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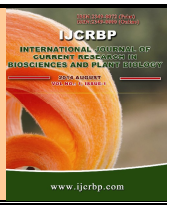

Original Research Article

Herbal Treats Practiced by Tribal and Rural Populace in Arunoothmalai Hills of Salem District, Tamilnadu, India

C. Alagesaboopathi*

Department of Botany, Government Arts College (Autonomous), Salem – 636 007, Tamilnadu, India

**Corresponding author.*

Abstract

The present study highlights the use of plants for several diseases by Malayali tribe and rural people living in Arunoothmalai Hills. Medicinal plants are worthiness and are used for production of different drugs. The research was mainly focused on gathering information on traditional uses of plants from tribal and local peoples. Local inhabitants are excessively knowledgeable about the utilization of indigenous flora of the research area. A total of 66 plant species belonging to 57 genera and 38 families used by them as herbal medicines to cure various common ailments such as snake bite, jaundice, diabetes, skin diseases, urinary troubles, malarial fever, anthelmintic, dysentery and asthma, etc were documented. The larger plant families which contributed in folk plants included Acanthaceae (6 species) Lamiaceae and Euphorbiaceae (5 species each), Asteraceae, Solanaceae and Asclepiadaceae (4 species each). The medicinal plants used by Malayalis and rural people are listed with scientific name, family, vernacular name, plant parts used, method of drug preparation the studied area is wealth in medicinal plants to cure a vast spectrum of human disorders. The indigenous information of medicinal plants has important potential for research and the discovery of modern medicines. The study revealed some unknown medical uses of medicinal plants.

Keywords

Arunoothmalai Hills
Ethnobotany
Folk remedies
Medicinal plants
Traditional knowledge
Tribal people

Introduction

Plants are used medicinally in various countries and are a principle of numerous potential and powerful remedies. India is endowed with luxuriant wealth of medicinal plants which are extensively used by all sections of people either directly as folk drugs or in many indigenous systems of medicine or indirectly in pharmaceutical preparations of novel medicines (Alagesaboopathi, 2011). According to World Health Organization (WHO), more than 80% of the world's population relies on traditional medicine for their main health care demands. Traditional herbal remedies are regarded as safe, cost effective, easily affordable with no

adverse side effects and due to this fact worldwide need for herbal drugs is continuously increasing and in India its market is expending at an annual rate of 20 percentage (Pesek et al., 2008; Divya et al., 2011).

People depend on the forest resources for numerous uses like for food, drugs, gums, dyes, fodder, agricultural implements, insecticides, hunting, poison, narcotics, medicines, timber, wood, non-timber forest products etc. (Puspangadan, 1995). Plants have been used as medicines for thousands of years and are used today in their genuine as well as processed from several medicinal plants which have been forgotten by modern man as a result of his dependence on the speedy results of allopathic awareness and are being rediscovered because of growing awareness of unwanted side effects and other aspects of the later (Dwarakan and Alagesaboopathi, 1999). Plants have always the source of drugs and have several uses to mankind. According to some previous researchers (Kirtikar and Basu, 1999; Nadkarni, 2001; Kadavul and Dixit, 2009; Guru Prasad, 2011; Sankaranarayanan et al., 2010; Jayanthi et al., 2012; Muralidharan et al., 2012) plants have been used in traditional medicine for many thousand years (Abu-Rabia, 2005).

The information of medicinal plants has been accumulated in the course of several centuries based on various medicinal systems such as Siddha, Ayurveda, Unani, Naturopathy, Amachi and Homeopathy. These systems of medicine performance a very notable role in health care system of rustic people covering all categories of disorders (Das et al., 2009) and evolved over years of attention, attempt and blunder, consequence and inheritance has widely remained with the aboriginal people (Ragupathy and Mahadevan, 1991). In India, it is reported that traditional healers utilize 2,500 plant species and 100 species of plants supply normal sources of medicine (Pei, 2001). India is one of the 12-megabiodiversity centers with 2 hot spots of biodiversity in the Northeastern Region and Western Ghats. There are about 400 families in the world of the flowering plants; at least 315 are represented in India (Sharma, 2003).

