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Medicinal Pteridophytes of Madhya Pradesh

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Abstract
The present study mainly focuses on the Medicinal Pteridophytes are widely used by tribal/Rural people of the Madhya Pradesh. As many pteridophytes plant species belonging to many types of medicine are presented in this research article. The Botanical name, distributions and Medicinal uses are provided. Satpura Hills, Amarkantak, Asirgarh Hills, Jabalpur, Mandla, Chhindwara, Rewa region, Sidhi and Sagar were interviewed in this study.

Keywords: Pteridophytes, Medicinal plants, Madhya Pradesh

1. Introduction

The state houses a diversity of ecosystems including plateaus, ravines, ridges, valleys, riparian areas and flat plains. With four major forest types, nine National Parks and 25 Wildlife Sanctuaries, the Tiger state houses one of the richest floral diversity. With around 5000 plant species, Home to six tribes with distinct customs, practices and diverse cultures, the biological diversity sustains livelihoods and ensures food security to two-fifth of the state's 66 million population. Indigenous health systems nurtured by rich traditional knowledge woven around over 1000 medicinal plants contribute significantly to health security in rural areas.

Although the process of inventorization is as old as prehistoric times when first human being came to know about food grain or cereal crops several inventorization processes have been undertaken throughout the world and India particularly in Madhya Pradesh (Central India). Captain Forsitch in 1862 reached Pachmarhi and build the first bungalow (Bison lodge) there and wrote the interesting book "The Highland of Central India" in 1871. This attracted many botanists to inventories the Pachmarhi. Brandis (1874), Gamble (1892), Hole (1906), Hainse (1916), Graham (1915), Rao and Narayan Swami 1960, Panigrihi *et al.* (1960-1961), Tiwari (1964), Oommanchan (1971-1977), Oommanchan and Shrivastava (1987), Mukharjee (1984), Pandya (1962),[1-6] Verma and Mudgal have made noteworthy contribution to the flora of Pachmarhi and Madhya Pradesh [7]. The vegetation of Asirgarh Hills [8]. Ecological and phyto-geographical flora of pteridophytes of Pachmarhi hills [9]. Ethnomedicinal importance of the Ferns of Madhya Pradesh [10], 61 Ethnobotanical important plant species with botanical, local, family names are enumerated with their tribal uses and out of these, 22 species are additions to the Flora of Pachmarhi [11].

The cluster of three protected areas, the Satpura National Park (524 sq. km), the Bori Wildlife Sanctuary (486 sq. km) and the Pachmarhi Wildlife Sanctuary (417 sq km) forming a compact unit of 1427 sq. km in the Satpura hill ranges within the Hoshangabad district of Madhya Pradesh is unique area of high natural and derived land resource values. The salient natural values are conservation of soil water- regime, biodiversity and endangered species. The main resource values, on the other hand, are timber, firewood, forest, pastures, agriculture, irrigation and fisheries. Pteridophytic flora of Pachmarhi Hills, Families: Psilotaceae-Isoctaceae, Psilotaceae-Isoctaceae, Gleicheniaceae- Athyriaceae and Thelypteridaceae–Marsileaceae Central India-I, II, III, and IV [12-15].

Peculiarities of Pteridophytic flora of Pachmarhi Satpura hills[16], Pteridophytes flora of Bhopal [17], Tamia Patalkot Mey pteridophyta kee lupt hoti durlabh Prajatiya [18], the plant diversity has also been described from lower (hepatic) to higher taxas (angiosperms) of Pachmarhi [19]. He is observed Pteridophyte flora includes 46 genera, belonging to 18 families and 94 species. Pteridophytic Flora of Pachmarhi reveals occurrence of 107 species, belonging to 18 families and 52 genera [20]. Medicinally important Pteridophytes of Central India [21], Ethnomedicinal usage of pteridophytes of Amarkantak in the treatment of various diseases [22]

and Ethnomedicinal uses of pteridophytes of Amarkantak [23], Indigenous Herbal Medicines by Tribal Formulations and Traditional Herbal Practices [24]. Traditional uses of pteridophytes among baiga tribes of Amarkantak, Anuppur district [25].

2. Materials and Methods

The present study is the outcome of the one year of critical field survey in the different parts of Madhya Pradesh various seasons. Medicinal information was gathered from the local and tribal people. All the specimens were collected in duplicate forms and they were deposited in the Herbarium of Botany department of government Narmada post graduate college, Hoshangabad, (M.P.) Descriptions of species and identification were done with the help of standard published literature [26-30].

