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The Pteridophytes of Sivagiri range of Tirunelveli Hills, Tirunelveli district, Tamil Nadu

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Abstract

The aim of the present study survey of the fern flora of Sivagiri range of Southern Western Ghats, Tirunelveli district, Tamil nadu. A total of 16 species was collected and recorded, belonging to 12 families. 16 pteridophytes species are first time reported in Sivagiri range, Tirunelveli Hill, Tamil Nadu.

Key words: Pteridophytes, western ghats, Tirunelveli district

Introduction

Pteridophytes are seedless and primitive vascular plants, which is characterized by independent heteromorphic alternation of generation. Pteridophytes are very glorious past being the dominant vegetation of the earth about 280-230 million years ago (Mehra, 1967; Bir, 1987, 1994 and Khare, 1996). About 12,000 species of pteridophytes occur in the world floras and about 1200 species of ferns and fern allies are likely to occur in India (Khoshoo, 1995; Manickam and Rajkumar, 1999; Chandra, 2000; Dixit, 2000).

Pteridophytes are very easily vulnerable to anthropogenic interactions owing to their susceptibility and lack of adaptiveness to the slightest environmental perturbations. Consequent to a human population explosion and subsequent migration from low land of the highland forests, the pteridophyte population has been seriously affected in South India. The pteridophytes are one of the groups which are seriously affected and being devastated from many areas consequent to deforestation. Except a very few species, pteridophytes prefer undisturbed shaded habitats in the interior of wet rain forests. The World Conservation Union (IUCN), or International Union for the Conservation of Nature and Natural Resources, has played a major role in focusing international concern on the loss or extinction of species. The aim of the present study survey of the fern flora of Sivagiri range of Southern Western Ghats, Tirunelveli district, Tamil nadu.

Materials and Methods

Intensive field explorations were carried out in the Sivagiri range of Western Ghats, Tirunelveli District during the year 2012-2013, to document the ferns and fern-allies. The collected plants were identified with the help of The Ferns of Southern India (Beddome, 1969;1970) and Pteridophyte Flora of the Western Ghats - South India (Manickam and Irudayraj, 1991).

Table-1: Checklist of Pteridophytes from Sivagiri range of Southern western Ghats

Sl.No	Pteridophytes	Family
1.	*Doryopteris concolor* (Langsd. & Fisch.) Kuhn	Sinopteridaceae
2.	*Cyclosorus interruptus* (Willd.) H. Itô	Thelypteridaceae
3.	Stenochlaena palustris (Burm.) Bedd.	Blechnaceae
4.	*Marsilea minuta* L.	Marsileaceae
5.	*Adiantum caudatum* L.	*Adiantaceae*
6.	*Adiantum lunulatum* Burm.	Adiantaceae
7.	*Adiantum capillus* -veneris	Adiantaceae
8.	*Pityrogramma calomelanos* (L.) Linkb	Adiantaceae
9.	*Hemionitis arifolia* (Burm. f.) T. Moore	Adiantaceae
10.	*Pteris argyrea* T. Moore	Pteridaceae
11.	*Nephrolepis biserrata* (Sw.) Schott	Davalliaceae
12.	*Christella parasitica* (L.) Lev.	Thelypteridaceae
13.	*Angiopteris evecta* (G. Forst.) Hoffm	Marattiaceae
14.	*Asplenium nidus* L.	Aspleniaceae
15.	*Actiniopteris radiata* (Sw.) Link	Actiniopteridaceae
16.	*Drynaria quercifolia* (L.) J. Sm.	Polypodiaceae

Results and Discussion

A total of 16 species were identified in sivagiri range of Western Ghats represented in the table-1. The identification of pteridophytes species was first time reported for this region. Earlier studies of pteridophytes species were published different location of Western Ghats. According to Nayar and Geevarghese, (1993) published 178 ferns of Fern

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flora of Malabar region of Kerala. Yohanarasimhan *et al*., (1981) reported 12 species of ferns in the flora of Chikmagalur District, Karnataka. Rajagopal and Bhat, (1998) enumerated 151 ferns and 21 fern allies of Western Ghats, Karnadaka. Benjamin and Manickam 2007 reported that 61 species of Pteridophytes of Western Ghats.

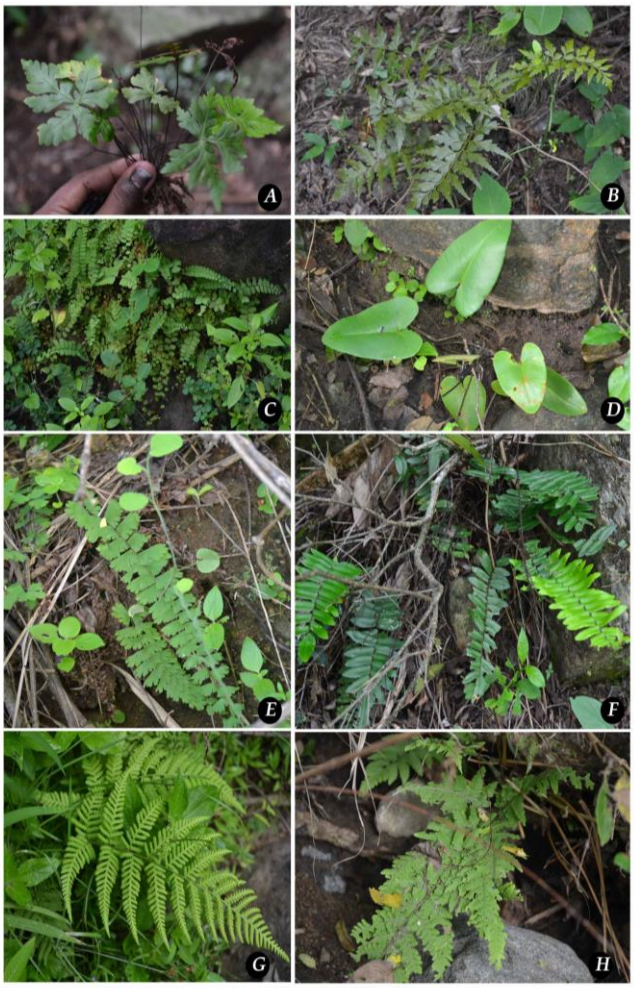

Plate -1: Pteridophytes species of Sivagiri Hills,Tirunelveli

The conclusion of the present study area observed that high density of pteridophytes, which is now subjected to unscientific exploitation particularly agriculture, mining, water reservoirs and other developmental activities. Due to this not only pteridophytes but also several plant taxa are disappearing rapidly. Due to these reasons, species are becoming rare and endangered. In addition to awareness among the local people, these species are in great need of either in situ or ex situ conservation.

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