



MORPHOLOGICAL STUDY OF MARSILEA QUADRIFOLIA FROM MELGHAT FOREST OF VIDHARBHA REGION OF AMRAVATI DISTRICT, MAHARASHTRA.

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Abstract

The Pteridophyta formed a dominant part of Earth's vegetation in the historic past (280 – 230 million years ago). In the present day flora, excluding the non-vascular plants, they rank only next to the spermatophytes. 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.

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, among waterfalls, road sides of Ghats, in association with Angiosperms and Gymnosperms.

Key words –Marsilea, Melghat Forest, Plant specimen, Pteridophytes.

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Introduction –

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Material and Method –

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

The plant specimen of *Marsilea* 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 prssed flat, bfore their wilting. They are pressed after the day's visit.

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

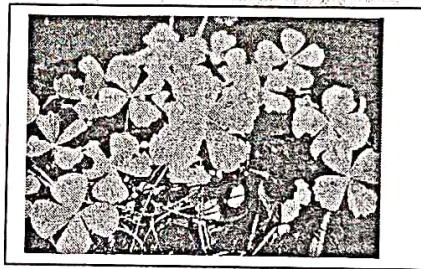
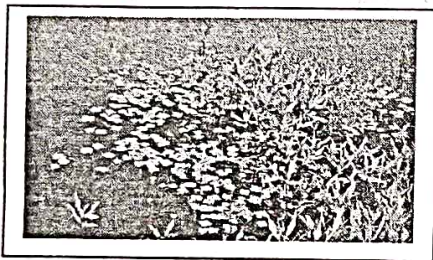
After drying of plant material, the plant specimen were mounted on herbarium sheets of standard size. The specimens are labeled as per all data. The *Marsilea* specimen were preserved in 4% formalin solution.

Observation –

The sporophyte reported from ponds, ditches, pools and lakes of Melghat forest area. It is observed from Gavilghrh fort road, near tank, near pond, it also reported from Lake. The sporocarps are observed from September to January, also exhibit amphiterrestrial habitat.

The plant body divided into petiole, roots, rhizome, leaf and sporocarp. Roots adventitious borne at each node on the lower side of rhizome. Roots may develop laterally. The stem is also called as rhizome, that keeps on the surface of the soil. The rhizome slender, branched with nodes and internodes, dichotomously branched, indefinite in growth and multidirectional. Leaves long petiolated and compound, borne at the nodes and are arranged in two rows.

Young leaves are strongly circinate. Petiole long, soft, and flexible, 27-28 cm long. Lamina divided into four leaflets, obovate with crenate or wavy margin, each leaf let 1.5x 2.0 cm long. At the base of petiole bean shaped and stalked sporocarp present. Sexual reproductive organ which contain microsporangia and megasporangia. Sporocarp 0.4 x 0.3 cm long.



Result and Discussion -

Pteridophyta are treated as vascular cryptogams as they have a well-developed conducting system. The plants are with feather like fronds. Vascular cryptogams are, therefore, an assemblage of seed less vascular plants that have successfully invaded the land and reproduced by means of spores.

While studying the Marsilea, the observation is as the Filicophyta are an assemblage of vascular cryptogams that have established themselves most successfully to life on land. The fern shows varied habitats, diverse habit, supremacy in vegetative propogation and the remarkable success in competition with the modern seed plants. The living ferns spread widely in East and West Melghat forest area at high altitude, in moist conditions along ghat roads.

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