



# LICHENS, BIOFILMS, AND STONE



2023 Eagle Hill  
Natural History  
Science Seminars  
on the coast of  
eastern Maine

**Instructor: Judy Jacob & Michaela Schnull**

**When: August 6 - 12, 2023**



Maine's rocky shorelines and inland outcroppings are rich with diverse lichen and biofilm covers. Grave markers of local granite, and marble, slate, and sandstone from other New England states and foreign countries host lichens and biofilms. In this seminar, we will study the physical, chemical, and ecological relationships between lichens, biofilms, and stone.



Lectures will cover basic lichen morphology and species identification; biofilm morphology; the role of lichens and biofilms in the environment; basic geology; the history of stone quarrying, finishing, and construction; and the history and contemporary practices of stone preservation. Field trips are planned for forest and shore environments, a granite quarry, a gravel pit, and several cemeteries. We will examine and identify lichens, biofilms, and stones in the field and in the laboratory. The interactions between lichens and biofilms, and to what extent lichens and biofilms protect or harm stone surfaces from weathering, will be discussed. As a class project, participants will compile a checklist of the lichen species found during field trips.

We expect participants to represent a wide variety of disciplines and avocations; the pursuit of individual interests will be encouraged. While prior knowledge of lichens, biofilms, or stone will be useful for this seminar, it is not necessary.



**GENERAL INFO**

**CALENDAR**

**APPLY**



## about the instructor

**Judy Jacob** ([judyjacob@gmail.com](mailto:judyjacob@gmail.com)) is a Senior Conservator with the National Park Service, Northeast Region, in the New York City Field Office. She works primarily on stone monuments and masonry buildings: evaluating conditions, preparing preservation plans, and executing stabilization and repair treatments. She is currently working on a study examining biofilms and white marble.

**Michaela Schnull** ([mschnull@oeb.harvard.edu](mailto:mschnull@oeb.harvard.edu)), PhD., is a lichenologist and the Director of Collections at the Harvard University Herbaria. Her research interests include lichen ecology, biodiversity, and systematics. She has taught classes in plant microscopy, plant identification, and lichens and air pollution.