Herbal medicine, which is also known as Herbalism or Botanical medicine, is the utilization of herbs for their phytotherapeutic or medicinal importance. Traditional medicinal usages and ethnobotanical knowledge play significant role in the scientific investigation, specifically when the literature and field work information have been properly evaluated. The documentation of indigenous information on the utility of local plant resources by various ethnic groups or communities is one of the essential purposes of ethnobotanical study (Shrestha, 1998). Many workers reported uses of medicinal plants to treat different diseases by rural and tribal people inhabiting different areas of Tamilnadu (Ayyanar and Ignacimuthu, 2005; Udayan et al., 2006; Ignacimuthu et al., 2008; Alagesaboopathi, 2009; Sankara-narayanan et al., 2010; Umapriya et al., 2011; Samydurai et al., 2012). However, no previous works has been carried out so far on the enumeration and status of medicinal plants in Arunoothmalai hills of Salem district of Tamilnadu.

Salem is one of the most significant districts of Tamilnadu. It lies between 11°14′46″ and 12°53′30″ North latitude and between 77°32′52″ - 78°53′05″ East longitude. The district is mountainous in nature. Enumerated below are some notable Hills. They are Shevaroy Hills, Kalvarayan, Suriyamalai, Kanjamalai Hills, Kumaragiri Hills, Bodamalai, Vanavasi Hills, Arunoothmalai and Palamalai. The district is well known for its peculiar assemblage of vegetation riches. The utilization of plants for treating many ailments is known to various households. The elderly people have wide knowledge of the ethnomedicinal plants found in the nearby forest. They are excellent identification, use, extraction, preparation and applications of plants and herbs in several kinds of disorders locally occur in the area. The use traditional information in health care method where herbs, plants and roots of some wild trees and plants locally available are used for treating the diseases. They have indigenous mode of treatment for various kinds of ailments with the help of local herbal medicines.

They provided knowledge such as scientific name of the species, local name (Tamil), family, part(s) used and uses. They reported that the most of the plant species are really effective treatments for various ailments such as snake bite, diabetes, stomachache, asthma, jaundice, fever, cough, leprosy, diarrhoea, cuts, wounds, cold, skin diseases, ulcers, urinary disorders and even cancer. The present report give an account of the indigenous medicinal plants used by rural people and tribals (Malayali) in Arunoothmalai Hills of Salem district, Tamilnadu.

Materials and methods

The study was conducted between August 2011 and July 2012 during various flowering seasons at several areas. The information on medicinal plants was collected from the medicine men, village headmen and the aged and experienced people the herbal medicine practitioners, village dwellers, village herbalists, vaidyas and their traditional healers (Sinha, 1996). Each of the plant material was assigned field book number and reported as to family, scientific name of species, vernacular name (Tamil), parts used, method of drug preparation, mode of applications, dosage and duration were documented (Parinitha et al., 2005) and medicinal uses, plant parts that were identified as having use in ethnobotany were collected and compressed plant species collected were identified with the help of relevant published floras (Gamble, 1936; Henry et al., 1987; Henry et al., 1989; Matthew, 1983). The herbarium specimens were deposited in the Department of Botany, Government Arts College (Autonomous), Salem for future reference. It was found that many of the present information was not so far been available in literature.

Results and discussion

The present investigation work is based on the indigenous information of most generally used medicinal plants of Arunoothmalai Hills, Tamilnadu. A total of 66 plant species belonging to 38 families distributed in 57 genera have been recorded. These contribute to 52 remedies. The families which contributed with species included as folk medicines were: Acanthaceae (6 species) Lamiaceae and Euphorbiaceae (5 species each), Asteraceae, Solanacecae and Asclepiadaceae (4 species each), Fabaceae, Amaranthaceae, Caesalpiniaceae, Meliaceae, Cleomaceae and Aristolochiaceae (2 species each), while the remaining 26 families represented by single species. Among them most popularly used medicinal plants such as *Andrographis paniculata* Nees, *Solanum trilobatum* L, *Solanum surattense* Burm.f., *Melia azedarach* L., *Phyllanthus amarus* Schult & Thorn, *Andrographis echioides* Nees, *Rhinacanthus nasutus* Kurz. *Aristolochia indica* L. *Hemidesmus indicus* R.Br. and *Aloe barbedensis* Mill which plays significant role in the first health care system of tribals and rural people. The information on scientific names, families, vernacular names, plant parts used and ethnomedicinal uses have been recorded in Table 1.

The present research notable that people of rural and tribal is highest remedies used for treating the ailments in the studied area were: jaundice, snake bite, malarial fever, asthma, diabetes, skin diseases, cough, dysentery, urinary troubles, these medicinal species are used as entire or their parts in the form decoction, extract, powder, latex, juice and paste. The medicinal uses are qualities with details such as the part(s) used singly, combination with other ingredients or mixed with other plants, method of preparation and mode of administration were noted in the field.

