

## Education Update –November 2022

Prepared by Catrina Adams, BSA Education Director

### Education/Outreach online discussions/Botany 360

- BSA Education Committee meeting was held September 1.
- Ideas for upcoming Botany 360s were discussed, and a poll went out to determine interest in each: 1) Utilizing Botany Conference content in teaching; 2) Making pedagogy accessible and publishable – BSA resources & QUBES platform introduction; 3) Revitalizing the BSA Core Concepts and Learning Objectives in Plant Biology for Undergraduates; 4) Tools for assessing student inclusion & learning in STEM. Highest level of shared interest was in #1, followed by #3.
- Rachel Jabaily will lead a Botany 360 on Wednesday, November 2 at 5PM Central to explore potentially using Botany conference resources for education, and what would be required to make that easier/possible.
- Applying to graduate school Q&A was held September 20 as a virtual BOTANY360 session. This replaces the in-person session typically held at BOTANY for PLANTS scholars and is now planned and hosted by the new Early Career Professional Development Committee.

### Education/DEI Staffing

- Jennifer Hartley, BSA's Education Programs Supervisor had her first anniversary working with the BSA in August. She continues to be an amazing resource for PlantingScience and is working on some exciting new ideas to work with Idaho teachers to bring students and PlantingScience student research posters to the upcoming Botany conference. She is coordinating platform development work with the HubZero team and getting kudos from the HubZero team on the clarity and detail of feedback and development plans.
- We are currently gearing up to recruit 2 early-career scientists to help as PlantingScience community coordinators on a contract basis (~5-10 hours/week for the next spring and fall sessions. We are particularly looking to get applicants who are willing to work with the program in both sessions, as Fall 2023 will have high administration demands and a much larger than usual cohort due to the F2 grant participants. We are planning to model recruitment and selection for these services on the process we used to recruit BSA's social media interns.
- Sarah Sims, DEI Outreach Programs Coordinator is currently on parental leave and anticipates returning November 14. In addition to her work as program coordinator for Botany and Beyond, she hosted an extremely well-received Botany 360 on August 11 entitled "Nurturing Botanists: Developing a Self- and Community-Care Practice." She worked with the Indigenous Voices grant to prepare a survey on perceptions of Indigenous scholars and scholarship that is about to be piloted. She also has helped advise the ROOT&SHOOT working group on conference inclusion and accessibility.

### Grant Funding Updates:

- **NSF DRK-12 F2 grant work Y2 ongoing**, upcoming Y3 a critical year for recruiting and implementation of research study (NSF DRL#2010556, C. Adams PI, 3.9M, 2020-2025). Details available:  
[https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=2010556&HistoricalAwards=false](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2010556&HistoricalAwards=false)
  - We are currently recruiting teachers for the Y3 main experimental year of the F2 research project. We need 120 teachers to participate in one of three groups this summer and fall: (group 1 (control), no PD/business -as-usual teacher; group 2, in-person PD/PlantingScience in fall; group 3, online PD/PlantingScience in fall.

