

Ethnobotanical investigation in Masagoundanur Village, Erode District, Tamil Nadu, India

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ABSTRACT

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The present investigation provides first hand information on 67 taxa belonging to 57 genera and 30 families. They are used as medicinal plants for various ailments, viz. diabetes, poisoning, fever, asthma, bone fracture, diaphoresis, indigestion, diuresis, eye pain, injury and wounds, jaundice, constipation, leg pain, rheumatism, scabies, skin diseases, stomach ache, toothache, ulcer, etc., by the people of Masagoundanur Village, Erode District, Tamil Nadu. Ethnobotanical research can provide a wealth of information regarding relationship between plants and traditional societies.

Keywords: Ethnobotany, medicinal plants, Masagoundanur, Tamil Nadu, India

INTRODUCTION

Since ancient times, plants have been an exemplary source of medicine to cure various ailments. Herbal drugs constitute a major source of all the codified systems of traditional medicines in India, such as Ayurveda, Homeopathy, Naturopathy, Siddha, Unani and Yoga (Vaidya & Devasagayam 2007, Kanneboyena et al. 2015, Pandey et al. 2016). Medicinal plants help in alleviating human suffering and are widely used for subsistence, home remedies and trade (Kunwar et al. 2006). Typically, people living near forest area are ethnomedicinally knowledgeable (Raj et al. 2018). The villagers in the Masagoundanur village have sound knowledge on the medicinal properties of their plant resources. Therefore, they use many plant species for

the treatment of various day-to-day ailments. On this basis, it was decided to undertake the present ethnobotanical investigation among the people of Masagoundanur, Erode district, Tamil Nadu.

Masagoundanur village is located between Lat, 11°74' N to 11°76' N and Long. 77°66' E to 77°67' E and is surrounded by well protected forest, viz. Bargur Reserve Forest in Erode District. The study area occupies an area of 250 ha. The average temperature ranges from 10° to 35° C. The inhabitants of Masagoundanur are mainly involved in agriculture and are cultivating commercial crops such as turmeric, banana, maize, ground nut, green gram, black gram and cow pea. These villagers depend upon the local plants for the treatment of various diseases as native medicines.

Table 1. List of important medicinal plants of Masagoundanur villages with medicinal uses.

