REVIEW OF LITERATURE

REVIEW OF LITERATURE AND STATISTICAL

Butler (1918) who may be considered as Founder of Indian Mycology and Plant Pathology and published a classic book "Fungi and diseases in plants". Excellent and quite significant mycological work has been carried out in India mainly the fungi responsible for destructive diseases of crop plants, while the highly heterogenous class of fungi - the Ascomycetes was given little attention. Recently, several groups of Ascomycetes have been tackled by workers in India and many additions were made into the literature from the Indian collections.

Thind et al., have studied Discomycetes, especially Helotiales, Pezizales and Clavariaceae and Basidiomycetes, Polyporaceae of Mussorie hills from the Himalayas. Kar et al., studied Discomycetes from Eastern India and Pyrenomycetes of W.Bengal. Bose and Muller have contributed to the Ascomycetes of Himalayas. Narayanswamy and Ramkrishnan studied Powdery mildews of Madras. Rao Ramkrishnan and Chaudhery studied Ascomycetes of Hyderabad. Mukerji and Sethi (1970) studied family Chaetomiaceae and monographed the genus Chaetomium. Family Clavicipitaceae have been studied by Govindu and Thrimulachar (1963), Srinivasan (1963), Kulkarni (1963) and Mhaskar (1974). Marine Ascomycetes have been studied by

Das Gupta (1955) and Raghukumar (1973). Coprophilous Ascomycetes have been studied by Lodha (1971) of Rajastan. Soil ascomycetes have been studied by Mathur et al., (1962). Thind and Waraitch (1969) studied Xylariaceae of the Himalayan region. Subbarao, Subramanian and Kumbhojkar studied taxonomy and applied aspects of Yeasts.

Dymock (1853) was a first who reported Agaricus ostreaus from Maharashtra State. Later many workers like Dalgado, Theissen and Blatter described number of fungi occuring in this area. The original work started by European workers was well taken over by Indian workers. Most of the work carried by these workers is in the field of Plant Pathology, the pathogens of the cultivated plants. The first list of fungi of Maharashtra was published by Uppal, Patel and Kamat (1935) and was supplemented by Patel, Kamat and Bhide (1949). Kamat, Patwardhan, Rao and Sathe (1971) published list of fungi of the Maharashtra State, which includes 1281 fungi excluding Myxomycetes. This supplement was revised by Desai and Patwardhan (1974). The latest list of fungi of Maharashtra has been published by Bhide et al., (1987). Poona Agriculture College was established in 1907 and University of Poona in 1948 with late Prof.Mundkar an eminent mycologist and plant pathologist of country as the first Professor in Botany. Hindustan Antibiotics at Pimpri near Poona and establishment of the Maharashtra Association for

cultivation of Sciences by late Prof. Agharkar at Pune become the prime centres of mycological studies in the State.

The active work of mycology in the Maharashtra State has been carried by the keen interest of investigators. Tilak and Ramchandra Rao (1968) studied lignicolous ascomycetes. Patwardhan, Damle and Tare (1968) studied powdery mildews; Kamat, Seshadri and Pande (1974) studied and monographed Sphaeriaceous genus Phyllachora; Narendra (1973) studied coprophilous ascomycetes; Pande and Kamat studied Xylariaceae of Western ghats of Maharashtra; Patwardhan investigated extensively and concentrated on the Lichen flora of the Western Maharashtra; Thite and Kulkarni (1974) studied sooty molds of Maharashtra; Chavan, Kulkarni, Sathe and Patil contributed to the knowledge of the rust fungi; Mehta (1966), Mujumdar (1968), Deoray (1974) and Ursekar (1974) have studied soil fungi; Bhagwat (1968) studied cellulytic and coprophilous fungi.

Our school has also contributed much and investigated the different groups of the ascomycetous fungi by systematic exploration from this part of the State. Patil (1979) and Jagdale (1984) studied lignicolous forms; Chavan and Patil (1984) studied coprophilous ascomycetes. Patil and Pawar (1987) studied the foliicolous ascomycetes especially of the order Dothideales, Ghadge and Patil (1987) investigated the Discomycetous fungi from this region.

