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P Vijayashalini

PG and Research Department of Botany, Vellalar College for Women (Autonomous), Thindal, Erode, Tamil Nadu, India

G Jayanthi

PG and Research Department of Botany, Vellalar College for Women (Autonomous), Thindal, Erode, Tamil Nadu, India

P Abirami

PG and Research Department of Botany, Vellalar College for Women (Autonomous), Thindal, Erode, Tamil Nadu, India

Survey of the traditional medicinal plants at Vanavasi hill of Salem district

P Vijayashalini, G Jayanthi and P Abirami

Abstract

The survey was carried out in Vanavasi hill area; it has documented a total of 74 angiospermic plants and 2 pteridophytes with medicinal value. In the present account 74 species of angiosperms and 2 fern are used as traditional medicine for various disorders and diseases like piles, menorrhagia, epistaxis, alexipharmic, burns, disease of blood, throat disorders, chronic bronchitis, rheumatism, anaemia, asthma, nose and eye diseases, indigestion, dysentery, diarrhoea, dyspepsia, fever, vaginal infections, tumors, neuralgia, splenopathy, leucorrhoea, ulcers, muscular pain, rheumatoid arthritis, urinary problem, skin infections, eczema, painful swelling of joint, diabetes, allergic rhinitis, hiccup, oedema etc. In the present study area provide safety and efficacy information to encourage, the preservation of culture, conservation and sustainable utilization of plant wealth occurring in the target area.

Keywords: Vanavasi hill, survey, medicinal plants, documentation, traditional uses

Introduction

Herbs are staging a comeback and herbal “renaissance” is happening all over the globe. The herbal products today symbolize safety in contrast to the synthesis that are regarded as unsafe to human and environment. Plants play a vital role in our economy but also as remedies of various human diseases, study and use of economic plants of India have been a part of Indian medicine and Indian plant lore from ancient time. *Acacia latronum* [1].

The World Health Organization (WHO) estimates that some 80% of the developing world relies on the traditional medicines and in which 85% use plants or their extracts as active substances as plant drugs for their primary healthcare needs [2, 3]. Traditional medicine still remains the main resource for the hill tribes and rural communities for treating health problems [4-6].

Traditional medicine is widely used and accounts for about 40% of all health care delivered [7]. Many research works have been doing on plants, which provide human with extensive and fundamental uses. The authentic product or by product of plants serves human beings in so many ways, one of which is medicine.

The majority of these involve the isolation of the active ingredient (chemical compound) found in a particular medicinal plant and its subsequent modification. In the developed countries 25% of the medical drugs are based on plants and their derivatives [8] and the use of medicinal plants is well known among the indigenous people in rural areas of many developing countries. Plants, especially the higher ones have been described as the sleeping giants of drug and these medicinal plants have been screened for their chemicals that are potentially potent [9]. Many of the medicinal plants, especially in Nigeria have been documented [10]. The importance of medicinal plants, and the contribution of phytomedicine to the well-being of a significant number of the world's population, has attracted interest from a variety of disciplines [11].

Materials and Methods

Study area

Vanavasi is a town Panchayat in Mettur taluk, Salem district, in the South Indian state of Tamil Nadu. It is a small village popular for the hand loom silk sarees and its temples. Among the diverse castes kannadikas and senguntha mudhaliar are high in population. The hill is located at 11°40'10"N 78°08'27"E / 11669438°N 78.140865°E. It has an average elevation of 278 meters (9/2) ft. Vanavasi is surrounded by the hills named as Nagarmalai, Jeragamalai, Godumalai, Kanjamalai, Pachaimalai, Shervaroyan hills and Eastern Ghats.

Correspondence

P Vijayashalini

PG and Research Department of Botany, Vellalar College for Women (Autonomous), Thindal, Erode, Tamil Nadu, India

Panoramic View of Vanavasi hill



North View

East view

History of the Hill

Historical belief imply as “Panja Pandavas” started their vanavasm from this hill to various places. They dwell in this hill for one year and hence the named as Vanavasi and it is also called “Panja Pandavas” vanam or Ram Lakshmana’s vanam. During this inhabitation “Throwpathi” lost her earring in this hill, Panja Pandava searched for a long time and at last found it in a place which they named as “Koppu Kandrayan” where Throwpathi warship Perumal as her God. Festivals are being held every Tamil Puratasi month, in the temple. It is believed that Panjapandavas were saved by Lord Krishna, who had changed his avatharam as a mouse. It also the dwellers of the hill also believe that there is a treasure in “Mini Parai” is there.