S. No.	Name of Species	Family	Vernacular Name	Part Used	Medicinal Uses
1	<i>Abrus precatorius</i> L.	<i>Fabaceae</i>	Kundu mani	Beads, leaf	Rheumatism, Skin diseases, Bone fracture, Swelling, Urinary complaints, Sore throat, Inflammation of gum, Menstrual complaints, Snake bites, Mouth ulcer, Typhoid, Pain reliever,
2	<i>Abutilon indicum</i> (L.) Sweet.	<i>Malvaceae</i>	Thutthi	Seed, root	Antipyretic, Piles, Scabies, Head ache
3	<i>Acacia leucophloea</i> (Roxb.) Willd.	<i>Mimosaceae</i>	Velvel	Bark juice	Laxative, Tooth ache,
4	<i>Acacia nilotica</i> (L.) Willd. ex Del.	<i>Mimosaceae</i>	Karuvell	Branch lets	Tooth ache, Leprosy, Cough, Anti-poison,
5	<i>Acalypha fruticosa</i> Forssk.	<i>Euphorbiaceae</i>	Sinnithalai	Juice of leaves	Skin irritations, Diabetics,
6	<i>Achyranthes aspera</i> L.	<i>Amaranthaceae</i>	Nayuruvi	Seed, leaf juice	Laxative, Asthma, Piles, Acidity, Scorpion bites, Dysentery, Cough, Cold, Diuretic, Blood pressure,
7	<i>Aerva lanata</i> (L.) Juss. ex Schultes	<i>Amaranthaceae</i>	Sirupooli	Root, Leaves	Diuretic, Vegetative, Insect bites,
8	<i>Albizia amara</i> (Roxb.) Bolvin.	<i>Mimosaceae</i>	Wunja	Leaf	Hair cleaner
9	<i>Aloe vera</i> (L.) Burm.f.	<i>Liliaceae</i>	Sortukathalai	Leaf juice	Skin irritation, Purgatives, Head ache,
10	<i>Asparagus racemosus</i> Willd.	<i>Liliaceae</i>	Thanneer vittam	Tuber	Stomach ache, Gout, Hemophilic disorders, Threatened abortion, Nutritive, Irregular menstruation, Weakness,
11	<i>Atalantia monophylla</i> (L.) Correa.	<i>Rutaceae</i>	Kattu Elumichai	Root	Antiseptic
12	<i>Azadirachta indica</i> Adr. Juss.	<i>Meliaceae</i>	Vembu	Whole plant	Skin diseases, refrigerant, Scabies, Snake bite, Typhoid, Malaria fever, Eye diseases, Vomiting, Cooling effects,
13	<i>Azima tetracantha</i> Lam.	<i>Salvadovaceae</i>	Sango mullu	Leaf juice	Cold, Cough, Swelling, Piles, Cholera
14	<i>Blepharis maderaspatensis</i> (L.) Roth.	<i>Acanthaceae</i>	-	Leaf juice	Bone fracture
15	<i>Calotropis gigantea</i> (L.) R. Br.	<i>Asclepiadaceae</i>	Yarukku	Latex	Hydrocele, Back pain, Swellings, Jaundice, Fever, Foot nails, Gout, Cough, Rheumatism.
16	<i>Capparis divaricata</i> Lam.	<i>Capparaceae</i>	Thoratti	Leaves	Stomach ache
17	<i>Capparis sepiaria</i> L.	<i>Capparaceae</i>	Karunsoorai	Leaves	Cut wound, Stomach ache
18	<i>Capparis zeylanica</i> L.	<i>Capparaceae</i>		Leaves	Stomach ache, Swellings, Piles, Cholera,
19	<i>Caralluma umbellata</i> Haw.	<i>Asclepiadaceae</i>	Muyalkombuc hedi	Stem	Leg pain
20	<i>Cardiospermum canescens</i> Wall.	<i>Sapindaceae</i>	Kattumutakathan	Leaf juice	Bone setting, Skin diseases,
21	<i>Cardiospermum helicacabum</i> L.	<i>Sapindaceae</i>	Mutakathan	Leaf paste	Bone setting, Leg swellings, Gout, Eye diseases, Head ache,
22	<i>Carissa congerra</i> Wight.	<i>Apocynaceae</i>	Kalakkai	Fruit	Refrigerant
23	<i>Cassia auriculata</i> L.	<i>Caesalpinaceae</i>	Aavaram	Seed, root	Dysentery, anti-septic
24	<i>Catharanthus roseus</i> (L.) G. Don.	<i>Apocynaceae</i>	Nithiyakal	Flower	Eye pain, Cancer, Injuries, Diabetics.
25	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	<i>Poaceae</i>	-	Leaves	Ailments
26	<i>Cissus quadrangularis</i> L.	<i>Vitaceae</i>	Pirandai	Young stem	Indigestion, Swellings, Bone fracture, Wounds, Dysentery, Joint pain,
27	<i>Clitoria ternatea</i> L.	<i>Fabaceae</i>	Karkattan	Leaf juice	Ulcer, Stomach ache, Leprosy, Goiter, Swellings,
28	<i>Cymbopogon citratus</i> (DC.) Stapf.	<i>Poaceae</i>	Vasapullu	Leaf oil	Cold, Body pain, Cold & Cough, Ring worm, Stimulant, Stomach ache, Malaria, Joint pain, Injuries,
29	<i>Cynodon dactylon</i> (L.) Pers.	<i>Poaceae</i>	Arukupullu	Leaf juice	Stimulant, Urine block.
30	<i>Dichrostachys cinerea</i> (L.) Wight. & Arn.	<i>Mimosaceae</i>	Vedathalan	Flower, Root	Anti-Rheumatic

