



Studies on medicinal plant from tehsil Mangalwedha district Solapur, Maharashtra, India

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Abstract

The knowledge of traditional medicines is handed down from generation to generation over the centuries and it is usually used for the treatment of common diseases. The present survey was done in Mangalwedha tehsil in the year 2021-2022. Mangalwedha is a central zone/ transitional town in the Solapur district in state of Maharashtra its lies between 17° 30' 39.5496" N latitude and 75° 27' 7.0200" E longitude with 1140.9 Sq. Km area. During the survey, a total of 80 valuable medicinal plants species belonging to 36 families were identified. The information of use of these medicinal plants, collection relevant information is documented with their botanical names, family, common name in concern with use by the local people for different purposes. The area is rich in biodiversity. 80 species belonging to 39 families of flowering plants species have been used by various remedies. The information from the traditional healer's is rich and faithful source for traditional knowledge regarding medicinal plants.

Keywords: survey, medicinal plants, Mangalwedha, Solapur, Maharashtra, India

Introduction

The knowledge of traditional medicines is handed down from generation to generation over the centuries and it is usually used for the treatment of common diseases. The Indigenous communities of India were found to be using about 8,000 species for medicinal uses from about more than 10,000 wild species. According to (WHO) World Health Organization, about 80% of indigenous populations in developing countries uses the traditional medicines for primary treatment of common diseases. (Chandanshive *et al.*, 2022) ^[2].

In the world, India ranks 6th among 12 mega diversity countries which is a treasure for endemic medicinal plants. (Samudra and Shinde, 2021) ^[14]. Medicinal plants have an important role in the wealthy life of people. In India, Ethno-medicinal heritage is continued even today from several centuries through rural and remote areas. The ayurvedic medicines were documented in Rig-Veda, Atharva-Veda and Sushruta from ancient times. (Dhulganade *et al.*, 2021) ^[4].

Medicinal plants produce chemical substances, synthesized by plants which are also known as secondary metabolites. They can be used in the form of ayurvedic and allopathic medicines. The use of herbal remedies has been described in ancient texts such as the Vedas and the Bible. (Torane *et al.*, 2021) ^[16]. It is estimated that from algae and angiosperms 70,000 plant species have been used which are medicinally useful. The herbal drugs are also known as ayurvedic medicine while the synthetic drugs and chemical molecular drugs are known as allopathic medicines. (Tembhurne and Nanir, 2012) ^[15].

Medicinal plants are the essential natural resources. The preservation of traditional knowledge can be effectively documented by the pervasive participation of local herbal- healers. This survey is carried out so as to collect and document valuable information about diversity of medicinal plant species used by local people in and around Mangalwedha tehsil. The result of this survey can be beneficial for the improvement of traditional practitioners. In Mangalwedha tehsil, the survey of medicinal plants was practically ignored. Hence it was felt to undertaken the study.

