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Documentary Evidences of Selected Indigenous Medicinal Plants Used By the Tribal Peoples of Savarikkadu

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Abstract
Indigenous plants are a treasure of any region for ailment treatment. Indigenous use of medicinal plants all over the world precedes the origin of modern medicine in the healthcare system. Medicinal plants are used with the intention of maintaining health, to be administered for a specific condition, or both, whether in modern medicine or in traditional medicine. Tribal peoples are the one who depend on nature throughout their life. Savarikkadu is the place which is enriched with more plants. And those people depend on plants for all their basic health diseases. The present work is initiated to explore some rare indigenous medicinal plants in Savarikkadu from the tribal people and a total of "Forty eight" plant species included in "Twenty seven" families were found. The Ethno botanical survey on Indigenous Medicinal Plants is conducted between Septembers to December 2023. More information about the traditional knowledge was collected randomly from the tribal peoples of the Savarikkadu. The field visit is taken many times to collect information from the tribal people regarding traditional and indigenous knowledge. A few tribal people were interviewed in this survey. Traditional medicines were still used by the peoples from the traditional medicinal experience of practicing individuals in the Savarikkadu. They use these plants for the treatment of various diseases listed in the table. And these plants were arranged according to the Bentham and Hookers system of Classification and API Taxonomy. These plants were also pollution free and easily available for the needs. Those plants are arranged with their botanical name, vernacular name, family, habit, parts used, preparation, used as and medicinal uses. And further study is going on with these plants.

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1. INTRODUCTION

India is well known for its vegetation. And still, the world depends on the plants for their different purposes and needs in their day to day life. Basically plants give us everything, among all the needs of humans from the plants, medicinal use plays a vital role in it. Many industries from all over the world depend on plants for production. There are approximately 320,000 plant species found worldwide, ranging from giant sequoias to sea grass meadows; most of the plants will be vascular plants. There are estimated to be over 18,000 species of flowering plants in India, which constitute some 6-7 percent of the total plant species in the world. India is home to more than 50,000 species of plants, including a variety of endemics. Tamil Nadu leads all states in the country, with 5640 species

Accounting for 1/3 of the total flora of India. This includes 1,559 species of medicinal plants, 533 endemic species, 260 species of wild relatives of cultivated plants and 230 red-listed species. (Ganesh *et al.*, 2016).
Most of these plants are found in the hill region of Tamil Nadu due to its climate and water sources. And still most of the people in the hill region depend on the plants for their various purposes like furniture, food, animal feeds and as medicines too (Jenny and Suganthi, 2017). About maximum no of plants contains many medicinal uses though it is poisonous. Although many medicinal systems like (Allopathic, siddha, Unani and homeopathy) have arisen, people believe in the medicines obtained from the plants that tribal people believe that these plants as their god and they totally depend on the plants for their medicinal use. (Kiruthika and Suganthi, 2022).

There are approximately 100 families over there in Savarikkadu. The floral diversity of these places were very rich, so the present study is to conduct an ethno botanical survey of medicinal plants and their traditional indigenous uses for various illnesses used by the tribal community of Savarikkadu. (Himalini and Razia, 2019).

2. MATERIALS AND METHODS

Study Area

The study area is in India, Tamil Nadu, Dindigul District, Savarikkadu, an area of 1039.46 km2 which is geographically located between 77°14′26″ and 77°45′28″E longitudes and 10°6′25″ and 10°26′54″N latitudes. The average rainfall is 1437mm. And the altitude of the study area is 7200 feet above sea level. The average temperature in the summer is 19.8° C and in the winter it will be below 10 ° C. The pH ranged from 4.15-6.4 in agriculture soil, and 3.86 - 5.64 in forest soil, whereas forest soil indicated the presence of high organic matter and high quantities of elements. The major trees available in these forests are pine, teak and eucalyptus. (Himalini and Razia, 2019).

