



SOME ETHNOMEDICINAL PLANT SPECIES OF PADMALAYA FOREST REGION OF EAST KHANDESH JALGAON DISTRICT, MAHARASHTRA, INDIA

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Abstract

The work deals with 27 medicinal plant species used traditionally by *Bhil & Bharadi* tribes of Padmalaya region of Jalgaon district of Maharashtra (India) for the treatment of various ailments. Some medicinal plants with unexplored ethnomedicinal uses of plants have been reported.

Key words : Ethnomedicine, *Bhil & Bharadi*, Padmalaya.

Introduction

India is one of the 17 mega diverse countries in the world with four biodiversity hotspots. The country consists of ca. 19294 flowering plants (Karthikeyan, 2000) out of which 2560 species have been estimated as trees (Rao, 1994).

Once upon a time Padmalaya forest was considered to be the richest vegetation in Jalgaon district. It is situated 20.869345°N & 75.392532°E.

In Satpuda east & west of Satmala Forest ranges, Padmalaya is famous religious ancient place having historical importance that, during Mahabharata, the 'Pandvas' made their settlement in this area because of rich forest vegetation for their protection. Today the forest has been destroyed almost, except few trees are in remainance. However there are wild trees needs to be protected from the local pressure, habitat loss & climatic changes.

Now a day's Padmalaya forest occupies 6826.59 hectors of Reserve Forest as per the report of Forest Dept., Govt. of Maharashtra. As far as Padmalaya forest concern there is neither report nor a literature on Biodiversity of Tree species is available. Therefore, it has been thought worthwhile to carry out the intensive studies on Tree plants species of the area.

Forests are the sources of invaluable medicinal plant wealth since time immemorial. Tribal men's realize the preventive and curative properties of plants and started healthcare system. India's traditional systems of medicine are the part of cultures that attracted the attention of peoples today. Medicinal plants in meetings family's primary healthcare and nutritional needs are traditional which is found popular in all cultures (Anonymous, 1994; Ayensu, 1981). These medicinal plants provide alternative green health and number of ecofriendly domestic and industrial usage Billore, Joseph and Dave (1998), Bodding (1925), Rajasab (2004). These remedies based on herbal medicines often have negligible side effects and due to relatively unaffordable cost of synthetic drugs, traditional medicines now become an affordable choice for the poor people in these areas. Although, considerable work has been done on floristic and ethnobotany of various regions and tribes of Maharashtra State (Tewary, 1980; Borins, Mel 1976; Duke, 1996; World Health Organization, 2002; Khare, 2004; Bagul, Yadav and Garud, 2006; Bagul and Yadav, 2003a & b, 2007; Prakash, Raja, Anderson, Williams, Regini 2008; Semwal, Saradhi, Kala & Sajwan 2010; Rajith, Ambily, Vipin Mohan Dan, Sree Devi, George & Pushpangadan, 2012; Bagul & Patil, 2011; Bagul, 2011, 2013).

Pawara and Bhills are the tribes predominantly located in the east west Khandesh of Maharashtra.

Burhanpur district of Madhya Pradesh, Belgaum district of Karnataka, and Surat district of Gujarat make the boundaries. River Tapti, Girna and Purna flows along with the middle of the district covers major forest area in which Pawara & Barela primarily depends upon medicinal plants of their surrounding area for the treatment of their ailments. Living in the forest these tribal communities acquired knowledge about these wild flora and fauna. After years of practice, observations and analysis by trial and error methods the innovative members of these communities have selected useful and harmful members of the surrounding forest vegetation. The study aims to prepare an inventory of medicinal plants species used by these tribal peoples to cure various diseases.

Methodology

Extensive and intensive ethnobotanical surveys were conducted in different region localities of Padmalaya region from June 2017- March 2018. The interview method was adopted for gathering knowledge of tribal's, Local medicinemens (Bhagats, Witch doctors and maharaj) and mouth to mouth discussion about therapeutic uses of local plants in the treatment of various diseases were noted carefully. A simple questionnaire was prepared to gather data regarding the medicinal information purpose. Voucher specimens were collected from the field. The collected specimens were identified correctly by using Flora and other pertinent literature (Karnik & Basu, 1935; Karnik, 1935; Karnik, 1961; Mahabale & Karnik, 1959; Cook, 1958; Hooker, 1872-1897; Singh, Kartikey and Laksh, 2001). The herbarium prepared by standard method (Jain and Rao, 1977) has been deposited in the department of botany, Arts, Science and com, college, Chopda. [Simple Questionnaire (Jain & Bose, 1993)] used for data collection is like occurrence of plant, respondents age, sex & education, community status (medicine man, nurse, doctor), forest type where plant was found & its availability in nature (common, frequent, rare, occasional etc), plant part used to treat part used, mode of administration (oral, external) & dosages given with & how many times & days the drugs prepared roughly given (glassful, teaspoonful, paste).

