



**VELLALAR COLLEGE FOR WOMEN (AUTONOMOUS)**

**"College with Potential for Excellence"**



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**Erode-638 012, Tamil Nadu, India**



**PG & Research Department of Botany**

**&**

**Microbiologists Society of India (MBSI)**



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**RECENT TRENDS IN PLANT SCIENCE**

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## FLORISTIC DIVERSITY OF PTERIDOPHYTES ALONG ALTITUDINAL GRADIENTS

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The present study proves that the unexplored area of Valparai and Manambolli range of Anamalai Tiger Reserve which is the part of Southern Western Ghats are rich in several medicinally important ferns. In this study, a total of 79 species of pteridophytes belonging to 43 genera and 19 families were documented, which have been classified and presented based on PPG (Pteridophyte Phylogeny Group, 2016) classification system. The major families represented, with a greater number of species compared to others, include Pteridaceae, Selaginellaceae, Aspleniaceae, Thelypteridaceae, Polypodiaceae and Dryopteridaceae. Pteridaceae was identified as the largest family with the highest number of genera (9) followed by Thelypteridaceae (5), Polypodiaceae (5), Dennstaedtiaceae (4) and Dryopteridaceae (4). *Pteris* was observed to be the largest genus with 7 species. Among the 79 species, 7 were categorized as rare. The region also harbours endemic species like *Cyathea nilgiriensis*, *Cyathea gigantea*, *Histiopteris incisa* and *Hypodematum crematum*. Of the 79 species, 68% of Pteridophytes were terrestrial, 19% lithophytes and 13% were epiphytes. The highest species diversity (38%), including *Cyathea nilgiriensis*, *Actiniopteris radiata*, *Odontosoria chinensis*, *Hemionitis opposita* was reported from altitudes ranging from 1000 to 1500 msl, followed by 28% from 1500 to 2000 msl (*Angiopteris helferiana*, *Pityrogramma austroamericana*, *Doryopteris concolor* and *Hemionitis arifolia*), 27% from 500 to 1000 msl (*Selaginella intermedia*, *Pityrogramma calamelanos* and *Nephrolepis cordifolia*), and 7% of the species from 2000 to 2500 msl (*Histiopteris incisa*, *Pteris biaurita* and *Leptochilus decurrens*).