Original Research Paper

VOLUME-6 | ISSUE-2 | FEBRUARY-2017 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46

Traditional Ethnomedicinal Plants Used By the Tribal in Coastal Area of Dahanu Taluka, Palghar District, Maharashtra State, India

Botany

KEYWORDS: Traditional ethnomedicine, tribal, coastal area, Dahanu taluka, Palghar district, Maharashtra.

Shivangi Chaudhari — Department of Botany, S.D Arts, V.S. Apte Commerce and M.H. Mehta Science College, Palghar-401404

Dakshata Patil — Department of Botany, S.D Arts, V.S. Apte Commerce and M.H. Mehta Science College, Palghar-401404

Jayananda Tosh — Department of Botany, S.D Arts, V.S. Apte Commerce and M.H. Mehta Science College, Palghar-401404

ABSTRACT

The present paper deals with the study of traditional medicine used by the tribal of coastal area of Dahanu taluka of Palghar district, Maharashtra state. Altogether 22 plant species belonging to 11 families were recorded in targeted area. The main indication for medicinal plants use were against fever, skin diseases, ulcer, common cold, asthma, wound healing, rheumatism, dysentery, diarrhoea, worm problem etc.

1. Introduction

Ethnobotany deals with the direct relationship of plants with human being (Jain 1987). It is the multidisciplinary science which defines interaction between plants and people. It is not limited to the use of plants for food, clothing and shelter but also use for their religious ceremonies, ornamentation and health cases (Schultes 1992). Ethnobotany is recognized as an effective way to discover future medicine by traditional knowledge (Fabricant and Farnsworth 2001). Use of plants for the treatment of various human diseases is as old as human civilization. About 90% people in rural India take the help of local health practitioners for the treatment of various diseases (Yadav S.S. and Patil S. H. 2001). It is indicate that certainly the tribal people have had specific knowledge about the therapeutic value of the plants (Mittre 1981).

Dahanu taluka from Palghar district in Maharashtra is blessed with coast line. Coastal areas are transitional area between the land and sea characterized by a very high biodiversity and they include some of the richest and most fragile ecosystem on the earth. The tribal's in Palghar taluka used forestflora for their day to day life for various purposes as well as make use of plants to treat different diseases (Tosh 1996, 2004 and 2012). Due to the growing human population, indiscriminate industrialization and climate change manyplant species are vanishing and in future State and central government wants to set up a port in Dahanu taluka of Vadhawan point. It will negatively impact the areas biodiversity and tribal's community because majority of the tribals in Dahanu are Warlis and in coastal area Mahadev Kolis are living. The tribals of this area mainly depend upon the flora for their live hood and used traditional medicinal plants for curing the aliments and diseases. So authors attempt to acquire important traditional medicinal plant species.

2. Materials and Methods

The information regarding traditional medicinal plants was collected from tribal Coastal area of Dahanu taluka from Palghar district. Coastal area of Dahanu taluka covers an area of approximately 350 sq/km. It extends between 19.580 North latitudes and 72.440. East longitudes. To the west of the town is beautiful coast of the Arabian Sea while the east is lined with the magnificent Sahyadri ranges. Extensive field visits were organized for collecting plant species and the information of traditional medicinal plants was collected from tribals residing coast line of Dahanu. Plants initially identified by their local names later properly identified by using Cooke flora (Cooke 1901-1908), Talbot (1909 – 1911) and (S.C. Agrawal, R. N. Pati 2010). Identified plants were deposited in the herbarium for future studies. Traditional medicinal plants record are arranged alphabetically with botanical name and author, family, local name (Marathi), habit, part used for aliment and method of preparation.

3. Enumeration of Ethnomedicinal Observed Taxa

During this survey summarized ethnobotanical uses of medicinal plants in coastal area of Dahanu have been explored. In all 22 species of 17 genera and 11 families have been recorded and the information gathered from the traditional healers arranged alphabetically with botanical name and author, family, local name (Marathi), habit, part used for aliment and mode of preparation.

1. Abrus precatorius L.
(Fabaceae), Climber; Gunja (Marathi)
Uses: Seed powder is made paste with water applied externally to relieve joint pain.
Whole plant is dried, roasted and ash is applied on wound.

2. Abution indicum L.
(Malvaceae), Shrub; Petari (Marathi)
Uses: Whole plant dried and made into powder used to treat kidney diseases. Oil is extracted from the root which is applied on joint pain. Flower paste is used to treat ulcer.

3. Acanthus illicifolus L.
(Acanthaceae), Shrub/Herb; Maranda (Marathi)
Uses: Leaves are dispensed with pepper and employed as an emollient formation for rheumatism. Decoction of root and leaves used for asthma.

4. Achyranthes aspera L.
(Amaranthaceae), Herb; Aghadha (Marathi)
Uses: Seeds crushed and simmered in water to made tea to treat diarrhea. Leaves decoction to treat ulcer.

5. Andrographis paniculata (Burm.f,) Wall. Ex
(Acanthaceae), Herb; Kalpa (Marathi)
Uses: Decoction of the leaves is used to treat cough, whole plant extract is used to treat skin diseases.
.

