflammatory.
56.	<i>Plumbago auriculata</i> Lam.	Root	Blackwater fever, relief headache.
57.	<i>Jasminum mesnyi</i> Hance.	Leaves	Antioxidant
58.	<i>Vinca major</i> L.	Whole plant	Sore throat, toothache, chest pain
59.	<i>Kniphofia uvaria</i> L.	Whole plant	Antioxidant
60.	<i>Cynoglossum zeylanicum</i> Lehm.	Whole plant	Anti inflammatory
61.	<i>Ipomea obscura</i> L.	Leaves	Aphthae, dysentery
62.	<i>Ipomea pes-tigridis</i> L.	Leaves, root	Pimples, tumours, dropsy
63.	<i>Merrimeia quinquefolia</i> L.	Whole plant	Acute tonsillitis
64.	<i>Cestrum auranticum</i> Lindl.	Whole plant	Anti microbial
65.	<i>Solanum mauritianum</i> Scop.	Whole plant	Antioxidant
66.	<i>Calceolaria mexicana</i> L.	Whole plant	Fodder on animals
67.	<i>Scrophularia nodosa</i> L.	Whole plant	Skin diseases, tumour
68.	<i>Veronica persica</i> Poir.	Whole plant	Blood purifier, cough
69.	<i>Spathodea campanulata</i> p.Beauv.	Whole plant	Fever, malaria, liver complaints, diabetes
70.	<i>Justicia betonica</i> L.	Whole plant	Anti plasmodium
71.	<i>Verbena rigida</i> Spreng.	Leaves	Diuretic
72.	<i>Lantana camara</i> L.	Whole plant	Antiphlogistic, anti-dermatosis, diaphoretic,
73.	<i>Salvia coccinea</i> Buc'hoz.	Whole plant	Anti inflammatory
74.	<i>Clinopodium umbrosum</i> (M.Bieb.) K.Koch.	Whole plant	Carminative, blood purifier
75.	<i>Boerhavia erecta</i> L.	Root, leaves	Anthelmintic, cardio tonic, diarrhoea
76.	<i>Amaranthus viridis</i> L.	Whole plant	stop dysentery, inflammations, blood purify,
77.	<i>Aerva lanata</i> L.	Leaves, root	Swellings, snakebite, constipation
78.	<i>Aerva javanica</i> (Burm.f.) Shult.	Seeds	Headache
79.	<i>Alternanthera sessilis</i> L.	Whole plant	Intestinal cramps, fever, diarrhoea, dysentery
80.	<i>Nothosaerva brachiata</i> (L.) Wight.	Whole plant	Skin diseases, Stomach ache, and anti septic.
81.	<i>Phytolacca octandra</i> L.	Root	Lung sickness, snakebites, sores.
82.	<i>Persicaria chinensis</i> L.	Whole plant	Depurative, eye diseases.
83.	<i>Persicaria nepalensis</i> Meisn.	Whole plant	Astringent
84.	<i>Rumex crispus</i> L.	Whole plant	Antioxidant
85.	<i>Euphorbia heterophylla</i> L.	Whole plant	Antiplasmodial, cathartic, Skin tumour.
86.	<i>Euphorbia pulcherima</i> Wild ex klotzsch.	Whole plant	Antiinflammatory, Respiratory problems
87.	<i>Artocarpus heterophyllus</i> Lam.	Wood, Fruit	Sedative, cooling tonic
88.	<i>Iris versicolor</i> L.	Flowers, rhizomes	Stomache, gastric problems
89.	<i>Gloriosa superba</i> L.	Whole plant	Bleeding piles, leprosy, snake bites
90.	<i>Commelina diffusa</i> Burm f.	Leaves, stem	Poulticing sores, irregular menstruation
91.	<i>Commelina bengalensis</i> L.	Whole plant	Infertility in women, laxative
92.	<i>Cyperus rotundus</i> L.	Whole plant	Fodder on animals
93.	<i>Briza minor</i> L.	Root	Against flu
94.	<i>Arundinella pumila</i> (Hochst. ex A.Rich.) Steud.	Leaves	Cooling agent
95.	<i>Bambusa vulgaris</i> Schrad.	Stem, shoot	Rheumatism, abscesses and malaria
96.	<i>Eragrostis bifaria</i> (Vahl) Bor.	Whole plant	Fodder on animals
97.	<i>Poa annua</i> L.	Whole plant	Fodder on animals
98.	<i>Dactyloctenium aegyptium</i> (L.) Willd.	Whole plant	Stomach ache, rheumatism
99.	<i>Paspalum distichum</i> L.	Whole plant	Traditional medicine
100.	<i>Tragus roxburgii</i> Ohwi.	Whole plant	Fodder on animals
102.	<i>Dicranopteris linearis</i> x(Burm.f.) Underw.	Leaves	Antioxidant, antipyretic
103.	<i>Cupressus macrocarpa</i> Hartw.	Leaves	Rheumatism
104.	<i>Pinus wallichiana</i> A. B. Jacks.	Leaves and resin	Gonorrhoea