For curing disorders, the used of aerial plant parts was highest (83.33%) than the underground parts (16.66%). Among these 66 plants collected belonging to dicots are represented by 62 species of 53 genera and 33 families while monocots are represents by 4 species of 4 genera and 4 families. Leaf was the most largely utilized plant part recorded for 37 plant species in a total of 66 reported plants. Percentage of plants parts used is as follows: leaves 56%, whole plant 18%, root 15%, fruit 10%, seeds 9%, stem 4%, latex 4%, flowers 4% and tuber 1%. Commonly, fresh part of the plant was used for the preparation of drugs. Highest utilize of leaves medicinal utility

reveals either these plants are easily availability or they may have potent medicinal properties. Based on Table 1 high numbers of medicinal plant species were utilized for the curing skin diseases (23%), fever (17%) and snake bite (15%)

All the 66 species have medicinal uses. 8 species are used for snake bite. Various species are used for asthma, dyspepsia, cough, cold, urinary troubles, rheumatism, diarrhoea, anthelmintic, and stomachache. Species such as *Centella asiatica, Eclipta prostrata, Boerhaavia diffusa, Justicia tranquebariensis, Phyllanthus amarus, Emblica officinalis* are used to cure jaundice. Plants like *Rhinacanthus nasutus, Andrographis paniculata, Cassia occidentalis, Heliotropium indicum, Calotropis gigantea* are used to treat scorpion bite. Diabetes is treated effectively with *Aerva lanata, Andrographis paniculata, Gymnema sylvestre, Syzygium cumini* and *Coccinia indica*. For curing leprosy, *Aristolochia indica, Azadirachata indica* and *Melia azedarach* are excellent remedies. People also make use of *Gloriosa superba* and *Alangium salvifolium* to treat eye diseases.

It was noted that elder people had more knowledge about the traditional uses of medicinal plants than younger generation. The tribal and local inhabitants utilize 66 species of plants for treating many ailments. Various species had many uses. From previous times people made utilize of plants for their essential demands, live hood and primary health care. Some plants utilized by people are propagated, while others grow in wild conditions. The tribal and rural people needs essentially on plants for medicine, food, fodder, nuts, craft, agricultural tools, house construction and for other necessities. Plant utilized to snake and scorpion bites, fever, diabetes, jaundice, cough, skin diseases urinary troubles, dysentery, headache and toothache (Rajan et al., 2002; Ayyanar and Ignacimuthu, 2005; Udayan et al., 2006; Venkataswamy et al., 2010; Umapriya et al., 2012; Ramana Naidu et al., 2012).

Ethnomedicine is assured and reduced costly therefore the tribal and rural people of this area still used the traditional ailments. The enumeration has been compared with relevant published literature and it was found that formerly (Ramana Naidu et al., 2012; Chopra et al., 1956). Comparable studies on medicinal species in similarity to their used and conservation has been conducted in different parts of India (Ignacimuthu et al., 2006; Guru Prasad, 2011; Ramana Naidu et al., 2012; Das and Choudhury, 2012). *Andrographis paniculata* plant juice utilized to cure diabetes, jaundice and dysentery in the study area and the same use was also reported by Jayanthi et al., (2012). *Aristolochia bracteolata* plant decoction is given for snake bite and skin diseases. But the same plant decoction has been reported for snake bite and skin diseases (Umapriya et al., 2011). Apart from this, medicinal plants such as *Evolvulus alsinoides* and *Ocimum basilicum* are practiced among the Kani tribals of Tirunelveli hills for their medicinal usefulness to curing fever, cold, veneral diseases and also as a hair development promoter (Ayyanar and Ignacimuthu 2005). Due to more need of ethnomedicinal plants and more benefit, local villagers have been motivated for conservation and propagation of these plant species.

Medicinal plants performance an important role in providing information to the researchers in the field of ethnopharmacology and ethnobotany. The observations of present investigation showed that traditional medicine plays a vital role among the rural people of Arunoothmalai Hills. Besides this, in other Hills of Tamilnadu like Shevaroy Hills, Kolli Hills, Pachamalais, Palamalai Hills, Nilgiri Hills, Maruthamalai Hills, Javadhu Hills and Yelagiri Hills, Practitioners are practicing the traditional system of medicine such as Siddha, Ayurveda, Naturopathy and Homeopathy. In Arunoothmalai, the traditional medicinal method is very effective, supportive and successful in curing snake bite, jaundice, diabetes, fever, urinary troubles and skin diseases. Ethnomedicinal survey is most helpful for research scholars, scientists and scientific companies for further research on isolation and identification of active biocompounds that can be formulated into several medicines.

