



Mountain Lake *Echoes*

 UNIVERSITY of VIRGINIA

Produced by the University of Virginia's Mountain Lake Biological Station mlbs.org

Science Writing: Creative Approach to Biology and Ecology

by Hannah Rogers, University of Virginia



Writing is fundamental to science. Practitioners routinely produce texts during the research process and to communicate results to peers and publics. This intensive three-credit course is designed to improve writing skills, both for use in specialist knowledge communities and in popular contexts. It will be held from May 26-June 7, 2015 in conjunction with MLBS's ArtLab program and will count toward the Arts & Science writing requirement.



The field research station at beautiful Mountain Lake provides the setting. In this inspiring environment, students will create written works ranging from communication articles that address on-site science programs to poems about the experience of observing a particular organism to essays on landscape impressions. Last year's students wrote poems about a meteor shower, flash fiction on the American

Chestnut, science communication articles on parasite research, and essays on the history of Mountain Lake's development that drew from conversations with scientists and residents. The course is designed to emphasize patterns of writing so that students will be able to duplicate good practices (including drafting, peer editing, source research, and radical revisions) beyond the course.

This year's course will introduce a variety of writers who were inspired by environmental topics and consider the observations writers have made about the natural world. Different contexts call for different kinds of writing, and so our survey will include biographies of scientists, the poetry of William Wordsworth and Mary Oliver, and the essays of Rachel Carson, Henry David Thoreau, John McPhee, and Wendell Berry. To round out full days of hiking, reading, and writing, the class will view and discuss a series of films on ecological topics open to all at the station. In this manner, the class will explore what writing can tell us about the environment and the way society perceives and values the natural world.



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Upcoming Events

REU Program
May 26 - July 31

Summer 2015 Courses
Session I: May 26 - June 12
Session II: June 15 - July 10
Session III: July 13 - 31

Summer Seminar Series
Tuesdays and Thursdays
8 p.m. at Lewis Hall Auditorium
Begins May 28

Walton Lecture

July 4th Festivities

Triathlon

ArtLab and Lucille Walton Fellow Presentation
July 12 - 25

Open House
July 18

View our web calendar for up-to-date announcements.



From the Director

I've been traveling a lot this winter and spring giving research seminars at several universities and always take the opportunity to give a short "infomercial" about Mountain Lake. I only spend a few minutes talking about the courses and programs, but with a few pictures of recent summers and a quick story or two about what goes on in on the mountain, I never fail to get a few people come up afterwards for more information. Often they're students interested in the REU program or grads looking for a place to conduct some field work, but sometimes faculty interested in teaching a class or establish a research program come through. There is no advertising as effective as the having the people who have experienced MLBS talk about it, so I encourage you all to talk it up whenever you have an audience.

One of the most exciting bits of news from the winter is that NSF has elected to fund the MLBS REU program for another five-year period! This grant will extend the program into 2020, just shy of 30 years running. As those of you who have been around the REUs know, this is an exceptional program, and it is especially gratifying that NSF and the reviewers of our many proposals have been able to recognize the quality of the students and the program we offer. We have another bumper crop of excellent applicants that mentors are sorting through right now, winnowing down the list to the REUs that will join us for the summer. Kudos go out to Eric Nagy, who put together another excellent proposal to keep our program zipping along.

This year's annual giving appeal featured a stunning image of a luna moth illuminated on one of the lawn path lights that was taken by Hazel Galloway. Whether it was due to Hazel's photography or the general generosity of past Mountain Lakers, we are pleased to report that giving was up 53% from last year. Donors have once again provided enough support to hold the annual Walton Lecture (stay tuned for details), as well as targeted donations to support station stays for graduate and undergraduate students. Many many thanks to all who were able to help us continue to share the experience.



