

***Pteridium aquilinum* (L.) Kuhn. (Dennstaedtiaceae) - An effective ecological indicator**<sup>1</sup>Binu Thomas, <sup>2</sup>U. M. Chandrashekar, <sup>1</sup>Rajendran, A. and <sup>1</sup>K.M.Prabhukumar

Received: 15 January 2013 / Accepted: 15 February 2014/ Published Online: 15 March 2014

©Gayathri Teknological Publishers 2014

**Report**

*Pteridium aquilinum* (L.) Kuhn, a medium sized colonial plant with long creeping hairy rhizome. Lamina deltoide-ovate, tripinnatifid at the base, bipinnate towards apex; pinnules sessile, oblong, densely hairy; veins obscure. Sori submarginal, linear, protected by upper and lower fimbriate indusial (Thomas and Rajendran, 2012) (Fig.A,B& C). This invasive species now naturalized in various habitats including shola forests also (Whitson, 1996). The colonising nature of *Pteridium aquilinum* (L.) Kuhn. in shola forest floor indicates, the vegetation of an area is disturbed by forest fire. The spores of this plant is dispersed over the area and getting suitable environmental conditions it becomes germinate and spreading over the entire fired area. A similar observation was made by Aiyar (1932). According to his study, the secondary succession of *Acronychia laurifolia*, *Elaeocarpus munronii* and *Meliosma arnotiana* in shola forests could become dominant due to natural disturbance.

Shola forests are regarded as unique due to the rich flora and fauna. It is often confined to sheltered ravines, troughs and other depressions. This ecosystem is characterized by distinct vegetation patches associated with vast expanses of grass lands, the tree cover of the forest types are characterized by having stunted evergreen trees with dense, round or umbrella shaped crowns consisting of entire and coriaceous leaves. The trees are clothed and festooned with rich mass of epiphytes.

**Present Address**

<sup>1</sup>Department of Botany, School of Life Sciences, Bharathiar University, Coimbatore 641 046., Tamil Nadu, India.

<sup>2</sup>Kerala Forest Research Institute Sub Centre (K.F.R.I.), Chandakunnu P.O. Nilambur- 679 342, Kerala, India.

To whom Corresponding Author

E-mail to: binuthomasct@gmail.com

More over the forest floor are matted with diverse array of both Pteridophytes and Bryophytes (Chandrashekar and Jayaraman, 2002). Some of the threatened factors to the existing ecosystem are that lack of unsustainable management and other ecological factors may also affect the distribution of species at different altitudinal gradients in Shola forests. Moreover it also provides suitable habitat for various flora and fauna that are endemic to the Western Ghats. Hence, more attention is required to prevent the loss of biodiversity and conserve this fragile ecosystem.

**Keywords :** *Pteridium aquilinum* (L.) Kuhn, ecological indicator, Shola forests

**Citation:** Binu Thomas, Chandrashekar, U. M., Rajendran, A. and Prabhukumar, K.M.2014. *Pteridium aquilinum* (L.) Kuhn. (Dennstaedtiaceae) – An effective ecological indicator. *Botanical Report*,3 (1):8-9.

Submission manuscripts info:

botanicalreport@yahoo.com

© 2014 GTRP-GRF group

Manuscript Type : **Report**Received Manuscript : **Via Email**Approved Letter : **Received**

Funding Source: Nil

Conflict of Interest : **Nil**Manuscript Full Responses: **Authors**

© 2013 GTRP Reserved. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by-nd/3.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



Fig. A: Study Area of Mannavan shola forest of Southern Western Ghats of Kerala



Fig.B: Population of *Pteridium aquilinum* (L.) Kuhn.



Fig. C: Individual plant- *Pteridium aquilinum* (L.) Kuhn.;

## References

- Aiyar, T.V.V. 1932. The sholas of Palghat division, a study in the ecology of tropical rain forests of Western Ghats. *Ind. For.*,58: 414 - 432.
- Thomas, B. and Rajendran, A. 2012. Chasmophytic Fern and Fern allies of Coimbatore District, Southern Western Ghats, Tamil Nadu, India *Int. J. Applied Bio Res.*,11: 1 - 10.
- Chandrashekara, U. M. and Jayaraman, K. 2002. Stand structural diversity and dynamics in natural forests of Kerala. *K.F.R.I. Res. Rep.* No. 232.
- Manickam, V.S. and Irudayaraj, V. 1992. *Pteridophyte Flora of Nilgiris, South India*, Bishen Singh Mahendra Pal Singh, Dehra Dun.
- Manickam, V.S. and Irudayaraj, V. 1992. *Pteridophyte Flora of the Western Ghats, South India*. B.I. Publication, New Delhi.
- Whitson, T.D. 1996. *Weeds of the West*. Western Society of Weed Science in cooperation with Co-operative Extension Services, University of Wyoming. Laramie, Wyoming.