Data collection

The plants were collected during their (2010 November) flowering period. Voucher specimens usually one twig due to conservation and preservation of biodiversity of all medicinally valuable plants were collected, poisoned, dried and mounted with voucher number following the conventional methods [12] and deposited at the department of Botany Herbarium, Vellalar College for Women, Erode, Tamil Nadu. Photographs of few plants were also taken to supplement the herbarium. Identification was done by using Flora of the Presidency of Madras [13] and The Flora of the Tamil Nadu Carnatic [14-18]. Flora of Tamil Nadu Series [19-21] was used at best for nomenclature. The plants were enumerated following the Natural system of Classification of Bentham & Hooker with binomial, local name, description of the plant and uses. A survey of literature was made to find out the active principles of drug plants identified [22-24]. For documentation of the available medicinal flora, ethno botanical surveys were conducted in August- September-2016. These specimens were collected and identified by botanist, Department of Botany, Vellalar College for Women, Erode and confirmed by Herbarium, Botanical survey of India, Southern circle, Coimbatore, Tamil Nadu, India.

Table 1: Some important medicinal plants in Vanavasi hill

S. No	Binomial name	Family	Vernacular name	Parts used	Mode of Usage
1.	<i>Acacia latronum</i> Willd.	Mimosaceae	Karodei.	Leaves and bark	Used as cardio tonic and diuretic drug.
2.	<i>Acalypha alnifolia</i> Klein ex Wild.	Eupobiaceae	Seemai kuppai meni	Whole plant	Antifungal and Antiarteriosclerosis
3.	<i>Adansonia digitata</i> L.	Malvaceae	Papparappuli	whole plant	To treat diarrhoea, anaemia and asthma.
4.	<i>Agave americana</i> L.	Liliaceae	Nar kathalai.	Whole plant	Antiseptic, wound healing and antiinflammatory properties.
5.	<i>Achyranthes aspera</i> L.	Amarantaceae	Nayuruvi	Whole Plant	Diuretic, Astringent, Diarrhoea, Bleeding Piles and Cough.
6.	<i>Aegle marmelos</i> Corr.	Rutaceae	Vilvam	Leaves	Leaves ground with peper and milk administered orally to cure dyspepsia.
7.	<i>Ailanthus excels</i> Roxb.	Simarubiaceae	Peru	Bark, Leaves	Bark: Curing the jaundice. Leaves: Cattle lice
8.	<i>Ailanthus malabarica</i> Dc.	Simarubiaceae	Perumaram	Leaves and stem	Used in dysentery and diarrhoea
9.	<i>Allmania nodiflora</i> R.Br.	Amarantaceae	Kumatti kerai	Leaves	Snake bite
10.	<i>Alternanthera paronychioides</i> A. St. Hill.	Amarantaceae	-	Whole plant	Antioxidant, antiglucotoxic andantidiabetes properties.
11.	<i>Alternanthera pungens</i> Kunth.	Amarantaceae	-	Leaves	Leaf extract is used in asthma, strangury, ammenorrhoea, dropsy, antidote to alcohol poisoning, rheumatism and vermifuge.
12.	<i>Alternanthera triandra</i> Lam.	Amarantaceae	Ponnankanni	Whole Plant	Bleeding mucous membrane and rectum pain
13.	<i>Alysicarpus rugosus</i> Dc.	Leguminosae	Red money wort	Whole Plant	Contains vitamins and minerals, used for fodder and pasture.
14.	<i>Anona squamosa</i> L.	Anonaceae	Sitha palam	Whole Plant	Leaves cure ulcer, seeds used for uteri cause abortion, unripe fruits used to diarrhea, dysentery, and dyspepsia, roots cure sedative.
15.	<i>Argemone Mexicana</i> L.	Papaveraceae	Piramma thandu	Whole Plants	Latex used as blisters, seeds used as a laxative, roots used as a sedative.
16.	<i>Aristolochia bracteata</i> Retz.	Aristolochiaceae	Aadu theendaapalai	Leaves and roots	Leaves used as vermifuges and mucosae, roots used as a antidotes (venomous stings and bites).
17.	<i>Atalantia monophylla</i> Correa.	Rutaceae	Kattunaragam.	Fruit	To treat rheumatism.
18.	<i>Boerhaavia diffusa</i>	Nyctaginaceae	Mukkurathai	Roots	Dyspepsia, jaundice, enlargement of spleen,