Plate 1: Study Area

Sample Collection

The field study was conducted for more than a few months with the tribal peoples of Savarikkadu and the peoples who practice medicines. The ethno-botanical data (Vernacular name, Family, Habit, Parts Used, Preparation, Used as and medicinal uses) were collected by the help of tribal peoples in and around the study area. The collected plant species were identified taxonomically using Flora of the Presidency of Madras. By Gamble, J. S. (James Sykes), 1847-1925 and Botanical Survey of India (BSI), Coimbatore. The plants are arranged by botanical names, family, local name, useful part and ethno-botanical uses for different diseases. (Jenny and Suganthi, 2017; Kiruthika and Suganthi, 2022)

3. RESULTS AND DISSCUSSION

The documentation study deals with 48 plant species belonging to 27 families that were said to possess different medicinal uses for various diseases. Here table - 1 showing Binomial name, Vernacular name, family, parts used and the Ethomedicinal uses for the medicinal plants collected and documented. And table - 2 and chart - 1 shows the families that the plants belong to. Table - 3 and chart - 2 represent the plant parts used for the diseases.

Table 1: showing the Binomial name, Vernacular name, Family, Parts Used and Ethno Medicinal Uses of the Documented Plants.

S. No	Binomial Name	Vernacular Name	Family	Parts Used	Ethnomedicinal Uses
1.	***Senna septemtrionalis*** **(Viv.) H.S. Irwin & Barneby.**	Tenaru	Fabaceae	Leaves and Flower	Snakebites, fever, burns, Cholera, Hemorrhoids and Gastroenteritis.
2.	***Solanum pseudocapsicum*** **L.**	Ratha Kilangu	Solanaceae	Leaves and unripe fruit	Gonorrhea and abdominal pain.
3.	***Oxalis latifolia*** **Kunth.**	Pulingam	Oxalidaceae	Leaves	Digestion, Bleeding piles and dysentery.
4.	***Capsicum frutescens*** **L.**	Milagai	Solanaceae	Leaves and fruit	Pressure and diabetes.
5.	***Plantago major*** **L.**	Arugam	Plantaginaceae	Leaves	Gastrointestinal bleeding, hematemesis, dysentery, hemorrhoids, stomachache, intestinal ulcers, dyspepsia and constipation.
6.	***Neoachamandra japonica*** **(Thunb.) W.J.de Wilde & Duyfjes.**	Naai pagal	Cucurbitaceae	Leaves and fruit	Diabetes, hemorrhoids, hematochezia, hematuria, hematemesis, hemorrhinia, uterine or intestinal

					hemorrhage, arteriosclerosis, headache, hypertension, dysentery, dizziness, and pyoderma.
7.	***Buddleja asiatica* Lour.**	Karkkattan	Scrophulariaceae	Leaves and Flower	Fever, coughs, colds, stomach aches, diarrhea, malaria and dysentery.
8.	***Mimosa pudica* L.**	Tottan cinunki	Fabaceae	Leaves	Urogenital disorders, piles, dysentery, sinus, and also applied on wounds.
9.	***Phyllanthus niruri* L.**	Kilaneli	Phyllanthaceae	Leaves and root	Kidney stones, gallbladder stones, liver cancer & jaundice.
10.	***Phyllanthus urinaria* L.**	Cirukila nelli	Phyllanthaceae	Leaves and root	Jaundice, diabetes, malaria,liver diseases, jaundice, gonorrhea, frequent menstruation, diabetes, skin ulcers, sores, swelling, and itchiness.
11.	***Boerhaavia diffusa* L.**	Mukkurttaikkoti	Nyctaginaceae	Leaves, root and aerial parts	Pain relief, anti-inflammation, intestinal worms and asthma.
12.	***Boehmeria pendulifolia* Wedd ex D.G.Long.**	Sirukanjori	Urticaceae	Leaves and root	Hemorrhoids, leucorrhoea, impetigo and used as a poultice.
13.	***Bambusa vulgaris* Schrad. ex J.C.Wendl.**	Moongil	Poaceae	Shoot and leaves	Heart problems and malaria, inducing uterine contractions.
14.	***Achyranthus aspera* L.**	Nauruvi or Apamarki	Amaranthaceae	Leaves	Asthma, in facilitating delivery, bleeding, bronchitis, debility, dropsy, cold, colic, cough, dog bite, snake bite, scorpion bite, dysentery, earache, headache, leukoderma, renal complications, pneumonia, and skin diseases.

