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ATMOSPHERIC SCIENCES RESEARCH CENTER

Falconer Lectures

Summer 2023



Whiteface Mountain Field Station
110 Marble Mtn. Lane
Wilmington, NY 12997



Tuesdays Biweekly
July 11- August 22
7:00 pm



Whiteface Mountain
Field Station
Wilmington, NY

Free to the public

JULY 11 ARRIVE 6PM FOR MEET-N-GREET

ASRC Whiteface Mountain Field Station Open House

Scott McKim, Science Manager, ASRC Whiteface Mountain Field Station

Paul Casson, Operations Manager, ASRC Whiteface Mountain Field Station

Mark Beauharnois, Senior Programmer/Analyst and Common Ground in the Clouds Program Coordinator, ASRC Whiteface Mountain Field Station

Join us for an open house to showcase the important environmental monitoring that is done at the field station by Science Manager, Scott McKim. We will also have informational displays highlighting our “Common Ground in the Clouds” educational outreach. Weather permitting, we will conduct a tour of the New York State Mesonet field station, National Acid Deposition Program (NADP) site, Clean Air Status and Trends Network (CASTNET) site, and the Department of Environmental Conservation (DEC) air monitoring trailer. The tour will be conducted by our Science Manager, Scott McKim and Operations Manager, Paul Casson.



JULY 25

Ground Layer Functional Ecology Across the Montane Temperate-Boreal Climate Gradient

Leah Prudent, M.S., Department of Environmental Biology, SUNY College of Environmental Science and Forestry

The ground layer, or understory, can contain up to 90% of plant species diversity of the forest and varies with elevation (climate) and canopy cover, but most work on forest ecology and climate change focuses only on the overstory (trees). And while species diversity is important, functional diversity can illuminate key links between plant distributions and ecosystem processes across climate gradients. This talk will describe ground layer functional trait research conducted across elevational gradients on 5 mountains across the Northeastern US, and show how functional diversity in the understory can relate to ecosystem dynamics in a warming climate.

AUGUST 8

Completing Adirondack Park: Making the East's Grandest Park a Global Rewilding Success Story

John Davis, Rewilding Advocate, Adirondack Council

Adirondack Council's rewilding advocate John Davis will present a slideshow showing how we have largely succeeded but also what we must still do to realize the potential of New York's Adirondack Park as one of the world's first and greatest experiments in returning the land to wildlife and wildlife to the land. Davis, who also serves as director of The Rewilding Institute, will talk about the wild creatures who have recovered and those who have not yet returned, and will show how Adirondack Park can be kept viable thru wildways to surrounding wildlands and through coexistence between the people of the Park and the wildlife of the Park.

AUGUST 22

The Atmospheric Organic Carbon Cycle: From Air Quality to Climate

Chris Lawrence Ph.D. Candidate, University at Albany's Atmospheric Sciences Research Center

Organic carbon is an essential building block for life, forming a vast array of complex molecular structures that exist in virtually all environments including cities, forests, lakes, streams, oceans, and the atmosphere. It is currently thought that 10,000+ different organic compounds are present in the atmosphere, existing as gases, particles, and dissolved in cloud and rain droplets. Organic compounds impact our world in several ways, including contributing to air pollution, interacting with our climate, and altering the functionality of ecosystems. Despite these large impacts, organic carbon (including methane) makes up less than 0.0002% of the Earth's atmosphere and its abundance is 200 times less than carbon dioxide. This lecture will discuss this small but critical fraction of the carbon cycle. First, we will discuss key concepts in organic carbon's role in atmospheric chemistry. Next, we will discuss its major emission sources and how it's removed from the atmosphere. Finally, we will discuss changes and trends in organic carbon (including measurements from cloud water collection at Whiteface Mountain), and what implications this could have in a changing climate.

