



The 1156<sup>th</sup> meeting of the New England Botanical Club, Inc. will be held **Saturday, 8 January 2022, at 7:00 PM EST via Zoom.**



**“22<sup>nd</sup> Winter Warmth by Watching from Wherever  
the Work of Worthy Winners”**

**By**

**2020 Winners of Our Awards**

**Dr. Sarah T. Bois (Les Mehrhoff Botanical Research Award)**

**Dr. Jay Wason III (Junior Faculty Award on the Flora of New England)**

**Jacob Suissa (Graduate Student Research Award)**

**PLEASE READ:**

- 1) **PRESENTATIONS & MEETINGS WILL CONTINUE TO BE VIRTUAL:** The link to join our Zoom Monthly Meetings will be reoccurring and is below. After this presentation, we invite attendees to stay on Zoom and participate in some “virtual visiting.” Feel free to provide your own refreshments!
- 2) **PRESENTATION ABSTRACTS:**  
[See [Home](#) page for speakers’ photos; See [Upcoming Meetings](#) page for links to their websites.]

Dr. Sarah T. Bois, Linda Loring Nature Foundation, MA

**"Naturalized Scotch Broom (*Cytisus scoparius*) on Nantucket Island: A Case for Invasive Listing in Massachusetts"**

Abstract: Scotch Broom (*Cytisus scoparius*) has been introduced to many parts of the world as an ornamental species becoming one of the worst invasives in terms of ecological and economic impact in some parts of North America. Scotch Broom's low freeze tolerance has historically limited spread in New England. Global climate change has made parts of New England more tolerant for species like Scotch Broom. We investigate the extent of the Scotch Broom present on Nantucket Island, a first step in understanding its invasiveness. This project provides supporting documentation for listing Scotch Broom with the Massachusetts Invasive Plant Advisory Group.

Dr. Jay Wason III, University of Maine, ME

**"Drought Effects on Tree Physiology, Growth, and Survival"**

Abstract: The likelihood and severity of drought is expected to increase in the northeastern US. This is concerning given that many of our native tree species may not be well adapted to these novel future climate conditions. Therefore, we have conducted a series of experiments testing how native tree species respond to experimental droughts of different lengths and at different times of year. Our results suggest that many native tree species are quite sensitive to drought, especially in spring. Most species tended to favor water conservation at the expense of photosynthesis and growth. However, despite growth reductions in spring, some species also exhibited resilience to drought and show remarkable growth recovery that same year. These results improve our understanding of how future droughts may impact northeastern US forests.

Jacob Suissa, Harvard University PhD student, MA

**"Untangling the Elaborate Evolution of the Fern Vascular System"**

Abstract: Vascular plants account for 93% of Earth's terrestrial flora. Xylem and phloem, vital for transporting water and nutrients through the plant, unite this diverse clade. Three-dimensional arrangements of these tissues (vascular architecture) are manifold across living and extinct species. However, the evolutionary processes underlying this variation remain elusive. Using ferns, a diverse clade with multiple radiations over their 400-million-year history, we synthesized data across 3,339 species to explore the tempo and mode of vascular evolution and contextualize dynamics of phenotypic innovation during major diversification events. Our results reveal major paradigm shifts in our understanding of fern vascular evolution.

- 3) **VIDEOS of PAST PRESENTATIONS:** Please see [Past Meetings](#) for videos of past lectures, including Dr. Bellemare's December presentation.
- 4) **NEXT NEBC MEETING VIA ZOOM:** On Saturday, 5 February 2022, **Dr. Valerie Pence**, Director of Plant Research, Center for Conservation and Research of Endangered Wildlife, Cincinnati Zoo & Botanical Garden, Cincinnati, OH, will speak on **"Saving All Plants: Technologies to Extend *ex situ* Conservation to All Plant Species."**
- 5) **MEMBERSHIP RENEWALS ARE NOW DUE:** [Renew Your NEBC Membership for 2022 Here!](#)
- 6) **FUNDING OPPORTUNITIES OPEN (DEADLINE 1 FEBRUARY 2022):**
  - **NEBC JUNIOR FACULTY AWARD ON THE FLORA OF NEW ENGLAND** – Applications are accepted from early-career, tenure-track faculty at any college or university in New England. Full requirements and application instructions can be found on the [Junior Faculty Award on the Flora of New England](#) web page.
  - **NEBC LES MEHRHOFF BOTANICAL RESEARCH AWARD(S)** – Full details for project requirements and application instructions can be found on the [Les Mehrhoff Botanical Research Award](#) web page. Summaries of past funded projects can be found on the same web page.
  - **NEBC GRADUATE STUDENT RESEARCH AWARD(S)** – Each year NEBC awards several thousands of dollars in support of botanical research conducted by graduate students. Full details for proposals and supporting letters can be found on the [Graduate Student Research Award](#) web page. Abstracts for previous recipients can also be found on this web page.

*The next Council meeting via Zoom will be rescheduled for mid-January 2022.*

## **ZOOM INVITATION FOR NEBC MONTHLY MEETINGS**

Topic: NEBC Monthly Meeting

Date and Time: First Saturday of the month at 7:00 PM; Second Saturday in January.

Join Zoom Meeting

<https://zoom.us/j/98845538584>

Meeting ID: 988 4553 8584

One tap mobile

+19292056099,,98845538584# US (New York)

+13017158592,,98845538584# US (Germantown)

Dial by your location

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Germantown)

+1 312 626 6799 US (Chicago)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

Meeting ID: 988 4553 8584

Find your local number: <https://zoom.us/u/adKxNNXCOj>

### **The New England Botanical Club**

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**NEBC WEB SITE:** <http://www.rhodora.org/>

[New England Botanical Club brochure](#)

### **NEBC Corresponding Secretary**

Dr. Nancy M. Eyster-Smith

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[Mission and Vision Statements](#)

[Strategic Goals for 2020-2025](#)