Table 1. Medicinal plants used to cure various ailments in Arunoothmalai Hills, Salem district of Tamilnadu, India.

Scientific name	Family	Vernacular name	Plant parts used	Utilization of medicinal plants for different ailments
Abrus precatorius L.	Fabaceae	Kundumani	Leaves and seeds	50 ml of seed juice is mixed with cow's milk and given once a day for 3 days for abortion. The leaf powder mixed with sugar and is given orally for cough and sore throat.
Acalypha indica L.	Euphorbiaceae	Kuppaimeni	Leaves	Leaf extract is applied externally to treat poisonous bites.
Achyranthes aspera L.	Amaranthaceae	Nayuruvi	Leaves and root	Juice of fresh leaves is given orally to treat cough, piles and diuretic. Root paste is for snake bite.
Adhatoda zeylanica Medicus	Acanthaceae	Adathodai	Leaves	Leaf powder is mixed with hot water and taken internally to treat cough, cold, fever and asthma.
Aegle marmelous (L.) Corr. Serr.	Rutaceae	Vilvam	Leaves and fruits	Leaf juice is given internally to treat diarrhoea. Decoction of the fruit is mixed with sugar are given in cold and fever.
Aerva lanata (L.) A.L.Juss, ex Schult.	Amaranthaceae	Poolaipoo	Whole plant	Whole plant is mixed with sugar is taken orally to cure diabetes, diuretic and cough.
Ageratum conyzoides L.	Asteraceae	Sethupunthalai	Leaves	Leaf paste is applied over affected area to treat skin diseases and itches.
Alangium salvifolium (L.F.) Wangerin	Alangiaceae	Alinji	Fruit	Fruit juice is used to treat eye diseases.
Aloe barbedensis Mill.	Liliaceae	Chothukathalai	Leaves	Paste of leaf is applied to curing various skin ailments. Fresh leaf juice is taken with sugar for the treatment of digestion, rheumatism and fever.
Andrographis echioides Nees.	Acanthaceae	Gopuramthangi	Whole plant	Whole plant extract is given for the treatment of fever. Leaves paste applied externally in snake bite.
Andrographis paniculata Nees.	Acanthaceae	Periyanangai	Whole plant	Leaf juice is mixed with cow's milk are given in diabetes, jaundice, malarial fever, dysentery and itches. Decoction of whole plant is taken orally to treat fever, snake bite, scorpion bite and dyspepsia.

Scientific name	Family	Vernacular name	Plant parts used	Utilization of medicinal plants for different ailments
Anisomeles malabarica (L.) R.Br.Ex.Sims.	Lamiaceae	Paeimiratti	Stem	Stem paste is mixed with coconut oil and applied externally to treat wounds.
Argemone mexicana L.	Papaveraceae	Pirammathandu	Latex and seeds	Yellow juice is used for scabies. Powdered seed is used to cure cracks at foot.
Aristolochia bracteolata Lam.	Aristolochiaceae	Adutinnapalai	Leaves and root	Root decoction is given orally to treat gonorrhea and skin diseases. Leaf paste is applied externally to treat snake bite.
Aristolochia indica L.	Aristolochiaceae	Eswaramooligai	Leaves and root	Leaves used to treat leprosy. Leaf paste is applied over affected area to cure skin diseases. Root paste is used to treat snake bite.
Azadirachta indica A.Juss.	Meliaceae	Vembu	Leaves, stem bark and seeds	Paste of leaf is applied to skin disease. Stem bark decoction is given orally for 7 days to cure rheumatism. Seed oil is used to cure skin disease and leprosy.
Boerhaavia diffusa L.	Nyctaginaceae	Mukurattai	Whole plant	Whole plant juice is mixed with black pepper (*Piper nigrum*) powder is taken orally to cure cough, skin diseases and jaundice.
Calotropis gigantea (L.) R.Br.	Asclepiadaceae	Erukku	Flower, leaf latex and root	Leaf latex is applied externally to treat dog bite, scorpion bite and snake bite. Root paste used for toothache. The flower powder mixed with black pepper (*Piper nigrum*) and drink to treat snake bite.
Cardiospermum helicacabum L.	Sapindaceae	Modakkathan	Whole plant	Fresh whole plant juice is taken with sugar for the treatment of rheumatism.
Cassia auriculata L.	Caesalpiniaceae	Aavarai	Leaves and roots	The leaf decoction is given orally twice a day for 5 days to treat anthelmintic. Leaf paste is given internally to treat ulcers. Paste of root is used to cure skin ailments.
Cassia occidentalis L.	Caesalpinaceae	Peyavarai	Leaves and seeds	Leaf paste is applied externally on skin troubles. Seed paste used for scorpion sting.
Catharanthus roseus G.Don	Apocynaceae	Nithyakalyani	Roots	Roots juice is given orally to curing cancer and high blood pressure.