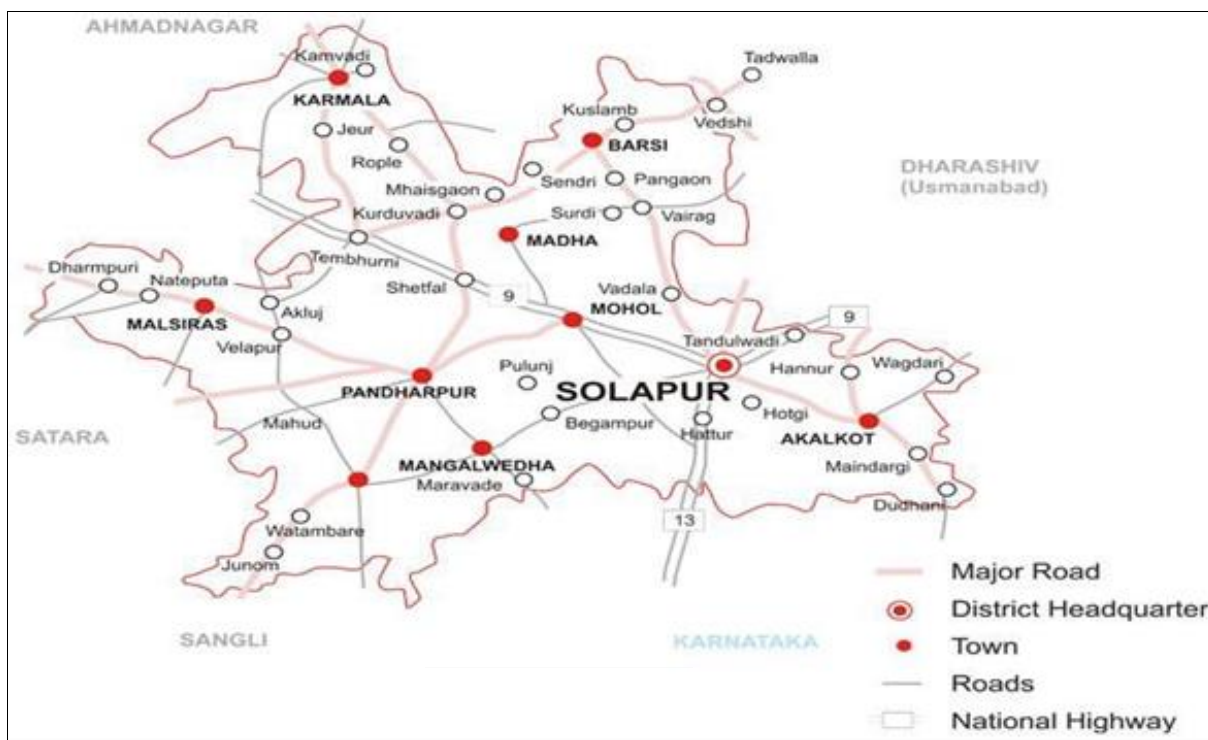
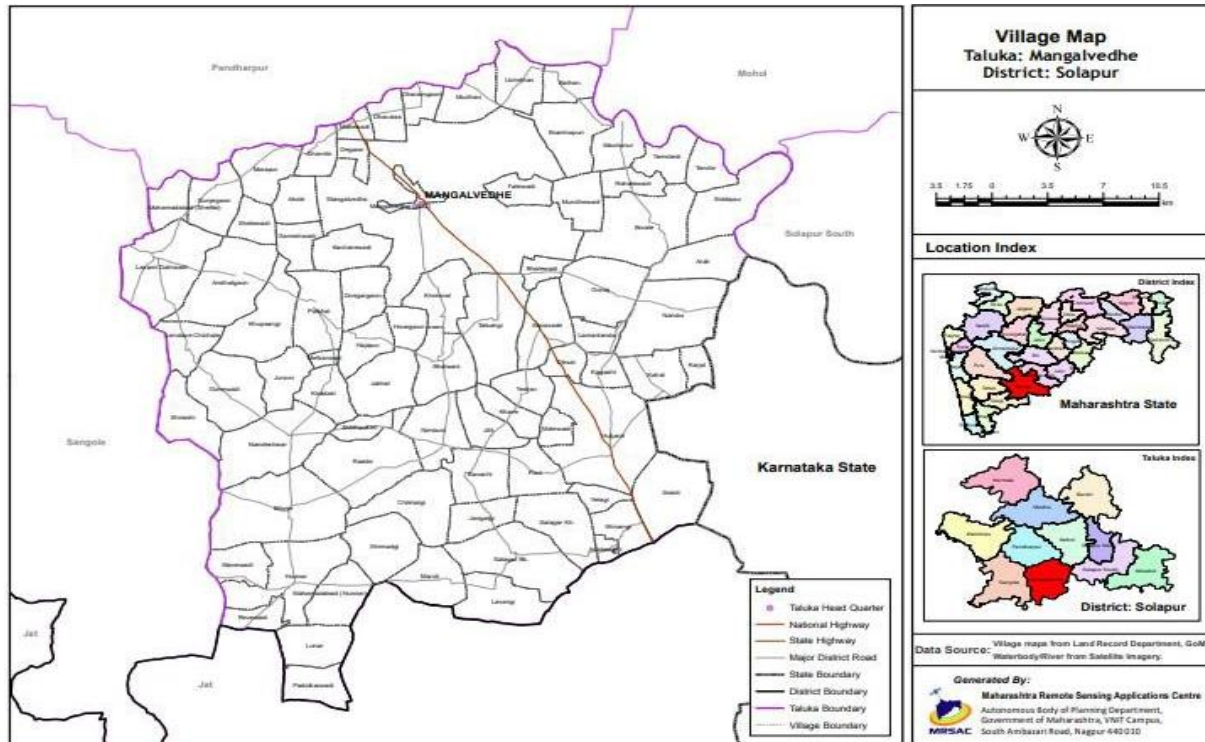



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Materials and Methods

Mangalwedha is a central zone transitional town in the Solapur district in state of Maharashtra its lies between 17° 30' 39.5496" N latitude and 75° 27' 7.0200" E longitude with 1140.9 Sq.Km area. Solapur district is bounded on the north by Ahmednagar and Osmanabad districts, on the east by Osmanabad and Gulbarga (Karnataka State) districts, on the south by Sangli and Bijapur (Karnataka State) and on the west by Satara and Pune districts.

