

Studies on Some Ethno Medicinal Plants In and Around Pusad Tahsil, Dist. Yavatmal

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ABSTRACT

Since the beginning of human civilization, medicinal and aromatic plants have been used by mankind for its therapeutic value. Nature has been a source of medicinal agents for thousands of year and one impressive number of modern drugs has been isolated from natural sources. Pusad is a city in the Yavatmal district located in vidarbha region of Maharashtra state of India. It is named after the pusriver its ancient name was "pushpawanti". In the area like Pusad Tahsil variety of medicinal plant and aromatic plants are found. Some medicinal and aromatic plants Studied *Curcuma longa* L. *Azadiracta indica* L. *Eucalyptus globus* L. *Tridax procumbance* L. *Withania somnifera* L. Dunal, *Ocimum sanctum* L. *Emblica officinalis* L. About 25 plants species belonging to about 21 families were studied. The medicinal plant has contributed a rich help to human beings, therefore there is a necessity to conserve the medicinal plants.

Key words- Ethno Medicinal, flowering plants, Pusad, medicinal herb Aromatic Plants, Ayurveda

I. INTRODUCTION

Botany is the branch of Biology which deals with the study of plants including their structure properties and biochemical processes. Also included are plants life that gives us oxygen, food supplies and many other necessities. Botany is branch of Biology which is study of living organism since plant life is so fundamental to human survival, people have been studying plant life so life from beginning of recorded time.

Plant taxonomy is the science that finds, identities, describes classification and names of plants. Thus making it one of the main branches of taxonomy is closely allied to plant systematic and there is no sharp boundary between the two. Taxonomy or systematic is the study description on variation among organism in order to come out with a classification systems plant growth habit, leaf arrangement and shape of flowers and fruit characteristics. Importance of plant taxonomy to arrange element or true of plant into a more systematic manner; so that they can be

better understood and could be used easily and more effectively relationship (Phylogenetic ancestry and origin of plants) to indicate the distribution and habitat of plants on the earth and their benefits. Ever since ancient time in search for secure for their diseases. The people looked for drugs in nature. The beginning of the medicine plant use was instinctive, as in case with an animal.

Botanists and plant explores have helped in chronicling for us the significance of biological diversity, yet we seldom thanks the green plants. When we go to bed each night for being the primary source of food and energy in the world. If the process of photosynthesis did not exist, we also would not exist on this planet Earth. Besides from plants value as sources of food, herbal medicines and drugs and many of the raw materials of industries, plants are important to many in many other ways.

Angiosperms are commonly called flowering plants. The flowering plants are believed involved from a now extinct group of gymnosperms. They appear in the fossil record in abundance during cretaceous period, about 120 million years ago. Angiosperms, like other vascular plants, contain chlorophylls and beta-carotene and have megaphylls, stomata and cuticle impervious to water. The modern forms have a more highly involved vascular system than is found in other groups. About 2,35,000 different species of angiosperms are known, which dominated the tropical and temperate regions of the world. Occupying well over 90 percent of Earth vegetative surface with only very minor exceptions. The angiosperms include not only the plants with conspicuous flowers but also most of the tall trees like Eucalyptus, glabulus, Cocos nucifera etc. The cactus and coconut; all the corn, Wheat, rice and other grains and grasses that are staples of the human diets and the basis of agricultural economy all over the world. These tremendously diverse plants are classified in two large sub-groups monocotyledons and dicotyledonous. Those plants having two cotyledons are known as monocotyledons when the plants having more than one cotyledon are known as dicotyledonous.

Morphology is basic fundamental branch of botany which is define as "The branch of botany which deals with the study of forms and features of different plants or organs i.e. roots, stems, leaves, flowers, seeds and fruits". External morphology includes study of external characters of plants or organs while internal morphology deals with study of internal structures of these organs, which is also called as anatomy or histology. When changes are occurred in environment, also changes occurrence in climate conditions the plant life in which diversity will be take place. On the basis of diversity in plant habits are occurred.

II. STUDY AREA

Pusad is a city in the Yavatmal district located in vidarbha region of Maharashtra state of India. It is named after the pusar river its ancient name was "pushpawanti"

In 1950 when the constitution of India come into effect, pusad as part of the central provinces and Berar was merged with the newly formed state of Madhya Pradesh. In 1956 under pressure from Marathi irredentists the Berar and Nagpur divisions were transferred to Bombay State. In 1960 the Bombay state was partitioned into Maharashtra and Gujrat. There is an going vidarbha region as well as a separate movement to demand upgrade of pusad's status from taluka to district.

Vasantrao Naik a Grassroots Banjara leader who was born in Gahuli village of pusad remains the longest serving chief minister of Maharashtra from 1963 to 1975.