Scientific name	Family	Vernacular name	Plant parts used	Utilization of medicinal plants for different ailments
Centella asiatica (L.) Urban.	Apiaceae	Vallarai	Leaves	Leaf juice mixed with cow's milk is given to treat jaundice.
Cissus quadrangularis L.	Vitaceae	Pirantai	Stem, leaves and roots	Paste of stem and leaf is used to treat bone fracture. Root paste applied for body pains and inflammation.
Cleome gyanandra L.	Cleomaceae	Nallavelai	Fruit	Paste of fruit is applied externally to treat headache.
Cleome viscosa L.	Cleomaceae	Nayiveli	Seed	Seed paste is given internally to treat anthelmintic and liver problems.
Clitoria ternatea L.	Fabaceae	Sangupoo	Leaves	Leaf juice is mixed with black pepper (*Piper nigrum*) given orally to treat constipation.
Coccinia indica Wight and Arn.	Cucurbitaceae	Kovai	Leaf and fruit	Leaf juice is mixed with sugar given orally to treat diabetes.
Cocculus hirsutus Diels.	Menispermaceae	Kattukkodi	Leaves and root	Leaf decoction is used to curing eczema. Root juice is given internally to cure stomache problems and rheumatism.
Cynodon dactylon (L.) Pers.	Poaceae	Arugampullu	Whole plant	100 ml of whole plant extract is given for the treatment of diuretic.
Datura metel L.	Solanaceae	Vellaiumathai	Leaves	Leaf juice given in chronic ulcers and asthma.
Eclipta prostrata L.	Asteraceae	Karisalanganni	Leaves	Leaf decoction is mixed with cow's milk and given once a day for 7 days for jaundice.
Emblica officinalis Gaertn.	Euphorbiaceae	Nellikkai	Leaves and fruits	Leaf juice is mixed cow's milk and drink to cure diabetes. Dried fruit powder is used in the treatment of diarrhoea, dyspepsia and jaundice.
Euphorbia antiquorum L.	Euphorbiaceae	Sathurakalli	Latex	Latex is applied externally to get relief from body pain.
Euphorbia hirta L.	Euphorbiaceae	Ammam pachcharisi	Whole plant	Whole plant extract is taken orally in asthma and diarrhoea.
Evolvulus alsinoides L.	Convolvulaceae	Vishnukranti	Whole plant	Decoction of whole plant is taken internally to cure fever, diarrhoea and nervous debility.
Gloriosa superba, L.	Colchicaceae	Kalappai kilangu	Tuber and flower	Tuber decoction mixed with cow's milk is taken internally to cure aphrodisiac. Flower juice is used for eye diseases.
Gymnema sylvestre (Retz) R.Br. ex Schulters	Asclepiadaceae	Shirkurinjan	Leaves	50 ml of leaf juice mixed with 50 ml of cow's milk is taken orally once a day for three weeks against diabetes.

