Plant Archives Vol. 20, Special Issue (AIAAS-2020), 2020 pp. 271-275 *ISSN 0972- 5210*

ETHNOMEDICINAL USES OF SOME WILD PLANT SPECIES FOUND FROM KANZETA FOREST, DAHOD, GUJARAT, INDIA

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Abstract

Dahod district is located in Gujarat state in Western India, It's total area is 3,642 Km^2, with two parts of territory, Baria (Devgadh) and Sanjeli. Devgadhbaria is 45 km away from the Dahod. Devgadhbaria is famous for it's beauty of nature specially Ratanmahal and Kanzeta forest range. It's longitudinal angel is $22^0$45'13" N and $73^0$57'5". Present research work is deal with ethnomedicinal uses of some wild plant species found from Kanzeta forest. This Kanzeta forest is 30 km away from Devgadhbaria. This forest is cover about 11 villages. It is deciduous type of the forest covers about 11 villages. In present, we have reported 31 plants, which are used as a ehnmomedicinally, but i have taken 13 plant species like *Annona squamosa* L., *Abrus precatorius* L., *Millettia peguensis* Ali., *Cassia tora* L. Roxb., *Syzygium cumini* L., *Eclipta erecta* L., *Holerhena antidysentrica* (L.) R Br., *Calotropis procera (*Aiton) W.T. Aiton, *Ocimum tenuiflorum* L., *Emblica officinalis* L., *Jatropha curcas* L., *Ficus benghanensis* L., *Typha angustata* L.; which are belonging to Annonaceae, Fabaceae, Caesalpinaceae, Myrtaceae, Asteraceae, Apocynaceae, Euphorbiaceae, Typhaceae, Moraceae, Exclepidaceae, Laminaceae families. Main tribes inhabiting forest range are Machhaar, Sangoda, Baria, Ninama, Vasaiya, Vasava, Parmar and Chauhan. The present paper deals with description of medicinal plant species and detail ethnomedicinal information for curing several diseases. Some of the plants are very useful to cure major diseases like cancer, diabitis, TB and many more. Extensive field trips were carried out in the sacred grove at monthly intervals. Specimens of flowering plants were collected and identified with the aid of different regional floras.

***Key words*:** Ethnomedicinal plants, Kanzeta forest range, Deciduous Forest and Gujarat.

Introduction

Dahod district is located in Gujarat state in western India, it's total area is 3,642 km^2. It's territory divided into two parts namely Baria (Devgadh) and Sanjeli. Devgadhbaria is 45 km away from the Dahod. Devgadhbaria is famous for it's beauty of nature specially Ratanmahal and Kanzeta forest range. Present research work is deal with research of ethno medicinal plants in Kanzeta forest. This Kanzeta forest is 30 km away from Devgadhbaria and 70km away from center of dahod district. It's longitudinal is $22^0$45'13" N and $73^0$57'5" E. This forest is span 35 acre of area and 25km^2. This forest covers about 11 villages. The present paper deals with description of medicinal plant species and detail ethno medicinal information for curing several diseases. Some of the plants are very useful to cure major diseases like cancer, diabetes, TB and many more . It is deciduous type of the forest which include dry teak forest and dry bamboo breaks on the periphery. There are 550 plant species are growing, among them 120 species are trees, 40 species are shrubs, 238 species are herbs, 48 species of grasses, 87 species of climbers 2 species of partial parasite and 9 species of orchid. In present research paper, I have taken 13 Ethnomedicinal Plant species, which are related with Annonaceae, Fabaceae, Caesalpiniaceae, Myrtaceae, Asteraceae/ Compositae, Apocynaceae, Asclepidaceae, Lamiaceae/ Labitae, Euphorbiaceae, Moraceae and Typhaceae. Ayurveda is expanding, with the integration of herbs and minerals discovered in other countries and the strengthening of academic knowledge networks worldwide (Puri, 2003). Nearly 80% of world population is depending upon traditional system of India (Sandhya *et al*., 2006). Antioxidants are compounds that can delay or inhibit the oxidation of lipids or other molecules by inhibiting the initiation or propagation of oxidizing chain reactions (Karou *et al*., 2005). Research has been geared towards finding scientific evidence for the claims as to the therapeutic efficacy of African herbs by traditional healers. Most of the published and unpublished written ethno medicinal data with valuable and complementary information are scattered in forest area (Lawal *et al*., 2010). Ethnic groups and rural people of this area used to treat their alimentary by using fresh plants materials (Patel and Patel, 2010). The Himalaya have a great wealth of medicinal plants and traditional medicinal knowledge. Himachal Pradesh is one of the pioneer Himalayan states is rich in repository of medicinal flora