Pusad is a Tahsil/Block (CD) in the Yavatmal District of Maharashtra. According to census 2011 information the sub – district code of pusad block is 04085.

Total area of pusad is 1,173 km² including 1,163 km² rural area and 9.51km² urban area. Pusad has population of 3,41,186 peoples. There 72,40 houses in the sub-district. There are about 183 villages in pusad block. Marathi is a local language in pusad. Also people speak Gormati or Banjari, Gondi, Hindi, Sindhi and Marwadi. The yield of the crop is dependent of the type of soil and proper cultivation. Three types are found i.e. black soil, sandy and red soil. The soil characterization was carried out with respect to particle size distribution bulk density, maximum water holding capacity available water capacity hydraulic conductivity exchange capacity yavatmal district is the region of western vidarbha the part of Maharashtra. In the district and hence in pusad the main crops are cotton Soyabean ,Jawari, Bajari and Toor ect.

The essential nutrients required for proper growth of plants is supplied. The essential nutrients required for proper growth of plant is supplied of soil. Pusad tahsil is rich in floral biodiversity with tremendous medicinal potential. This is due to certain changes in physical features and soil texture. Pusad is surround by dense forest area like Singad with many different species like Teak, Bomboo, Shisam, Ritha, Behada etc. The forest plays vital role in our life and economy of tribal rural people.

III. REVIEW OF LITERATURE

Since the beginning of human civilization, medicinal and aromatic plants have been used by mankind for its therapeutic value. Nature has been a source of medicinal agents for thousands of year and one impressive number of modern drug has been isolated from natural source. Many of this isolation were based on the uses of the agents in traditional medicine. The plant based traditional medicine system continues to play an essential role in health care with about 80% of the world's inhabitants relying mainly on traditional medicines for their primary healthcare. The history of medicine in Indian can be traced to the vedic period. The Rig veda perhaos the oldest repository of human knowledge written about 4500-1600 BC claims about 99 medicinal plants and Sama veda 100 plants. Antharnvana veda deals with 288 plants almost all having medicinal ingredients used to cure deadly disease.

The medicinal plants are the local heritage with global importance Humans are endowed with a rich wealth of medicinal plants. The various medicinal plants are found all over in India. The medicinal herb can be a good alternative for many disease and conditions growing interest in health and wellness, alternative medicine are becoming increasingly popular worldwide.

Dikshit 1999 there are about 8000 medicinal plants listed in different classical and modern text on medicinal plants. About 960 medicinal plants are in active use in all India. Around 2000 species are documented in Indian systems of medicine like Ayurveda.

Kosambi 1962. In the dense forest area, nature is so kind that for thousands of years it has been possible for the tribal to live in comparative ease by simply hunting and food gathering.

Jain and Sinha 1988. The tribal's and local communities have accurate knowledge of wild food resources due to their long association with nature.

Leman 2008. An estimated 4,00,000 tones of MAPs are traded annually and more than 70 percent of the plant species used in herbal medicines, cosmetic and other plant based products are harvested from the wild and the demand for them is globally increasing

Leswar and Widjata 1992. One of the critical problems of the developing countries like India and other countries are its geometrical increase in human population explosion will have negative impact on our economic, social policies and would simultaneously misbalance our socio economic infrastructure. Thus the

control of human fertility in sense of its limitation is the most important and urgent all biosocial and medical problems. So to control fertility drugs in the forms of hormones and other compounds have been developed. To avoid the inevitable advance effect of drugs prepared from chemical sources, indigenous plants are given preference which is also cheap, easily available and harmless.

Murugan et al 2000. Many plants have fertility regulating properties. Recently continuous efforts are ongoing to develop antifertility products from plants. Plants based contraceptive measures such as crude plant extracts with scientifically proven efficacy could be beneficial and appreciable to the poor population of country. Indeed extensive researches are being carried out to evaluate the putative abortifacient and other antifertility activities of different plants as well as traditionally used folk contraceptive all over the world.

John 1981: Antifertility agents prevent the fertility by interfering in various normal reproductive mechanisms in both male and females. The ideal contraceptive agents are one which possess 100% efficacy, reversibility of action, free from side effects and easy to use as medicine.

Overwall 2006: Plants primarily used for their medicinal or aromatic properties in pharmacy or perfumery are defined as medicinal and aromatic plants in the European union.

Kala 2004: Forests have played key roles in the lives of people living in both mountain and lowland areas by supplying fresh water and oxygen as well as providing a diversity of valuable forest products for food and medicine.

KIT 2004. The cosmetic industries are increasing using natural ingredients in their products and these natural ingredients include extracts of several medicinal plants.

