



Virginia Native Plant Society 2020 Workshop

Earth's Climate: Present, Past, & Future



March 14, 2020

9:00 am - 3:15 pm

Piedmont Virginia Community College
V. Early Dickinson Building Theatre
501 College Drive
Charlottesville, VA 22902

<https://www.pvcc.edu/about-us/main-campus>

Earth's Climate: Present, Past, & Future

Many of us are concerned about climate change and no longer need to be convinced that it is real. But we can always learn something new about the study of climate and its changes and impacts on Earth's ecosystems. This workshop will focus on climate changes at different periods of time, and how it might relate to our current climate and inform our thoughts about today's changes.

Our speakers this year will cover more than 50 million years of Earth's climate history. From the present state of our coastal ecosystems, to climate perturbations during the historic period, to the glacial ages and their influence on eastern forests, and finally to the fossil record far in the past, we will explore environmental changes in our world.

Enjoy a day with knowledgeable speakers, and find out how both the present and the past can inform our understanding of climate and climate change.

PLEASE NOTE OUR VENUE.

Just like last year, the VNPS Workshop is being held on the Piedmont Virginia Community College campus in Charlottesville. We have plenty of seating!

Our venue is the **V. Earl Dickinson Theatre** (be aware that there is also a building called Dickinson Center on the campus).

Campus map at:

<https://www.pvcc.edu/about-us/main-campus>

Directions: From I 64 take exit 121 and head south on Rt. 20 (Scottsville Rd). Turn right on College Drive. Follow College Drive, continuing straight at the traffic circle. The destination will be on the right.

Morning refreshments and coffee provided.

Please bring your lunch.

Questions?

vnps.org@gmail.com
540-837-1600 (office)

703-434-0009 or
540-837-1600 (day of event)

Workshop Program

9:00 Registration and coffee

9:30 Welcome and introduction
Nancy Vehrs, President

9:45 **Dr. Carl Hershner**

Climate Change and Coastal Zone Plant Communities: Impacts and Opportunities

The latest climate models suggest Virginia will experience increases in temperatures, precipitation, storms, and sea level over the rest of the century. These changes will affect many of the natural plant communities in the state, particularly in the coastal plain. We can anticipate some of the ecological consequences of those changes and we are beginning to get a more realistic sense of the capacity of natural plant communities to help mitigate impacts on human systems.

10:45 Break

11:00 **Dr. Emily Southgate**

Interactions of Climate Change and Human Land Use in Eastern North America over the last 10,000 Years

Climate changes over the last thousand years in North America have occurred at the same time as increasingly dramatic changes in human land use, resulting in disruptions in human populations as well as in natural communities. Records of these changes can provide lessons for current and future climate changes on human, plant and animal communities. This presentation will discuss the methods used to study recent changes in vegetation as well as some details of events known as the Medieval Optimum, the Little Ice Age, and our current human-caused climate anomalies.

12:00 Lunch - please bring your own

1:00 **Rodney Bartgis**

The Pleistocene and Today: Reflections on a Million Years of Past Change and the Future of our Flora

For more than a million years, shifting climate has affected the plant life of Virginia. It has altered the distribution of species, rearranged plant communities, driven evolution, and caused extinction. What may this past tell us about the impacts of today's changing climate on plant life in our anthropogenic landscapes? Understanding some of the basic lessons from the past can help us make better conservation decisions moving forward.

2:00 Break

2:15 **Dr. Scott Wing**

Global Warming 56 Million Years Ago: What it Means for Plants and Us

Billions of tons of CO₂ are released into the atmosphere in a short time. Global temperatures soar, extreme rainfall events become common, and ecosystems transform. This might be a description of today, but it also describes a fascinating period in Earth's history that geologists and paleontologists are studying with the aim of predicting the future as well as understanding the past.

The Speakers

Carl Hershner is Director of the Center for Coastal Resources Management at the Virginia Institute of Marine Science (VIMS) and a professor in the School of Marine Science at William & Mary. He earned a PhD in Marine Science from the University of

Virginia. In addition to research on coastal wetlands, water quality, and shoreline management, he is involved in the advisory service mission of VIMS. Recent activities have focused on adaptation to climate change.

Emily Southgate is a historical ecologist, with graduate degrees in botany and history. She studies impacts of past human activities on our landscapes, attempting to reconstruct past landscape patterns and processes as these relate to conservation. Her book, *People and the Land Through Time. Linking Ecology and History* (Yale Univ. Press. First edition, 1997; second edition, 2019) is the primary text for the field of historical ecology and has inspired both ecologists and environmental historians to incorporate each other's fields in their research.

Rodney Bartgis is past West Virginia state director of The Nature Conservancy, a former botanist with the Maryland and West Virginia Natural Heritage Programs, and currently consults on land conservation and conservation planning. He has a Masters degree in biology from West Virginia University and is a past board member of the West Virginia Native Plant Society.

Scott Wing is a Curator of Fossil Plants at the National Museum of Natural History of the Smithsonian Institution. He received his B.S. in Biology in 1976 and his Ph.D. in 1981 from Yale University. His research focuses on fossil plants, how climate has changed in the past, and how ecosystems have responded to that change. He has long worked to uncover the causes and effects of the Paleocene-Eocene Thermal Maximum, a sudden global warming event 56 million years ago that has many parallels with current, human-caused. Wing was on the team that planned the new fossil hall at the Smithsonian.

Registration Form

Please register before March 12
Online registration at www.vnps.org

Name _____

E-mail _____

Cell phone _____

Home phone _____

Address _____

City, State, Zip _____

_____ \$50 members

_____ \$60 non-member spouse

_____ \$80 non-members; includes

1-year membership

_____ \$15 full time student

(have ID with you)

_____ Donation to VNPS

Make checks payable to VNPS

Credit payment:

Card # _____

Expiration date _____

Signature _____

Security code _____

Zip code _____

Mail form and payment to
VNPS Annual Workshop
400 Blandly Farm Lane, #2
Boyce, VA 22620