This clearly indicates that the area under investigation is quite rich as far as ascomycetous fungi are concerned and needs further exploration, collections and systematic survey which would provide a large number of the taxa which are not so far recorded or studied from this area. Eventhough this complex group of fungi has been extensively worked out but much is yet to know. This group as a whole also requires extensive revision because of its heterogenity and poor and eronous or incomplete records and reports from different parts of the world including also India. So far, there are 6082 generic names including nomina ambigua, dubia etc. belonging to more than 240 families of 46 orders (Eriksson and Hawksworths, 1987). Out of these known genera about 50% genera have been made invalid on the one or other reasons and are rejected. This clearly indicates that in taxonomy there is lot of confusion in understanding of this group of the fungi. This problem has been partially fulfilled by detailed and accurate study of the unknown taxa and also in known taxa in which there is a taxonomical doubts or uncertainity. Therefore, in the present work both these aspects have been kept in mind during the study of the ascomycetous fungi from this part of the state. The area under investigation provides quite varied and rare forms in different seasons due to quite favourable climatic conditions to the mycoflora. Therefore, some of the doubtful

taxa have been restudied and their correct identity have been confirmed. This piece of work is no doubt, the study of small region, in limited time, but provided quite interesting forms which were not known from this part of the country or to this country.

TABLE No.2 statistical Summery of the fungi studied

CLASS - PYRENOMYCETES

Order	Family	Genera	Genus NI	Genus NM	Genus NT	Species NS	Species NI	Species NM	Species NK	Species NT	Variety NS	Variety NI	Revision of Taxa	Additional Hosts record	Total Taxa
Erysiphales	Erysiphaceae	Cystotheca Berkeley & Curtis	-	-	1	1	-	-	-	-	-	-	=		1
		Uncinula Leveille	-	-	-	-	-	1	-	-	-	-	-		1
Meliolales	Meliolaceae	Appendiculella Hoehnel & Sitzb.K	-	-	-	-	-	-	1	-	-	-	-	1	1
		Asteridiella Mc Alpine	-	-	-	1	-	-	-	-	-	-	-		1
		Meliola Fries	-	-	-	-	1	-	-	-	1	-	1		3
		Ophioirenina Sawada & Yamamoto	1	-	-	-	-	-	-	-	-	-	-		1
Sordariales	Nitschkiaceae	Nitschkia otth & Fuckelex Karsten	-	-	-	-	1	-	-	-	-	-	-		1
Diatrypales	Diatrypaceae	Eutypa Tulasne	-	-	-	-	1	-	-	-	-	-	-		1
Phyllacho-rales	Phyllacho-raceae	Phyllachora Nitschkeex Fuckel	-	-	-	-	1	3	-	-	-	-	-	7	7
Hypocreales	Hypocreaceae	Heleococcum Jorgensen	1	-	-	1	-	-	-	-	-	-	-		1
		Hypomyces Tulasne	-	1	-	-	-	-	-	-	1		-		1
Clavicip-itales	Clavicipit-aceae	Hypocrella Saccardo	-	1	-	-	1	-	-	-	-	-	-		1

CLASS - LOCULOASCOMYCETES

Dothideales	Dothioraceae	Hypnotheca Tommerup	1	-	-	-	-	-	-	-	-	-	-	3	1
	Asterinaceae	Asterina Leveille	-	-	-	-	1	-	-	1	-	-	-		2
	Venturiaceae	Eudarluca Spegazzini	-	-	-	-	-	-	-	-	-	-	1		1
	Dimeriaceae	Wentiomyces Koodera	-	-	-	-	-	1	-	-	-	-	-		1
	Tubeufiaceae	Tubeufia Penzig & Saccardo	-	-	-	1	-	-	-	-	-	-	-		1
Orders	12 Families	17 Genera	3	2	1	4	6	5	1	1	1	1	2	11	26 Taxa

NI - New to India NM - New to Maharashtra State NT - New to Tamil Nadu State

NS - New to Science NK - New to Karnataka State.