

Short Communication on Impact Effect of Marchantia Polymorpha Plant

Fatimah Kattaf*

Department of Botany and Microbiology, College of Science, King Saud University,
Riyadh 11451, Saudi Arabia

Short Communication

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*For Correspondence

Fatimah Kattaf, Department of Botany and Microbiology, College of Science,
King Saud University, Riyadh 11451, Saudi Arabia
E-mail: fatima@kat.edu.sa

Marchantia polymorpha, could be a genetic transformation and a genome sequencing project have attracted attention to the species. Here I present an intensive assessment of the taxonomic status, anatomy and developmental morphology of every organ and tissue of the gametophyte and sporophyte on the premise of a radical review of the literature and my very own observations. Liverwort has been an issue of intensive study for nearly 200 years, and therefore the information summarized here offers a useful resource for future studies on this model plant. The common liverwort *hepatica* is an almost cosmopolitan species found round the human habitat in temperate regions. [1] Starting with Greek philosophers like Aristotle and Theophrastus, this species had been mentioned within the herbal literature long before modern plant taxonomic study was applied. The name 'liverwort' springs from the liver-shaped type of thalloid liverworts like *Marchantia*.

Bryophytes are characterized by the presence of the dominant plant body within the haploid gametophyte generation, an unbranched monosporangiate (having one sporangium within the terminal) sporophyte, and an absence of specialised conducting tissues containing lignin. The status of bryophytes because the oldest living land plants is widely accepted. Historically, three taxonomic bryophyte groups are recognized and now represent the three main divisions during this group: Marchantiophyta (liverworts), Bryophyta (mosses) and Anthocerotophyta (hornworts). Although liverworts have a leafy or flattened thalloid form, all mosses have a leafy form and every one hornworts have a flattened thalloid form. The leaves of the many leafy liverworts have two or more lobes and are arranged in three rows radiating from the stem, whereas the leaves of mosses are unlobed and typically spirally arranged. Additionally, the leaves of mosses typically have a prominent costa (or midrib), whereas those of liverwort lack one. The rhizoids of liverworts and hornworts are unicellular, whereas those of mosses are multicellular, consisting of one row of cells. [2]

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Marchantiaceae, including the genus *Marchantia*, may be a sister to the remaining families of Marchantiales. The *Marchantia* is characterized by presenting a multilayered complex thallus with an air chamber, ventral scales, two rhizoid types, gemma cups, stalked archegoniophore and antheridiophore, female receptacles with involucre, and sporophytes surrounded individually by a pseudoperianth. A fraction or most of those are vestigial or completely absent in other taxa of Marchantiales for instance, air chambers were independently lost a minimum of 3 times during the evolution of Marchantiidae.

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