



PTERIDOPHYTIC FLORA OF KANJAMALAI HILLS, SALEM DISTRICT OF TAMIL NADU, SOUTH INDIA

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ABSTRACT

The present investigation deals with the Pteridophytes flora of Kanjamalai Hills. A total of 14 species belonging to 8 genera and 7 families have been documented for each species, correct botanical name, local name (Tamil), field number and area have been given. The present study is the first report of Pteridophytic flora of Kanjamalai Hills of Salem District, Tamilnadu.

KEY WORDS

Distribution, Kanjamalai Hills, Pteridophytes, Salem.

INTRODUCTION

India has a luxuriant population of Pteridophytes greatest of the plants extend richly in moist tropical and temperate forest and their occurrence in several eco-geographically threatened areas from sea level to the maximum mountain are of much attention. But note highest diversity between 1300-1400 meters [1]. Though larger number of them choose shady and moist places but a some like in rock crevices and a few in dry areas. *Lygodium* climb on trees and members of Salviniaceae, Azollaceae and Marsileaceae grow in aquatic habitats [2].

A whole of 12,000 plant species of Pteridophytes that occur in the world flora. More than 1200 species of fern and fern allies have been noted from India [3]. Out of which seventeen percentage are endemic to India [4] though recent authentic findings are made from time to time. Majority of Pteridophytes are found in Eastern Himalays and North East India [5]. Particular species such as *Marsilea* and *Dryopteris* are edible whereas species of *Adiantum*, *Pteris Nephrolepis*, *Lygodium*,

Selaginella, *Actinoptis*, *Marsilea*, *Lycopodium* and *Angiopteris* prove extreme medicinal potentialities [6-9].

Intensive research activities have provided beneficial knowledge towards botanical information. Information on such investigation have supported in understanding the accurate location various taxa and distribution pattern of particular species [10]. However, there is no previous reports on the Pteridophytes collected from Kanjamalai Hills, Salem District of Tamilnadu.

Hence an intensive exploration was made and a list of fourteen Pteridophytes assembled has been prepared as a prelude to further wide performance.

MATERIALS AND METHODS

In the current research an intensive inspect was made field survey in several places namely, Siddheswara Swamy Temple, Sempulichan Stream, Mel Siddheswara Swamy Temple and Perumal Temple in Kanjamalai Hills. The Shrine of Lord Siddheswara Swamy is situated in the North Western foothill, Sixteen Kilometers away from

the city of Salem. It lying in between 11°37'24" North latitude and 78°4'5", East longitude of Eastern Ghats. The climatic data of this hill are as follow - annual mean rainfall 70 mm; 24°C to 38°C and relative humidity 70 to 90% with an elevation limit of 350-986 m from m.s.l. The trees in this expanse are very short with stunted development. The forests are mostly of a mixed deciduous and changeable type of varying density. During the course of examine ferns and ferns allies were collected and the herbarium was made. The gathered Pteridophyte plant species identification was carried

out by using "The Manual of Pteridophyte Flora of Western Ghats, South India [11]. The specimens are deposited in the Department of Botany, Government Arts College (Autonomous), Salem, Tamilnadu, India for future reference.

Enumeration of Plants

The plant species are arranged in an alphabetical order. The enumeration of plants contains botanical name, family name, local name (Tamil), field number and distribution.

Table-1: List of Pteridophytes found in various areas of Kanjamalai Hills, Salem district of Tamilnadu.

S. No.	Botanical Name with field Number	Local Name (Tamil)	Family	Distribution and Ecology
1.	<i>Actinopteris radiata</i> (SW.) Link CA 17	Korai panai	Actinopteridaceae	Common found on moist shady places on hills.
2.	<i>Adiantum capillus - veneris</i> L. CA 23	Roaddu Keerai	Pteridaceae	Found usually on moist shady places on hills
3.	<i>Adiantum caudatum</i> L. CA 19	Trailing Maiden Hair	Pteridaceae	Common on moist shady places in forest.
4.	<i>Adiantum lunulatum</i> Burm.f. CA21	Pachai Keerai	Pteridaceae	Frequent on moist shady places in forest.
5.	<i>Chilanthus mysorensis</i> Wall ex Beddome CA 27		Cheilantheaceae	Frequent found on moist shady places on hills
6.	<i>Drynaria quercifolia</i> (L.) J.Sm. CA 30	Aattukal Kizahangu.	Polypodiaceae	Rare on steep side of the hills in shady places.
7.	<i>Marsilea minuta</i> L. CA 33	Water clover	Marsileaceae	Frequent, found near ponds and ditches.
8.	<i>Marsilea quadrifolia</i> L. CA 36	Aarakkeerai.	Marsileaceae	Common found on near ponds and ditches.
9.	<i>Nephrolepis auriculata</i> (L.) Trimen CA 37		Davalliaceae	Common found on moist shady places on hills.
10.	<i>Pteris biauritia</i> L. CA 20	Nandukuddhi.	Pteridaceae	Frequent found on moist shady places on hills.
11.	<i>Pteris cretica</i> L. CA 29	Nandukuddhi.	Pteridaceae	Common found on moist shady places on hills.
12.	<i>Pteris longifolia</i> L. CA 38		Pteridaceae	Frequent found on moist and shaded places on hills.
13.	<i>Selaginella ciliaris</i> Spring CA 41	Chhotisanjeevan	Selaginellaceae	Abundant, found in shady and damp places.
14.	<i>Selaginella tenera</i> Spring. CA 16		Selaginellaceae	Rare, found in shady and damp places.