15.	***Mollugo verticillata* L.**	Parpadaga Pul	Molluginaceae	Leaves and root	Fever, aches, promotes appetite, and eye diseases.
16.	***Vernonia amygdalina* Delile.**	Sanjeevi Mooligai	Asteraceae	Leaves	Malaria and diabetes.
17.	***Citrus medica* L.**	Naratha	Rutaceae	Fruit, Leaves and seed	Indigestion, nausea, skin disorders and relieves itching.
18.	***Cipadessa baccifera* (Roth) Miq.**	Puilipan Cheddi	Meliaceae	Leaves Root and bark	Diabetes, dysentery, malaria, rheumatism, piles, headache, and psoriasis. It is especially for the treatment of cobra poison.
19.	***Vitex negundo* L.**	Karunochi	Lamiaceae	Leaf	Colds, flu, asthma and pharyngitis.
20.	***Euphorbia heterophylla* L.**	Palperukki	Euphorbiaceae	Leaves and root	Constipation, bronchitis and asthma. It is also used for mucus in the nose and throat, throat spasms, hay fever, and tumors.
21.	***Euphorbia hirta* L.**	Amman pacharisi	Euphorbiaceae	Leaves and latex	Intestinal diseases, ulcers and bronchitis, and the latex for conjunctivitis.
22.	***Aloe vera* L.**	Kathalai	Asphodelaceae	Succulent leaf gel	Skin injuries (burns, cuts, insect bites, and eczemas), digestive problems healing maladies, constipation and softening the skin.
23.	***Eucalyptus globulus* Labill.**	*Eucalyptus tree*	Myrtaceae	Leaves	Used in creams and ointments to relieve muscle and joint pain, and in some mouthwashes.
24.	***Jatropha curcas* L.**	Kattu amanakku	Euphorbiaceae	Leaves Latex and seed	Ulcer, tumor, scabies, wound, haemorrhoid, wound, splenomegaly, skin diseases, rheumatism and paralysis.
25.	***Passiflora subpeltata* Ortega.**	Kattuk Koti Tortai	Passifloraceae	Fruit, leaves and root	Digestion and gastrointestinal infections.

26.	***Pericaria chinensis* (L.) H. Gross.**	Sivappu kumbakodaali	Polygonaceae	Flower and leaves	Stomachaches, dysentery, burns, and fevers.
27.	***Cyanotis ciliata* (Blume) Bakh.f.**	Valukkai pul	Commelinaceae	Whole plant	Rheumatisms and joint pains.
28.	***Zanthoxylum asiaticum* L.**	Kattu-Milaku	Rutaceae	Leaves and root	Rheumatism, sickle cell anemia, toothache, urinary tract infection, healing elephantiasis, toothache, erectile dysfunction, gonorrhea, malaria, dysmenorrhea, and abdominal pain and venereal diseases.
29.	***Croton hitrus* (L.) Her.**	Kurottans	Euphorbiaceae	Seed	Cancer, constipation, diabetes, digestive problems, dysentery, external wounds, fever, hypercholesterolemia, hypertension, inflammation, intestinal worms, malaria, pain, ulcers and weight-loss.
30.	***Lantana camera* L.**	Unni plant	Verbenaceae	Leaves	Wound healing, fever treatment, cough treatment, influenza treatment, stomach ache, malaria, cancers, chickenpox, measles rheumatism, and ulcer.
31.	***Ipomoea coccinea* L.**	Kanavalikkodi	Convolvulaceae	Whole plant	Oedema, oliguria, ascariasis and constipation.
32.	***Passiflora foetida* L.**	Kurangu palam	Passifloraceae	Flower Leaf and root	Throat infection, giddiness, liver disorder, diarrhea, tumor, nervous disorder, and anxiety; sleep disorders, skin infections, hysteria and asthma.
33.	***Laportea canadensis* (L.) Wedd.**	Perunkanchori	Urticaceae	Leaves and roots	Fevers and diuretics.
34.	***Boehmeria nivea* (L.) Gaudich.**	Cheenapul	Urticaceae	Leaves and root	Fluxes and wounds.