Scientific name	Family	Vernacular name	Plant parts used	Utilization of medicinal plants for different ailments
Heliotropium indicum L.	Boraginaceae	Nakkipoo	Leaves	50 ml of leaf juice mixed with hot water is used in snake bite and scorpion bite.
Hemidesmus indicus R.Br	Asclepiadaceae	Nannari	Whole plant	Root powder mixed with water is given to promote coolness.
Hybanthus enneaspermus (L.) F.Muell.	Violaceae	Orilaithamarai	Whole plant and root	Whole plant extract is taken orally to cure diuretic. Root juice is given orally to treat urinary problems.
Justicia tranquebariensis L.	Acanthaceae	Thavasi murungai	Leaves	Leaf juice is given internally to cure jaundice. Leaf paste is applied over affected area to cure skin ailments.
Lawsonia inermis L.	Lythraceae	Maruthani	Leaves	Paste of leaf is applied externally as hair tonic.
Leucas aspera Spreng.	Lamiaceae	Tumbai	Leaves	The leaf juice is used in the treatment of cooling medicine for scabies. Leaf paste is applied on skin diseases and painful swellings.
Melia azedarach L.	Meliaceae	Malaivembu	Leaves	20 ml of leaf juice is taken orally thrice a day for 3 days for fever. The leaf paste is applied externally to treat skin diseases and leprosy.
Mimosa pudica L.	Mimosaceae	Thottalsurngii	Whole plant	Whole plant paste is taken orally twice a day for three days to treat dysentery. Decoction of roots is taken internally to cure asthma.
Musa paradisiaca L.	Musaceae	Valai	Stem	Stem juice is given internally to dissolve the kidney stones.
Ocimum bassilicum L.	Lamiaceae	Thhirnetru pachilai	Leaves	Leaf juice is used for earache, cold and urinary troubles.
Ocimum sanctum, L.	Lamiaceae	Tulasi	Leaves	Leaf juice is used for fever and cold. Leaf juice mixed with black pepper (*Piper nigrum*) powder is taken orally to treat cough.
Oxalis corniculata L.	Oxalidaceae	Puliyarai	Roots	Paste of root is taken internally to cure fever.
Pedalium murex L.	Pedaliaceae	Perunerunji	Leaves	Leaf juice is given orally to treat urinary troubles and also used for gonorrhea.
Pergularia daemia (Forssk) Chior.	Asclepiadaceae	Veliparuthi	Leaves	Leaf paste is applied externally on forehead during intense headache. Leaf juice is taken orally to cure asthma.
Phyllanthus amarus Schult & Thorn	Euphorbiaceae	Kezhanelli	Whole plant	50 ml of plant juice is given internally in empty stomach to treat jaundice.

Scientific name	Family	Vernacular name	Plant parts used	Utilization of medicinal plants for different ailments
Plectranthus coleoides Benth.	Lamiaceae	Omavalli	Leaves	Juice of leaves is taken orally to cure cold. Leaf paste is applied to treat wounds.
Plumbago zeylanica L.	Plumbaginaceae	Chithiramulam	Roots	Root powder mixed with cow's milk is given to cure fever, skin diseases, diuretic and dyspepsia.
Rhinacanthus nasutus Kurz.	Acanthaceae	Nagamalli	Leaves	Leaf paste is applied externally to treat snake bite, scorpion sting and skin diseases.
Ruellia tuberosa L.	Acanthaceae	-	Leaves	Leaf paste is applied externally on cuts and wounds.
Sesbania grandiflora Pers.	Papillionoideae	Agathi	Leaves	50 ml of leaf juice is taken orally to curing dysentery, stomachache and eliminate worms.
Solanum nigrum L.	Solanaceae	Manathakkali	Leaves	Juice of leaves is taken orally to treat stomach ulcer.
Solanum surattense Burm.f.	Solanaceae	Kandankathiri	Fruit	Fresh or dried fruit paste is used to curing toothache.
Solanum trilobatum L.	Solanaceae	Thuthuvelai	Leaves	Leaf juice is taken internally to treat cough, fever, cold and asthma.
Syzygium cumini (L.) Skeels	Myrtaceae	Navalpalam	Seeds	Seeds extract mixed with cow's milk is given internally to cure diabetes.
Tribulus terrestris L.	Zygophyllaceae	Nerunjii	Fruits and leaves	Fruit juice is taken orally to cure urinary troubles. Leaf paste is applied externally on cuts and wounds.
Tridax procumbens L.	Asteraceae	Vettukaya poondu	Leaves	Leaf paste is applied externally on cuts and wounds.
Vernonia cinerea (L) Less.	Asteraceae	Mukuthipundu	Flowers and roots	The flower juice is mixed with black pepper (*Piper nigrum*) powder and pinch of common salt is given internally to treat anthelmintic, fever and skin disease. Decoction of roots is taken orally to cure cough, stomachache and diarrhoea.
Vitex negundo L.	Verbenaceae	Nochi	Leaves	Leaves are boiled with water and the vapour is inhaled thrice a day to treat cold and headache.