Table 3: Families having maximum number of species present in the Parson’s Valley Dam

S. No	Family	Number of Species
1.	Berberidaceae	1
2.	Papavaraceae	1
3.	Brassicaceae	1
4.	Caryophyllaceae	1
5.	Malvaceae	1
6.	Tropalaceae	1
7.	oxalidaceae	1
8.	Rutaceae	3
9.	Icacinaceae	1
10.	Rhamnaceae	1
11.	Fabaceae	9
12.	ceaselpinaceae	1
13.	Rosaceae	2
14.	Myrtaceae	3
15.	Onagraceae	1
16.	Rubiaceae	2
17.	Asteraceae	22
18.	Companulaceae	1
19.	Ericaceae	2
20.	Plumbaginaceae	1
21.	Oleaceae	1
22.	Apocyanaceae	1
23.	Asclepidaceae	1
24.	Boraginaceae	1
25.	Convolvulaceae	3
26.	Solanaceae	2
27.	Scrophulariaceae	2
28.	Acanthaceae	1
29.	Verbanaceae	2
30.	Lamiaceae	2
31.	Nyctaginaceae	1
32.	Amaranthaceae	5
33.	Phytalocaceae	1
34.	Polygonaceae	3
35.	Euphorbiaceae	2
36.	Moraceae	1
37.	Iridaceae	1
38.	Lilliaceae	1
39.	Commelinaceae	2
40.	Cyperaceae	1
41.	Poaceae	7
42.	Selaginellaceae	1
43.	Gleicheniaceae	1
44.	Cupressaceae	1
45.	Pinaceae	1

Table 4: Percentage of plant species in the study area

S. No	Habit	Number of Plants	Distribution%
1.	Tree	15	14.42%
2.	Shurb	26	25%
3.	Herb	58	56%
4.	Climber	4	4%
5	Twiner	1	1%

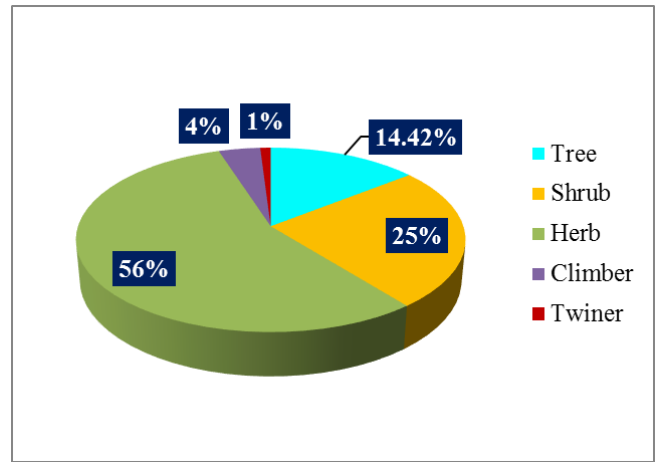


Fig 1: Distribution% of vegetation in Parson's Valley Dam

5. Acknowledgement

The authors are grateful to acknowledge the PG and Research Department of Botany, PSG College of Arts & Science, Coimbatore for providing the necessary facilities during the study.

