

Research Article

Ethnomedicinal uses of some pteridophytes from Konkan region of Maharashtra, India.

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ABSTRACT

In the present investigation the studies were carried out for utilization of pteridophytes by the local people and tribes in the treatment of various diseases from Rajapur and its adjoining areas of Ratnagiri district. The information regarding their medicinal uses was collected by visiting different areas and from the local practitioners such as vaidos and elder villagers. The results obtained are very interested and tabulated with their uses and common names.

Keywords: Ethnomedicine, Pteridophytes, Konkan, Maharashtra, vaidos.

INTRODUCTION

There are over 53 million tribal people in India belonging to 550 communities of 227 ethnic groups¹. These tribal communities draw their sustenance largely from forests for food, medicine and other requirements¹⁻². Forests represent a whole way of life for tribal peoples and as such their life and economy are, therefore, intimately interwoven with the forests and forest wealth³. Pteridophytes are much neglected group of plants having 12, 000 species occur in the world flora of which about more than 1,000 species into 70 families and 191 genera likely to occur in India⁴. Out of 1,000 species of Pteridophytes occurring in India, 170 species have been found to be used as food, flavor, dye, medicine, bio-fertilizers, oil, fiber and bio-gas production⁵. The medicinal value of Pteridophytes against bacteria, fungi, virus, cancer rheumatism, diabetes, inflammation, consultant, fertility, diuretic, pesticides, heptoprotective, and sedative had been reported. Besides sugar, starch, proteins and amino acids, ferns contain a variety of alkaloids, glycosides, flavonoids, terpenoids, sterols, phenols sesquiterpens etc. as potential components used in various industries⁶.

In comparison to higher plants they have found little applications in medicine. The tribal communities, ethic groups and folklore throughout the world are utilizing their plant parts like rhizome, stem, fronds, pinnae and spore in various ways for the treatment of various ailments since ancient time.

It was observed that the number of contributions about the taxonomy, ecology and

distribution of pteridophytes have been published from time to time but enough attention has not been waged towards their useful aspects. Therefore in the present investigation an attempt has been made to explore indigenous and ethnomedicinal uses of pteridophytes.

METHODOLOGY

Frequent visits have been carried out during 2006-2012 in rainy, winter and summer seasons. The standard methods have been followed for the collection of pteridophytes along the different areas of Ratnagiri district⁷⁻⁹. In the present study an intensive survey was made at various places namely, Sawantwadi, Sindhudurg, Kankawali, Rajapur, Ratnagiri, Jaitapur and small villages adjoining to these areas. The information was collected from the local practisners such as vaidos and elder villagers. After collection of plant material herbariums were prepared. All the authentic identification of specimens was done with the help of fern floras^{5, 9-10}. The field data were collected on plant parts used; its collection, preparation of drugs, its dosage and administration. The local names of the plants were recorded. The local names of plants also sometimes give indications of morphological characters, habitat or use of the plant.

RESULTS

During survey it was observed that the Konkan region still away from development in transport and medical facilities. Therefore most of the villagers depend on local practitioners even for serious diseases. They are utilizing

angiosperm plants in addition to these ferns and fern allies full fill their curative requirement through folk medicine. In the present study nearly 22 species of Pteridophytes from the area are enumerated (Table 1) with botanical name, family, common name, parts used and medicinal uses in Table-1

DISCUSSION

The present study showed that numbers of pteridophytic species are having medicinal importance in the study region. Among all 22 species mentioned above 21 species are common and abundantly present except *Ophioglossum*. The traditional healers who prepare remedies also serve as diagnosticians, identifying causes of illness before prescribing treatment. The dose given to the patient depends on age, physical status and health conditions of the patient. The method of use of plants varies according to nature of disease. In the majority of the cases, a decoction of various parts of plants used is administered for treating a disease or diseases. Most of the decoctions are made just by crushing the plant parts but some are

made by boiling plant parts in water, decanting of the liquid and drinking after cooling. Paste of some plants is plastered to set dislocated or fractured bones or muscular pain.

In the recent years it was observed that traditional knowledge of plants in many communities from this region is changing because of rapid socioeconomic and cultural changes. The indigenous knowledge from Konkan region communities and local people regarding uses of pteridophytes needs to be secured. Appropriate mechanisms for effective benefits sharing of potential value of this knowledge need to be developed. Documentation of this knowledge is valuable both for the communities and their future generations and for scientific consideration of wider uses of the knowledge.

ACKNOWLEDGEMENTS

The authors are thankful to Scientist experts from NBRI, Lucknow and Indian fern Society members for helping in identification of plants. Authors are also thankful to knowledge providers for providing valuable information and sharing their findings.