6. Asparagus racemosus Willd.
(Liliaceae),Twinner; Shatavri (Marathi)
Uses: Dried leaves powder in a glass of warm milk with honey to treat cough.
Whole plant is dried and powder is used to treat nervous disorder and root extract is applied on small pox.

7. Avicennia officinalis L.
(Acanthaceae), Shrub/ Tree; Tavir (Marathi)
Uses: Seed paste is applied on small pox and bark extract is applied on rheumatism.

8. Barleria priontis Linn. (Yellow variety)
(Acanthaceae) Shrub; Kolita (Marathi)

Uses; Leaves extract is applied on joint pain, Leaf juice with honey is used to treat Cough and fever.

9. Biophytum sensitivum L.
(Oxalidaceae), Herb; Lajvanti (Marathi)
Uses: Grounded leaves are given along with butter milk for diarrhoea and grounded Seeds are applied over wound and ulcer.

10. Brugaiera gymnorhiza Lamk.
(Rhizophoracea), Tree; Zumber (Marathi)
Uses: Decoction of bark is used to treat diarrhoea and fever.

11. Cadaba fruticosa L.
(Capparidaceae) shrub; Habab, (Marathi)
Uses: Roots are burned and the ash is used to neutralize venom from snake bite.
Ash of burned plant is used to treat rheumatoid

12. Cleome rutidosperma DC.
(Capparadaceae) Herb; Nilitilvan (Marathi)
Uses: Leaf extract is used to treat skin diseases and the leaf sap is applied to cure ear ache.

13. Cleome viscosa L.
(Capparadaceae) Herb; Pivlatilvan (Marathi)
Uses: Decoction of seed is used to treat rheumatism. Leaf juice mixed with ghee is applied on wound and ulcers.

14. *Crotalaria palida* Aiton.
(Fabaceae), Shrub; Jangali tag (Marathi)
Uses: Infusion of the plant is used to treat skin diseases. Root paste is applied on rheumatism.

15. *Crotalaria retusa* L.
(Fabaceae), Shrub; Dingala (Marathi)
Uses: Decoction of flower and leaves is used to soothe a cold.

16. *Desmodium gangaticum* (L.) DC.
(Fabaceae), Shrub; Pivari (Marathi)
Uses: Juice of the root and leaf decoction is used to cure diarrhoea and dysentery, Root powder mixed with honey is applied on mouth ulcer.

17. *Desmodium triflorum* (L.) DC.
(Fabaceae), Weed; Ranmethi (Marathi)
Uses: crushed plant is applied externally on wounds, ulcers, and for skin problem.

18. *Eclipta alba* (L.) Hassk.
(Asteraceae), Herb; Maka (Marathi)
Uses: dried leaves powder is administered along with castor oil to relieve intestinal worm infection. Seed paste is applied over wound to reduce pain.

19. *Exoecaria agallocha* L.
(Euphorbiaceae) Tree; Geba (Marathi)
Uses: Chewig a little piece of bark is drastic to constipation.

20. *Hemidesmus indicus* (Linn.) R. Br.
(Asclepiadaceae) shrub; Anantamul (Marathi)
Uses: Root powder and leaves of Malabar nut taken with milk to relive asthma.
Root bark and betal leaf smeared with catechu used to treat kidney diseases.

21. *Ruellia tuberose* Linn.
(Acanthaceae) Herb; Ruwel (Marathi)
Uses: A paste made of root and few peppers is taken to cure stomach ache.

22. *Salvadora persica* L.
(Salvadoraceae) Tree; Khakan (Marathi)
Uses: The juice of the leaves is used in skin diseases. Seed oil is applied on the skin in rheumatism. Fruit past is applied on joint pain.

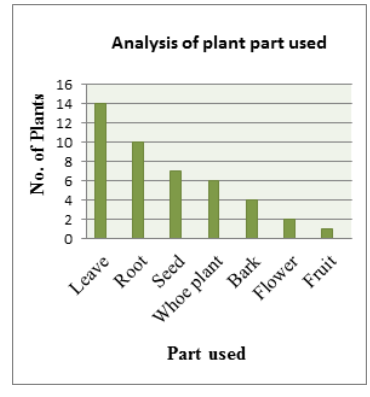
During data analysis revealed that leaves and root are used for various diseases followed by seeds, whole plant, bark,flower and fruit (Graph 1). Different species used to treat important and common diseases like rheumatism & ulcer (6 species), skin diseases (5 species), joint pain, wound healing, diarrhoea, cough and cold (4 species) asthma, kidney diseases, small pox, and fever (2 species), worm problem, nervous disorder, snake bite, ear ache, dysentery, constipation and stomach ache(1 species) (Graph 2). Some remedies consist of single herbs but more than two herbs are reported in several preparation. The preparation of plant parts were powder, decoction, extract and juice. Plate 1 indicates some important ethnomedicinal plants of coastal area of Dahanu.