The present investigation of medicinal plants is done in Mangalwedha tehsil of district Solapur, Maharashtra during time period 2021-2022. The field work was conducted in several villages around the Mangalwedha tehsil, of district Solapur is during 2021-22. The information was collected from local peoples, medicine man, vaidus and farmers. Through this visit the names and uses of medical plant were documented in the present paper. (Maruti Shahne and V.D. Devarkar).



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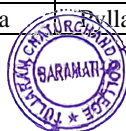
Study area

The traditional knowledge and uses about the plant for the treatment of the common diseases was collected from people especially traditional village medicines. (Harney N.V, 2013) [5]. The present study of the ethno-medicinal data collection was based on the Mangalwedha tehsil. This field study survey was carried out by arranging botanical excursions for documenting ethno-medicinal uses of local medicinal plants. Field survey is carried out at monthly interval during Jan 2021- Jan 2022 to document the ethno-medicinal plants with respect to uses medicinal plants of the area. The plants were collected and identified with the help of available literature and classical flora's such as Hooker (1872-1897), Cooke (1901- 1908), Yadav and Sardesai (2002), A.V. Karne. And also, from different regional flora's such as flora of Kolhapur district, flora of Baramati tehsil and flora of Solapur district. The collected material is pressed and deposited in the herbarium. The information from this survey is that, the information given by the local people about medicinal plants and their medicinal use, helped a lot while publishing this work. (Rajasamarsen K. Modi and Pratima Mathad, 2016) [13].

Results

Table 1

Sr. No	Botanical Name	Local Name	Family	Medicinal Uses
1	<i>Acacia arabica</i> Willd.	Babhul	Fabaceae	Dental use, Relieves pain.
2	<i>Acalypha indica</i> L	Kupi	Euphorbiaceae	Anti-cancer, Antidiabetic
3	<i>Achyranthes aspera</i> L	Aghada	Amaranthaceae	Boils, Cold, Asthma, Dysentery
4	<i>Adathoda vasica</i> Nees	Adulsa	Acanthaceae	Bronchitis, Tuberculosis
5	<i>Aegle marmalous</i> Correa	Bel	Rutaceae	Anti-inflammatory
6	<i>Agave americana</i> L	Ghaypat	Asparagaceae	Burns, Bruises, Skin irritation
7	<i>Allium cepa</i> L	Onion	Amaryllidaceae	Lower blood sugar level, Blood cholesterol, Diabetes
8	<i>Allium sativum</i> L	Garlic	Amaryllidaceae	High blood pressure, Tuberculosis.
9	<i>Aloe vera</i> (L.) Burm.f.	Korphad	Asphodelaceae	Heal burns, Clear acne
10	<i>Alstonia scholaris</i> (L.) R. Br	Saptarni	Apocynaceae	Treat diarrhea, Dysentery.
11	<i>Annona squamosal</i> L	Sitaphal	Annonaceae	Cancerous tumors, Abscesses.
12	<i>Annona reticulate</i> L	Ramphal	Annonaceae	Anthelmintic, Analgesic
13	<i>Argemone mexicana</i> L	Mexican prickly poppy	Papaveraceae	Rheumatism, Jaundice, Leprosy, Microbial infections, Malaria
14	<i>Asparagus racemosus</i> Willd	Shatavari	Asparagaceae	Boost immune system, Cough
15	<i>Azadirachta indica</i> A.Juss.	Neem	Meliaceae	Treat acne, Fungal infection
16	<i>Barleria prionitis</i> L	Koranti	Acanthaceae	Toothache, Glandular swellings
17	<i>Bauhinia variegata</i> L	Kanchan	Fabaceae	Diabetes, Ulcer
18	<i>Bauhinia racemosa</i> Lam.	Aapata	Fabaceae	Treatment of headache, Fever
19	<i>Bambusa bamboo</i> (L.) Voss	Bamboo	Poaceae	Anti-inflammatory, Astringent
20	<i>Opuntia elatior</i> Mill.	Nivdung Prickly Pear	Cactaceae	Antioxidant
21	<i>Caesalpinia pulcherrima</i> (L.) Sw.	Shankasur	Fabaceae	Minor injuries, Relieve fever
22	<i>Calotropis gigantea</i> (L.) Dryand.	Rui	Apocyanaceae	Digestive, Respiratory, Circulatory disorders
23	<i>Carica papaya</i> L	Papaya	Caricaceae	Intestinal parasite infections
24	<i>Senna auriculata</i> (L.) Roxb. (Synom : <i>Cassia auriculata</i> L)	Tarvad	Fabaceae	Constipation, Jaundice, Diabetes
25	<i>Cassia fistula</i> L	Bahava	Fabaceae	Inflammatory swellings
26	<i>Catharanthus roseus</i> (L.) G.Don (<i>Vinca rosea</i> L)	Sadafuli	Apocynaceae	Relieve muscle pain, Depression
27	<i>Chrysanthemum indicum</i> L	Shevanti	Asteraceae	Inflammation, Hypertension, and respiratory diseases
28	<i>Citrus limon</i> (L.) Osbeck	Lemon	Rutaceae	Scurvy, Fevers, Rheumatism
29	<i>Clitoria ternatea</i> L	Gokarn	Fabaceae	Antidepressant, Anticonvulsant
30	<i>Colocasia esculenta</i> (L.) Schott	Alu	Araceae	Neurological and Skin disorders
31	<i>Cymbopogon schoenanthus</i> Spreng.	Gavaticaha	Poaceae	Anti-spasmodic, Fever
32	<i>Cynodon dactylon</i> (L.) Pers	Harali	Poaceae	Laxative, Coolant, Expectorant
33	<i>Dalbergia sissoo</i> Roxb.	Sheesam	Fabaceae	Ulcers, Fever
34	<i>Datura stramonium</i> L	Dhattura	Solanaceae	Respiratory decongestion, Dental and Skin infections
35	<i>Delonix regia</i> (Boj. Ex Hook.) Raf.	Gulmohar	Fabaceae	Scorpion bite, Bronchitis
36	<i>Phyllanthus emblica</i> L.	Avala	Elaeagnaceae	Antipyretic, Analgesic