Table 1: Medicinally important ferns and fern allies from Konkan region of Maharashtra

Sr. No.	Name of the species with family	Common Name	Parts used	Medicinal uses
1.	<i>Acrostichum aurum</i> L. Pteridaceae	Neche	Fronds	i) Paste of frond is applied on forehead. ii) Young fronds are cooked and used as vegetable. iii) The fronds are used as broom making and fish attractions.
2.	<i>Actinopteris radiata</i> (J. Koenig ex Sw.) Link Pteridaceae	Morpankhi	Whole plant	Astringent, antihelmintic and styptic
3.	<i>Adiantum capillus-veneris</i> , L. Adiantaceae	Mayurshikhi	Whole plant	Diuretic and astringent
4.	<i>Adiantum caudatum</i> , L. Adiantaceae	Mayurshikha	Fronds, Rhizomes	Cough and fever. Antihelmintic
5.	<i>Adiantum philippense</i> L. subsp. <i>philippense</i> Adiantaceae	Mayurshikhi, Ghodpavali, Bedki, jiwali, Ghodyachi gibha, Kale.	Whole plant	i) To treat cough, bronchitis, catarrh, sore throat and chronic nasal catarrh. ii) Fronds are also used for skin disease and low fever. iii) Rachis is used for making handicraft caps.
6.	<i>Angiopteris helferiana</i> C.Presl Marattiaceae	Ghora top	Rhizomes	Used against Scabies
7.	<i>Athyrium hohenackerianum</i> , (Kunze.) T.Moore. Woodsiaceae	--	Fronds, Rhizome	i) The decoction frond and rhizome used as strong antirheumatic and anthelmintic. ii) The rhizome paste applied on the place of scorpion bite. Then it get relief.
8.	<i>Cheilanthes farinosa</i> , (Forssk.) Kaulf. Pteridaceae	Pandhar	Whole plant	i) The mature plant decoction is used for wound healings of cattels. ii) The decoction also used for cold and fever. (Dose-one teaspoonful in a day up to 3 days iii) The whole mature plant decoction, about two teaspoonfuls once a day is recommended in removal of different intestinal worms and also good remedy for peptic ulcer.

9.	<i>Christella parasitica</i> , (L.) H.Lev. Thelypteridaceae	Panpatti.	Fronds	i) The paste of plant is applied to treat backache. ii) Decoction of mature leaf is used for hair wash.
10.	<i>Dicranopteris linearis</i> , (Burm. f.) Underwood Gleicheniaceae	Thicket Fern	Fronds Rhizome	Asthma, women's sterility. Antihelmintic
11.	<i>Diplazium esculentum</i> , (Retz.) Sw. Woodsiaceae	Katarphala.	Whole plant	i) Young fronds are used as vegetables. ii) The one teaspoonful juice once a day is given in malaria fever. iii) It is used as fodder. iv) Decoction of leaves is applied to treat scabies. v) The leaf juice is a good tonic for cough, asthma and jaundice.
12.	<i>Drynaria quercifolia</i> , (L.) J. Smith. Polypodiaceae	Bashing, Wanar bashing, Pankadha	Whole plant	i) Fronds are used poulticing against swellings. ii) Leaf extract used on ears puse. iii) Young fronds are used as cattle fodder in some part of study area. iv) 50 gm rhizome mixed to meat curry (1/2 liter) and consume 7 to 8 days .then sever pile will cover within a eight days . v) The rhizome and leaves are antihelmintic and expectorant. vi) The plant juice used in low fever.
13.	<i>Dryopteris cochleata</i>	Kakolisag	Rhizomes	Leprosy, antifungal, Swellings , ulcers and pains
14.	<i>Lygodium flexuosum</i> , (L.) Sw. Lygodiaceae	Chitrangi, Malya, Wanashiwel, jakhamjodi	Whole plant	i) Decoction of fronds is applied to treat chronic cuts and wounds. ii) Juice of plant about one teaspoonful once a day during bed time is prescribed to anthelmintic for expulsion of intestinal worms. ii) Decoction of fronds is drunk to cure jaundice. iv) Juice is used as antirheumatic. v) The rhizome paste is applied on piles.
15.	<i>Marsilea minuta</i> , L. Marsileaceae	Water Clover	Leaves	Cough and bronchitis
16.	<i>Ophioglossum reticulatum</i> , L. Ophioglossaceae		Whole plant	i) Tender portion are cooked as vegetables. And paste of root is applied on wounds ii) The warm decoction of rhizome used as a lotion for burns.
17.	<i>Pityrogramma calomelanos</i> , (L.) Link. Pteridaceae		Whole plant	i) The young frond decoction used in kidney trouble. ii) Decoction of leaves used to cure the ox and cattel wounds present on neck. iii) The juice of leaves and rachis about one teaspoonful once a day is given relief gastric disorders and it is a antihelmintic.
18.	<i>Pteridium aquilinum</i> , (L.) Kuhn v Deck. Dennstaedtiaceae	Bracken Fern	Rhizomes Rhizome and fronds	Antihelmintic and astringent. Chronic disorders
19.	<i>Pteris vittata</i> L. subsp. <i>Vittata</i> Pteridaceae		Whole plant	i) The aqueous extract of fronds and rhizome are used on wound healing. ii) They are boiled with four time water and drunk as tonic. iii) The whole young or mature plants are used as fodder.
20.	<i>Selaginella tenera</i> , (Hook & Grev.) Spring. Selaginellaceae	Sajivani	Dried plants	Diuretic gonorrhoea and hallucination
21.	<i>Selaginella delicatula</i> , (Desv) Alston. Selaginellaceae		Whole plant	i) Paste of plant is applied on cuts and wounds. ii) The leaf juice is used on low fever (one spoonful in a day) iii) The juice/ poultice of leaf and stem extract covered over child head during high fever. iv) Tender young portions are fried in edible oil and are given to woman after

				delivery to stop the bleeding.
22.	<i>Tectaria coadunata</i> (Wall. ex Hook. & Grev.) C. Chr. Dryopteridaceae	Wadchavali.	Whole plant	i) Leaves are used as anthelmintic. ii) The decoction of rhizome is given in stomachache of children. iii) The leaves decoction is used as good remedy on asthma bronchitis.

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