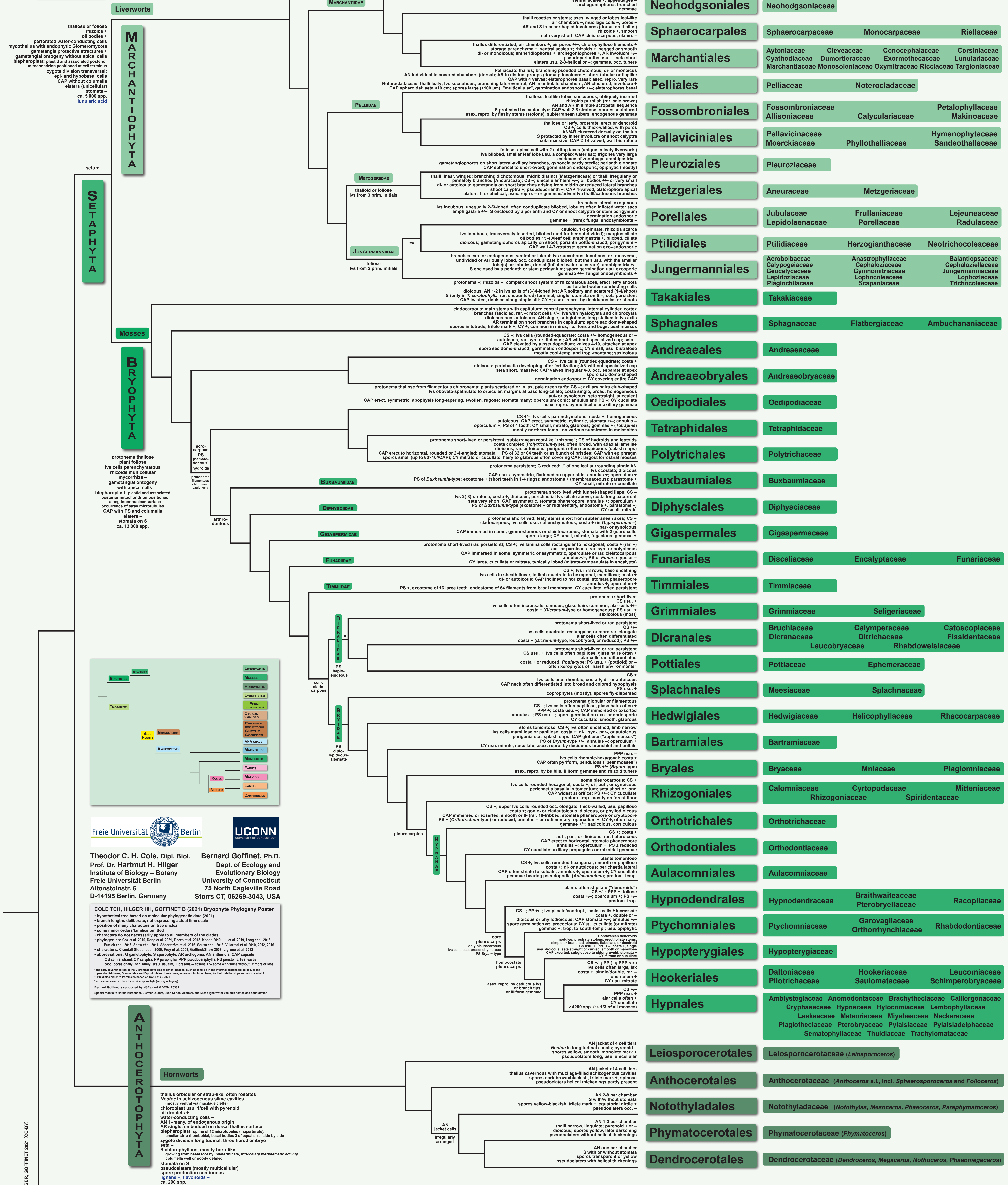


BRYOPHYTE PHYLOGENY POSTER

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



BRYOPHYTE PHYLOGENY POSTER
TRACHEOPHYTE PHYLOGENY POSTER
ANGIOSPERM PHYLOGENY POSTER



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COLE TCH, HILGER HH, GOFFINET B (2021) Bryophyte Phylogeny Poster

- hypothetical tree based on molecular phylogenetic data (2021)
- branch lengths deliberate, not expressing actual time scale
- position of many characters on tree unclear
- some minor orders/families omitted
- characters do not necessarily apply to all members of the clades
- phylogenies: Cox et al. 2016, Dong et al. 2021, Flores et al. 2018, Knopp 2010, Liu et al. 2019, Long et al. 2016, Pott et al. 2016, Shaw et al. 2011, Soderstrom et al. 2016, Sousa et al. 2018, Vilmarin et al. 2010, 2012, 2016
- characters: Caswell-Storck et al. 2009, Fey et al. 2009, Goffinet-Shaw 2008, Lippert et al. 2012
- abbreviations: G gametophyte, S sporophyte, AR archegonia, AN antheridia, CAP capsule
- CS central strand, CY calyptra, PP paraphysis, PPP pseudoparaphysis, PS peristome, lvs leaves
- occ. occasionally, rar. rarely, usu. usually, ± present, – absent, + some with/without, ± more or less

* the early diversification of the Dicranales group fits to other findings, such as families in the informal pseudoparaphysis, or the pseudoparaphysis. Scleroblasts and Trichoblasts arise through an actinocytosis, but their relationship remains uncertain.

† indicates sister to Funariales based on Dong et al. 2021

• character used 1. See for terminal species being rechecked

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Vascular Plants see Tracheophyte and Angiosperm Phylogeny Posters