



Study of Morphological characters of *Selaginella radicata* from Melghat region of Amravati district

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Abstract

Melghat Forest lies on the southern shoot of the Satpuda range of hills. This part of Satpuda is known as Melghat, it consists of succession of hills and valleys. The most prominent geological feature of Melghat is the Gavilghat range of hills which is abundantly rich in biological diversity. The entire area of Melghat is covered by the forest of the Dry deciduous Teak Forest. It extends for about 65 km from North to South between latitude $21^{\circ} 46'$ and $20^{\circ} 11'$ North and about 95 km. from East to West between longitude $77^{\circ} 34'$ and $76^{\circ} 38'$ East.

As the name implies, Melghat is literally a meeting place of Ghats. It consists of succession of hills and valleys with constant and abrupt variations in altitude, aspects and gradient. The annual rain fall varies from place to place within short distance; with the change in altitude and aspects. The annual rain fall varies from place to place within short distances; with the change in altitude and aspects.

Pteridophytes formed a dominant part of Earth's vegetation in the historic past. In the present day flora, excluding the non-vascular plants, they rank only next to spermatophytes. In Melghat Forest the moisture present in the invisible form in the troposphere belt of the atmosphere, is known as humidity. The relative humidity in Melghat Forest area varies from 63.25 -64.0. so that Pteridophytes flourishes very well in Melghat Forest. *Selaginella radicata* also flourishes finely in Melghat Forest in rainy season.

Key words – Pteridophytes, Melghat, *Selaginella*.



Introduction –

The entire area of the Melghat is covered by the forest of the Dry deciduous Teak Forest. *Tectona grandis* is the most important and dominant species distributed in the entire areas. The high altitude with heavy rain fall, high moisture, humidity, minimum moderate temperature, waterfalls, moist rocks, and humus soil. Pteridophytes grow under shady and damp places, along waterfalls, road sides of Ghats, in association with Angiosperms and Gymnosperms. The forest of Melghat is mostly of the Dry Mixed deciduous type and one of the important forests of Vidarbha region of Maharashtra in India. The vegetation varies considerably with the change in altitude, soil, temperature, humidity and rainfall. The average rain fall varies from 1300 mm to 1450 mm, the temperature range varies from 13 to 41°C and humidity varies from 48% to 100%. The soil is also different types. The general floristic study of Melghat Forest includes the plants like 94 tree species, 708 shrubs, 368 small herbs, 66 climbers, 2 species of Bamboo, 127 species of grasses. Pteridophytes flourishes in Melghat under shady and damp places, along waterfalls, road sides of Ghats, in association with Angiosperms and Gymnosperms.

Melghat is known as paradise of Vidharbh. Melghat means the 'meeting of Ghats' which is just what the area is, a large tract of unending hills. The forest of Melghat is mostly of the Dry Mixed Deciduous type and one of the important forests of Vidharbh region. Melghat lies on the Southern shoot of the Satpuda range of hills. This part of Satpuda is known as Melghat, It consists of succession of hills and vallies

Materials and Methods

Pteridophytes division of vascular plants which do not produce seeds. It include Ferns, Club mosses and Horse tail. In Melghat under shady and damp places, along waterfalls, road sides of Ghats, in association with Angiosperms and Gymnosperms.

The plant specimen of *Selaginella blatteri* was collected in every stage of their growth and habitats and reproduction from different localities of Melghat Forest area. The plants were collected in tin vasculum. The plants are pressed flat, before their wilting. They are pressed after the day's visit.

The *Selaginella* was pressed between the sheets of news or blotting paper. These sheets were alternated between sheets of news or blotting paper. The plant became dry by transferring their moisture into the blotting papers.

After drying of plant material, the plant specimen were mounted on herbarium sheets of standard size . The specimens are labeled as per all data. The *Selaginella* specimen were preserved in 4% formalin solution.

Observation –

Selaginella radicata along the road sides in moist condition. It is distributed from August to October. The sporocarp observed from September to November.

Sporophyte terrestrial, sub erect, short with root stem and leaves . A rhizophore is an organ intermediate in structure and function between the stem and root, it is root like in appearance and behavior but has no root cap . Rhizophore grow down to the soil and true roots emerge from them. :eaves dimorphic, ligulate present in the pair. Each leaf sessile with acute apex, distinct midrib and obovate 2.0 – 2.5 cm long ligulate tongue shaped.

Strobilus is the sporangia bearing organ or region of the sporophyte. The Sporangia arise in the axile of leaves called Sporophylls, It shows heterospory I,e, Sporophyll with micro and mega sporangium.





Result and Discussion

The pteridophytes are considered as a first vascular plants that colonized the terrestrial habitat. In the course of evolution they reached upto arborescent habit that has resulted into a gigantic and thick forest in Siluro- Devonian period. Pteridophytes have well developed conducting system. The plants are with feather like fronds.

The living members are represented by living taxa widely distributed over the surface of the global part . In Melghat Forest area Selaginella with three different specis distributed in different climatic conditions. Selaginella distributed on rock at moist condition with creeping stem, spirally arranged leaves, sporangia arranged in terminal strobilus. Selaninella shows ecological succession in forest ecosystem.

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