Butch Brodie

News & Notes

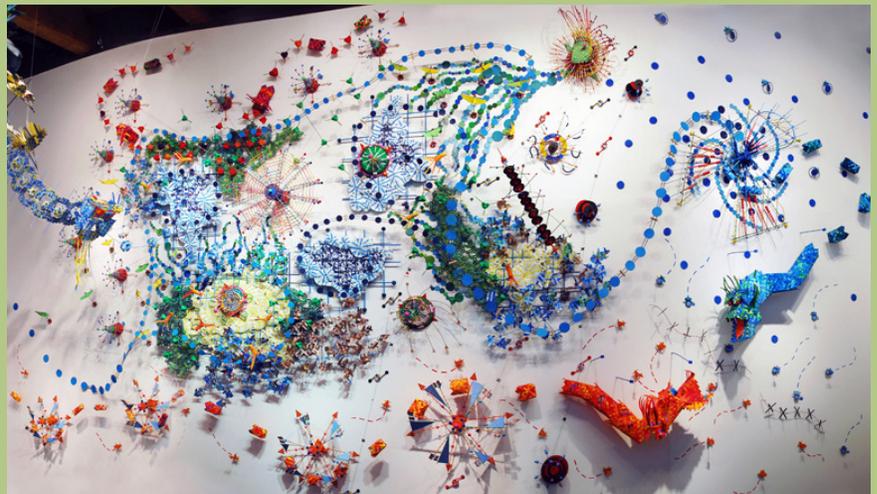
REU Grant Renewed

The National Science Foundation has awarded MLBS a \$553K grant to continue its summer REU-Site program for five more years. The REU program has run continuously since 1993. In those 22 years it has served 253 students.



ArtLab 2015

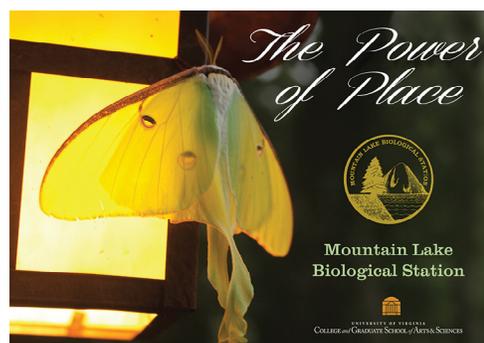
This year's ArtLab Lucile Walton Fellow will be Nathalie Miebach. Miebach's work translates and interprets scientific ideas and data in three-dimensional woven sculpture. Five other nationally recruited Artists-in-Residence and six UVA art students will join Miebach at MLBS July 12-25. ArtLab work will be featured at the Station Open House July 18. ArtLab will also feature its writing course again this year - Creative Approaches to Biology and Ecology.



Changing Waters, by Nathalie Miebach

www.nathaliemiebach.com
Data, reed, wood, rope, paper
30'x20'x1', 2011

Changing Waters looks at the meteorological and oceanic interactions within the Gulf of Maine. Using data from NOAA and GOMOSS buoys within the Gulf of Maine, as well as weather stations along the coast, I am translating data that explores the seasonal variations of marine life by looking at the interactions of atmospheric and marine data. Elements of the rich New England fishing history are also included. This large-scale wall installation plots information through the geographic anchors of a map of the Gulf of Maine.



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You can support the programs at Mountain Lake Biological Station by visiting our website.

All donations are tax-deductible.

mlbs.org

Student Corner

by Corlett Wood, University of Virginia

I've spent a quarter of the summers of my life at Mountain Lake Biological Station, and I'm still not ready to leave. I came to MLBS in the summer of 2008 with an English degree and an untested interest in scientific research. The fact that I applied to graduate programs in evolutionary biology the following fall speaks to how formative my experience was. I've returned every summer since for my dissertation research.

Mountain Lake has converted me into a whole-hearted believer in the importance of community in science. I'm indebted to both my mentors and my students for transforming me into a biologist over the seven years I've been at the station. One of the most fulfilling parts of my entire graduate career was mentoring students through NSF's Research Experiences for Undergraduates program at MLBS. My students were a constant source of renewal for my own love of science and their questions pushed me to dig deeply into foundational evolutionary and statistical concepts. Some of my favorite parts of my dissertation are the result of their contributions.



Ganoderma tsugae, a wood-rotting fungus.