4. Discussion

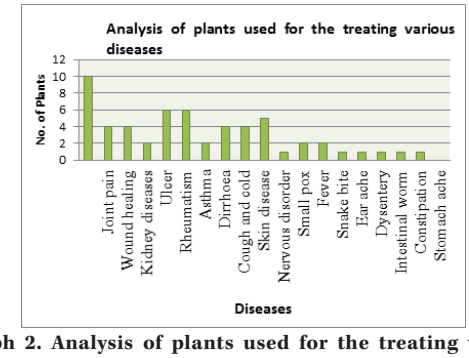
The flora of coastal area of Dahanu provides a very good source of traditional medicine and still tribal community in Dahanu dependent on indigenous knowledge for health care. These people have a long history of traditional use of plants. It will help to identify possible links between a plant's chemical compositions and how tribal use these plants to treat different aliments. This study will investigate the fact that documentation of therapeutic uses of herbal remedies with formulation of new drugs. The flora of Dahanu is very reach and good source of medicinal plants in future it will definitely use to preparer life saving medicines. Our work will always attempt to achieve results that documenting the indigenous knowledge on the utilization of medicinal plants may have some benefits for future researchers.

Acknowledgement

The authors are Sincere thanks to the tribal who revealed their knowledge on traditional medicine, Principal and Management of the S.D Arts, V.S. Apte Commerce and M.H Mehta Science College for encouragement and facilities.

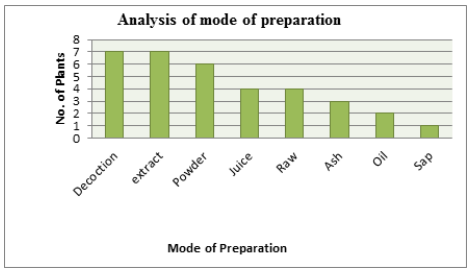


Graph 1. Analysis of the plant part used with respect to no. of species.



Graph 2. Analysis of plants used for the treating various diseases.

VOLUME-6 | ISSUE-2 | FEBRUARY-2017 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46



Graph 3. Analysis of mode of preparation.

Some important ethnomedicinal plants of coastal area of Dahanu

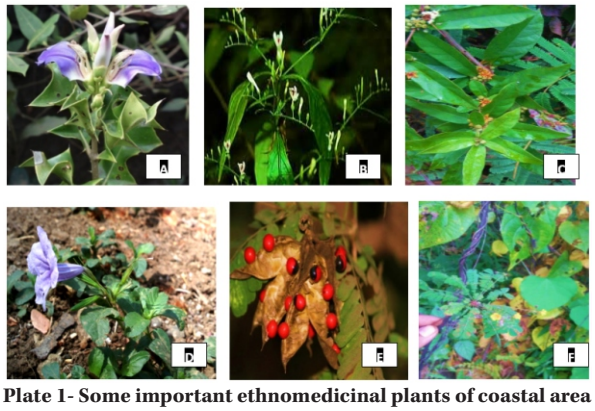


Plate 1- Some important ethnomedicinal plants of coastal area of Dahanu

A. *Acanthus illicifolus* L.
B. *Andrographis paniculata* (Burm.f.) Wall. Ex
C. *Hemidesmus indicus* (Linn.) R. Br.
D. *Ruellia tuberose* Linn.
E. *Abrus precatoriu* L.
F. *Biophytum sensitivum* L.

References

1. Cook T. (1901-1908). The Flora of the Presidency of Bombay (Repr. Ed.) Vol. I- III (Repr. Ed. 1958) Botanical Survey of India, Calcutta.
2. Fabricant D. S., Farnsworth N. R. (March 2001). The value of plants used in traditional medicine for drug. Environ. Health Perspect. 109 Suppl 1 (suppl 1): 69-75.
3. Jain S. K. (2004). A Mannual of Ethanobotany, Scientific Publisher. Jodhpur, India.
4. Mittre, Vishnu (1981) Wild plants in Indian folk life – A historical perspective. In Glimpses of Indian ethnobotany, (S. K. Jain, ed). Oxford and LBH publishing Co. New Delhi- 37- 58.
5. S. S. Agarwal, R. PATI (2010): Folk medicine, folk healers and medicinal plants of Chhattisgarh, ISBN-978-81.
6. Schultes R. E. (1992). Ethnobotany and technology in the Northwest Amazon: A partnership. In sustainable harvest and marketing of rain forest products, Eds. Plotkin and Famolare, Island Press, CA, pp: 45-76.
7. Tosh J. (1996). 'Ethnobotanical Studies of western Maharashtra.' J. Econ, Tax .Bot. 12 (Addl. Ser.): 169-174.
8. Tosh J. (2004) : Ethnobotany, Green Gold Branch of Botanical (Science. Ethnomedicinal Plants, Pointer Publishers, Jaipur, India : 177-191
9. Tosh J. (2012) : Ethnobotanical study from Taluka Palghar of Dist Thane, Maharashtra State. Journal of Economic Taxonomy Botany. Vol. 36(4) : 693-701 ISSN 2050-9768.
10. Yadav S.S and Patil S. H. (2001). Traditional medicines and healthcare system of tribals of Satpuda region. Maharashtra state, Plant Arch, 1 (1&2) 111-118.