	L.				abdominal pain, liver disorders and diuretic. It have a antistress agent, anti-inflammatory, anti fibrinolytic and anti-bacterial properties.
19.	<i>Borreria hispida</i> K. Sch.	Rubiaceae	Nuttichoori	Leaves and seeds	Leaves used as a headache and seeds are recommended as substitute for coffee and medicinally used as aphrodisiac, confection, cooling and demulcent
20.	<i>Calotropis gigantea</i> R.Br.	Asclepiadaceae	Erukku	Leaves and flowers	Leaves cure elephantiasis, wounds and boils. Flowers used against cough and improving appetite and treating scabies.
21.	<i>Cannabis sativa</i> L.	Cannabinaceae	Kanja chedi	Leaves	Stimulation of hunger in chemotherapy and analgesic effects.
22.	<i>Caralluma adscendens</i> R.Br.	Asclepiadaceae	Kallimulayan	Latex and stem	The latex is applied to warts and bites, stem used in chest, cardiac and obesity problems.
23.	<i>Caralluma umbellata</i> Haw.	Asclepiadaceae	Mullagay	Fruit and stem	Fruit: Back pain, Stem: Jaundice, rheumatism and neuralgia.
24.	<i>Cardiospermum canescens</i> Wall.	Sapindaceae	Kattumudakathan	Whole plant	Dysentery and rheumatoid arthritis.
25.	<i>Cardiospermum helicacabum</i> L.	Sapindaceae	Mudakatthan	Whole plant	Rheumatism.
26.	<i>Cassia augustifolia</i> Vahl.	Leguminosae	Ponnaravai	Leaves	Purgatives, Dermatitis.
27.	<i>Cassia auriculata</i> L.	Leguminosae	Avaram	Root, seeds and dried lowers	Root: Fever, Diabetes, urinary disorder, Constipation and laxative. Seeds: Chronic purulent conjunctives. Dried flowers: Substitute for tea in case of diabetic patients.
28.	<i>Cassia fistula</i> L.	Leguminosae	Konnei	Whole plant	Root: Leprosy and skin diseases. Leaves: Malaria, Rheumatism and ulcer. Fruit: Heart disease and leprosy. Bud: fever, Leprosy and Constipation.
29.	<i>Cassia occidentalis</i> L.	Leguminosae	Payaverai	Roots and Seeds	Roots: Diuretic and fever. Seeds: Coffee like beverage for asthma.
30.	<i>Cassia siamea</i> Lamk.	Leguminosae	Manja Konnei	Whole Plant	Acute granulocytic leukemia, lymphocytic leukemia, anal cancer, blood cancer, brain tumor, breast cancer, cancer in ovary and cancer in pancreas.
31.	<i>Cassia tora</i> L.	Leguminosae	Tagerai	Whole plant	Aperient, germicide, mucilaginous and laxative.
32.	<i>Cissus quadrangularis</i> L.	Vitaceae	Pirandai	Stem	Used as a Digestive, bone fractures and cure vata.
33.	<i>Clitoria ternatea</i> L.	Leguminosae	Sangu pushbam	Root	Tied around waist to keep away evil spirits.
34.	<i>Coleus aromaticus</i> Benth.	Lamiaceae	Karpura valli	Leaves	Coughs, sore throats, nasal congestion and rheumatism.
35.	<i>Corchorus tridens</i> L.	Tiliaceae	-	Leaves	Rich in beta- carotene, iron, calcium and vitamin-C and used for antioxidant activity.
36.	<i>Crotalaria retusa</i> L.	Leguminosae	Kilukiluppai	Whole Plant	Cough, Kapha, vata, dyspepsia, fever, cardiac disorders, stomatitis, scabies and impetigo. Seed powder: Skin diseases.
37.	<i>Crotalaria pallida</i> Aiton.	Leguminosae	Kilukilikki chedi	whole plant	To treat urinary problem, fever, prevent skin infections and eczema
38.	<i>Crotalaria verrucosa</i> L.	Leguminosae	Sivanar vembu	Roots	The root paste brushed on decayed aching teeth.
39.	<i>Curculigo orchioides</i> Gaertn.	Amaryllidaceae	Nilapanai kilangu	Root stocks	Skin diseases, asthma, bronchitis, jaundice, diarrhoea, dyspepsia, colic and vomiting
40.	<i>Cyperus rotundus</i> L.	Cyperaceae	Korai	Bulb	Fever, digestive system disorders, inflammation and for pain reduction for muscle relaxation.
41.	<i>Digera muricata</i> L.	Amarantaceae	Kattu thoiyal	Whole plant	Hepatoprotective, antimicrobial, antioxidant, antidiabetic, anthelmintic agent.
42.	<i>Dodonaea viscosa</i> L.	Sapindaceae	Stichy hop bush	Leaves	Anti inflammatory, anti ulcer, anti bacterial, anti fungal, agent and treatment of fractures.
43.	<i>Eclipta alba</i> Hassk.	Asteraceae	Karisalanganni	Whole plant	Cures anaemia, diphtheria, eczema and dermatitis.
44.	<i>Evolvulus alsinoides</i> L.	Convolvulaceae	Vishnu kranthi	Whole plant	To improve memory power.
45.	<i>Evolvulus nummularius</i> L.	Convolvulaceae	Elikkathu ilai	Leaves	Purify blood and improve memory power.
46.	<i>Ficus bengalensis</i> L.	Moraceae	Aalamaram	Bark and Latex	Powder of bark and latex are applied in rheumatic pains, infusion of bark is effective in diabetes, dysentery, gonorrhoea and seminal weakness.
47.	<i>Fluggea leucopyrus</i> Willd.	Euphorbiaceae	Veppolan	Leaves	Crushed with buttermilk and administered orally for leucorrhoea.

