

IV MATERIAL AND METHODS

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Material and Methods :

Genus Pteris vittata grows luxuriantly in the botanical garden of Department of Botany, Shivaji University, Kolhapur. The same plants were used for morphological and anatomical studies in the present piece of work.

Methods :

1) For studying the anatomical details hand sections of root, rachis, rhizome and pinnules were cut.

2) To obtain the sections of rhizome and rachis, small pieces of them were softened in F.A.A. solution for few days.

3) The usual double staining (Saffranine followed by fast green) method was followed.

4) Scales on the rhizome and rachis were removed by means of a scalpel and stained with aqueous saffranin before mounting them in glycerine jelly.

5) For leaf epidermal study, epidermal strips (Peels) of Pinnules preserved in F.A.A. were removed by means of a sharp knife and stained with aqueous saffranine and mounted in glycerine jelly.

6) For studying the venation pattern, the whole mount of pinnules were prepared. The pinnules were kept in

F.A.A. solution and repeated changes of F.A.A. solution were given to remove the chlorophyll till the pinnules had become almost transparent.

Epidermal peels were also removed by applying the nail polish paint to pinnules for venation and stomatal studies.

7) Spore morphology was studied by acetolysis method described by Erdtman 1935.

8) For showing the anatomical details, the sketches of scales, stomata, sporangia, T. S. of Root, rhizome, rachis and pinnule were made by using camera lucida. They are also supplemented with the microphotographs.

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