

SUMMARY
AND
CONCLUSION

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The topic of the present dissertation entitled "Taxonomical Studies in the Ascomycetous Fungi from South Western Maharashtra" has been selected due to the richness of the Ascomycetous fungi occurred in this part of the state due to favourable climatic conditions throughout the year, both saprophytic and parasitic forms. A continuous survey for last two years from different localities of the Western Ghats in Maharashtra State provided a good number of ascomycetous forms. In this short period of time, only two classes viz. Pyrenomycetes and Loculoascomycetes forms were collected and studied in detail taxonomically and presented in this work. This is a continuation of the work by the previous workers of this department, who also worked out the different groups of Ascomycetous fungi.

Important features of the present work are summarised in brief as follows :

- i) Total twentysix taxa have been worked out in the present investigation (i.e. two varieties and twenty-four species).
- ii) In this work Pyrenomycetes members are dominant and

represented by two varieties and eighteen species belonging to twelve genera of the seven families belonging to seven orders; while six species belonging to five genera of the five families of the order Dothideales of the class Loculoascomycetes.

- iii) Most of the species worked out in this work are either parasitic or mycoparasitic and very few belonging to both groups are saprophytic.
- iv) The genus Phyllachora Nitschke ex Fuckel is dominant and represented by seven species followed by the family Meliolaceae represented by one variety and five species belonging to the four genera viz. Appendiculella Hoehnel Sitzb. K., Asteridiella Mc Alpine, Meliola Fries and Ophioirenina Sawada and Yamamoto.
- v) Out of the seventeen genera studied in this work, three genera viz, Ophioirenina Sawada and Yamamoto, Heleococcum Jorgensen and Hypnotheca Tommerup have been recorded for the first time in India thus, the new generic record to the fungi of India. These genera are very rare and known by only their type species or one or two additional species. The genus Ophioirenina Sawada and Yamamoto is only known by its type species and reported only from China. The

genus Heleococcum Jorgensen is only known by two species recorded only from Japan and the genus Hypnotheca Tommerup from England.

- vi) Out of twenty-six taxa studied, one variety and four species have been proposed here as a new, thus new to science. These new taxa have been proposed purely based on morphological ground.
- vii) One variety and seven species have been recorded for first time in India and four species have been recorded for the first time in Maharashtra State and one each from Karnatak and Tamil Nadu State.
- viii) The genus Appendiculella Hoehnel, Sitzb.K., Phyllachora Nitschke ex Fuckel and Hyphnotheca Tommerup have been recorded on twelve new additional hosts.
- ix) The genus Cystotheca Berkeley and Curtis (Erysiphaceae) has been recorded on the leaves of Calophyllum opetalum Willd., a member of the family Clusiaceae (= Guttiferae) from Coimbatore (T.N.), a first record of Powdery mildew occurred on this family.
- x) The genus Hypocrella Saccardo is recorded as an entemogenous taxa by its both perfect and imperfect states.

- xi) Two varieties viz. Hypomyces papulasporae Rogerson and Samuels var. americanus Rogerson and samuels and Eudarluca caricis (Fr.) O.Eriksson var. indica (Ramkrishnan) O.Eriksson comb.nov. and Tubeufia indica sp.nov. have been recorded as mycoparasites.
- xii) The species of Meliola Fries viz. M.piperae Thite and Miss S.D.Patil (HCIO 33672) published in Geophytopath, 13(1) : 124-125, 1983, has been revised by studying its type material and merged with M.stenospora Wint. var. major Hansford on the basis of the characters studied.
- xiii) Two species of a common rust mycoparasite viz. Eudarluca caricis (Fr.) O.Eriksson and E.indica Ramkrishnan, the perfect state of Darluca filum (Biv.) Cast. have been reported by Patil (1979) and Ramkrishnan, T.S. (1951) from Maharashtra and South India. Now these two species have been revised and their status has been changed as per the studies made by Ove E. Eriksson (1966 a) who considered these as a variety viz. Eudaluca caricis (Fr.) O.Eriksson var. indica (Ramkrishnan) O.Eriksson Comb. nova. on the basis of nature of stroma, septation and pigmentation of ascospores, therefore, Ramkrishnan's species is being considered as basionym and the

species reported by Patil (1979) is being treated here as a variety of Eudarluca caricis (Fr.) O.Eriksson viz. E.caricis (Fr.) O.Eriksson var. indica (Ramkrishnan) O.Eriksson.

- xiv) This thesis, thus consists of Floristic as well as taxonomic study.

This piece of work, the Taxonomical study of Ascomycetes fungi from this part of state within a short period of time, is well justified and provided a quite good and some rare and little known Ascomycetes fungi, which have been worked out and added some interesting taxa to the fungal flora of India.