REVIEW OF LITERATURE

Review of literature

Schuster (1958) Worked on different aspects of bryophyte taxonomy. He prepair an outline of bryophyte classification. He classified bryophytes into two classes and six orders. Author prepair keys for Order, Sub-Order, Family and Genera.

Bapna (1962) Studied pathological aspect of bryology. Author studied some Fungi on *Riccia* species. According to the author fungi infecting *Riccia* species belongs to ascomycetes group

Fulford (1963) Worked on modern taxonomy of bryophyte and discovered the modern species concept of liverworts from Latin America. It was a major step towards modern taxonomy of bryophyte. For taxonomy not only Morphology or Anatomy were considered but also ecology, association, cultivation, physiological studies were also considered.

Bowers(1964) Studied a water soluble rapid , permanent mounting medium for bryophytes. Author formulated a new mounting medium (FAA) and technique for its use. This was important work in cytology in bryophyte.

Bird and Ogllvie (1964) Explored the Bryoflora of Alberta. Author reported 9 new bryophytes. Their ecology and geographic distribution were discussed.

Ehrle and Coleman (1968). Made another great contribution in taxonomy. Ehrle and Coleman have added 40 hepatics and 133 mosses from Livingston Country New York. Many taxa were new to local flora.

Solter and Dhale (1972) Added 6 species of hepatics to the flora of Pickle Spring Area Southeastern Missouri. Three of them *Caphalozia cannivens* (Dicks) spruce, and *Pellia endiviaefolia* (Dicks) Dum, were reported for the first time from Missouri. According to the author Misscuri represent considerable range of bryoflora.

Stringer and Stringer (1974) Studied bryophytes of Southern Manitoba. Stringer and Stringer studied ecology of bryophytes of coniferous forests in Birds Hill Provincial Park. Stringer and Stringer describe 4 bryophyte from the coniferous and mixed wood forest of Birds Hill Provincial Park Manitoba. According to the Stringer forest floor bryophytes appears to be more sensitive to different environmental factor than vascular species, thus their was great difference in terrestrial bryophyte strata.

Surie (1979). Commented on chemotexanomy of bryophytes. Surie discussed use of biochemical data of all level of bryophyte taxonomy. Surie suggested that biosynthetic evolution has taken place independently in several different group of bryophyte.

Smith (1979) Worked on an experimental approach to bryophyte taxonomy. According to Smith morphology, palenology fossil etc Contribute to evolution and phylogeny of bryophyte up to the generic level.

Clarke (1979) Studied spore morphology in relation to bryophyte systematic according to Clarke spore morphology have great potential contribution to the systematic in reorganization of higher ranking taxa such as genera and family.

Udar and Singh (1981) Reported a new species of the genus *Notothylas* Sull., *N. himalayensis* Udar *et* Singh, from India. The species showed remarkable difference in morphological and anatomical character from other species of genus *Notothylas*

Gardiner (1981). Described a bryophyte flora of Surrey. During this work author recorded the distribution pattern of bryophyte to indicate their frequency and to describe the habitats where they commonly found. Nomenclature followed by the author was from 4 th edition of the Census catalogue of British Hepatics and the mosses flora of Britain and Ireland

Jones (1990) Prepared an artificial key to the genera of African Hepatics. Key was based on the vegetative characters. This key has been revised and greatly enlarge to include all the genera of Hepatics

Asthana et al. (1994). Studied a rare Indian Liverwortes: *Schiffeneria hyaline* Stph. For correct identification and classification of the genus some advance technique like SEM of spores and elaters were used for first time

Kumar et al. 1994. Studied on the regeneration in *Riccia billardieri* Mont. et Nees, *Cythodium aureonitens* (Griff.) Mitt. Kumar et al. tested regeneration *Riccia billardieri* Mont. et Nees *Cythodium aureonitens* (Griff.) Mitt using 4 different condition *viz*,. Knop's solution, Half Knop's solution, water and soil extract. Kumar *et al* concluded that polarity is more in evolved Marchantiales than those having less different in organization.

Joshi (1995). Made the collection of different bryophyte from South West India. Joshi described 2 Classes and 15 Families of hepatics with 17 Family of mosses.

Sharma and Shrivastava (1997). Studied Distribution of Indian Lepidozzineae (Hepatiaceae). Sharma and Shrivastava studied 31 genera of Lepidozzineae out of which some restricted to one area or the other, while the rest were widely distributed within the country. East Himalayan territory is most suitable for about 90 % of the Lepidozzineae taxa. Some Lepidozzineae showed intercontinental distribution.

Awasti et al. (1999).Gave an account of the Indian species of genus *Lopholejeunea* (Spruce) schiffn.. Awasti recorded 10 species and 2 verities. Out of which two species were new to India.

Kumar et al,(2000). Describe the occurance and development of regenerates from the leaf cell of *H. haplometrium* and *Calobryum,* both *in vivo* and *vitro* for the first time in Indian bryology

Nath et al. (2000). Studied Role of bryophyte in soil management and rock binding. Nath discussed role of bryophyte in rock building, land conservation, mineral indication, slop formation, erosion prevention and their remarkable capacity to grow after sand burial.