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(Boktapa and Sharma, 2010). The tribal people of the Jhalod used different plant materials in various diseases like fever, cough, headache, hepatitis, constipation, scorpion bite, muscular pain, asthma, snake bite total 30 ethnomedicinal plants belonging 29 Genera and 21 Families (Maru and Patel, 2012). Tribal people of Ambaji forest range directly depend upon forest resources for their daily needs. The aim of ethnobotany is to study how and why people use and conceptualize plants in their local environments (Patel, 2015). Ethnobotany is the study of how people of a particular culture and region make of uses of indigenous plants. Ethnobotany explore how plants are used for such things as food, shelter, medicine, clothing, hunting and religious ceremonies. (Patel and Patel, 2015). Ambaji range forest is representing 434 angiosperm species (20% of the Gujarat flora) belonging to 85 families (Patel, 2015). The tribal women of the Jhalod used different plant materials in gynec diseases like lucceouria, ovary disease. Urine infection, lactation, maturation-problem sexual-potential-problem and infertility (Maru *et al*., 2016). Diabetes is the greatest public health problem and is considered as the silent epidemic of the 21st century. In Iran, there are approximately 1.5 million diabetic patients. Before the discovery of insulin, medicinal plants were widely used for the treatment of diabetes in Iran (Ahmadi *et al*., 2016). Human beings have been using plants for long time and research workers are constantly bringing to light additional information on the relationship between plants and man. Some plants used for the treatment of earache from forest areas of Jhalodtaluka, Dahod district, Gujarat, India (Maru *et al*., 2017).

Materials and Method

To gain ethnomedicinal uses by tribals; I have contacted local medicine men Ramsingbhai and Premsingbhai (Tribals) and they treat diseases of local people of forest. Collected the information regarding the medicinal uses of certain plant species were indentify and guided by Dr. R.S. Patel. Different field trips were arranged frequently and collect the data regarding different plant species. I have visited certain places and documented through photographs. All the plant specimens are identified with the help of flora of Gujarat and another valuable literature.

Result and Discussion

The present research work is based on Ethnomedicinal plants used to cure different diseases. These plant species are used medicinally and given to tribal society by Premsingbhai Rathod and RamsingbhaiBariya. In these 13 plant species i have taken it's botanical name, common name, family and it's ethno-medicinal uses.

Tribal people are not so good in financial condition. So they can't afford alopethic or Homeopathic medicine. That's why they are totally depending upone medicinal plants. By these wild plant species the cured major and minor diseases. They also use these plants as home utilitiues, in agriculture and as cosmetics. According to study of R.N. Maru, among 30 plants 30% of plants are useful to cure teeth diseases, stomach pain, fever, diabetes, constipetion, cough and asthama and according to my research work among 13 plants 62% of plants are use to cure asthama, diabetes, teeth diseases, cough and constipetion; 53% of another diseases like cancer, wound, TB, skin diseases etc are cured.

Main benefit of this research work is that these medicines having not side effects and anyone can undergone the treatment by medicinal plants. In long or in short term any diseases can be cured by it. But major throwback of this research is patient should have patience and trust on vaidhya and take regular amount of dose. If amount of dose will high and low, it will affect body negatively.

Ethnomedicinal Uses of Plants

1. **Botanical Name:** *Annona squamosa* L.

   Common Name: Sitafal

   Family: Annonaceae

   Ethnomedicinal uses: Fresh fruits are used in initial stage of cancer. Fruit is also useful to remove heat of the body.

2. **Botanical Name:** *Abrus precatorius* L.

   Common Name: Sarmoi

   Family: Fabaceae

   Ethnomedicinal uses: Whole plant is pounded and taken to remove constipation and heat of the body.

3. **Botanical Name:** *Millettia peguensis* Ali.

   Common Name: Kanaji

   Family: Fabaceae

   Ethnomedicinal uses: Stem bark or seeds are pounded to cure skin diseases, allergy, skin eczema and ringworm. Stem is also used as a toothbrush.

4. **Botanical Name:** *Cassia tora* L. Roxb.