RESULTS AND DISCUSSION

This survey noted nearly 14 species of Pteridophytes from the area enumerated with botanical name, family, local name (Tamil), field number and distribution of 14 species, 8 genera and 7 families of Pteridophytes are recorded.

Plants of families Pteridaceae was largely represented (6 species) followed by Marsileaceae and Selaginellaceae (2 species each). The rest of the families recorded one species only (Table 1). Species diversity of pteridophytes slowly get decreased and today they are restricted to lesser habitat mainly in temperate area. Alagesaboopathi and Subramanian, (2017) [9] reported

that 14 species of Pteridophytes have ethnomedicinal uses of Kanjamalai Hills of Salem District.

CONCLUSION:

Present research in Pteridophytes diversity of various extent were noted in various families of Pteridophytes such as Actinopteridaceae, Pteridaceae, Cheilanthaceae, Polypodiaceae, Marsileaceae, Davalliaceae and Selaginellaceae member on the rainy season which are the most dominant genera in the Kanjamalai Hills, Salem district of Tamilnadu, Southern India. The Pteridophytes eg. *Actinopteris radiata*, *Adiantum capillus - veneris*, *Adiantum caudatum*, *Adiantum lunulatum*, *Chilanthus mysorensis*, *Drynaria quercifolia*, *Marsilea quadrifolia*, *Nephrolepis auriculata*, *Pteris biauritia*, *Pteris cretica*, *Pteris longifolia*, *Selaginella ciliaris* and *Selaginella tenera* are found in the Kanjamalai Hills, thus in the future investigations all these identified species of Pteridophytes would be useful for pharmaceutical purposes.

REFERENCES

1. Blanford HF. A list of the ferns of Simla in the N.W.Himalaya. Today and Tomorrow's Printers and Publishers, New Delhi. (1888).
2. Bower FO. The ferns (Filicales), Today and Tomorrow's Book Agency, New Delhi, (1963).
3. Dixit RD. A Gensus of the Indian Pteridophytes Flora of India. Series 4, botanical Survey of India, Department of Environmental & Forest, Government of India, Howrah, (1984).
4. Sanjappa M, Venu P. An overview of Biodiversity status trends and threat. botanical Survey of India, Howrah, 18-19 (2010).
5. Clarke CB. A Review of the Ferns of Northern India. Transaction of the Linnean Society, London. (1880).
6. Perumal G. Ethnomedicinal use of Pteridophyte from Kolli Hills, Namakkal District, Tamilnadu, India. *Ethnobotanical Leaflets*; 14: 161-172, (2010).
7. Karthik V, Raju K, Ayyanar M, Gowrishankar K, Sekar T. Ethnomedicinal uses of Pteridophytes in Kolli hills, Eastern Ghats of Tamilnadu, India. *J.Nat. Prod. Plant Resour.* 1(2): 50-55 (2011).
8. Santhosh Kumar S. Samyadurai P, Nagarajan N. Indigenous knowledge on some medicinal Pteridophytic plant species among the Malasar Tribe's in Valparai Hills, Western Ghats of Tamilnadu. *American Journal of Ethnomedicine.* 1(3): 164-173 (2014).
9. Alagesaboopathi C, Subramanian G. Ethnomedicinal studies on some Pteridophytes of Kanjamalai Hills, Salem district of Tamilnadu., India. *World Journal of Pharmaceutical Research.* 6(8): 1590-1596 (2017).
10. Chowdhury NP, Researches on living Pteridophytes in India, Burma and Ceylon (Sri Lanka). Aisa Publication, Bombay. (1971).
11. Manickam VS, Irudayaraj V, Pteridophyte *Flora of the Western Ghats*- South India, BI Publications Pvt Ltd. New Delhi, (1992).

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