

# INTRODUCTION

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The present investigation on "Discomycetous fungi" is mainly based on floristic and taxonomic study and confined to the South Western parts of Maharashtra State. The work on the family Geoglossaceae (Discomycetes) is scanty and not studied systematically except few workers. Therefore, it is presumed that there is an urgent need to investigate these fungi from the South Western districts of Maharashtra State and thus, a topic has been selected.

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Maharashtra is one of the major States in India and forms a part of the Western Zone of the country with an area 306-345 Sq.Kilometers. The State is divided into three parts viz. (i) Western Maharashtra, (ii) Marathwada and (iii) Vidarbha. The Western Maharashtra is further divided into three regions viz. Coastal Konkan, Ghats and Desh.

Geography, climate, vegetation etc. of the State have been described in detail by Arunachalam (1969) and Deshpande (1971).

The present investigation is confined to the South Western part of the Maharashtra and especially to the Western Ghats.

The area under study <sup>only</sup> includes Kolhapur district. Kolhapur district is extremely Southward of Maharashtra and situated between 15° and 17°N latitude and 73°E longitude. The total area of the district is 8257 Sq.kilometers.

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### Topography and Soil :

Physiographically the area under investigation can be divided into following three broad zones (i) The Western part, (ii) The Central Part and (iii) The Eastern Part.

I) i) The Western part : It receives heavy rainfall and is mountainous and is covered with lateritic soil. The pH varies from 4.5 to 6.5. The soils of hill tops and ridges, which are not covered by forests, are red to brownish-red, mostly eroded and shallow with good drainage and are with low percentage of phosphorus, Nitrogen and lime, but the soils of hill tops and ridges under forests are fertile and rich in humus,. However, the soils in the vallies are well supplied with Nitrogen and Potash and are fairly deep retentive of moisture.

ii) The Central Part : It receives moderate rainfall. These soils are brownish. The pH varying from 6.5 to 7.5. They are rich and fertile with excellent granular structure and well supplied with Calcium, Phosphorus and Potash but are poor in Nitrogen.

iii) The Easter Part : It receives precarious rainfall and covered with medium black soil; pH varying from 7.5 to 8.5. Fertile soil is rich of Phosphorus and Potash but is poor in Nitrogen.

II) Rainfall : Within a very short period of only three months from mid-June to mid-September the South-West Monsoon <sup>late</sup> brings almost the entire annual rainfall, which is as high as 6350 mm at Gaganbawada area in the West and minimum about minimum about 480 mm at far East of the area. The Monsoon months from June to September account for 90 to 95% of the annual rainfall. The months of October to December together receive 15 to 20% of the annual rainfall in the Eastern part. July is the wettest month with about 40% of the annual rainfall.

Table A : Showing the average rainfall in Kolhapur district.

Year	June	July	August	September
1985	720 mm	2205 mm	1285 mm	433 mm
1986	750 mm	2220 mm	1260 mm	425 mm
1988	87 mm	420 mm	239.6 mm	165 mm

III) Temperature :

The temperature exhibits a large range between winter and summer and as between day and night. In summer the temperature rises as high as 107°F during the month of April while in Winter, it goes down as low as 58°F during the months of December and January.

Table B : The temperature is given during the four seasons of the year 1985-1986 and 1988-1989.

Months	Seasons	:Mean maximum		: Mean minimum	
		:temperature		: temperature	
		: 1985-86	: 1988-89	: 1985-86	: 1988-89
May	Summer	37.2°C	36.5°C	22.9°C	11.9°C
July	Monsoon	26.7°C	27.3°C	21.2°C	18.4°C
November	Autumn	30.9°C	30.8°C	16.3°C	10.0°C
January	Winter	31.1°C	30.6°C	15.3°C	8.8°C

#### IV) Wind :

The prevailing wind directions is mainly westerly during March-May, though in the afternoon easterly winds occur on 50% of the days. The nights over the whole area generally cool.

#### V) Climate and climatic seasons :

The climate of the area is temperate especially in adjoining the Ghats. The year in respect of this area may be divided into three climatic periods as follows : hot weather period from March to May, rainy weather period from June to October and cold weather period from November to February.

#### VI) Vegetation :

The edaphic and climatic diversities lead to the development of different types of vegetation in this part of

the State. The types of vegetation in South-Western part of the Maharashtra State are as follows : (i) Tropical deciduous, (ii) Dry deciduous, (iii) Thorn and Shrub, (iv) Semievergreen, (v) Evergreen and (vi) Open grass lands or pastures. The vegetation type changes from locality to locality, due to varied ecological factors, which provide good opportunity for the growth of different types of fungi throughout the year. The varied vegetation pattern and agriculture, cool and humid weather of this part of the Maharashtra State provide good opportunity for the growth of many fungi. From the reports, large number of genera and species of fungi have been reported by many workers (Kamat et al., 1971; Bhide et al., 1987). It is found that along with many other plant groups, fungi are also quite abundant in this region.

The present study is concerned with the systematic investigation of the family Geoglossaceae. This is the first attempt to investigate the members of this family from this region and also the materials collected and studied by previous workers from this laboratory viz. Patil (1975-80), Jagadale (1984) and Ghadge (1986).