


BRYOPHYTE PHYLOGENY POSTER

Systematics and Characteristics of Nonvascular Land Plants (Mosses, Liverworts, Hornworts)



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COLE, TCH., HILGER, H.H., GOFFINET, B. (2019) Bryophyte Phylogeny Poster
• hypothetical tree based on molecular phylogenetic data (2019)
• branch lengths do not express actual time scale
• position of many characters on tree unclear
• characters do not necessarily apply to all members of the clades
• phylogenies: Cox et al. 2010, Flores et al. 2010, Knoop 2010, Liu et al. 2019, Long et al. 2016
• characters: Hendrickson et al. 2010, Knoop et al. 2010, Lovelace et al. 2010, Lovelace et al. 2012
• abbreviations: G gametophyte, S sporophyte, AR archegonia, AN antheridia, CAP capsule
CY calyptra, PP parapophyllia, PPP pseudoparapophyllia, PS peristome, Ivs leaves
s.t. sometimes, usu. usually, + present, - absent, ~ some with some without, ? more or less
Special thanks to Harald Kürschner, Dieter Quandt, Juan Carlos Villarreal for valuable advice and consultation



Hornworts

thallus orbicular or strap-like, often rosettes
Nostoc in schizogenous slime cavities
(mostly ventral via mucilage clefts)
cilia 1-cell, 1-cell with pyrenoid
oil droplets +
water-conducting cells
AR single, embedded on dorsal thallus surface
blepharoplast: spine of 12 microtubules (imperforate),
inner membrane with 2 rows of 2 of same size, side by side
zygote division longitudinal, three-tiered embryo
sets -
S chlorophyllous, mostly horn-like,
growing from basal foot by indeterminate, intercalary meristematic activity,
columnella well or poorly defined
stomata -
pseudoelaters (mostly multicellular)
spore production continuous
lignans +, flavonoids -
ca. 200 spp

Vascular Plants see Tracheophyte and Angiosperm Phylogeny Posters