Conclusion

The tribal and rural people of Arunoothmalai Hills, Salem district of Tamilandu has been using several plants of therapeutic utilize since time immemorial. Tribals and villagers mainly depend on the plants for all ailments. They are perceptive of the plant remedies for common diseases such as jaundice, diabetes, dysentery asthma, rheumatism, skin diseases, cough, urinary troubles, fever, dyspepsia and constipation. They are also very popular with the antidotes for scorpion bite and snake bites. Clinical and pharmacological studies will

support in the confirmation of the efficiency of the report plants. The utilize of the reported plant species were collected from the regional people, who utilize them as tradition. Therefore, it is not proper to use them without consulting an experienced Siddha, Ayurveda, Naturopathy and Homeopathy medicine practitioners. For the profit of the community the documented plant species should be taken protect of and also steps be taken for propagation as well as conservation of these plant species. Finally, to conclude, this research paper ethnobotanists, people interested in herbal medicine phytochemists, pharmacologists for further important research of medicinal plants present in the Arunoothmalai Hills of Salem district, India.

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References

Abu-Rabia, 2005. Urinary diseases and ethnobotany among pastoral nomads in the Middle East. J. Ethnobiol. Ethnomed., 1: 4.

Alagesaboopathi, C., 2009. Ethnomedicinal plants and their utilization by villagers in Kumaragiri Hills of Salem district of Tamilnadu, India. Afr. J. Trad. CAM. 6(3), 222-227.

Alagesaboopathi, C., 2011. Ethnomedicinal plants used as medicine by the Kurumba tribals in Pennagaram region, Dharmapuri district of Tamilnadu, India. Asian J. Exp. Biol. Sci., 2: 140-142.

Ayyanar, M., Ignacimuthu, S., 2005. Traditional knowledge of Kani tribals in Kouthmalai of Tirunelveli hills, Tamilnadu, India. J. Ethnopharmacol., 102(2): 246-255.

Chopra, R.N., Nayar, S.L., Chopra, I.C., 1956. Glossary of Indian Medicinal Plants, Council of Scientific and Industrial Research, New Delhi, India.

Das, S., Choudhury, M.D., Ethnomedicinal uses of some traditional medicinal plants found in Tripur, India. J. Med. Plants Res., 6(35), 4908-4914.

Divya, B., Mruthunjaya, K., Manjulla, S.N. 2011. *Parkinsonia aculeata*: A phyto-pharmacological review. Asian J. Plant Sci., 10, 175-181.

Dwarakan, P., Alagesaboopathi, C., 1999. Traditional crude drug resources used for human and live-stock diseases in Salem district, Tamilnadu. J. Econ. Taxon. Bot., 23, 421-424.

Gamble, J.S., 1936. Flora of the Presidency of Madras. Vol. I-III, Allard & Son Ltd., (Reprinted, 1956), Botanical Survey of India, Calcutta, India. 1936.

Guru Prasad, B.R., 2011. Assessment of ethnomedicinal plants from Chamundi Hills, Mysore. J. Med. Plants Res., 5(20), 5200-5202.

Henry, A.N., Chitra, V., Balakrishnan, N.P., 1989. Flora of Tamilnadu, India. Series 1: Analysis Vol. III, Botanical Survey of India, Southern Circle, Coimbatore, Tamilandu, India.

Henry, A.N., Kumari, G.R., Chitra, V., 1987. Flora of Tamilnadu, India. Series 1: Analysis Vol.II, Botanical Survey of India, Southern Circle, Coimbatore, Tamilandu, India.

Ignacimuthu, S., Ayyanar, M., Sankara-narayanan, K., 2005. Ethnobotanical investigations among tribes in Madurai district of Tamilnadu, India. J. Ethnobiol Ethnomed. 2, 25.

Ignacimuthu, S., Ayyanar, M., Sankarasivaram, K., 2008. Ethnobotanical study of medicinal plants used by Paliar tribals in Theni district of Tamilnadu, India. Fitoter. 79(7-8), 562-568.

Jain, S.K., 1991. Dictionary of Indian Folk Medicine and Ethnobotany. Deep Publications, New Delhi.

Jayanthi, P., Aravindhan, V., Rajendran, A., 2012. Phytotherapeutic plants of Madukkarai Hills in the Southern Western Ghats of Coimbatore District, Tamilnadu, India. Int. J. Ayurv. Herbal Med. 2(5), 897-906.

Kadavul, K., Dixit, A.K., 2009. Ethnomedicinal studies of the woody

species of Kalrayan and Shervarayan Hills, Eastern Ghats, Tamilnadu. Indian J. Trad. Knowl. 8(4), 592-597.

Kirtikar, K.R., Basu, B.D., 1999. Indian Medicinal Plants. Vol. I-IV. International Book Distributors Booksellers and Publishers, Dehra Dun, India.

