GENERAL INTRODUCTION

Studies in Indian Liverworts have received great attention in the past whereas Mosses remained neglected as far as their detailed studies are concerned. It is painful to state that even their correct identification in India is very difficult, owing to the lack of literature and illustrated accounts. It is more so in face of the fact that this country is rich in Moss flora. However some contribution in this branch are by Griffith (1842, 1849), Muller (1853, 1872), Mitten (1859), Dixon (1914, 1937), Brotherus (1924), Brühl (1931), Gupta (1933), Kachroo (1954), Moguchi (1956, 1958, 1969), Banerji & Sen (1957), Gangulee (1957), Narayanaswami & Lal (1957), Pande et al (1957, 1958), Chopra (1957, 1960), Chopra and Sharma (1956, 1958), Chopra and Bhandari (1959, 1960), Mitra & Allsopp (1959), Mitra et al (1959), Gangulee & Chatterji (1960), Bartram (1965, 1960), Lal (1961) and Foresan (1961). On the contrary lot of work on mosses in Europe, America and Japan are to be seen. Many important aspects such as study of Ecology, Physiology and Life-history of Indian mosses are still in its infant stage. The present worker has made an attempt to study some of these aspects in detail in case of some Indian Mosses. This work was undertaken with a view to investigate moss flora of different places in India as suggested by late Prof. Pande (1958). The places chosen for this type of study are Nainital, Pachmarhi and Sagar*. According to the nature of work and for the sake of convenience the work has been divided and represented in three major sections. The first section deals with the taxonomy, morphology and geographical

* Old spelling Saugor.
distribution of the mosses from Nainital, Pachmarhi and Sagar. A brief account of the climatic, edaphic and other factors affecting the development of moss vegetation has also been included here. In the section II some aspects of ecology and physiology of three mosses from Sagar viz. (i) *Bryum coronatum*, (ii) *Hyophila involuta* and (iii) *Erpodium mangiferae* have been given. Of these the first two are terrestrial and third is epiphytic. The methods employed for the detailed investigations both in the natural habitat as well as in laboratory under different conditions are also given.

In the case of *Erpodium* the epiphytic moss results of extensive field studies and the probable factors responsible for its growth and distribution have been given.

Section III covers the life history studies in all the three mosses mentioned above growing quite commonly at Sagar and its immediate suburbs. In this part the development of gametophore, their anatomical details, the development of sex organs and sporophyte and the morphology of the mature capsule have been included.