INTRODUCTION

Introduction

Bryophytes are non vascular plants generally reproducing by spore and vegetative mode. They are considered to be the pioneers that colonize terrestrial habitat from aquatic environment. They are the most primitive and simplest land plants and more common in humid areas. Water is an indispensable factor for completing their life cycle hence they are rightly termed as "Amphibians of Plant Kingdom". They do not possess cuticle and therefore can take up water over their entire surface. As a result, they obtain their nourishment directly from water. Due to the remarkable capacity to absorb water, bryophytes are also called "Resurrection" Plants (Daniels and Kariyappa, 2007).

Bryophytes are the second largest group of plants, with about 25,000 species distributed worldwide (Buck and Goffinet, 2000). About 2000 species of mosses, 816 species of liverworts and 34 species of hornworts are occurring in India (Dash and Saxena, 2009). The plants are distributed in Eastern and Western Himalayas, Central India and South India. The Indian subcontinent with its vast range of ecological and climatic diversity is the richest "treasure house" of bryophytes.

Bryophytes form an important and striking part of the cool and humid regions of Western Ghats. They are ecologically important and diversified plant communities that differ morphologically. They impart a lush greenery and verdant cover in every possible habitats like old walls, roofs, tree trunks, hill slopes, forest cover, lateritic brick work, various artificial substrates in and around hills and plateaus of Western Ghats (Daniels and Kariyappa, 2007).

The bryophytes are one of the neglected group of plants in India probably owing to their not so significant economic value and occurrence in inaccessible hostile habitats. However, they are ecologically highly significant elements of diverse ecosystems, such as habitat modification, nutrient cycling, maintenance of nutrient status of soil, primary productivity and many others. Inspite of this, their conservation has been neglected.

This group forms an important element in the biodiversity, especially in tropical ecosystems. Bryophytes are important in horticulture, medicines, soil conservation, rock and mineral builders, bio-indicator and material for decoration

(Pant, 1987). Bryophytes the pioneer invaders of barren hills, provide seed bed to other vegetation, retain moisture and add organic matter to make environment congenial for forest establishment. Bryophytes play a key role in the formation of natural biotic community. They are indicators of unpolluted environment in forest ecosystem and health of forests (Frego, 2007). Some of them also provide refuse to certain hibernating invertebrates and serve as food for several insects. Though they form the minor component of total biomass they play important role in nutrient cycle. They are immense use of phytoremediation studies.

Systematic studies on bryophyte flora of different localities have frequently perused in various parts of the world as well as in India. Taxonomic observations provide useful data on distribution, migration and ecology of symmetry and diversity of bryophyte.

Bryological communities belong to comparatively small, fragile and disturbed ecosystems. Furthermore, small size of individual plant increases their vulnerability due to human related activities, heavy deforestation, forest fire, tourist population, mass harvesting by professionals, other anthropogenic activities and grazing animals (Daniels and Kariyappa, 2007).

The floristic studies of bryophytes in Maharashtra are very fragmentary. These plants are fast vanishing form their natural habitats without being scientifically catalogued or studied. Due to ecological importance, sensitivity and vulnerability of bryophytes to changing environment, it is most essential to enlist bryophytes of a locality and revise it annually. The undisturbed habitats on Kas plateau harbour healthy population of bryophytes. However, till date we do not have any illustrated account of bryophytes from Kas plateau. This necessitated immediate floristic studies of this immense biological wealth before it is completely destroyed. With this aim and first step in this direction exploration of various natural habitats of Kas plateau were carried out during 2008-2009 to document the bryoflora.

Presently, Western Ghats is experiencing tremendous physiognomic changes. Due to rapid urbanization and pressures inflicted by the inexorable growth of human population, forest have succumbed to heavy deforestation, forest fires, landslide. pollution mass harvesting by professionals and other anthropogenic activities, Gene pool inherent in the Western Ghats is being lost at an alarming rate. Further the insurgency on various hill stations and plateaus has resulted into many fold increase

in mobile population of tourist and other related anthropogenic activities intensifying plant wealth depletion. Therefore, there is an urgent need to protect this unique flora of our fragile Western Ghat ecosystem, before it is destroyed.

The main aim of this work is to place on record the distribution of bryophyte from Kas plateau.