Raven 1998. India and China are two of the largest countries in Asia which have the richest arrays of registered and relatively well known medicinal plants.

Kala 2006. The Indian subcontinent is well known for its diversity of forest products and the age-old health care traditions, there is an urgent need to establish these traditional values in both the national and international perspective realizing the ongoing developmental trends in traditional knowledge.

Mayers 1991 and Lacuna: Richman 2002 apart from health care, medicinal plants is mainly the alternate income generating source of underprivileged communities.

Singh et al 1979 and Olsen and Larsen 2003. The globalization of herbal medicine along with uncontrolled exploitative practice and lack of concerted conservation efforts. Now threaten the country's medicinal plants.

Singh and Hajr, 1996. The northern part of India possesses a great diversity of medicinal plants because of the royal Himalayan range. So far about 8000 species of angiosperms 44 species of gymnosperms and 600 species of pteridophytes have been reported in Indian Himalaya.

Sefanou et. Al, 2014: The herbaceous plants are an integral component of everyday life and culture in all over the world for centuries. These plants are used in pharmaceuticals, cosmetic, cooking and recent years in food technology as antioxidants. The Greek flora is rich in native herbaceous plants and climatic and soil conditions are prevailing with the possibility of their cultivation.

Friedman & Adler 2007. World health organization (WHO) estimated that 70-80% of the population living in Africa, India and other developing nations depend on traditional health care systems for primary valued by early humans.

IV. METHODS AND MATERIALS

In the area like Pusad Tahsil variety of medicinal plant and aromatic plants are found. When I was studying for my project. I came to know that the plants are divided into medicinal and aromatic plant. I found all three types of plants, some of them are easy to identify and classify. These plants' pictures were collected from various places from college premises, college botanical garden, forest department, nursery, street, Bhavani temple Public Park and corners of Pusad Tahsil of Vidarbha in Maharashtra. The Vidarbha has a great wealth of medicinal plants and traditional medicinal knowledge. Medicinal plants have played an important role of primary health care system among the local people of Vidarbha region.

The data was collected through secondary sources mainly from the website of Government of Maharashtra state medicine plant and forest department of Maharashtra. References from research paper in Pusad Tahsil of Yavatmal District.

The plants were studied from August 2019 to March 2020. The photographs which are captured by the digital camera, phones. The habit flower, leaf, fruit stem. Inflorescence of photograph is captured. The plants were collected season wise and the collection of photograph was taken within the plants list arranged according to Bentham and Hooker system of classification. After using various books (references), research paper, journals collected large record of medicinal and aromatic plant in Pusad tahsil. The record use of medicinal and aromatic plant (vernacular name, oilment treated part used. Modes of preparation and ingredients) the traditional knowledge about the plants for curing disease was collected from traditional healers and elderly men who participate in herbal therapy.

I also made contacts with my professors of my college, they guided me for identifying and characterizing of different species. They also suggested me many sources to get information for species. During my project many villagers also gave me important significant information about medicinal and aromatic plants.

The data was collected through flora of Amravati district with special reference to the distribution of tree species by M.A. flora of Maharashtra state Dicotyledon. Volume- I (BSI) by N.P. Singh and S. Karthikeyan, flora of Maharashtra state Dicotyledon Volume-II (BSI) by N.P. Singh, P. V. Lakshminarsimha.

V. OBSERVATIONS

List of Medicinal and Aromatic Plants Studied

Sr. No.	Botanical Name	Common Name	Family	Herbarium no.
1	<i>Curcuma longa</i> L.	Turmeric	Zingiberaceae	ASC 12
2	<i>Hibiscus rosasines</i> L.	Chinarose (E), Jaswand, Gudhal	Malvaceae	ASC18
3	<i>Citrus lemon</i> Burm. F.	Lemon, Nimbu	Rutaceae	ASC42
4	<i>Azadiracta indica</i> L.	Neem, Margo, Nimbh	Meliaceae	ASC45
5	<i>Acacia nilotica</i> L.	Babhul, Babul	Fabaceae	ASC29
6	<i>Rosa indica</i> L.	Rose, Gulab	Rosaceae	ASC33
7	<i>Eucalyptus globus</i> L.	Nilgiri	Myrtaceae	ASC41
8	<i>Passiflora indica</i> L.	Krushnakamal	Passifloraceae	ASC22
9	<i>Coriandrum sativum</i> L.	Coriander, Dhaniya, Sambhar	Apiaceae	ASC05