31	<i>Dodonaea viscosa</i> Jacq.	<i>Sapindaceae</i>	Viral	Leaves	Bone fracture,
32	<i>Eclipta prostrata</i> (L.) L.	<i>Asteraceae</i>	Karisilanganni	Leaf juice	Jaundice, Injuries, Wounds, Scorpion bites, Cold & Cough,
33	<i>Euphorbia antiqorum</i> L.	<i>Euphorbiaceae</i>	Sadurakalli	Latex	Foot nails
34	<i>Evolvulus alsinodes</i> (L.) L.	<i>Convolvulaceae</i>	Vishnugandhi	Seed	Aphrodisiac
35	<i>Ficus benghalensis</i> L.	<i>Moraceae</i>	Aala maram	Latex, Fruit	Blister, Cough, Urinary compliant, Injuries, Wounds, Leprosy, Cooling effect,
36	<i>Gymnema sylvestre</i> (Retz.) R.Br. ex Schult.	<i>Asclepiadaceae</i>	Sirukurinja	Leaves, Whole plant	Anti-diabetic, Snake bite, Diarrhoea, Obesity, Asthma, Eye complaints, Inflammations, Diabetics,
37	<i>Jasminum auriculatum</i> Vahl.	<i>Oleaceae</i>	Kodimalli/ Mullai	Leaf oil	Head ache
38	<i>Jatropha curcas</i> L.	<i>Euphorbiaceae</i>	Kattiamanakku	Leaf oil	Leg pain, Mouth ulcer, Sore throat, Injuries,
39	<i>Jatropha gossypifolia</i> L.	<i>Euphorbiaceae</i>	Adalai	Leaf oil	Skin disease, Mouth ulcer, Internal worms, Dysentery, Injuries,
40	<i>Lantana camara</i> L.	<i>Verbenaceae</i>	Mukuthipoo	Leaves	Diaphoretic, Vomiting, Dysentery,
41	<i>Leucas aspera</i> (Willd.) Link.	<i>Lamiaceae</i>	Thumbai	Leaf juice, Whole plant	Cold, Cough, Jaundice, Skin diseases, Cough, Fever.
42	<i>Moringa concanensis</i> Nimmo.	<i>Moringaceae</i>	Kattumurungai	Gum	Stimulant, Chest pain, Stomachache,
43	<i>Ocimum americanum</i> L.	<i>Lamiaceae</i>	Elumichai Tulasi	Leaves , Root	Scabies
44	<i>Ocimum tenuiflorum</i> L.	<i>Lamiaceae</i>	Tulasi	Leaves , Root	Cold, Cough
45	<i>Opuntia dillenii</i> (Ker Gawl.) L.D. Banson.	<i>Cactaceae</i>	Sapathikalli	Root	Antidote
46	<i>Pavetta indica</i> L.	<i>Rubiaceae</i>	Pavattai	Leaves , Root	Diuretic
47	<i>Pergularia daemia</i> (Forssk.) Chiov.	<i>Asclepiadaceae</i>	Veliparuthi	Leaf juice	Rheumatism
48	<i>Perotis indica</i> (L.) Kuntze	<i>Poaceae</i>	Narival	Leaves , Root	Cold, Cough
49	<i>Phyllanthus amarus</i> Schumach. & Thonn.	<i>Euphorbiaceae</i>	Kilanelli	Leaf juice	Jaundice,
50	<i>Phyllanthus emblica</i> L.	<i>Euphorbiaceae</i>	Nelli	Fruit	Diuretic, Vitamin C, Hair tonic, Eye sight,
51	<i>Pongamia pinnata</i> (L.) Pierre.	<i>Fabaceae</i>	Pungu	Fruit	Skin Diseases, Joint pain,
52	<i>Rhynchosia capitata</i> (Roth.) DC.	<i>Fabaceae</i>		Leaves	Ailment
53	<i>Rivea hypocraterifomis</i> (Desr. ex Lam.) Choisy.	<i>Convolvulaceae</i>	Musuttai	Bark	Head ache
54	<i>Rostellularia japonica</i> (Thunb.) Ellis.	<i>Acanthaceae</i>	-	Leaves	Skin disease
55	<i>Sansevieria roxburghiana</i> Schult. & Schult.f.	<i>Agavaceae</i>	Mottamanji	Leaf juice	Antipyretic
56	<i>Sida acuta</i> Burm.f.	<i>Malvaceae</i>	Pazhampasi	Leaf juice	Cut wound
57	<i>Sida codifolia</i> L.	<i>Malvaceae</i>	Nilathaati	Leaf juice	Antiseptic
58	<i>Syzygium cumini</i> (L.) Skeels	<i>Myrtaceae</i>	Naval	Seed, Bark	Anti-diabetic
59	<i>Tamarindus indica</i> L.	<i>Caesalpiniaceae</i>	Puli	Fruit	Tooth ache, Refrigerant, Scorpion bite, anti-toxic,
60	<i>Toddalia asiatica</i> (L.) Lam.	<i>Rutaceae</i>	Milakavanai	Root, Bark	Anti-diabetic, Anti-malarial, Anti-pyretic, Indigestion, Cough, Rheumatism,
61	<i>Tribulus terrestris</i> L.	<i>Zygophyllaceae</i>	Nerungi	Seed	Stimulant, Fever, Kidney stone,
62	<i>Tridax procumbens</i> L.	<i>Asteraceae</i>	Vettukayapundu	Leaf juice	Cut & Wound, Injuries, Scorpion sting, Kidney stone, Toothache, Stomachache, Diabetic, Diarrhoea,
63	<i>Vernonia cinerea</i> (L.) Less.	<i>Asteraceae</i>	Senkzhuneer	Leaves	Cold, Skin diseases, Eye diseases, Kidney stones,
64	<i>Wrightia tinctoria</i> (Roxb.) R.Br.	<i>Apocynaceae</i>	Veppaalai	Seed, Root	Stimulant, Fever, Dysentery, Snake bites,
65	<i>Zizyphus mauritiana</i> Lam.	<i>Rhamnaceae</i>	Ilanthai	Fruit, Leaves	Scorpion sting, Menstrual disorders, Dysentery, Mouth ulcer, Swellings, Insect bites,
66	<i>Zizyphus oenopila</i> (L.) Mill.	<i>Rhamnaceae</i>	Chooraimullu	Fruit, Leaves	Mouth ache, Stomach disorders,
67	<i>Zizyphus xylopyrus</i> (Retz.) Willd.	<i>Rhamnaceae</i>	Kottai Elandai	Leaves	Purgative