Because it is so supportive, MLBS was the perfect place to learn how to fail—an indispensable skill in field biology, which I am convinced is governed by Murphy's Law. My best-laid experimental plans crumbled in the field more times than I care to admit. When they did, I relied on the collective experience, wisdom, and natural history knowledge of the station community to solve the problem. I've wrestled with all steps of the scientific process over meals at the dining hall, around a bonfire, or on the porch of one of the station cottages with my advisors, labmates, and friends.



Corlett searches for her study species, forked fungus beetles (*Bolitotherus cornutus*).

The community that I've found at MLBS extends beyond the physical boundaries of the station. Mountain Lake is something of a hub for evolutionary biologists. I've been lucky enough to share my work with internationally renowned biologists that come to the station through the Walton lecture series. At conferences in places as far-flung as Oklahoma, Utah, and Ontario, I've bonded with more people than I can count over our shared experiences at Mountain Lake. I'm determined to seek out similar academic communities as I move onto a post-doc. Mountain Lake has taught me that I'll be a much better scientist for it.



A group of forked fungus beetles (*Bolitotherus cornutus*)



The "Beetle Crew" returns to the station after a day in the field.



MLBS researchers at the Wind Rock overlook at sunset.



Corlett Wood is a PhD candidate at UVA and an integral part of the MLBS community. After completing her degree this spring, she will head to the University of Toronto for her post-doc in John Stinchcombe's lab (1995 MLBS REU), where she will study the evolution of environmentally responsive phenotypes in plants.



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2015 Summer Courses *3 Credits*

Summer Session I (May 26 - June 12)

Plant Conservation and Diversity: Bioinformatics, Systematics, and Field Techniques

Zack Murrell, Appalachian State University

The extraordinary diversity of the southern Appalachians will serve as a backdrop to explore the world of plants. We will visit unique and wide-ranging regional mountain habitats to study species assemblages and biodiversity. Management activities of state and federal agencies will be examined. We will critique contemporary views of the most effective conservation units (individual, population, species, family, habitat, etc.) and methods.

Field Herpetology

Colleen Ingram and Laurence Frabotta, University of Virginia

MLBS sits on the divide between the Atlantic and Mississippi drainages of the Appalachian Mountains, a hotspot for salamander biodiversity. We will explore the natural history, taxonomy, distribution, ecology, conservation, and diagnostic characteristics of Eastern North American amphibians and reptiles. We will visit diverse local habitats, using a variety of methods to locate, identify, and survey aquatic and terrestrial herpetofauna.

Science Writing: Creative Approaches to Biology and Ecology, a short ArtLab Course

(May 26 - June 7)

Hannah Rogers, University of Virginia

Writing is fundamental to the practice and appreciation of science. We write about biology and nature to explain the world and teach each other. This course trains writers to communicate broadly with specialists and citizens. We will be inspired by the environment at Mountain Lake and other prominent nature and science writers (eg. Wordsworth, Oliver, Cole, Thoreau, McPhee, Berry) and use the experience to produce creative written works.



Summer Session II (June 15 - July 10)

Hormones and Behavior

Caitlin Gabor and Andrea Aspbury, Texas State University

Hormones alter the development and expression of animal behavior. Behavior in turn changes the effects of hormones. We will take an evolutionary approach in exploring the causation and mechanism of hormone-mediated behaviors. We will use endocrinological techniques to examine behavior and hormone variation in wild populations. Students will help design and conduct a class research project with the goal of publishing our results.

Field Entomology

James Wagner, Transylvania University

Insects account for 95% of all animal species on Earth and are integral to the health of natural and agricultural ecosystems. Students will learn to recognize major orders of insects, know their natural history and role in the environment. We will survey aquatic and terrestrial habitats and make synoptic collections of the great taxonomic diversity of insects in the southern Appalachians. Students will learn proper museum preservation techniques.

Summer Session III (July 13 - 31)

Field Methods in Wildlife Ecology

Eric Liebgold and Tami Ransom, Salisbury University

An introduction to field research methods for measuring and monitoring animals with an emphasis on testing biological and wildlife management hypotheses. We will survey small mammals, birds, reptiles and amphibians. Students will learn sampling designs, protocols, and types of studies. Exercises will include surveying, trapping, marking, and measuring animals. Skills learned will be used in hypothesis-driven group projects.



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