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Research Article

MEDICINAL PTERIDOPHYTES FROM SITHERL, TAMIL NADU

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ABSTRACT

Pteridophytes are primitive vascular plants in the plant Kingdom. The Pteridophytes constitute the primitive vascular plant groups which are found all over the world including in India. The Pteridophytes have been used successfully in various system of medicines. This article outlines the medicinal Pteridophytes in Sitheri Hills

Key Words:

Pteridophytes, Medicinal Plants,
Sitheri Hills

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INTRODUCTION

Pteridophytes are primitive vascular plants in the plant World. The fossil plants evidence shows that five classes of fern and fern allies were present in the Devonian period and they dominated the vascular cryptogam until the mesozoic Era when angiosperms proliferated. The Ferns are found scattered all over the Pteridophytes are known to man for than 200 years for their medicinal values. Theophrastus (327 -287 BC) and Discorides (50 AD) had referred the medicinal values of certain ferns. Caius (1935) is supposed to be the first man who has described the medicinal uses of some ferns of India. Besides Nayar (1957) and kaushik & Dhiman (1995) also reflected lights of medicinal uses of some pteridophytes of India.

The pteridophytes had an important role in folklore medicine. These plants have been successfully used in various systems of medicines like Ayurvedic, Unani, Homeopathic and other systems of medicines. Kirital *et al.*, (1935) had described 27 species of ferns having Varied medicinal values. Chopra *et al.*, (1956) have included 44 Species and Nadkarni (1954) recorded 11 species of pteridophytes having medicinal importance. May (1978) published a detailed review of the various uses of ferns and listed 105 medicinal ferns. Singh (1999) reported 160 species of pteridophytes in India on the basis of phytochemical, pharmacological and ethanobotanical

studies. Recently, Ghosh *et al.*, (2004) reported some edible pteridophytes as vegetables and medicines.

The present article outlines a list of 13 medicinally useful pteridophytes found in Sitheri hills with their recent nomenclature, family and their brief uses.

METHODOLOGY

Sitheri is a hill station in Dharmapuri district located in Tamil Nadu, India. Sitheri hills are one of the segment of Eastern Ghats of Tamil Nadu, which comes Pappireddipatti taluk. It is situated at an altitude of 1097.3m (3600ft) above the sea level. Sitheri hills comprises various kinds of vegetation such as the evergreen, semi green, riparian, dry deciduous scrub and thorn scrub forests. The maximum and minimum temperature is 19^oC in winter and 40^oC in summer respectively. The average annual rainfall is 900mm attained from southwest and northeast monsoons. Topographically, the area is undulating with an altitude varying from 240 to 1260m. The total area of sitheri is found to be 400km².

Enumeration

Some of the important medicinal pteridophytes in sitheri hills have been enumerated:

Selaginella involvens (Sw.) Spring

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Ladies use spore powder as substitute to vermilion powder. The 'sindoor' in napali language. plant is considered to help to rejuvenate life, also used in the prolapse of rectum, prevents cough, bleeding piles, gravel amenorrhoea and as an antibacterial (Manandhar (1996),Singh 1999).

Psilotum nudum (L.)

The oil spores are given to infants to arrest diarrhea. Herb juice showed antibacterial activity against micrococcus phygenes and pseudomonas nerugionsa and also used as a purgative. The shoots yield a phenolic psilotin. The plant contains the following bi flavones-apigenin, acacetin, genkwanin, amentoflavone and hinokiflavone. Manickam and Irudaya raj. 1992

Actinopteris radiata (S.w.) link.

Plant is bitter having the properties like styptic, anthelmintic, astringent sweet, loosing, serve conditions of kapha and pitta, diarrhea, dyseutery, heliminithiasia, haemorstysis and fever. Warriar *et al.* 1996.

Cheilantheis farinosa (Forsk.) Kaulf.

Roots are used to treat eczema and stomachache, fronds are used to treat menstrual disorders. (jain 1991)

Heminoitis arifolia (Burm.) Moore.