35.	***Teucrium canadense* L.**	Maram munivar	Lamiaceae	Leaves	Fever, arthritis, gout and digestive complaints.
36.	***Plectranthus mollis* (Aiton) Spreng.**	Kuruver and Vetiver	Lamiaceae	Leaves and root	Cold, asthma, constipation, headache, cough, fever and skin diseases.
37.	***Solanum ptychanthum* Dunai.**	Manatakkali	Solanaceae	Leaves Root and fruit	Psoriasis, hemorrhoids, deep skin infections, stomach irritation, cramps, spasms, pain, nervousness, asthma and whooping cough.
38.	***Ageratum conyzoides* L.**	Pampillu	Asteraceae	Whole plant	Sore throat, antilithic spasms, diarrhea, dislocated bones and epilepsy.
39.	***Coleus barbatus* L.**	Marunthu koorkan	Lamiaceae	Leaves	Treatment of rashes, asthma, bronchitis, insomnia, epilepsy, angina, cancer, cardiomyopathy, congestive heart failure, convulsions, cramp, depression, dermatosis, dyspepsia, dysuria, eczema, glaucoma, high blood pressure, hypothyroidism, infertility, insomnia, ischemia, myocardosis, obesity, psoriasis, respirosis, thrombosis and water retention.
40.	***Digitaria bicornis* (Lam.) Roem. & Schult.**	Akki Pul or Arisi Pul	Poaceae	Leaves and root	Gonorrhoea
41.	***Sophora tetraptera* J.S.Muell.**	karunai kilangu	Fabaceae	Bark, root and leaves	Internal pains, colds, used to dress wounds, treat skin diseases, bruises and sore throats.
42.	***Phyllanthus emblica* L.**	Periya nellikai	Phyllanthaceae	Leaves and fruit	Diabetes, diarrhea, gonorrhea anti-aging, sunscreen diuretic and laxative.

43.	***Caria papaya* L.**	Papalli	Caricaceae	Fruits, leaves and seed	Stomach pains relieve menstrual pain, and improve ingestion, wound healing, heart disease, bacterial infections, and inflammations.
44.	***Citrus aurantifolia* (Christm. l Swing.)**	Elumiccai	Rutaceae	Fruit, leaves and flower	Treatment of malaria, jaundice, sore throat, oral thrush, treatment for anxiety and insomnia.
45.	***Punica grantum* L.**	Matuḷai	Punicaceae	Fruit and its peel	Obesity, metabolic syndrome, coronary heart disease, periodontitis, gingivitis, and stomatitis.
46.	***Jatropha gossypifolia* L.**	Kattukottai	Euphorbiaceae	Seed	Ulcers, blisters, eczema bacterial and fungal infections or febrile diseases, muscle pain or jaundice.
47.	***Leucas aspera* (Willd.) Link.**	Thumbai	Lamiaceae	Leaves and flower	Respiratory ailments, digestive disorders, respiratory illnesses, snoring issues, skin allergies, headaches and skin conditions.
48.	***Cryptolepis dubia* (Burm.f.) M.R.Almeida.**	Pala koti	Apocynaceae	Stem, roots, latex and Leaves	Paralysis, rickets and rheumatism.

Table 2: Showing families contains number of plants

S. No.	Families	No. of Plants
1.	Lamiaceae	5
2.	Euphorbiaceae	5
3.	Rutaceae	3
4.	Fabaceae	3
5.	Solanaceae	3
6.	Phyllanthaceae	3
7.	Urticaceae	3
8.	Poaceae	2
9.	Asteraceae	2
10.	Passifloraceae	2
11.	Oxalidaceae	1
12.	Plantaginaceae	1
13.	Cucurbitaceae	1

14.	Scrophulariaceae	1
15.	Nyctaginaceae	1
16.	Amaranthaceae	1
17.	Molluginaceae	1
18.	Meliaceae	1
19.	Asphodelaceae	1
20.	Myrtaceae	1
21.	Polygonaceae	1
22.	Commelinaceae	1
23.	Verbenaceae	1
24.	Convolvulaceae	1
25.	Caricaceae	1
26.	Punicaceae	1
27.	Apocynaceae	1

