



# Advanced Bryology: Taxonomy & Microscope Techniques for Moss Identification

August 2–8, 2026

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Join us for a moss microscope boot camp! Learn the skills to make species ID easier in this intermediate/advanced seminar for advancing laboratory skills in the classification and microscopic identification of bryophytes, primarily mosses. Focus will be on keying specimens, morphological terminology, and detailed tutorials on the essential but nuanced dissection and microscope techniques. Lectures will cover (1) key diagnostic traits and evolutionary relationships of ~30 families and over 40 genera from the local bryoflora of Maine, (2) the dynamic and challenging realm of moss taxonomy and classification, (3) the best online identification resources, (4) effective strategies beyond dichotomous keys for working with difficult or ambiguous specimens, and (5) best practices for creating long-lasting herbarium-quality collections for personal or professional herbaria. Lab time will emphasize (1) keying specimens to species using multiple online and print resources, (2) mastering dissection and microscopy techniques (e.g. stem and leaf sectioning, gametangia, tubers, stomata, peristomes), and (3) practicing an efficient workflow that includes photographing specimens during iterative dissection and microscopic steps to build high-quality images that can be shared with online communities for collaborative species determination. Students will spend five or more hours a day in lab, complemented by two field trips to diverse habitats to collect fresh material, though participants are welcome to bring specimens from other regions to study. Prerequisite: some prior experience identifying mosses with or without a microscope (email instructor inquiries on preparedness). Join us for a challenging but rewarding journey into the miniature but mighty world of mosses!

**Theresa Clark** ([theresaannclark@gmail.com](mailto:theresaannclark@gmail.com)) is a bryophyte ecologist and educator originally from Maine, where she fell in love with bryophytes during an Eagle Hill seminar in 2004. During her M.Sc. (Northern Arizona University), she produced a moss flora and ecological analysis of bryophytes in the Grand Canyon. She specialized in arid land moss ecophysiology during her PhD (University of Nevada, Las Vegas), studying moss resiliency to climate change. As a postdoc at the University of Minnesota, she studied functional trait ecology of Utah canyon mosses. She has contributed to several other moss floras (e.g. in Costa Rica and the Shawangunk Mountains of NY) and offers regular moss outreach events and workshops for children and adults alike. When not “mossing”, she teaches biology at St. Catherine University, in St. Paul, MN. See more about her research & past workshops at <https://www.mossesinmotion.com/>.