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Conservation Strategies for the Hygrophilous Pteridophytes of Central Western Ghats

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Pteridophytes, the most primitive vascular plants which originated in the Silurian Period 438 million years ago constitute a significant part of the vegetation next only to the angiosperms. They occur all over the lands barring snow-covered regions and many associated with water-bodies. Acrostichum aureum is a fern found in mangrove swamps of tropics. The Indian Western Ghats with about 320 species of ferns and fern-allies is one of the richest regions in pteridophytes. The pteridophyte richness in the Western Ghats tends to decline from southern to northern latitudes in correlation with progressive reduction in number of rainy months with higher latitudes. Thus the 8-12°N latitude, with 8-10 rainy months, shelters 230 species, the central Western Ghats (12-16°N) with 5-8 rainy months 174 species and northern portion (16-20°N) with 3-4 rainy months having just 64 species. Of the terrestrial ferns the species that tend to taper off towards more north are several epiphytic and lithophytic ones of shaded and damp forests, of cooler and shaded sholas, spray zones of waterfalls, of perennial water courses, swamps etc. Our study in central Western Ghats indicates that if humid microhabitats such as Myristica swamps, dipterocarp dominated relic primary forests, perennial waterfalls, sholas etc., most sought after for hydro-electric projects, expansion of coffee and tea plantations, betelnut gardens etc. are prioritized for conservation, the continuance of even relatively rarer pteridophytes like Cyathea nilgiriensis, Psilotum nudum, Lycopodium squarrosum, Stenochlaena palustris, Lindsea odorata, Hymenophyllum polyanthose and Asplenium crinicole etc. will be reassured.

Key words: Western Ghats, pteridophytes, conservation, relic forests