37	<i>Eucalyptus globulus</i> Labill.	Nilgiri	Myrtaceae	Arthritis and Skin ulcers
38	<i>Euphorbia hirta</i> L.	Dudhi	Euphorbiaceae	Jaundice, Gonorrhoea
39	<i>Ficus benghalensis</i> L.	Vad	Moraceae	Skin diseases
40	<i>Ficus glomerata</i> L	Umbar	Moraceae	Spongy gums, Leucorrhoea, Urinary problems, Asthma
41	<i>Ficus carica</i> L.	Anjir	Moraceae	Gastrointestinal diseases
42	<i>Ficus religiosa</i> (L) Forssk.	Pimpal	Moraceae	Epilepsy, Sexual disorders
43	<i>Hibiscus rosa-sinensis</i> L	Jaswand	Malvaceae	Hair loss, Gastric ulcers, Coughs
44	<i>Jasminum auriculatum</i> Vahl	Mogra	Oleaceae	Burning micturition, Wounds
45	<i>Kalanchoe pinnata</i> (Lam.) Pers. (<i>Bryophyllum pinnatum</i> (Lam.) Oken)	Panfuti	Crassulaceae	Kidney stones, Pulmonary infection, Rheumatoid arthritis
46	<i>Lantana camara</i> L	Tantani	Verbenaceae	Cancer, Leprosy, Chicken pox
47	<i>Lawsonia inermis</i> L	Henna tree	Lythraceae	Skin infections, Wounds, Eczema
48	<i>Limonia acidissima</i> L	Wood apple	Rutaceae	Diarrhea, High cough
49	<i>Mangifera indica</i> L	Mango	Anacardiaceae	Lower blood pressure, Regular pulse, Stabilize digestive system
50	<i>Mentha spicata</i> L	Mint	Lamiaceae	Irritable Bowel Syndrome
51	<i>Millingtonia hortensis</i> L.f.	Indian cork tree (buch)	Bignoniaceae	Asthma, Antipyretic, Sinusitis, Cholagogue and tonic
52	<i>Mimosa pudica</i> L	Lajalu	Fabaceae	Conjunctivitis, Hemorrhoids
53	<i>Momordica charantia</i> L	Karla	Cucurbitaceae	Liver disease, Ulcers
54	<i>Moringa oleifera</i> Lam	Shevga	Moringaceae	Arthritis, Constipation, Intestinal ulcers, Intestinal spasms
55	<i>Murraya koenigii</i> (L.) Sprengel	Curry leaves	Rutaceae	Bruises, Edema, Piles, Itching
56	<i>Nerium oleander</i> L	Kanher	Apocyanaceae	Heart conditions, Epilepsy, Painful menstrual periods, Leprosy
57	<i>Nyctanthes arbor-tristis</i> L	Parijatak	Oleaceae	Anti-helminthic, Anti-pyretic
58	<i>Ocimum tenuiflorum</i> L	Tulas	Lamiaceae	Cough, Asthma, Fever.
59	<i>Oxalis corniculata</i> L	Creeping woodsorrel	Oxalidaceae	Traumatic injuries, Sprains and Poisonous snake bites, Influenza
60	<i>Pithecellobium dulce</i> (Roxb.) Benth.	Vilayati chinch	Fabaceae	Gum ailments, Toothache
61	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Ashok	Annonaceae	Helminthiasis, Cardiac problems
62	<i>Pongamia pinnata</i> (L.) Pierre	Karanj	Fabaceae	Tumors, Piles, Skin diseases
63	<i>Psidium guajava</i> L	Peru	Myrtaceae	Gastroenteritis, Cough, oral ulcers
64	<i>Punica granatum</i> L	Pomegranate	Lythraceae	Digestive, Skin disorders, Arthritis
65	<i>Ricinus communis</i> L	Castor	Euphorbiaceae	Backache, Muscle aches, Bilharziasis, Expulsion of placenta, Gallbladder pain, Menstrual cramps, Insomnia
