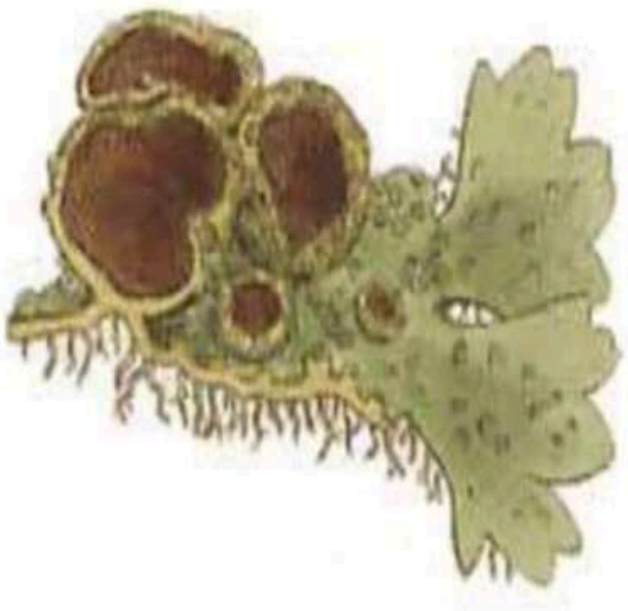
ECOLOGICAL AND ECONOMIC IMPORTANCE OF BRYOPHYTES

INTRODUCTION TO BRYOPHYTES

- **Bryophyte** is a traditional name used to refer to all embryophytes (land plants) that are non-vascular plants such as mosses, liverworts etc.
- The defining feature of bryophytes is that they do not have true vascular tissue. Although some do have specialized tissues for the transport of water, they are not considered to be true vascular tissue since they do not contain lignin.
- There are about 25,000 different species of bryophytes in the world today.
- Even though these plants are small in size, they are one of the largest groups of land plants and can be found almost everywhere in the world.



OCCURANCES OF BRYOPHYTES

TYPES OF BRYOPHYTES

- There are mainly three types of bryophytes. They are:
  1. Mosses
  2. Liverworts
  3. Hornworts

Ecological Important:

- 1. Peat formation
- 2. Food and shelter
- 3. Soil conservation
- 4. Pollution
- 5. Indicator of acid rain

1. Peat formation - Peat is brown dark colour spongy matter produce due to compression and carbonization by deposits and water .

Used in horticulture , making ethyl alcohol and illuminating gas .

2 . Food and shelter - Many animals makes use of bryophytes . Numerous animal eat bryophytes . May bird nest formation used to a vital part of different bryophyte

- 3. Soil conservation - Bryophytes form a mat and prevent soil erosion
- The enter wined moss stems and rhizoids bind soil particles firmly
- Hold large amount of water and reduce run off .

- 4. Pollution - sulfur dioxide is very damaging but some bryophytes are highly tolerant of sulfur dioxide pollution and examples of these are the mosses Funaria hygrometrica and Bryum arngenteum

- 5. **Indicator Of Acid Rain** - Mosses are good indicator of acid rain because they lack a protective epidermis and cuticle hence are most susspectible than vascular plants .
- For example Neckera crispa indicates high pH as like of acid rain .

Economical Important

- Source of fuel
- Preservative agents
- Medicinal used
- Ornamental plant
- House hold uses

- **Source of fuel** - Peat mosses are best suited for the production of mehtane , and peat is likely to become an important of fuel for production of heat , methane or elctricity in the future .

- **Preservative agents** - Bryophytes have a excellent power to absorb moisture and can act as good preservative agent

Tollund Man, found in Denmark, was preserved by the tannic acids of a peat

- **Medicinal uses** - help to cure rigworms , ash of moss is mixed with honey and fat to treat cuts, burn and wounds .
  - Liverworts are used to liver disease

a. Ringworm b.Athlete's foot c. Thrush

- **Ornamental plants** - Bryophyte have also been used for green house crops , putted ornamental plant and seedlings , and in garden soil .

- **Household uses** - The Himalayans also use mosses as insect repellents when storing food .
- Local mosses and liverworts are dried , made into a coarse powder that is sprinkled over grains and other goods to be stored in containers .