3. Observation and Result

Table 1: Distribution of Pteridophytes in the Madhya Pradesh and there medicinal uses

No.	Pteridophytic taxa	Distributions	Medicinal uses
1.	*Actiniopteris radiata* (Sw.)	Satpura Hills Hoshangabad, Sidhi, Amarkantak, Chhindwara	Styptic, Anthelmintic, Bronchitis, Gynecological and Tuberculosis
2.	*Adiantum capillus-veneris* L., Sp	Satpura Hills Hoshangabad, Sidhi, Amarkantak, Chhindwara	Cough, Diabetes, good health and Chicken pox
3.	*Adiantum incisum* Forssk.	Satpura Hills Hoshangabad	Internal burning, Cough, Diabetes, Fever and skin diseases
4.	*Adiantum philippense* L.,	Throughout Madhya Pradesh	Cough, Asthma, Fever, Leprosy and Hair Falling
5.	*Ampelopteris prolifera* (Retz.)	Satpura Hills Hoshangabad,	Vegetable curry, and eaten with choice among Villagers.
6.	*Angiopteris helferiana C. Presl*, For-Jen.	Satpura Hills Hoshangabad	Indigestion, Dysentery, treatment hair loss of the cattle caused either due to infection or injury
7.	*Asplenium cheilosporum* Kunze ex Mett	Satpura Hills Hoshangabad	Enlargement of spleen in continuance of urine, Calculus, Jaundice and Malaria
8.	*Asplenium falcatum* Lam.	Satpura Hills Hoshangabad	Smoked for colds in head and chest, used as an expectorant.
9.	*Asplenium indicum* Sledge in Bull	Satpura Hills Hoshangabad	Gonorrhoea
10.	*Asplenium laciniatum* D. Don	Satpura Hills Hoshangabad	Leucorrhoea
11.	*Asplenium nidus* L.	Satpura Hills Hoshangabad	Jaundice and Malaria
12.	*Asplenium trichomanes* L.	Satpura Hills Hoshangabad	Colds in head and chest, used as an expectorant
13.	*Athyrium falcatum* Bedd.	Satpura Hills Hoshangabad	Anthelminic
14.	*Azolla pinnata* R. Br	Throughout Madhya Pradesh	Antifungal agent
15.	*Blechnum orientale* L.	Satpura Hills Hoshangabad	Anthelmintic, rhizome is used in Typhoid
16.	*Botrychium lanuginosum* Wall. ex Hook	Satpura Hills Hoshangabad	Vulnerary and also used in Dysentery
17.	*Botrychium daucifolium* Wall. ex Hook.	Satpura Hills Hoshangabad	Vulnerary and Dysentery
18.	*Ceratopteris thalictroides* (L.)	Satpura Hills Hoshangabad, Raisen	Fresh wounds and poultice in skin diseases
19.	*Cheilanthes farinosa* (Forssk.)	Satpura Hills Hoshangabad, Betul, Chhindwara, Amarkantak (Anuppr) Sidhi, Khandwa, Shivpuri	Urine problems and Epilepsy
20.	*Cheilanthes grisea* (Blanf.)	Satpura Hills Hoshangabad	General tonic
21.	*Cheilanthes tenuifolia* (Roxb. in Griff.)	Satpura Hills Hoshangabad, Betul, Chhindwara, Damoh, Sidhi, Khandwa, Mandla, Amarkantak (Anuppur) and Panna	General tonic
22.	*Christella dentata* (forssk.)	Satpura Hills Hoshangabad	Gout rheumatism
23.	*Christella parasitica* (L.)	Satpura Hills Hoshangabad	Spermatorrhea, gout and rheumatism
24.	*Cyathea balakrishnanii* (Dixit et Tripathi)	Satpura Hills Hoshangabad	Hair tonic, sudorific and aphrodisiac
25.	*Cyathea gigantea* (Wall. ex Hook.)	Satpura Hills Hoshangabad	Hair tonic, white discharges, indigestion
26.	*Cyathea spinulosa* (Wall. ex Hook.)	Satpura Hills Hoshangabad	Hair tonic, sudorific and aphrodisiac
27.	*Davallia bullata* Wall.	Satpura Hills Hoshangabad	Antibacterial and constipation
28.	*Dicranopteris linearis* (Burm. F.)	Satpura Hills Hoshangabad	Roofs and house walls, Asthma and Aqueous, cushion for cattle shed, Anthelmintic
29.	*Diplazium esculentum* (Retz.)	Satpura Hills Hoshangabad and Amarkantak Anuppur	green vegetables
30.	*Dryopteris cochleata* D. Don	Satpura Hills Hoshangabad and Amarkantak Anuppur	Snakebite, Rheumatism, Leprosy cuts, Wounds, Ulcers, Swelling and pains.