66	<i>Santalum album</i> L	Chandan	Santalaceae	Bronchitis, Fever, Sore mouth
67	<i>Senegalia catechu</i> (L.f.) P.J.H.Hurter & Mabb.	Khair	Fabaceae	Indigestion, Osteoarthritis
68	<i>Sesbania sesban</i> (L.) Merr	Shevari	Fabaceae	Gonorrhoea, Syphilis, Jaundice
69	<i>Spathodea campanulate</i> P.Beauv.	Pichkari	Bignoniaceae	Urethral inflammation, Liver complaints, as a poison antidote
70	<i>Syzygium cumini</i> (L.) Skeels	Jambhul	Myrtaceae	Bronchitis, Asthma, Biliousness
71	<i>Tamarandus indica</i> L	Chinch	Fabaceae	Diarrhea, Respiratory problems
72	<i>Tectona grandis</i> L.f.	Sag	Lamiaceae	Piles, Leucoderma, Bronchitis
73	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn	Arjun	Combretaceae	Asthma, Bile duct disorders
74	<i>Terminalia catappa</i> L	Badam	Combretaceae	Scabies, Leprosy wounds
75	<i>Tinospora cordifolia</i> (Thunb.) Miers	Gulvel	Menispermaceae	Bone fracture, Eye disorders
76	<i>Tridax procumbens</i> L	Dagadipala	Asteraceae	Wound healing, Anticoagulant
77	<i>Vitex negundo</i> L	Nirgudi	Lamiaceae	Muscle aches, Joint pains, Edema
78	<i>Withania somnifera</i> (L.) Dunal	Ashwagandha	Solanaceae	Asthma, Diabetes, Hypertension
79	<i>Zingiber officinale</i> Roscoe	Ginger	Zingiberaceae	Flatulence, Loss of appetite, Cough, Bronchitis, Nausea
80	<i>Ziziphus jujube</i> Mill	Bor	Rhamnaceae	Stimulate appetite, Enhance liver health, Ease sunburn



Discussion

Above Data of medicinal plants survey from the area under study revealed that 80 species belonging to 39 families of flowering plants are used as traditional medicines by the local people. Medicinal plants were collected along with the documentation of significant information regarding their scientific names, families, common names and used by the local people for different purposes. Ethnomedicinal plant survey during observed in different regions the traditional knowledge has become extinct in some communities. There was none to carry the knowledge to the next generation if not documented properly. The knowledge shall be lost without any means for retrieval. (Torane *et. al.*, 2021)^[16].

Plants photographs

Plants photographs**Fig 3****Conclusion**

The studied area is rich in traditional and herbal medicines with diversity of medicinal significance. Mangalwedha tehsil has a rich source of medicinal plants such as *Aloe vera*, *Adathoda vasica*, *Tinospora cordifolia*, *Oscimum sanctum*, *Mentha spicata* and *Calotropis procera* important medicinal plants used by Ayurvedic practitioners, Vaidas, farmers, medicine men and people of Mangalwedha Tehsil. It will give the awareness for use of medicinal plants for future study.

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