



2015 Eagle Hill Fall Weekend Workshops . . .
. . . on the coast of eastern Maine

INTRODUCTION TO LICHENS

October 23–25, 2015

This introductory workshop is designed for undergraduates in the biological sciences, people involved in natural history inventory work and interpretation, and for teachers or anyone whose appreciation of the outdoors has ever excited their curiosity about these attractive and intriguing organisms. The seminar will also provide a solid foundation for those contemplating more advanced study. The basic structure, life history, and ecology of lichens will be covered in formal lectures and discussions. Field trips to a variety of habitats will introduce these organisms in their natural settings where students will learn to recognize common lichen genera, describe their macro- and microhabitat preferences, and learn basic collection techniques. Lab work will focus on the identification of representative lichens and the identification and curation of student collections. The goal of the workshop is to provide participants with the confidence, basic knowledge, and skill to pursue further study of lichens on their own. No prior experience in identifying lichens is needed. (Lab fee: \$40 including lab kit)



about the instructor

Dr. Fred Olday (folday@gmail.com) has taught botany, chemistry, and soils at University of Massachusetts Lowell and at College of the Atlantic in Bar Harbor, Maine. Following his retirement from the Maine wild blueberry industry, he has returned to College of the Atlantic where he presently teaches courses in bryophyte and lichen biology. He spends as much time in the outdoors as possible where he divides his time between hiking, trail clearing, and becoming more familiar with the local bryophytes and lichens.

For more information about the 2014 Eagle Hill Fall Weekend Workshops and to register, visit <http://eaglehill.us/fall-workshops> or contact Marilyn at: marilyn@eaglehill.us / 207-546-2821 ext 1.

Introduction to Lichens
October 23 - 25, 2015

Dr. Fred C. Olday
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(207) 483-4023

Class limit - 14 students

Daily meeting times – Saturday from 8:30AM to 12:30PM (lunch is at 12:30PM), and 1:30 to 5:30PM (dinner is at 7:00PM). From 8:00PM onwards Saturday evening is optional, though most participants might like to spend a few hours in the classroom after dinner working on their collections. The same schedule will be adhered to on Sunday, except the afternoon class will meet from 1:30 to 4:30PM to allow participants sufficient daylight travel time to return home.

Activities during the weekend generally combine intensive field studies and follow-up work in the lab accompanied by lectures, discussions, and individual help by the instructor. Carpooling in student vehicles will be necessary for field excursions where vehicle use is required.

Tentative Schedule for the Weekend.

Friday, October 23

Afternoon to early evening arrival

Dinner at 7:00PM

Evening orientation – Introductions; participants' interests, experience, and expectations for the workshop.

Saturday, October 24

Morning – Lecture: What are lichens? Lichens as fungi which have discovered agriculture—relationship of mycobiont to photobiont. Chloro- vs. cyanolichens. Macro- vs. microlichens. Vegetative and asexual reproductive features of lichens. Lab: Getting organized; resources—literature, websites; instructor demonstration of microscope technique; use of dichotomous keys; begin group keying of macrolichens. Field Trip (Eagle Hill & vicinity): Use of hand lens; macroscopic features of lichens; ecology and substrate specificity.

Afternoon – Field Trip (Tunk Mt. & vicinity): Introduction to collecting techniques and field notes. Collecting will focus on lichens from a variety of forest ecosystems, including a northern white cedar swamp, hemlock-northern hardwoods, and upland spruce-fir forests. Special Lab: Sterile crusts; group keying of a sterile crust.

Evening – Lab: Begin keying of personal lichen collections.

Sunday, October 25

Morning – Lecture: Sexual reproductive features of lichens. Ascolichen life cycle. Special Lab: Fertile crusts; group keying of a fertile crust. Continue keying of personal macro- and microlichen collections.

Afternoon – Lab: Continue keying lichen collections. Review field notes, packet, and label specimens from the weekend's workshop. Wrap-up and prepare for late afternoon departure.

What to Bring:

Items to purchase in advance and bring with you, if you do not already have them:

Bausch & Lomb 10X Hastings Triplet hand lens, or equivalent. Available from Kooter's Geology Tools (<http://www.kooters.com>), or, to order by phone, call 1 (888) 383-5219.

The Macrolichens of New England by James W. Hinds and Patricia L. Hinds. New York Botanical Garden Press (2007). Available from Amazon.com or NYBG Press. Order well in advance.

Other supplies and equipment to bring: a spray bottle (as sold for misting plants), sturdy sheath knife, cotton pillow case, stiff 1-1/2-inch putty knife ("Hyde" #02150 is ideal), ultra-fine point "Sharpie" permanent marking pen, rain gear, umbrella, hiking boots, hat with visor or broad brim, daypack, water bottle, notebook, pencils, shoebox to store your collections in, and any lichen references you may have and are likely to be working with after the course. A laptop computer is also helpful if you have one.

To be Provided: An identification kit (includes fine-tip forceps, dissecting needles, slides, coverslips, razor blades, water bottle, pipet, chemical reagents, micro-pipets, wax block, ruler, and tray).

Lab Fee: Covers the cost of the identification kit which participants may take home with them following the workshop. \$40.