Observations

Herbal Remedies for Fevers and Pneumonia

1. *Actinopteris radiata* (Sw.) Link. : Pteridophyte

Distribution: In Sparse forest rocks of Bhimkund

Uses : Juice extracted from whole plant is massaged on the body to control the fevers.

Exsiccata : RMB 35, Padmalaya.

2. *Barleria gibsonii* Dalz. : Acanthaceae

Distribution: In Sparse forest of Padmalaya East

Uses : Ash of the whole plant is prescribed with warm water daily one teaspoonful three times for 5 days.

Exsiccata : RMB 45, Padmalaya.

3. *Cadaba indica* (L.) Druce:

Distribution : In dense forest of Padmalaya Nagduli side.

Uses : Decoction of the whole plant is useful to control fevers and chest pain.

Exsiccata : RMB 15, Padmalaya.

4. *Cassia fistula* L.:

Distribution : In forest of Padmalaya, West

Uses : Fruit pulp is given with mother's milk to reduce temperature of the body.

Exsiccata : RMB 105, Padmalaya.

5. *Cleome viscosa* L.

Distribution: In Sparse forest of Padmalaya

Uses : Decoction of whole plant is used in controlling of fevers.

Exsiccata : RMB 38, Padmalaya.

6. *Euphorbia hirta* L.

Distribution: In Sparse forest of Padmalaya

Uses : Juice of the whole plant is considered very useful in the treatment of pneumonia.

Exsiccata : RMB 48, Padmalaya.

7. *Hibiscus surttensis* L.

Distribution : In Sparse forest of Padmalaya

Uses : Root decoction is given in the fevers.

Exsiccata : RMB,27, Padmalaya.

8. *Oxalis corniculata* L.

Distribution : In Sparse forest of Padmalaya

Uses : Leaf ash is applied on body to relieve from fevers.

Exsiccata : RMB 20, Padmalaya.

9. *Solanum nigrum* L.

Distribution : In Sparse forest of Padmalaya

Uses : Decoction of whole plant is given twice for 7 days in fevers and headache.

Exsiccata : RMB 65, Padmalaya.

10. *Tinospora cordifolia* (Willd.) Miers.

Distribution: In Sparse forest of Padmalaya

Uses : Distribution -In Sparse forest of Padmalaya, RMB 40, Padm.

Decoction of the whole plant is very useful in fevers. A mixture of decoction of Tulas' leaf, Gulvel and 'Kalimiri' fruit powder is very useful.

Exsiccata : RMB 70, Padmalaya.

11. *Triumpheta malabarica* Koenex. Rottb.

Distribution : In Sparse forest of Padmalaya, RMB 24, Padm

Uses : Fruit paste is applied on body to control fevers.

Exsiccata: RMB 24, Padmalaya.

12. *Vernonia cinerea* (L.) Less:

Distribution : In Sparse forest of Padmalaya, RMB 33, Padm

Uses : Ash prepared from floral parts mixed into warm water. This water is used for bath to relieve the fevers and body pain.

Exsiccata : RMB 33, Padmalaya.

Herbal Remedies for Cold, Cough Asthma and Bronchitis:

13. *Acalypha indica* L.

Distribution : In Sparse forest of Padmalaya, RMB 40, Padm

Uses : A teaspoonful of leaf extract is given three times a day for 5-6 days.

Exsiccata : RMB 40, Padmalaya.

14. *Adhatoda vasica* (L.) Nees

Distribution : In Sparse forest of Padmalaya, RMB 29, Padm.

Uses : Fresh leaves treated in hot vapours and juice extracted. One teaspoonful juice is given twice daily for 2-3 days in cough.

Exsiccata : RMB 29, Padmalaya.

15. *Alangium salvifolium* (L.f.) Wang.

Distribution : In Sparse forest of Padmalaya, RMB 42, Padm

Uses : Leaves boiled in water and vapor inhaled in cough.