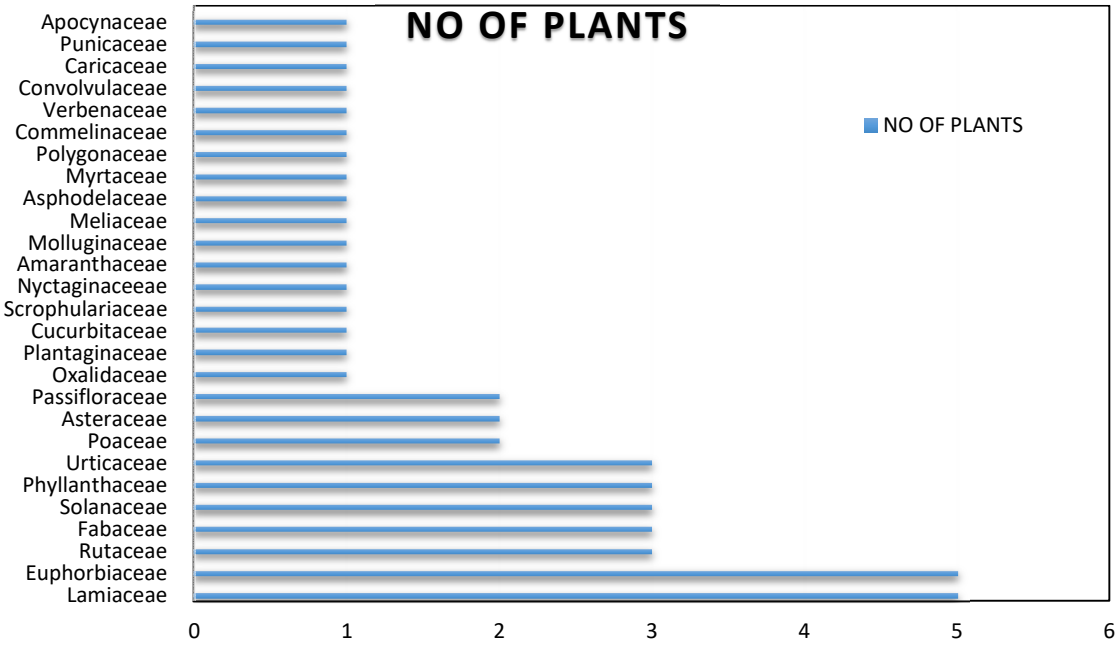

Chart 1: Showing the Number of Plants present in each families

Table 3: Showing the parts used in number of plants

S. No	Plant Parts Used	No. of Plants
1.	Roots	17
2.	Bark	4
3.	Leaves	40
4.	Flower	6
5.	Fruit	10
6.	Latex	3
7.	Seed	5

8.	Fruit Peel	2
9.	Whole plant	4
10.	Succulent leaf gel	1

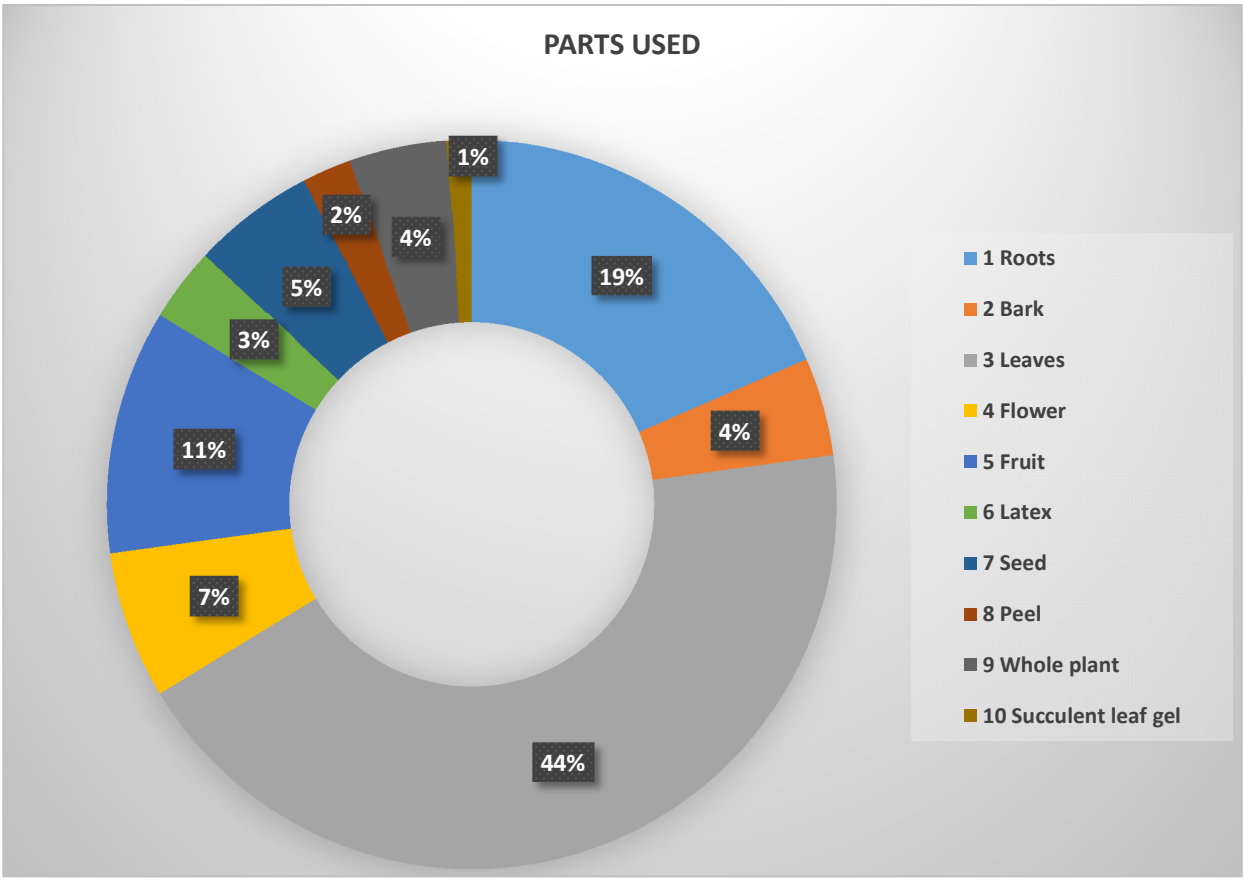

Chart 2: Showing parts used in each plant

S. septemtrionalis (Viv.) H.S. Irwin & Barneby.

S. pseudocapsicum L.

O. latifolia Kunth.

N. japonica (Thunb.) W.J.de Wilde & Duyfjes

C. frutescens L.

P. major L.

B. asiatica Lour.

M. pudica L.

P. niruri L.

P. urinaria L.

B. diffusa L.

B. vulgaris Schrad. ex J.C.Wendl

B. pendulifolia Wedd ex D.G.Long.

M. verticillata L.

A. aspera L.

C. medica L.

V. amygdalina Delile.

C. baccifera (Roth) Miq.

J. curcas L.

P. subpeltata Ortega.

V. negundo L.

E. heterophylla L.

E. hirta L.

A. vera L.

P. chinensis (L.) H. Gross.

Z. asiaticum L.

L. canadensis (L.) Wedd.

D. bicornis (Lam.) Roem. & Schult.

S. tetraptera J.S.Muell.

J .gossypiifolia L.

C. hitrus (L.) Her.

L. camera L.

I. coccinea L.

P. foetida L.

E. globulus Labill.

C. ciliata Blume) Bakh.f.

B. nivea (L.) Gaudich.

T. canadense L.

P. mollis (Aiton) Spreng.

S. ptychanthum Dunai.

A. onyzoides L.

C. barbatus L.

P. emblica L.

C. papaya L.

C. aurantifolia (Christm. l Swing.)

P. grantum L.

L. aspera (Willd.) Link.

C. dubia (Burm.f.) M. R. Almeida.

Plate 2:

4. CONCLUSION

