



The 1169th meeting of the New England Botanical Society will be held
Saturday, 6 May 2023, at 7:00 PM at Garden in the Woods,
Native Plant Trust, Framingham, MA



“Sphagnum Moss-Associated Nitrogen Fixation in New England Peatlands”

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PLEASE READ (LOTS of NEW INFO and REMINDERS):

- 1) **ACTIVITIES AT GITW WILL BE IN-PERSON ONLY:** Please see below for details about garden and garden shop access for NEBS members and then stay for this presentation by our 2021 winner of the [Junior Faculty Award on the Flora of New England](#).
- 2) **DR. COE'S ABSTRACT:** Nitrogen (N) limits productivity across terrestrial ecosystems. The chief way in which N enters the biosphere is through fixation via diazotrophic organisms such as cyanobacteria. In some ecosystems, mosses can form symbiotic associations with N-fixing cyanobacteria, and moss-associated N fixation can represent a critical N source to communities. While such associations have been demonstrated in arctic and boreal ecosystems, considerably less attention has been paid to temperate systems where mosses are ecologically important. To examine the magnitude and drivers of N fixation in New England peatlands, we conducted Sphagnum (peat moss) field incubations in three bogs spanning a latitudinal gradient from Western MA to Northern VT, using $^{15}\text{N}_2$ tracers coupled with modeling of biotic and abiotic predictor variables for N fixation. Excitingly, N fixation rates were, on average, greater than what has been reported in boreal and arctic regions. We identified ~10 Sphagnum species that associated with N-fixing cyanobacteria to different degrees. Cyanobacterial symbionts were present in lower regions of moss shoots early in the growing season and moved into the capitulum (shoot tops) to peak in abundance in August. Fixation varied over the course of the growing season in a way that mirrored cyanobacterial colonization. While we did not observe a strong latitudinal signal in our data, environmental variables captured across sites such as relative humidity and temperature were strong predictors of N fixation rates.
- 3) **LOCATION OF MAY MEETING IS AT GARDEN IN THE WOODS (GITW), FRAMINGHAM, MA:** GITW is at 180 Hemenway Road, the headquarters for the [Native Plant Trust](#). Admission will be free after 5:00 PM. Members and guests may tour the garden and bring a picnic supper to eat at the Education Building, where the presentation will be at 7:00 PM [Visit GITW](#) for more information.
- 4) **GITW GARDEN SHOP OPEN UNTIL 6 PM FOR NEBS MEMBERS:** NEBS members may purchase native plants, books, and other botanical items at Garden in the Woods in Framingham until 6 PM. On [Buy Native Plants](#) you will find the 2023 plant availability and price lists. Native Plant Trust books written by authors who are also NEBS members include the recently released *The Northeast Native Plant Primer: 235 Plants for an Earth-Friendly Garden*, as well as *Native Plants for New England Gardens*, *Wildflowers of New England*, and *Flora Nova Angliae*.
- 5) **NEXT MEETING - FRIDAY 23 JUNE 2023 WILL REQUIRE REGISTRATION BY ALL:** At 6:30 PM Dr. Kristina Jones, Director, Wellesley College Botanic Gardens, Wellesley, MA, will speak on “**A Sustainable Conservatory in New England? Lessons from Wellesley College's Global Flora Project**,” and then provide a tour of the [Global Flora Conservatory](#) at Wellesley College, MA. Preceding this Dr. Lisa Standley, NEBS Herbarium Curator, will present a workshop at 3:30 PM on “**How to Collect Vascular Plant Specimens**.” Please watch for an email in mid-May for the registration links for the workshop and the lecture/tour.

- 6) **SUMMER 2023 DAY & COLLECTING FIELD TRIPS:** DAY FIELD TRIPS (May 20, June 2, June 10, July 7) are informal, small-group outings to explore interesting places and to see (not collect) interesting plants, facilitated by knowledgeable and enthusiastic leaders. COLLECTING TRIPS (July 1, August 5) are intended to collect specimens in under-represented New England localities. Collected specimens will be added to our herbaria and species lists will be prepaid for local land managers. All trips will be **limited to 14 participants, so please register at least 1 week in advance**. Bring your lunch, water, insect repellent, field guides, hand lens, and curiosity. Be prepared for the terrain and level of difficulty indicated for each trip. Details can be found on the [Upcoming Field Trips](#) webpage or this [PDF](#). **We advise saving this PDF with the registration links and other information.**
- 7) **QUEER PLANT CONVERGENCE:** New England Botanical Society, Norcross Wildlife Foundation, and Native Plant Trust are sponsoring the [2nd Annual Queer Plant Convergence \(QPC\)](#) happening this July 28-30 at Norcross Wildlife Sanctuary in Wales, MA. The QPC welcomes members of the regional LGBTQIA+ community who have a shared interest in wild plants and the environment and forges connections and networks that promote diversity, equity, anti-racism, and inclusion. Registration will be required and will open soon at the link above.
- 8) **EAGLE HILL INSTITUTE DISCOUNTS (20%) & NEBS STIPENDS (\$150) FOR STUDENTS:** The [Eagle Hill Institute](#), Steuben, ME, is again offering NEBS members a 20% discount for their 2023 in-person summer week-long seminars (May-Sept). This discount is applied towards tuition and accommodations, but not meals or lab/microscope use fees. Also, NEBS will cover one stipend per year of \$150 towards costs for the first 3 NEBS STUDENT members who register for a summer botany course. Contact the Executive Director Sara Helm-Wallace at nebc@rhodora.org for details and to apply. [Eagle Hill calendar](#).
- 9) **MANAGING EDITOR OF RHODORA POSITION:** NEBS will review applications for **Managing Editor of *Rhodora***, our peer-reviewed journal, as they are received, and applications will be accepted until the position is filled. The Managing Editor for *Rhodora* is a hands-on, part-time, skilled, contracted position that oversees the preparation of accepted manuscripts for publication and is an important part of the *Rhodora* process, working regularly with the Editor-in-Chief of *Rhodora* and the Executive Director of NEBS. Duties, qualifications, and application procedure are described [here](#). Please share this information with any qualified person who may be interested in the position. If you have any questions, please contact **Sara Helm-Wallace, NEBS Executive Director**, at nebc@rhodora.org.
- 10) **VIDEOS of PAST PRESENTATIONS:** Please see [Past Meetings](#) for videos of past lectures, including Dr. Stephens' April presentation.
- 11) **MEMBERSHIPS ARE PAST DUE:** [Renew or Join for 2023 Here!](#) If you know of others who might be interested in our organization, please forward this link.

The next Council meeting will be 3 May 2023 from 6:00-7:00 PM ET via Zoom.

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NEBS WEB SITE: <http://www.rhodora.org/>
[New England Botanical Society Brochure](#)

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Meetings through June 2023
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