Exsiccata : RMB 42, Padmalaya.

16. *Ampelocissus latifolia* (Roxb.) Planch

Distribution -In Sparse forest of Padmalaya, RMB 55, Padm

Uses : Fruits eaten for cough and asthma.

Exsiccata : RMB 55, Padmalaya.

17. *Azadirachta indica* A. Juss.

Distribution : In Sparse forest of Padmalaya, RMB 67, Padm

Uses : Leaves kept in a close earthen pot and burnt over the fire. The smoke is inhaled in acute asthma.

Exsiccata : RMB 67, Padmalaya.

18. *Calotropis procera* (Ait) R.Br.

Distribution : In Sparse forest of Padmalaya, RMB 100, Padm

Flower ash is smoked in asthma.

Exsiccata : RMB 100, Padmalaya.

19. *Corralocarpus epigaeus* (Am.) Cl.

Distribution : In Sparse forest of Padmalaya, RMB 98, Padm

Root ash is useful in asthma.

Exsiccata: RMB 98, Padmalaya.

20. *Capparis decidua* (Roth) Edgcw

Distribution : In Sparse forest of Padmalaya, RMB 110, Padm

Uses : Extract of tender branches is useful in cough and asthma.

Exsiccata: RMB 110, Padmalaya.

21. *Cardiospermum halicacabum* L.

Distribution : In Sparse forest of Padmalaya, RMB 125, Padm

50 gm seed powder given with warm water in cough and bronchitis.

Exsiccata: RMB 125, Padmalaya

9. *Diospyros melanoxylon* Roxb.

Distribution : In Sparse forest of Padmalaya, RMB 135, Padm

Uses : Decoction of the fruit given twice daily for 7 days in cough.

Exsiccata : RMB 135, Padmalaya.

22. *Evolvulus alsinoides* L.

Distribution : In Sparse forest of Padmalaya, RMB 129, Padm

Uses : Ash of the whole plant is given with warm water daily twice for 1-2 months in asthma.

Exsiccata : RMB 129, Padmalaya.

23. *Euphorbia nerifolia* L.

Distribution : In Sparse forest of Padmalaya, RMB

73, Padm

Uses : Internal part of the bark is powdered and 'Bajara' flour cooked in open pan over fire. On the surface an extract comes out. 2-3 teaspoonful of the extract given daily twice for 7 days in chronic asthma.

Exsiccata: RMB 73, Padmalaya.

24. *Ocimum basilicum* L.

Distribution : In Sparse forest of Padmalaya, RMB 88, Padm

Uses : Flowers and leaves used in tea preparation which relieves from cold and cough.

Exsiccata : RMB 88, Padmalaya.

25. *Ocimum gratissimum* L.

Distribution : In Sparse forest of Padmalaya, RMB 94, Padm

Uses : Vegetable prepared of the leaves and flowers eaten daily for the treatment of cold and cough.

Exsiccata : RMB 94, Padmalaya.

26. *Solanum surrettense* Burm. f.

Distribution : In Sparse forest of Padmalaya, RMB 120, Padm

Uses : Root decoction is given daily twice for 7 days in cough and asthma. Leaf infusion used as an expectorant in asthma.

Exsiccata: RMB 120, Padmalaya.

27. *Vernonia cinerea* (L.) Less.

Distribution : In Sparse forest of Padmalaya, RMB 32, Padm

Uses : Decoction of the whole plant given daily twice for 7 days in asthma and chest pain.

Exsiccata : RMB 32, Padmalaya.

Discussion

The observation shows record of some new traditional uses of medicinal plants as medicines, e.g. anti cold & cough property of *Alangium salvifolium*. Use of *Solanum suretense* and *Evolvulus alsinoides* leaves in asthma, use of *Vernonia cineria* in asthma, *Calotropis procera*, *Euphorbia nerifolia* & *Diospyrus melanoxylon* in cough cold & asthma. Some plants are appreciably used on asthma, Gynic disorders, wound healing diarrhea and dysentery, ring worms, omitting, headache, bone fractures.

The survey reveals that many of the herbs used by the tribal peoples for the treatment of various diseases are very common and easily available at lowest cost and

hence affordable. The mode of preparation and administration of drugs are very simple and harmless to the patients without any side effects. Surprisingly these local peoples are aware of the continuous and conservative use of medicinal plants.

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