

PTERIDOPHYTIC FLORA OF TODGARH-RAOLI WILD LIFE SANCTUARY, RAJASTHAN, INDIA

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Todgarh Raoli Wildlife Sanctuary lies in central position of Aravalli range of Rajasthan. Aravalli range is the topographic feature of Rajasthan, which divides the state into two vegetational segments western xerophytic segment and southern mesic segment, thus this area is an ecotone zone. Due to this ecotone nature great biodiversity is represented in the floral element. Naturally so also the pteridophytic flora in Todgarh Raoli Wildlife Sanctuary. The sanctuary is fortunately a cradle of Pteridophytic plants group. This group of plants is represented by 21 genera and 39 species in Rajasthan. Most of the pteridophytes are listed in the category of endemic and rare species. They are in urgent need for the conservation of pteridophytes in this region. The distributions of pteridophytic flora and its conservations in Todgarh Raoli Wildlife Sanctuary have been discussed in this paper.

Keywords : Aravalli ranges; Pteridophytic flora; Todgarh Raoli Wildlife Sanctuary.

Introduction

Fern and fern allies are fascinating group of pteridophytes, which is almost distributed in Aravalli range. Todgarh Raoli Wildlife Sanctuary lies in central positions of Aravalli range of Rajasthan. Aravalli range is the topographic feature of Rajasthan. Aravalli range divides the state into two vegetational segments western xerophytic segment and southern mesic segment, thus this area is an ecotone zone. Due to this ecotone nature great biodiversity is represented in the floral element. Naturally pteridophytic flora is also represented in this region. The sanctuary is fortunately a cradle of Pteridophytic plants group.

Pteridophytes in Rajasthan received scant attention of the earlier botanical researchers. As per earlier pteridologist Mt. Abu was regarded to be the only

pteridophytic localities in Rajasthan state. First time botanists¹ devoted their attention exclusively to pteridophytic flora of Mt. Abu and recorded 22 species of ferns from this region. The pteridophytic flora of various localities of Rajasthan has been studied by many workers¹⁻⁶. First time the systematics and Taxonomy of pteridophytes of Rajasthan is given by Gena⁵ and Yadav and Meena⁷ and 21 genera and 39 species were reported. Extensive survey of various localities of South-East Rajasthan were conducted² and reported 27 species of pteridophytes belonging to 10 families of this part of Rajasthan. The distributions of pteridophytic flora of Todgarh Raoli Wildlife Sanctuary (Fig. 1) have been discussed in this paper. Most of the pteridophytes listed are in the category of endemic and rare species.

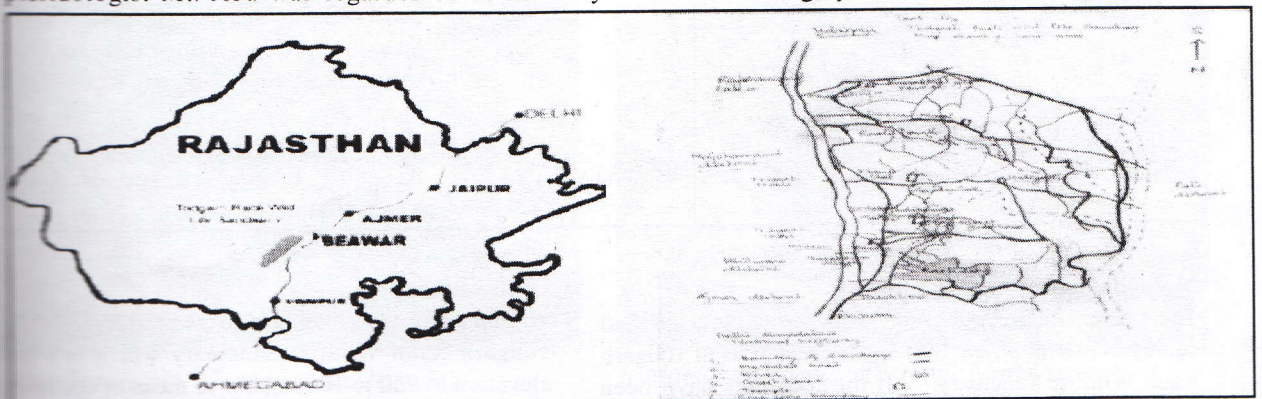


Fig.1. Location of study area

Table-1. Pteridophytic flora of Todgarh Raoli Wildlife Sanctuary.

