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CONSERVATION OF MEDICINALLY IMPERATIVE PTERIDOPYTES FROM KOKAN REGION OF MAHARASHTRA

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Abstract: The pteridophytes have been successfully used in the past in Ayurvedic, Unani, Siddha, Homeopathic and other preparations. Ferns are being removed from their natural shady habitats for various purposes. This has created a serious threat to pteridophytes of complete disappearance and as a consequence the environmental balance is disturbing every year. The rapidly shrinking fern cover of Western Ghats prompted to ponder over the issue. Therefore, researchers have stressed the need of conservation of the various pteridophytes. The present paper deals with the conservation of medicinally important ferns from the parts of Western Ghats, one of the World's 12 mega-biodiversity hotspots and their ex-situ conservation.
Keywords: Pteridophytes, Western Ghats, medicinal ferns, *ex situ* conservation

Introduction: The Pteridophytes forming dominant vegetation during carboniferous period, are much neglected group as compared to the angiosperms. These plants have engaged the attention of the botanists and horticulturists because of their beauty and graceful foliage. Besides this, these have been successfully used in the past in Ayurvedic, Unani, Siddha, Homeophathic and other preparations. For their use as horticultural plant or in the medicinal preparations, ferns are being removed from their natural shady habitats in the forests.

India has two hotspots – Western Ghats and Eastern Himalayas among the 25 hotspots harboring the richest and highly endangered eco-regions of the world harboring a diverse species of fauna and flora (Govindasamy, 2007). India has one of world's richest medicinal plant heritages. The wealth is not only in terms of the number of unique species (i.e. 6160) documented thus far for their medicinal use but also in terms of the tremendous depth of traditional knowledge about such uses for human & livestock health and also for agriculture. (Shankar, 2007). Western Ghats, one of the World's 12 mega-biodiversity hotspots, forms nearly a continuous line of mountains to the west of peninsular India running parallel to the west coast. Western Ghats supports 349 species (Manickam, 2003) out of 1100 – 1200 species of ferns and fern allies in India (Dixit, 1984; MoE&F, 1999 and Chandra, 2000).

Moreover, pteridophytes are totally uprooted every year in botanical excursions which has resulted in the reduction of the fern flora. This has posed a serious threat to these plants of complete disappearance and as a consequence the environmental balance is disturbing every year. The use of ferns for some medicinal preparations by local people and as horticultural plants by urban communities have created a serious threat to the fern flora a threat of extinction of some species from wild. During the regular field visits to the localities in Western Ghats, the authors came across a fact that in Western Ghats, quite a number of taxa of pteridophytes recorded earlier from various regions have been eradicated or lost in the recent years. Moreover, population densities have also significantly decreased. The present paper deals with the conservation of medicinally important ferns from Western Ghats of Maharashtra, one of the World's 12 mega-biodiversity hotspots and their *ex-situ* conservation.

Materials and methods: Various localities from Western Ghats were visited regularly for collection of the medicinally important species (Fig. 1) from 2013 to 2023. A total of 39 species of medicinally important ferns from Western Ghats were collected and studied. The cultivated ferns were provided special attention till their acclimatization in the fernery. Once acclimatized, ferns showed a healthy growth and attained reproductive stages.

Results and discussion: Ferns and fern-allies recorded (Table: 1) during this study are arranged according to the classification and arrangement of species within genera and genera within families followed by Fraser-Jenkins (2009).