48.	<i>Gomphrena serrata</i> L.	Amarantaceae	Vatanakappucceti	Leaves and flowers	Oliguria, hypertension, kidney problems, hoarseness and jaundice.
49.	<i>Hemidesmus indicus</i> R.Br.	Asclepiadaceae	Nannari	Root	Stimulant to increase blood circulation.
50.	<i>Ipomaea aquatica</i> Forsk.	Convolvulaceae	Vallai kirai	Whole plant	Gastric and intestinal disorders. Furthermore it has been found to have insulin like properties acting as an anti-hyperglycemia.
51.	<i>Jatropha curcas</i> L.	Euphorbiaceae	Kaatamanakku	Seeds	Anti-cancerous properties, external application for skin diseases and rheumatism.
52.	<i>Jasminum augustifolium</i> Vahl.	oleaceae	Kaatumalli	Roots	The root powder mixed with <i>Acorus calamus</i> the sweet sedge is in India considered a valuable external application for ring worm.
53.	<i>Leonotis nepetaefolia</i> R.Br.	Lamiaceae	Iranaberi	Whole plant	Antiinflammatory, antidiabetes and antinociceptive properties.
54.	<i>Leucas aspera</i> Speng.	Lamiaceae	Thumbai	Roots	The root powder mixed with <i>Acorus calamus</i> the sweet sedge is in India considered a valuable external application for ringworm.
55.	<i>Martynia annua</i> L.	Pedaliaceae	Thel kodukku	Ripe fruits Leaves	Scatias at initial stage, fruit is used tinea corporis, Leaves kill bugs.
56.	<i>Melia azedarach</i> L.	Meliaceae	Malai vembu	Leaves roots and Seeds	Leaves used as leprosy, anthelmintic, antilithic and diuretic, roots used as a resolvent and deobstuent, seeds used for rheumatism, internally the seed oil is useful in malaria, cure ulcer and tendency to heal.
57.	<i>Merrimia tridentate</i> Hallier.f.	Convolvulaceae	Kuthirai vaali	Whole plant	Febrifuge, generally healing venereal disease. Leaves: Antidotes. Roots: Dropsy, haemorrhoids, swelling, oedema, gout, diuretic.
58.	<i>Mimosa pudica</i> L.	Mimosaceae	Thottal surungi	Roots, leaves and seeds	Bleeding disorders, dysentery, piles. It is also applied externally to fissures, skin wounds and ulcer.
59.	<i>Mirabilis jalapa</i> L.	Nyctaginaceae	Anthimantharai 4 O' clock plant	Whole plant, Leaves and roots	Whole plant without seeds: Diuretic, purgative and vulnerary. Roots: Aphrodisiac and diuretic. Leaves: Reduce inflammation.
60.	<i>Mollugo oppositifolia</i> L.	Aizoaceae	Peru-n- tiray	Whole plant	Stomachic, asperigent, antiseptic, juice is applied to itches and other skin diseases.
61.	<i>Ocimum gratissimum</i> L.	Lamiaceae	Ram tulasi	Whole plant	To treat rheumatism and cough
62.	<i>Ocimum sanctum</i> L.	Lamiaceae	Thulasi	Whole plant	Cough cold, mild indigestion.
63.	<i>Passiflora foetida</i> L.	Passifloraceae	Poonduchedi	Whole plant	A tea of the leaves is used for expectorant and nervous disorders.
64.	<i>Pavonia procumbens</i> Boiss.	Malvaceae	Palam Pasi	Leaves	Ground with onion bulb, cumin seeds and administered orally along with butter milk to cure peptic ulcer.
65.	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Nellikai	Fruits	Blood Pressure.
66.	<i>Physalis angulata</i> L.	Solanaceae	Munnuthakalee	whole plant	Used as a remedy for abscesses, cough, fever and sore throats
