



## **BRYOPHYTE DIVERSITY IN EVERGREEN FORESTS OF BISLE GHAT REGION IN THE WESTERN GHATS, KARNATAKA**

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**Abstract**— Bryophytes are extremely good soil binders as they form large mats on forest floors and roadside cuts and hence control soil erosion. They form very good seed beds for seedlings and saplings particularly in evergreen forests. The objective of this study is inventorying the bryophyte members found in the Bisle Ghat region. The present study was carried out during June 2016 to October 2016. Regular and periodical visits to different sites of Bisle Ghat region were made during this period. Identification of the specimens was based on the gametophytic and sporophytic characters using the standard manuals and by referring the literatures. In the present study, we have collected 17 species of bryophyte. Of these, mosses comprise the major group next comes the liverworts. Most of the life forms of bryophytes in the Bisle Ghat region are hanging mosses, creeping thallus, leafy form, capsule bearing mosses etc. Rich flora during rainy season is highly distinctive and could be due to rich moisture and relative humidity. These investigations of bryophytes species are helpful in knowing the distribution in the study area and thus play an important role in their preservation and making us aware about their significance.

### **INTRODUCTION**

Bryophytes are useful to human beings as well as to other organisms and the environment in many ways. They are extremely good soil binders as they form large mats on forest floors and roadside cuts, thus controlling soil erosion. They are a good source of humus and hence a heaven for a number of soil-dwelling invertebrates like earthworms. They form a very good seed beds for seedlings and saplings particularly in the evergreen forests. They are very good indicators of environmental pollution. So far, 2489 taxa of bryophytes recorded from India, comprising 1786 species in 355 genera of mosses, 675 species in 121 genera of liverworts and 25 species in six genera of hornworts. 340 species as endemic of which 269 species are of mosses, 67 are of liverworts and 4 are of hornworts. (Dandotiya *et al.*, 2011). Many of the species of bryophyte found in Western Ghats. Western Ghats is a mountain range that runs parallel to the western coast of the Indian peninsula, located entirely in India. It is a UNESCO World Heritage Site and is one of the “hottest hot spot” of

biological diversity in the world. Bisle Ghat is the rain forest of the Western Ghats. The rain forests of the Bisle ghat favour the growth of the bryophytes. The objective of this study is to inventorying the bryophyte members found in the Bisle Ghat region. These investigations of species of bryophytes are helpful in knowing the distribution in the study area and thus play an important role in their preservation and making us aware their significance.

### **METHODOLOGY**

The study site is located in Sakleshpur taluk of Hassan district in Karnataka. The present study was carried out during June 2016 to October 2016. Regular and periodical visits to different sites of Bisle Ghat region were made during this period. The material has been collected from different localities. The mature plant samples were collected in clean plastic bags to establish their identity. The materials collected were subjected to detailed morphological examination. Identification of the specimens was based on the gametophytic and sporophytic characters using the standard manuals and by referring the literatures (Kashyap, 1929-1932; Chopra, 1975; Gangulee, 1985; Nair *et al.*, 2005.). These specimen were also identified in consultation with Dr. Gopalkrishna Bhat, Taxonomic research center, Poornaprajna College Udupi Karnataka and other knowledgeable taxonomists.

### **RESULT**

Bisle ghat region is rich in Pteridophytes. Most of the life forms of bryophytes in the Bisle Ghat region are hanging mosses, creeping thallus, leafy form, capsule bearing mosses etc. In the present study, we have identified 19 specimens of bryophyte species. Of these, mosses comprise the major group next comes the liverworts. Rich flora during rainy season is highly distinctive and could be due to rich moisture and relative humidity. All collected data have been classified and tabulated systematically by mentioning the scientific name, family name, nature of the habitat and habit of each specimen.