

Hubbard Brook “Zoom a Scientist” Program for K-12 Classrooms

The following scientists are available to join your classroom via Zoom for a 45 to 60-minute presentation and discussion about their research at the Hubbard Brook Experimental Forest in North Woodstock, NH. The session can be designed for elementary, middle, or high school levels. To discuss a topic and set up a session, contact educator@hubbardbrookfoundation.org.

Emily Bernhardt

Professor of Biology, Duke University

Topics:

- Climate change
- The carbon cycle
- Carbon sequestration - what is it?
- Can coal be clean? (<https://www.pbs.org/newshour/science/column-clean-coal-mean-can-save-planet>)
- Water quality - what does that mean?
- What lives in streams and rivers?

Lynn Christenson

Associate Professor of Biology, Vassar College

Topics:

- Moose (general information)
- Moose (climate-related challenges for animals and ecosystems)
- Animals and nutrient cycling/decomposition

Sara Kaiser

Research Ecologist/ Director, Hubbard Brook Field Ornithology Program, Cornell Lab of Ornithology

Topics:

- General topics in avian systems
- Migratory birds
- Reproductive strategies (e.g. mating and parental care)
- Social behavior (e.g. cooperation)
- Migratory bird response to environmental change
- Bird conservation
- Hubbard Brook Field Ornithology Program
- Field methods used to study wild birds
- Conservation genomics
- Sexual selection
- Mating systems
- Temperate vs. tropical life histories

Lindsey Rustad

Research Ecologist/Hubbard Brook Team Leader, USDA Forest Service

Topics:

- Climate Change
- Ice Storms
- WaterViz: Confluence of Art, Music, and Science
- Mysteries of the underground

Audrey Thellman

PhD Student, Biology, Duke University

Topics:

- Climate change and water
- Water quality and ecosystem health
- Land use change (in terms of water), e.g. agricultural runoff
- Winter climate change (lake ice and river ice records)
- Stream ecology
- Linkages between terrestrial ecosystem and streams (seasonality)

Adam Wild

Director of the Uihlein Maple Research Forest, Cornell University

Topics:

- General maple syrup production for beginners
- Flow of maple sap within a tree for maple syrup (physiology and tree anatomy)
- Factors controlling sap sweetness and the importance for maple syrup production (great for discussing photosynthesis)
- Sugarbush management
- Climate and maple syrup production
- Collection of maple sap
- Flavor and grades of maple syrup
- Wound partitioning within maple trees
- Increasing production of maple sap
- Processing sap into syrup
- Microbes and maple sap spoilage
- Other tree syrups: beech and birch

Alex Young

M.S. Forest & Natural Resource Management 2019, SUNY-ESF

Topics:

- Tree canopies
- Leaves
- Ecological forecasting
- Nutrient availability/N and P limitation
- Remote sensing using the NEON AOP