constipation, leg pain, rheumatism, scabies, skin diseases, stomach ache, swellings, toothache, typhoid, ulcer, urinary complaints, etc., for primary health care of people of Masagoundanur. Only nine species (e.g. *Abrus precatorius* L., *Achyranthes aspera* L., *Cymbopogon citratus* (DC.) Stapf. *Azadirachta indica* Adr. Juss., *Calotropis gigantea* (L.) R. Br., *Tridax procumbens* L., *Gymnema sylvestre* (Retz.) R. Br. ex Schult., *Asparagus racemosus* Willd. and *Ficus benghalensis* L.) are used for more than seven diseases (Table 2). Among the families, *Euphorbiaceae*

Table 2. Multifold uses of medicinal plant species.

S. No.	Dominant medicinal plant species	Used for number of diseases
1	<i>Ficus benghalensis</i>	9
2	<i>Ficus racemosa</i>	9
3	<i>Gymnema sylvestre</i>	10
4	<i>Tridax procumbens</i>	11
5	<i>Calotropis gigantea</i>	11
6	<i>Azadirachta indica</i>	11
7	<i>Cymbopogon citratus</i>	12
8	<i>Acalypha fruticosa</i>	12
9	<i>Abrus precatorius</i>	15

has the maximum number of medicinal plants followed by *Fabaceae* and *Mimosaceae*. The plant parts used for different ailments are leaves, stems, bark, roots, flowers, fruits and seeds. The study indicates that the maximum plant parts used by people of Masagoundanur are leaves (53%), followed by reproductive parts (20%), resin, latex and oil (10%), shoot, stem, bark (9%), 4% of roots, tubers and whole plant respectively (Table 3). According to life form, the

Table 3. Percentage of medicinal plant parts used in various ailments.

S. No.	Parts used	Percentage
1	Leaves	53
2	Shoot, Stem, Bark	9
3	Root, Tuber	4
4	Flower, Fruit, Seed	20
5	Resin, Latex, Oil	10
6	Whole plant	4

herbs are the most common; maximum number of herbs (36%) recorded were with medicinal properties followed by trees (24%), shrubs (22%) and climbers (18%) respectively (Table 4). Documentation of such

Table 4. Life form-wise uses of various ailments.

S No.	Life forms	Percentage
1	Climbers	18
2	Herbs	36
3	Shrubs	22
4	Trees	24

promising plant materials forms an ethnobotanical approach. Mostly tree species are used as ethnomedicine in Terai, Himalayan Region (Bajpai et al. 2016). But in the present study area, herbs are widely used as ethnomedicine. It is suggested that critical evaluation of the biological activity of various folk drugs is required to integrate the traditional medicine with modern system of medicine.

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