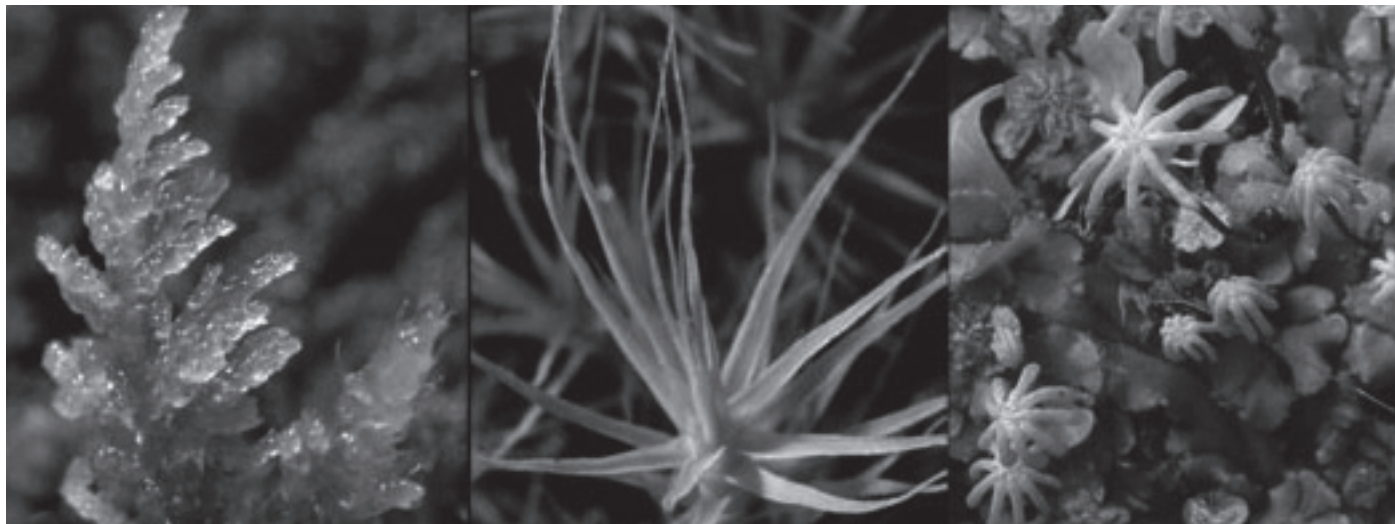


Mosses (*Bryophytes*)



What are they?

Mosses (*Division: Bryophytes*) are small plants that lack woody or vascular tissue. They require an environment temporarily saturated with water in order to complete their life cycle (Delgadillo, 2003a). They are the second largest group of green plants. They are divided into three groups: hornworts (*Class: Anthocerotopsida*), liverworts (*Class: Hepaticopsida*) and mosses (*Class: Bryopsida*).

They were among the first plant organisms to occupy the terrestrial environment. The name *briophyta* comes from the Greek *Brion*, meaning moss and the Latin *phyton*, meaning plant.

How many are there?

It is estimated that there are about 19,900 described species of mosses (CONABIO 2008). In Mexico, 980 species of mosses and about 500 liverworts are recognized (Delgadillo 1998, 2000, 2003a, b). Of the former group, 106 species (i.e.

19,900
species
worldwide

1,480
species in
Mexico

10.8%) are endemic to our country (Delgadillo, pers. comm. 2004).

Globally, the mosses are the largest group with around 12,800 species, followed by the liverworts, of which from 6,500 to 7,000 species are known.

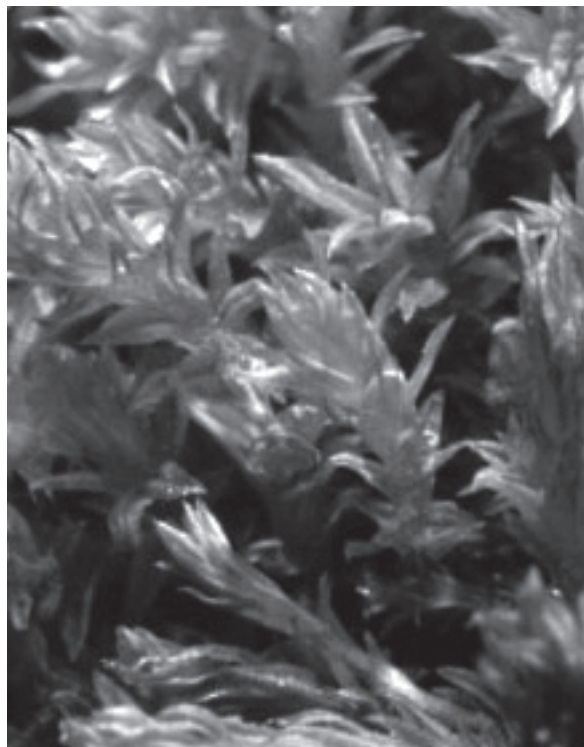
However, only about 100 species of hornworts are known.

Where do they live?

They live in a wide variety of environments, from high mountain to sea level, in rain forests or in dry areas. Often found in the wetter microclimates of these environments as they require water for reproduction.



Mosses (*Bryophytes*)



How are they?

They are generally small in size, and have a life cycle which includes two stages: the gametophyte and sporophyte, each with very different characteristics. Unlike in the ferns, the gametophyte (haploid) is the dominant stage in mosses. The sporophyte (diploid) is very small and short lived. The gametophyte has a small, often prostrate stem with small leaves arranged in a spiral. It also has rhizoids, through which they obtain nutrients.

How do they live?

Mosses form microenvironments of high humidity, since they retain water like a sponge and release it very slowly. For this reason, many micro-organisms and small arthropods depend on mosses. They are of great importance in the water cycle, because they store water and also prevent erosion.

How do we use them?

Mosses are collected as ornamentals, especially in the Christmas season to decorate nativity scenes, floral arrangements and decorative baskets.

In most cases extraction is done without management planning and is of high impact both to the populations of mosses, and the communities in which they live. Some mosses are used for their medicinal properties.

How can you help?

Avoid the purchase of mosses. The extraction of mosses requires authorization from SEMARNAT and a simplified management plan for non-timber forest products (Art. 55, Rules of the General Law on Sustainable Forestry Development). The Norma Oficial Mexicana (NOM-011-SEMARNAT-1996) establishes the procedures, criteria and specifications for the use, transport and storage of moss, spanish moss (*Tillandsia usneoides*) and moss fern (*Selaginella pallescens*).

Mexican Official Rules

