

PLANT MORPHOLOGY

Plant morphology is a field of study dealing with the external and gross internal structure of plant organs. Morphology intergrades somewhat with plant anatomy, which is the study of tissue and cell structure of plant organs. Morphology forms the basis of taxonomic descriptions and generally constitutes the most important data in determination taxa.

PLANT STRUCTURE

PLANT ORGANS

The basic structural components, or organs, of plants are delimited by and strongly correlated with their specific functions. Among the liverworts, hornworts, and mosses, these organs are components of the haploid gametophyte. The gametophyte of these taxa contains **rhizoids**, which are uniseriate, filamentous chains of cells functioning in water/mineral absorption. The basic body of the gametophyte can either be a flat mass of cells, termed a **thallus** (found in some liverworts and all hornworts) or a **shoot**, consisting of a generally cylindrical stem bearing leaves (found in some liverworts and all mosses).

It should be noted that the shoot systems of liverworts and mosses are gametophytic tissue. The major organs of vascular plants are sporophytic roots and shoots. **Roots** are present in almost all vascular plants and typically function in absorption of water and minerals. Roots consist of an apical meristem that gives rise to a protective root cap, a central endodermis-bounded vascular system, absorptive epidermal root hairs, and endogenously developed lateral roots.