   Common Name: Puvadiya

   Family: Caesalpinaceae

   Ethnomedicinal uses: Seeds are pounded and smear on skin diseases. Seeds of *Cassia tora*, leaves of *Azadirecta indica* L. Leaves of *Calotropis procera* are collected and mixture is made and applied on skin to cure skin diseases. Whole plant is used to cure joint pain.

5. **Botanical Name:** *Syzygium cumini* L.

   Common Name: Deshi Jambu

   Family: Myrtaceae

   Ethnomedicinal uses: One spoon of seed powder is taken orally at early morning with hungry stomach to

cure dibetes. Mixture of seed powder of *Syzygium cumini, Tinospora cordifolia*, *Adhatodavasica* and *Magifera indica* seeds powder are mixed and taken orally with water to cure diabetes.

6. **Botanical Name:** *Eclipta erecta* L.

   Common Name: Mahabrungraj

   Family: Asteraceae/ Compositae

   Ethnomedicinal uses: Whole plant is dried and make powder, one teaspoonful powder is taken to cure stomach pain and heat of the body. Whole plant is useful to increase hair growth.

7. **Botanical Name:** *Holerhena antidysentrica* (L.) R Br.

   Common Name: Kadu

   Family: Apocynaceae

   Ethnomedicinal uses: Fresh stem bark is used for the treatment of initial cancer. Juice of stem bark is taken orally to remove stone.

8. **Botanical Name:** *Calotropis procera* (Aiton) W.T. Aiton

   Common Name: Akado

   Family: Asclepidaceae

   Ethnomedicinal uses: Dried flowers are pounded and powder is made. One teaspoon ful of powder is mixed with honey and taken twice a day to cure asthma and respiratory diseases. Fresh leaves are taken, ventral part of the leaves are bounded on heal of foot to cure diabetes. 500ml milk of cow is boiled then stir with 1ft of stem and sweet mud is made. Then this sweet mud is eaten orally twice or thrice a day to cure malaria and any kind of fever.

9. **Botanical Name:** *Ocimum tenuiflorum* L.

   Common Name: Van Tulasi

   Family: Lamiaceae

   Ethnomedicinal uses: Fresh leaves of *Ocimum tenuliflorum* are eaten to cure cold, TB and cough. Fresh juice of leaves given orally to children to cure cold and cough.

10. **Botanical Name:** *Emblica officinalis* L.

    Common Name: Ambala

    Family: Euphorbiaceae

    Ethnomedicinal uses: Fresh fruits are eaten to improve digestive system and it also increase calcium level in body.

11. **Botanical Name:** *Jatropha curcas* L.

    Common Name: Ratanjyot

    Family: Euphorbiaceae

    Ethnomedicinal uses: Stem is chewed to cure teeth ache. Mixture of stem latex and pieces of leaves are smeared on teeth to cure pain.

12. **Botanical Name:** *Ficus benghanensis* L.

    Common Name: Vad

    Family: Moraceae

    Ethnomedicinal uses: Arial roots of are used to free from smoking and drink addiction. Pieces of arial root are kept in one glass of water and when fermentation is done, tea is made and given to adductor for 15 days to free from the addiction. Latex of is used to cure heal cracks. Few drops of latex are mixed with ***"patasha"*** and taken orally to stop vomiting.

13. **Botanical Name:** *Typha angustata* L.

    Common Name: GhaBajri

    Family: Typhaceae

    Ethnomedicinal uses: Roots and leaves are pounded and poultice is made, it is applied on abscess and wound.

Figure 1 shows 13 images of ethnomedicinal Plant, Figure 2 shows ratio of plant forms like herb, shrub, tree, climber etc., Figure 3 shows different major and minor diseases cured by ethno-medicinal plants. Here 13 plant species cure 22 diseases. Figure 4 shows Ratio of different plants related with different 11 families.

Conclusion

This research work is very useful to our society, who are not know the uses of some plant as a medicine. By this research work our society will aware and turn their mind in ayurveda treatment. Right now our society want to use and trust on ayurvedic medicine and some diseases are cured with the help of local plant species because they believe that there is no side effect of by using the plant as a medicine. They will also aware about the uses and curing of plant species. So in this way we can save some important and primitive plant species and save our biodiversity.