The fronds are used in the treatment of aches and as vermifuge (Dixit and Vohra 1984).In the Philippines, crushed juice from the fronds is used for burns.

Adiantvm caudatum (L)

Fronds extract is effective in wound healing (b urkill It 1996). It is used in skin diseases, diabetes, cough and fever, (chopra *et al.*, 1956), (Jain 1991).

A.lunulatum Burn

Leaf and root decoction is used for the treatment of chest complaints in Malaya. (nayar BK,1959) It is used tn blood related disease, for strangery and in fever due to elephantiasis. Fronds are burnt in oil and applied to itch. (Nayar. 1957)

Nephrolepis auriculata (L.).Trimen

Tubers are edible and decoction of the fresh frond given in cough.(Dixit and Vohra 1989) Sarnam *et al.*, 2005)

Hymenophyllum Javanicum Spr

The dried fern mixed with garlic and onions is sometimes smoked by the local people to cure headache. (Manickam & Irudayaraj 1992).

Drynaria quercifolia (L.) Jsm

The rhizome bitter, it is used as an antibacterial anodyne, constipating, anti in flammatory ronic, in the treatment of typhoid fever, phthisis, cough, arthralgia, cephalagia, diarrhea, uvcers and inflammations.(Dixit and Vohra 1984) It is very specific in the treatment of migraine. The decoction of the plant is used in typhoid fever and is also used as amthemintic pectoral, expectorant, tonic, dyspepsia and astringent. Fronds are useful as poulticing swellings. (Warriar *et al.*, 1996)

Pyrrosia lanceolata Fore well

A decoction of the fern is used in South Africa curing for colds and sore throats. In Mexico, a tea prepared from the fronds is used for itch (Manickam & Irudayaraj 1992).

Marsilea Minuta L

Plants are used in cough, spastic condition of leg muscles, etc. and also in sedatum and insomnia. The leaves and sprouts are cooked as vegetables and sold in the market (Dixit and Vohra 1980) It is a cumbersome weed in paddy fields. Plant is sweet, astringent, refrigerant, acrid, diuretic, expectorant, anodyne, constipating, aphrodisiac, depurative and febrifuge. It is useful in psychopathy, ophthalmia. Strangury, diarrhoea, leprosy, skin diseases, haemorrhoids, dyspepsia and fever (Warriar *et al.*, 1996).

Salvinia molesta Mitch

The pulp of this plant possesses the properties for the formation of paper which can be suitably used in various ways. The plant can act as a additional source of raw material in the paper industry for the manufacture of low grade papers (Bhardwaj 1989).

Azolla pinata R.Br.

Used as an important bio fertilizer in paddy and other crops. (Singh 1997).

CONCLUSION

1. Pteriphytes, the fern and – allies as they are called are of great medicinal values. In addition to this, quite a number of them are used as food, shelter and ornamentals. (Pteridophytes are lightly prized as foliage ornamentals due to their beauty and grace whether indoor or outdoors).
2. With the present information it is clear that the hills and forests where majority of pteridophytes grow, natives frequently use their young fronds and dried rhizomes as source of food and extracts of different parts and their decoction as medicine for various ailments. These information serves as a base for new compounds with active principles for phytochemical, pharmacognostical and clinical research, indigenous people use many of the pteridophytic medicinal plants traditionally for treating their common ailments like stomach ache, diarrhea, dysentery, skin problem.....etc. at present a number of pteridophytes have been eradicated (or) lose due the deforestation the existing deforestation and habit fragmentation would pose a serious threat to the growth of wild plants.
3. Researchers have stressed that need of conservation of the various pteridophytes (Bir 1988).
4. Therefore, the Exploitation of the pteridophytes for their economic utility including ornamental use must be done, but at the sometime care should be taken for their conservation. If these guide lines can be followed strictly and if we can maintain are biodiversity, further studies on pteridophytes can bring many more medicinally important species to light.

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