67.	<i>Physalis pruinosa</i> L.	Solanaceae	Milaguthakkali.	whole plant	Used to treat asthma, microbial infections and liver diseases
68.	<i>Portulaca quadrifoliana</i> L.	Portulacaceae	Pasalai keerai	Whole plant	To cure Skin diseases, diseases of kidney, bladder and lungs diseases. Used as Anti scorbutic and anti cephalic.
69.	<i>Sida acuta</i> Burn.	Malvaceae	Pilla valatti chedi	Whole plant	Fever and headache.
70.	<i>Stachytarpheta indica</i> Vahl.	Verbinaceae	Seemainayuruvi	Whole plant	Treating intestinal worms, venereal disease, rheumatic inflammation, cataract and open sores
71.	<i>Thevetia nerifolia</i> Juss.	Apocynaceae	Manjalarali	Bark	Tonic and cardiac stimulant.
72.	<i>Urginea indica</i> Kunth.	Liliaceae	Narivengayam or kaatuvengayam	Bulbs	Diuretic, expectorant and promotes urination.
73.	<i>Wrightia tinctoria</i> R.Br.	Apocynaceae	Palamaram	Leaves, Seeds	Leaves used as Thermogenic, anodyne, hypotensive. Seeds used as bitter, astringent, carminative and anthelmintic.
74.	<i>Zizyphus jujube</i> Lamk.	Rhamnaceae	Elanthai	Leaves and fruits	Leaves: Cure piles. Fruits: Edible as a snack.
75.	<i>Actinopteri sradinata</i> Link.	Actiniopteridaceae	Visirichedi	whole plant	To control blood pressure, tuberculosis and dried plant is used to cure cough.
76.	<i>Adiantum pedatum</i> L.	Polypodiaceae	Northern maiden hair	Whole plant	Refrigerant, expectorant and tonic.

Documentation

In the present survey has documented a total of 74 angiospermic plants, 2 Pteridophytic plants and Gymnosperms were almost null. Of these 74 angiospermic plants 70 plants are dicotyledons and 4 monocotyledons. Under the dicotyledons, 34 plants are Polypetalae, 20 plants are gamopetalae and 16 species are monochlamydeae. In this study 74 species of angiosperms and two ferns are used for various disorders are documented in the Table- I

Discussion

The medicinal plant surveyed in the Vanavasi hill the Caesalpiniaceae and Amarantaceae families are held the dominant position. The aim of present survey is to identify and document the plants used amongst the villagers of Vanavasi Panchayat, in these days, conservation of the traditional knowledge is greatly managed by a lot external factors related to the modernization of the region. It is therefore, urgent to save the cultural heritage of the natures, by confirming the therapeutically uses of the plants with scientific criteria and foresting the phytochemical research on important species containing potentially active principles.

Conclusion

Therefore, the results of this survey can be incorporated into future conservation management plants for threatened medicinal plants. The survey revealed that medicinal plants still play a vital role in the primary health care of the people and also offers a model for studying the relationship between plants and people within the context of traditional medical system.

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