S.No.	Name /Vernacular name	Family	Distribution
1.	<i>Actiniopteris radiate</i> (Sw.) Link -Mayurpankh, Palm fern	Pteridaceae	One of the most widely distributed xerophytic fern of this region. Widely distributed in Aravalli range Grow on old walls and in rock crevices.
2	<i>Adiantum capillus-veneris</i> Linn. -Maiden hair fern	Adiantaceae	Commonly found under moist and shady habitats in Todgarh Raoli Wildlife Sanctuary.
3	<i>Adiantum philippense</i> Linn	Adiantaceae	Common fern species of moist and shady habitat of Todgarh Raoli Wildlife Sanctuary.
4	<i>Adiantum incisum</i> Forsk. Hans-raj, Hans-pad, Walking-fern	Adiantaceae	One of the most widely distributed fern in Aravalli range and also present at Todgarh Raoli Wild life Sanctuary.
5	<i>Azolla pinnata</i> R.Br.	Azollaceae	A quite common free floating water fern of ponds throughout Rajasthan also found in Todgarh Raoli Wildlife Sanctuary.
6	<i>Cheilanthes farinose</i> Kaulf. Silver fern	Cheilanthaceae	One of the most common xerophytic fern of Rajasthan which is Widely distributed in Aravalli range. Found in Todgarh Raoli Wildlife Sanctuary
7	<i>Marsilea aegyptiaca</i> Willd.	Marsileaceae	Quite widely distributed near pond margins on the way of Jassa Khera villege of Todgarh Raoli Wildlife Sanctuary.
8	<i>Marsilea rajasthanensis</i>	Marsileaceae	Present in pond area near Barakhan Village of Todgarh Raoli Wildlife Sanctuary.
9	<i>Marsilea minuta</i> Linn.	Marsileaceae	One of the most widely occurring water fern. grows along the margins of the ponds, lakes and streams during rainy season almost throughout the Todgarh Raoli Wildlife Sanctuary.
10.	<i>Salvinia molesta</i>	Salviniaceae	Acommon floating fern species of Todgarh Raoli Wildlife Sanctuary.

Methodology

The present paper is based on the phytodiversity and survey of pteridophytic flora in different parts of Todgarh Raoli Wildlife Sanctuary. All the localities have been visited time to time and again throughout the year but mainly during monsoon period.

Observations

Present study deals mainly with the pteridophytic flora of Todgarh Raoli Wildlife Sanctuary which is a general elevation of 950 to 1000 m above mean of sea level, this region consists of many perennial or seasonal water channels which help in maintaining high humidity. Soil is



1. *Actiniopteris radiata* L (Family: Adiantaceae)



2. *Adiantum capillus-veneris* L (Family : Adiantaceae)



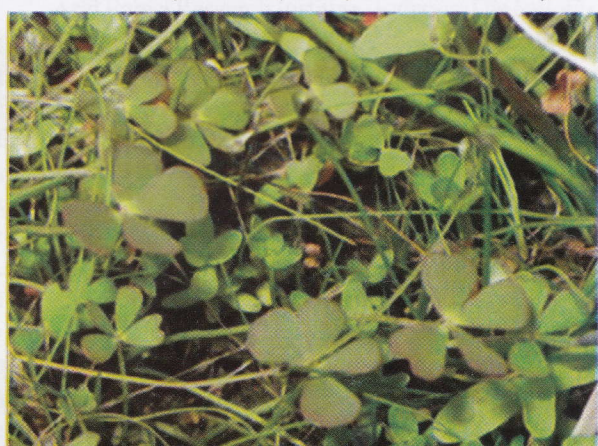
3. *Adiantum philippense* L (Family : Adiantaceae)



4. *Cheilanthes farinosa* (Family : Cheilantheaceae)



5. *Marsilea minuta* (Family : Marsileaceae)



6. *Marsilea aegyptiaca* (Family : Marsileaceae)

mainly gravel and rich in mica. Botanical names, local names, families and their distribution is discussed in the Table-1¹⁵⁰.

Discussion

Thorough investigation in different habitat and localities of Todgarh Raoli Wildlife Sanctuary revealed that

10 species and 6 genera belonging to 6 families of pteridophytes represented the group.

Actiniopteris radiata is found growing more or less frequently throughout the Sanctuary, in crevices of rocks and ravines and also on wall of old monuments and buildings. Two species of free-floating water ferns,

Salvinia and *Azola* are found growing abundantly in various ponds and stagnant water bodies in the Sanctuary. It was found from our survey that *Actiniopteris radiata*, *Adiantum incisum*, *A. capillus-veneris*, *A. philippense*, *Cheilanthes farinose*, *Marsilea rajasthanensis*, *M. minuta* occurs frequently at various surveyed localities, but *Actiniopteris radiata* is of "At Risk" status while *Marsilea rajasthanensis* and *M. minuta* are of "Rare" status.

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