10	<i>Anthocephaluschinesis</i> (Lamk)A.Ri ch	Kadamb,Burflower	Rubiaceae	ASC08
11	<i>TridaxProcumbance</i> L.	Tridax daisy, Gharma,Kambarodi	Asteraceae	ASC10
12	<i>Tagetspatula</i> L.	AfrivanMarigold,Genda,Zendu	Asteraceae	ASC31
13	<i>Catharanthusreseus</i> Don.	Periwinkle,Sadabahaar,Sadaphuli	Apocynaceae	ASC29
14	<i>Plumerinrubra</i> L.	Chafa	Apocynaceae	ASC52
15	<i>WithaniaSomnifera</i> L.Dunal	Ashwagandha	Solanaceae	ASC64
16	<i>Adathodavasica</i> L.	Adosa,Adulsa	Acanthaceae	ASC49
17	<i>Lantnacamera</i> L.	Haldikunku	Verbenaceae	ASC47
18	<i>Ocimumsanctum</i> L.	Tulsi,Tulas,Holybasil	Lamiaceae	ASC38
19	<i>Menthaarvensis</i> L.	Punclina,Mint	Lamiaceae	ASC63
20	<i>Boerhaviadiffusa</i> L.	Survani,Punarnav	Nyctaginaceae	ASC59
21	<i>Emblicaofficinalis</i> L.	Goosebeery,Amla,Awala	Euphoebiaceae	ASC44
22	<i>Polyanthusteberosa</i>	Nishigandha	Amaryllidaceae	ASC03
23	<i>Aloevera</i> L.	Aloevera,Korfal,Gheekumari	Liliaceae	ASC08
24	<i>Asparagusracemosus</i> Wild	Shatavari,Shatamuli	Liliaceae	ASC11
25	<i>Cocosnucifera</i> L.	Narial,Naral,Coconut	Arecaceae	ASC67
26	<i>Terminaliabellirica</i> (Gaerth) Roxb	Behda,Bahera	Combretaceae	ASC56

VI. RESULT

A total number about 25 plants species belonging to about 21 families were studied in project work. The plants were of four different habits like herb, shrub, tree and climber. The plants part which was used for study work is like stem, leaf, flowers. Plants distributed in about families including varied numbers of their members. Maximum number included in the family Apocynaceae, Malvaceae, Asteraceae, Liliaceae, Lamiaceae where rest of the families includes single species in the project. From this study work it is observed that the medicinal plants are used for various diseases right from common cold to the dreaded diseases like variety of cancers. The varieties now grown commercially for the health and moisturizing benefit found inside its leaves. The leaves of the *Ocimum sanctum* belongs to family Lamiaceae have been traditionally used for cough, cold, asthma and bronchitis etc. There are several many drugs medicinal plants all over the Pusad tahsil. Most of the plants are known as utilized by doctor and ayurvedic aids. The medicinal value of drug is due to presence of some chemical substance in the plant tissue. The most important substance like alkaloids, carbon compound, hydrogen, essential oils, resin, tannin, gum etc. The present communication provide a total number of species of medicinal plants belong to different family which have been if medicinally important occurring in Pusad tahsil. The medicinal plants listed in Pusad tahsil recorded that number of plants commonly used generally practice. Now there conservation is necessary for future generation lastly medicinal plant great values in human life. On this project I have discussed medicinal plants. There are large number of medicinal plant are grown on Earth but here only 25 plants discussed. Some

plants are medicinal and some plants are aromatic which show medicinal properties. The aromatic plants are special kind of used for their aroma and flavours many of them are also for medicinal purposes.

VII. CONCLUSION

From this study it has concluded that through various harmful diseases are not curable but we can manage and prevent, it by using medicinal plants. The plants which we have mentioned are helpful in a treatment and management of harmful diseases. The medicinal plants have contributed a rich help to human beings. Plant extracts and their bioactive ingredients present in them are responsible for anticancer activities have to be screened for their valuable information. The *Azadirachta indica* show anticancer property. The Oleoic acid isolated from *Lantana camara* was screened for anticancer activity against tumour.

Medicinal herb can be a good alternative for many diseases and conditions. They are low cost and tend to have fewer side effects however herbal medicine can still have unwanted health effects special when used in a combination with other drugs. Therefore medicinal and aromatic plants are very useful and economical.

People are aware about medicinal plants and they know their uses. According to them medicinal plants are best and medicinal plants show fast relieving properties. Even after knowing about the benefits of the medicinal plants they still prefer antibiotics as they said "who will waste time in collecting and preparing these medicinal plants for medicinal uses". Our ancestors dependent on medicinal herbs from brushing to any diseases which they were suffering from and they believed that medicinal herbs could cure anything. The plants have provided human beings with many of their essential needs including lifesaving pharmaceutical drugs. Recently the World Health Organization estimated that 80% of people worldwide rely on herbal medicines. The demand for medicinal plants is said to be increasing year after year. This necessitates the conservation of biodiversity.

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