The importance of medicinal plants is underscored by their widespread use in traditional medicine systems, as well as their significant role in modern pharmaceutical research and drug discovery. The uses of medicinal plants are numerous and varied, encompassing a wide range of medical and therapeutic applications. These plants have been employed to treat a multitude of ailments, from common colds and digestive disorders to more serious conditions such as cancer, cardiovascular diseases, and neurological disorders.

The sustainable use and conservation of medicinal plants are critical for realizing their full potential and ensuring their continued availability for future generations. Due to overharvesting, habitat loss, and environmental degradation, many medicinal plant species are threatened with extinction. Sustainable harvesting practices, cultivation initiatives, and conservation efforts are integral to preserving the rich diversity of medicinal plants, safeguarding their genetic resources, and maintaining their ecological and cultural significance.

These medicinal plants for the treatment of various diseases like Diabetes, respiratory disorders, skin diseases, ulcers, fever, cardiac diseases, Indigestion, nausea, skin disorders, relieves itching , arthritis, blood pressure, menstrual cramps, rheumatism and stomach disorders. And these plants have some properties like antibacterial, anti-cancerous, anti-inflammatory, anti-diabetes, antioxidant and antimicrobial. These plants have various

medicinal values so it is in need of preservation and conserve for future purposes and further research work.

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