Pande and Joshi.(2002). Studied Phytosociology, biomass and net primary production of bryophyte community growing on decaying logs in silver fir forest of Central Himalaya. Pande and Joshi examines species composition, Phytosociology, biomass and net primary production of Bryoflora growing on decaying loges. According to author maximum biomass was produced in rainy season and maximum net primary production was also high during rainy season.

Shrivastava and Verma (2002). Exploration of Liverworts Diversity on *Chincona* plantation, Dodabetta, Nilgiri Hills, India. Totle 13 species belonging to 2 orders. Jungermanniales and single species of order Metzergoniales were described by the author on *Chincona* plantation.

Shirke D.R. (2002)Described 3 classes of bryophytes with 2 orders 11families with checklist of bryophyte from Western Ghat.

Langer et al. (2003) Enlist 16 liverwortes and 1 hornwort from Jammu and Kashmir

Shaw and Renzagila (2004).Studied Phylogeny and diversification of Bryophytes. Shaw and Renzagila describe 3 bryophyte group (hornworts, liverworts and mosses) and phylogenetic relation. Shaw and Renzagila used multilocous, multigenome studies to resolve relationship between mosses and Liverworts. Shaw and Renzagila used single gene analysis to explain hornwort evolution.

Kumar. and Kazmi. (2004) Studied Bryophytes from Unchahar, Raebareli, U.P. Kumar. and Kazmi. describe 1 thalliod and 3 leafy forms of bryophyte from the study area

Dash and Singh.(2005) Recorded hepatics *Bazzania bidentula* (Steph.) Steph. As new addition to Indian Bryoflora.Species has been first time in India from *Dibang* valley district, U P

Srivastava and Srivastava (2006). Described new feature in *Cololejeunea producta* (Mitt.) Hatt. Those character include Dioecious nature of plant and presence of Sporophyte.

Nair et al.(2006.) Reported a preliminary account of Bryophytes of Chinnar wild life sanctuary (South India). Nair et al. reported 40 mosses 19 Liverworts and 1 Hornworts. Out of these 1 is new to mainland of India, 7 are new to peninsular India, and 18 were new to Kerla.

Singh and Singh (2006).Contribued to the Bryoflora of Great Himalayan National Park, Kullu, Himachal Pradesh Singh and Singh reported 11 species of genus *Porella.* Two of them were newly recorded to that area

T. pocs et al (2007) Recorded the liverwort (Marchantiopsida) T. pocs et enlist 33 hepatic taxa of which 5 were new to Whole India

Dey, and, Singh(.2008). Recorded *Lejeunea alata* Gottsche (Lejeuneaceae). Species was firstly reported in India from lower Dibabang Valley, District Arunachal Pradesh.

Srivastava and Srivastava (2008) Reported occurrence of a corticolous leafy bryophyte *Trocholejeunra infuscate* (Mitt.) Verd from the Champavat district of kumaun region in Western Himalaya. They report also show presence of gynoecia in *Trocholejeunra infuscate* which has not been reported by earlier worker

Tanwir et al.(2008).Enlisted Liverwort and Hornwort flora of Patnitop and it's adjoining areas (J and K),Western Himalaya, India. Tanwir et al (discussed distribution of 38 species belonging to 24 genera 17 families and 4 order from the study area.

Manju et al (2008). Studied bryophytes and their conservation of Kakkayam forest. Manju et al recorded 52 species of bryophyte including 28 liverworts and 24 mosses. Manju et al suggested that protecting the area , unique biodiversity of bryophytes can be preserved.

Manju et al (2008) Made some ecological observations on the bryophytes of Eravikulam national park South India. Total 126 bryophytes includind liverworts and mosses were studied out of which 39% of epiphyte, 27% were terrestrial, 12% saxicolous, 10%were both terrestrial and saxicolous,6% were epiphyte and saxicolous and 1% were epiphytic and terrestrial while 6% in all forms.

Gandhe (2008). Recorded a new Ascomycetes fungi *Didynella* belonging to family Pleosporaceae as parasite on the thallus of *Riccia himalayensis.*

Sofiya.(2008) Gave new chronological data were presented for 51 species of bryophytes from Bulgeria. 5taxa are liverworts belonging to families Cephalozeaceae Cephaloziellaceae Lophoziaceae Ricciaceae and Scapaniaceae 46 taxa of mosses were also reported.

Dash and Saxena (2009) Described bryoflora of Khandadhar hill rangs, Orissa India. Dash and Saxena enlisted 29 species of bryophytes ,23 liverworts, 4moss and 2 hornworts. Some species were suggested strongly to be conservsed agaist the threat of ongoinng mining activities in the study area.