31.	*Equisetum diffusum* D. Don	Satpura Hills Hoshangabad and Amarkantak Anuppur	Bone fracture, Kidney trouble
32.	*Equisetum ramosissimum* Desf.	Satpura Hills Hoshangabad, Sidhi, Panna, Shivpuri, Chhindwara	Bone fracture, Kidney trouble, Enema, Stomach disorders in children
33.	*Gymnopteris contaminant* Bedd.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Rheumatism
34.	*Hypodematium crenatum* Forsk.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Indigestion
35.	*Isoetes coromandelina* L.	Satpura Hills Hoshangabad, Neemach, Shivpuri, Khargone	Jadu-tona, Rheumatism, Locket for avoiding evil spirit
36.	*Isoetes panchananai* Pant & Srivastava.	Satpura Hills Hoshangabad	Locket for avoiding evil spirit
37.	*Lycopodium clavatum* (L.)	Satpura Hills Hoshangabad and Amarkantak Anuppur	Beri-beri as lotion, used in cough and skin eruption
38.	*Lycopodium volubile* (L.)	Satpura Hills Hoshangabad	Flatulence, Rheumatism, Lung ailments, and Eczema
39.	*Lygodium flexuosum* (L.)	Satpura Hills Hoshangabad, Hoshangabad, Betul, Chhindwara, Damoh, Sidhi, Khandwa, Mandla, Gwalior, Indore, Shivpuri and Panna	Skin diseases, Rheumatism, Sprains, Scabies, Eczema, Cut wounds, Casbundes and Rheumatism
40.	*Marsilea minuta* L.	Throughout Madhya Pradesh	Cough, Spastic conditions of leg muscles, in Sedation and Insomnia
41.	*Microlepia speluncae* (L.)	Satpura Hills Hoshangabad and Amarkantak Anuppur	Wound
42.	*Microsorum membranaceum* (D. Don)	Satpura Hills Hoshangabad	Purgative, Diuretic and healing wound
43.	*Nephrolepis acuta* Presl.	Satpura Hills Hoshangabad	Sori with leaves use as Tatttoo
44.	*Nephrolepis cordifolia* (L.)	Satpura Hills Hoshangabad	Wound to check bleeding, Cough and intestinal Disorders, Stomach ulcer and Acidity
45.	*Ophioglossum gramineum* Willd	Satpura Hills Hoshangabad and Amarkantak Anuppur	Hair fall
46.	*Ophioglossum polyphyllum* A.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Menstrual disorders, burns as Cooling agent
47.	*Ophioglossum reticulatum* L.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Burns as cooling agent, tonic used as Vulnerary and as Remedy for wounds
48.	*Ophioglossum nudicaule* L.	Satpura Hills Hoshangabad	Old skin disease
49.	*Osmunda regalis* L.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Rheumatism, Intestinal problems and Rickets
50.	*Pronephrium nudatum* (Roxb. ex Griff.)	Satpura Hills Hoshangabad	Pyorrhoea
51.	*Psilotum nudum* (L)	Satpura Hills Hoshangabad	Diarrhea and Antibacterial
52.	*Pteris biaurita* L.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Cuts and Bruises
53.	*Pteris cretica* L.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Wounds and Antibacterial
54.	*Pteris geminate* Wall. ex. Ag.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Hypotonic, Antiviral and Antibacterial
55.	*Pteris longifolia* L.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Swelling of Joints till it is cured
56.	*Pteris pellucida* Presl.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Early Maturation of boils
57.	*Pteris quadriaurita* Retz.	Satpura Hills Hoshangabad and Amarkantak Anuppur	Irregular Menstrual cycle
58.	*Selaginella bryopteris* (L.)	Satpura Hills Hoshangabad, Amarkantak, Jabalpur, Mandla, Chhindwara, Betul, Sehore	Gonorrhoea
59.	*Sphenomeris chinensis* (L.)	Satpura Hills Hoshangabad and Amarkantak Anuppur	Toothache, Swelling and sprains, Diuretic
60.	*Tectaria coadunata* (Wall. ex Hook. Et Grev.)	Satpura Hills Hoshangabad and Amarkantak Anuppur	Eczema and Scabies
61.	*Tectaria polymorpha* (Wall. ex Hook.)	Satpura Hills Hoshangabad	Eczema and Scabies

4. Conclusions

Madhya Pradesh provides an excellent piece of rich biodiversity. The tribal community is solely depends on the forest products, not only this, they have their own herbal health care system. In this these peoples use various plants, and their products to combat with numerous human diseases. There are several reports reciting the ethno-botanical uses of higher plants found in this area However, similar reports on the use of members of lower plant group as medicine is much scarred. The author had attempted here to gain the indigenous knowledge of tribal peoples about the use of pteridophytes members of a medicine system of the community. The tribe of this area is founded to use some common pteridophytes in their routine health care system to treat the diseases like cold, sciatica, fever, gonorrhoea, rickets, cardiac problem, rheumatism, skin diseases, mental disorders, stomach ulcer and acidity, abdominal & respiratory disorders, eczema and sexual problems, jadu-tona (table-1), some

important members of Medicinal used pteridophytic plant, which are used by the peoples of tribal communities.

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