Matthew, K.M., 1983. The Flora of Tamilnadu Carnatic. Vol. I, Rapinet Herbarium, Tiruchirapalli, Tamilnadu, India.

Muralidharan, R., Narasimhan, D., 2012 Ethnomedicinal plants used against gastrointestinal problem in Gingee Hills of Villupuram district, Tamilnadu. J. App. Pharm. Sci. 2(10), 123-125.

Nadkarni, K.M., 2001. Indian plants and drugs with their medicinal properties and uses. Asiatic Publishing House, New Delhi.

Parinitha, M., Srinivasa, B.H., Shivanna, M.B., 2005. Medicinal plant wealth of local communities in some villages in Shimoga district of Karnataka, India. J. Ethno-pharmacol. 98, 307-312.

Pei Sheng-Ji, 2001. Ethnobotanical approaches of traditional medicine studies: some experiences from Asia. Pharm. Biol. 39, 74-79.

Pesek, T.J., Helton, L.R., Reminick, R., Kannan, D., Nair, M., 2008. Healing traditions of Southern India and the conservation of culture and biodiversity. A preliminary study: Ethnobot. Res. Appl. 6, 471-479.

Pushpangadan, P., 1995. Ethnobotany in India - A Status Report, All India Co-ordinated Research Project, Ministry of Environment and Forests, Government of India, New Delhi.

Ragupathy, S., Mahadevan, A., 1991. Ethnobotany of Kodaikkarai reserve forest, Tamilnadu, South India. Ethnobot. 3, 79-89.

Rajan, S., Sethuraman, M., Mukherjee, P.K., 2002. Ethnobiology of the Nilgiri Hills, India. Phytothear. Res. 16(2), 98-116.

Ramana Naidu, B.V., Haribabu Rao, D., Subramanyam, P., Prabhakar Raju, C., Jayasimha Rayalu, D., 2012. Ethnobotanical study of medicinal plants used by tribals in Nallamalla Forest area of Karnool district, Andhra Pradesh. Int. J. Plant Anim. Envrion. Sci. 2(4), 72-81.

Samydurai, P., Jagatheshkumar, S., Aravinthan, V., Thangapandian, V., 2012. Survey of wild aromatic ethnomedicinal plants of Velliangiri Hills in the Southern Western Ghats of Tamilnadu, India. Int. J. Med. Arom. Plants 2(2), 229-234.

Sandipan Das, Khan M.L., Abhijit Rabha, Bhattacharya, D.K., 2009. Ethnomedicinal plants of Manas National Park, Assam, Northeast India. Indian J. Trad. Knowl. 8(4), 514-517.

Sankaranarayanan, S., Bapa, P., Ramachandra, J., Kalaichelvan, P.T., Deccaraman, M., Vijayalakshmi, M., Dhamotharan, R., Dananjeyan, B., Sathya Bama, S., 2010. Ethnobotanical study of medicinal plants used by traditional users in Villupuram district of Tamilnadu, India. J. Med. Plants Res. 4(12),1089-1101.

Sharma, R., 2003. Medicinal plants of India - An Encyclopedia. Daya Publishing House, New Delhi. 2003.

Shrestha, K.K., 1998. Ethnobotanical inventory and plant taxonomy basis approaches for ethnobotanical research. In: Ethnobotany for conservation and community development (Ed.: Shrestha, K.K.). Ethnomedicinal Society of Nepal, Kathmandu, Nepal. pp. 58-65.

Sinha, R.K., 1996. Ethnobotany. Shri Publisher, Jaipur, India.

Udayan, P.S., Satheesh George, T., Uhar, K.V., Indira Balachandran, 2006. Medicinal plants used by Malayali tribe of Servarayan Hills, Yercaud, Salem district, Tamilnadu, India. Zoo's Print J. 21(4), 2223-2224.

Umapriya, T., Rajendran, A., Aravindhan, V., Binu Thomans, Maharajan, M., 2011. Ethnobotany of Irular tribe in Palamalai Hills, Coimbatore, Tamilnadu. Indian J. Nat. Prod. Resour. 2(2), 250-255.

Venkataswamy, R., Mubarack, H.M., Doss, A., Ravi, T.K., Sukumar, M., 2010. Ethnobotanical study of medicinal plants used by Malasar tribals in Coimbatore district of Tamilnadu (South India). Asian J. Exp. Biol. Sci. 1(2), 387-392.