

Overview of the Special Issue on Bryophytes

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Commentary

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DESCRIPTION

Bryophytes are an off-the-cuff cluster consisting of 3 divisions of non-vascular land plants (embryophytes): the liverworts, hornworts and mosses. They are characteristically restricted in size and like wet habitats though they will survive in drier environments. The bryophytes encompass concerning twenty plant species. Bryophytes turn out embowered procreative structures (gametangia and sporangia); however they are doing not turn out flowers or seeds. They reproduce via spores. Bryophytes are sometimes thought-about to be a paraphyletic cluster and not a monophyletic cluster, Life cycle like all land plants (embryophytes), bryophytes have life cycles with alternation of generations. In every cycle, a haploid flora, every of whose cells contains a hard and fast range of odd chromosomes; alternates with a diploid plant, whose cell contain 2 sets of paired chromosomes. Gametophytes turn out haploid gamete and eggs that fuse to make diploid zygotes that grow into sporophytes. Sporophytes turn out haploid spores by meiosis that grows into gametophytes. Bryophytes are flora dominant, which means that the lot of outstanding, longer-lived plant is that the haploid flora. The diploid sporophytes seem solely sometimes and stay connected to and nutritionally obsessed with the flora. In bryophytes, the sporophytes are invariably branchless and turn out one spore case (spore manufacturing capsule), however every flora will produce to many sporophytes right away. The plant develops otherwise within the 3 teams. Each mosses and hornworts have a plant tissue zone wherever organic process happens. In hornworts, the plant tissue starts at the bottom wherever the foot ends, and therefore the division of cells is pushing the plant body upwards. In mosses, the plant tissue is found between the capsule and therefore the high of the stalk (seta), and turn out cells downward, elongating the stalk and elevates the capsule. In liverworts the plant tissue is absent and therefore the elongation of the plant is caused virtually completely by cell growth. Liverworts, mosses and hornworts pay most of their lives as gametophytes. Gametangia (gamete-producing organs), archegonia and antheridia, are made on the gametophytes, typically at the ideas of

shoots, within the axils of leaves or hidden below thalli. Some bryophytes, like the bryophyte *Marchantia*, produce elaborate structures up-to-date the gametangia that are known as gametangiophores. Gametes are process and should swim from the antheridia that turn out them to archegonia which can air a distinct plant. Arthropods will assist in transfer of gamete. Fertilized eggs become zygotes, that be converted into plant embryos within the archegonia. Mature sporophytes stay connected to the flora. They encompass a stalk known as a seta and one spore case or capsule. Within the spore case, haploid spores are made by meiosis. This is distributed, most ordinarily by wind, and if they land in an exceedingly appropriate atmosphere will be converted into a brand new flora. Therefore bryophytes disperse by a mixture of swimming gamete and spores, in an exceedingly manner almost like lycophytes, ferns and alternative cryptogams.