6. References

- Ghosh A. Herbal folk remedies of Bankura and Medinipur districts, West Bengal. 2003.
- Farnsworth NR, Akerele O, Bingel AS, Soejarto DD, & Guo Z. Medicinal plants in therapy. Bulletin of the world health organization, 1985; 63(6):965.
- Balick MJ, Cox PA. Plants, people, and culture: the science of ethnobotany. Scientific American Library. 1996.
- Ved DK, Goraya GS. Demand and supply of medicinal plants in India. NMPB, New Delhi & FRLHT, Bangalore, India, 18. 2005.
- Jyothi KA, Rao TN. Variability of raindrop size distribution and its impact on polarimetric rain rate estimators, 2012.
- Ghosh A. Herbal folk remedies of Bankura and Medinipur districts, West Bengal. 2003.
- Gamble JS, Fischer CEC. Flora of the Presidency of Madars. 1935.
- Samy RP, Ignacimuthu S. Antibacterial activity of some folklore medicinal plants used by tribals in Western Ghats of India. Journal of Ethnopharmacology. 2000; 69:63-71.
- Jain AK. Corruption: A review. Journal of economic surveys, 2001; 15(1):71-121.
- Sandhya B, Thomas S, Isabel W, Shenbagarathai R. Ethnomedicinal plants used by the valaiyan community of piranmalai hills (reserved forest), Tamilnadu, India. - A pilot study, 2006.
- Ganesan S, Suresh N, Kesaven L. Ethnomedicinal survey of lower Palani hills of Tamil Nadu. 2004.

12. Udayan PS, George S, Balachandran I. Ethnomedicine of the Chellipale community of Namakkal district, Tamil Nadu. 2005.
13. Ayyanar M, Ignacimuthu S. Medicinal plants used by the tribals of Tirunelveli hills, Tamil Nadu to treat poisonous bites and skin diseases. 2005.
14. Hebbar SS, Harsha VH, Shripathi V, Hegde GR. Ethnomedicine of Dharwad district in Karnataka, India—plants used in oral health care. *Journal of Ethnopharmacology*, 2004; 94(2-3):261-266.
15. Grierson DS, Afolayan AJ. An ethnobotanical study of plants used for the treatment of wounds in the Eastern Cape, South Africa. *Journal of Ethnopharmacology*. 1999; 67(3):327-332.
16. Chah KF, Eze CA, Emuelosi CE, Esimone CO. Antibacterial and wound healing properties of methanolic extracts of some Nigerian medicinal plants. *Journal of ethnopharmacology*. 2006; 104(1-2):164-167.
17. Ayyanar M, Ignacimuthu S. Medicinal plants used by the tribals of Tirunelveli hills, Tamil Nadu to treat poisonous bites and skin diseases. 2005.
18. Hebbar SS, Harsha VH, Shripathi V, Hegde GR. Ethnomedicine of Dharwad district in Karnataka, India—plants used in oral health care. *Journal of Ethnopharmacology*, 2004; 94(2-3):261-266.
19. Coon JT, Ernst E. *Andrographis paniculata* in the treatment of upper respiratory tract infections: a systematic review of safety and efficacy, *Planta medica*. 2004; 70:293-298.
20. Muthukumarasamy P, Han JH, Holley RA. Bactericidal effects of *Lactobacillus reuteri* and allyl isothiocyanate on *Escherichia coli* O157: H7 in refrigerated ground beef. *Journal of Food Protection*. 2003; 66(11):2038-2044.