Acknowledgement

I am thankful to Ramsingbhai and Premsingbhai to helpful to giving me knowledge and ethno-medicinal data from kanzeta forest. These both vaidh are came with us at forest and helpful for us to giving us such a precious research data. I am very thankful to Dr. R.S. Patel to giving me a support and guidance for this research work and specially thanks to our biology department. I am also thankful to the forest department to giving me a permission for visiting this forest.

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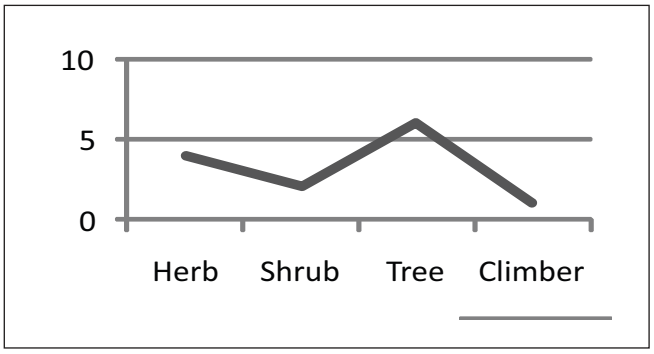

Figure 2: Graph of Plant Form

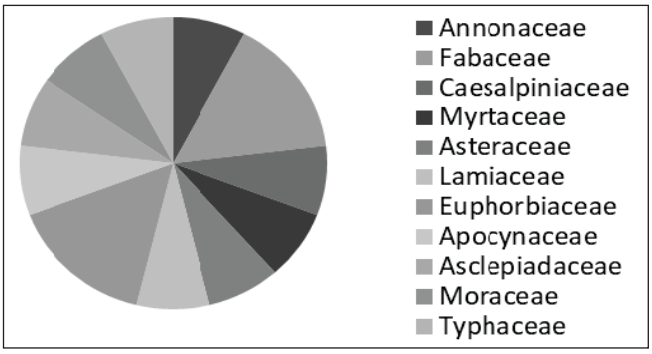

Figure 4: Plants related with different families

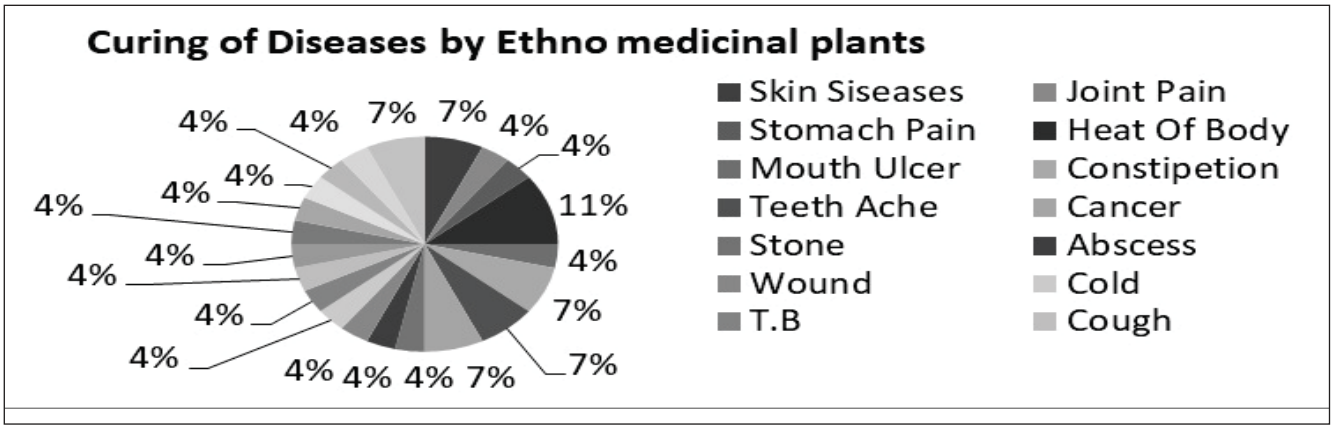

Figure 3: Different diseases curing by Ethnomedicinal plant species

Annona squamosa L.

Abrus precatorius L.

Millettia peguensis Ali.

Cassia tora L. Roxb.

Syzygium cumini L.

Eclipta erecta L.

Holerhena antidysentrica (L.) R Br.

Calotropis procera (Aiton) W.T. Aiton

Ocimum tenuiflorum L.

Butea monosperma L.

Pterocarpus marsupium Roxb.

Cassia fistula L.

Butea monosperma L.

Figure 1: Images of 13 Ethnomedicinal plants