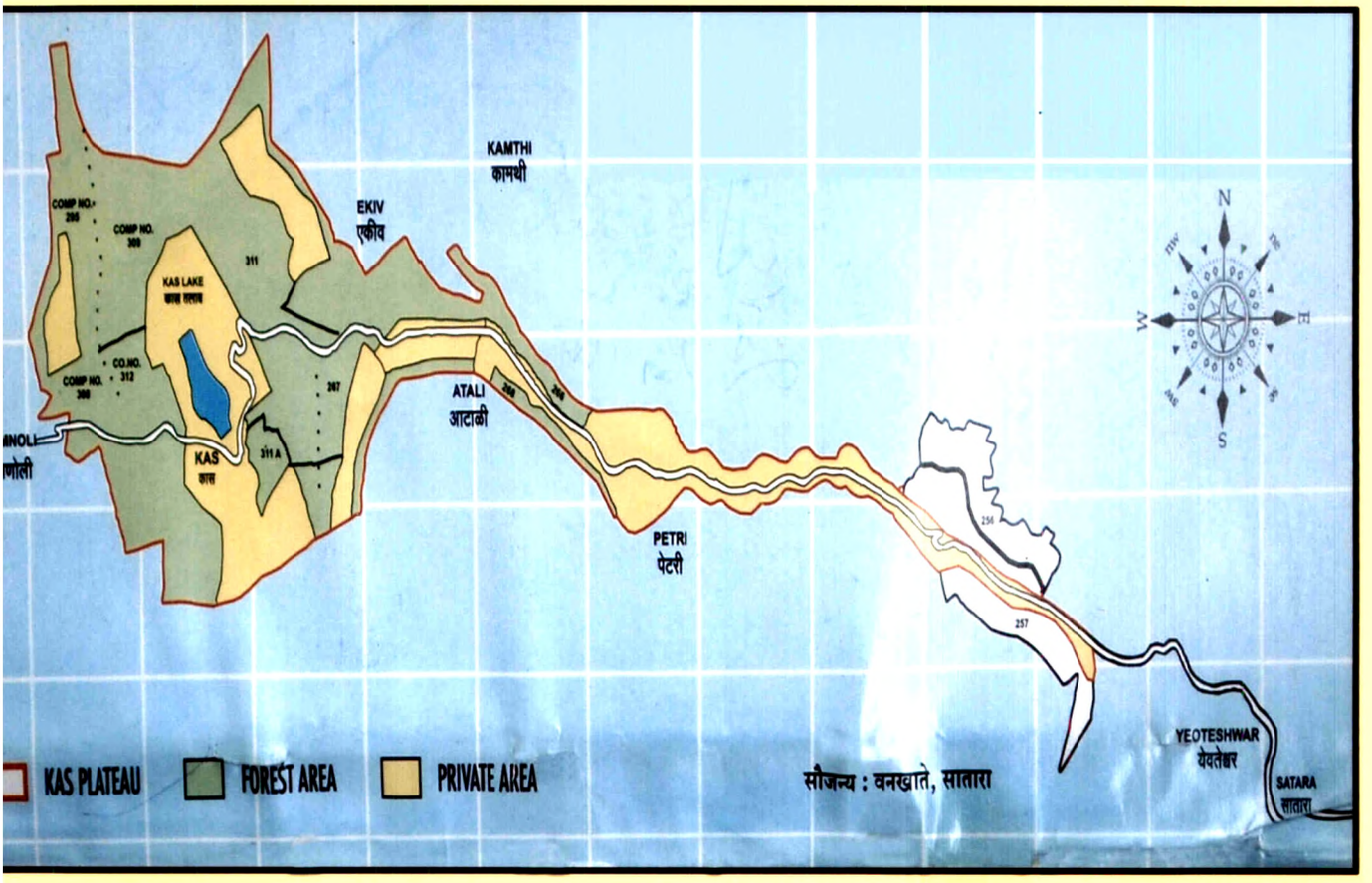
Manju, et al (2009). Described bryophyte flora of the alarm wildlife sanctuary in Western Ghats India is catalogued the first time . The catalogue consists of 116 taxa (89 mosses and 27 liverworts)

Awasti, et al (2010)Gave methods for *In vitro* propagation of the endemic and threatened Indian Liverwort:*Cryptometrium himalayense* Kash.

Chavan (2010). Gave an account of the taxa belonging to family Lejeuneaceae from Andaman Island. Totle 30 corticolous and folicolous species belonging to 12 genera are distributed over 3 subfamilies.

Sawant, U. J., Karadge, B. A. 2010. Reported 17mineral elements in 4 liverworts and 1 hornwort from Kolhapur District . The amount of iron and Silver were found to be high in these cryptograms.

Kas Map


KAMTHI
कामथी
EKIV
एकीव
KAS LAKE
कास तलाव
COMP NO. 295
COMP NO. 309
COMP NO. 308
CO.NO. 312
311
311 A
267
KAS
कास
ATALI
आटाळी
PETRI
पेटरी
254
257
N
E
S
W
YEOTESHWAR
येवतेश्वर
SATARA
सातारा
KAS PLATEAU
FOREST AREA
PRIVATE AREA
सौजन्य : वनखाते, सातारा