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- We have secured IRB approval for our research plans, but need to secure district approval for each participating district
- We are planning to pilot our revised assessment with students this year.
- We have approximately 90 teachers recruited so far, and are making a last push through the National Association of Biology Teachers meeting November 10-13.
- We are working with the HubZero team (our platform providers) to finish scoping and planning for a round of new development to make some anticipated improvements to user interface and to add new data tracking and mentor matching capabilities needed for Fall 2023. We are also adding a few new features to make it easier to use the PlantingScience platform to support online professional development for teachers and liaisons this summer.
- **Mentors and Liaisons urgently needed for Fall 2023/Fall 2024.** We will need to make a large push for early-career scientists to be a part of the F2 research study this winter/spring and will have a large demand for online mentors to work with student teams in Fall 2023. Please help us by passing along these calls as you see them!
- **Botany and Beyond grant** (NSF DEB#2138730; Anna Monfils (PI), Catrina Adams (coPI), Muriel Poston (coPI); \$1,254,869, 2021-2026). This expanded program builds on the existing PLANTS II program, Diversity and Inclusion Initiative Conference Grant, and BLUE career exploration workshops and will include three events: a pre-conference science identity workshop in spring in same region as Botany conference for local undergraduates (***Botany and Beyond Biodiversity Careers Workshop***); the ***PLANTS III*** mentoring program for underrepresented undergraduate students; and an ***Inclusive Teaching Initiative*** that involves sponsoring CC/TCU/MSI faculty to attend a workshop and inclusive botanical education track at conference.
  - **We experienced significant challenges and disagreements in management of this grant in Y1 that have led us to consider restructuring grant leadership for Y2.** We are working with NSF, PIs and BSA leadership in the restructuring process so the program can thrive and be successful.
  - Despite these leadership conflicts, PLANTS III and the Inclusive Teaching Initiative activities took place during Botany 2022 in Anchorage and feedback from participants was overall quite positive. **Y1 activities included hosting 12 students, 24 mentors (12 near-peer mentors and 12 mentors) as well as 7 CC/TCU/MSI Inclusive Teaching Initiative scholars.** The Botany and Beyond Biodiversity Career Workshops are planned to begin in Spring 2023 before the Boise Conference.
  - **We anticipate the Y1 report will be submitted to NSF by Nov 1.**
- Progress update on “Leading Cultural Change through Professional Societies” (LEAPS) NSF grants involving BSA
  - Catrina Adams, Chelsea Specht, and Brenda Molano-Flores are currently serving on the steering committee of the ASPB-led LEAPS RCN proposal [ROOT & SHOOT: Rooting Out Oppression Together & SHaring Our Outcomes Transparently](#). Chelsea is looking to rotate off the committee soon, and bringing Brenda on now with some overlap to help ensure a smooth leadership transition. Y1 activities included hiring a program facilitator (Marcia Puig-Lluch who staffed a ROOT&SHOOT booth at BOTANY this summer), putting together an expert committee, and hiring [Movement Consulting](#) to host equity training for RCN partner leadership. The leadership training is ongoing, with one final learning session scheduled for November 3. After this, leadership training participants will work in society-based teams through the

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process of identifying and completing a “capstone project” for their society with advice and scaffolding from the Movement consulting team. Separately from the Movement Leadership training, the ROOT&SHOOT RCN will also fund several working groups to accomplish the objectives of the grant. The first working group is focused on creating a shared “Safer Conferences” action plan. There are 25 members of the working group distributed among 5 subgroups: **(Group A)**. Community agreement (formerly Code of Conduct); **(Group B)**. Reporting structure - to hold people accountable for community agreement; **(Group C)** Conference site selection; **(Group D)**. Improving conference accessibility; **(Group E)**. Equitable programming and speaker selection. Members of working groups will receive some compensation for their contributions to the working group. The steering committee is also considering making use of the **AAAS SEA Change self-assessment tool across the RCN participants**. This is not a member survey; rather it is an “*evidence-based review of practices, policies, programs and traditions pertaining to membership-based activities and governance.*” The data-collection process is expected to take about six months, and will be followed by the development of action plans. The process should be carried out in parallel by all groups, with regular meetings to share progress. The SEA Change announcement is [here](#), and resources including data template and guidelines can be downloaded [here](#).

- The AISES-led “[Indigenous Voices in Biology](#)” involves BSA along with the Ecological Society of America and the Entomological Society of America, with Anna Monfils and Sarah Sims as BSA representatives on the steering committee. Y1 activities include a survey of participating society membership and leadership which is now in the piloting phase. This grant also sponsored an Indigenous Botanists Gathering at BOTANY that was hosted by Sky Wildcat from AISES with in-person support from Catrina Adams. Anna Monfils helped the grant team to plan and implement a botany/ecology career workshop at the AISES Conference in November, 2022.
- The AIBS-led “IDEA Conference 2.0” took place in October and November and included three mini-sessions on topics that rose from last year’s conference (see [report](#)) related to societies’ commitment to DEI: 1) Internal Structure, 2) External Communication, and 3) Assessment. At least 2 BSA representatives were present at each mini-session, and these representatives were also invited to attend the AIBS Council meeting on November 3.

**Life Discovery: Doing Science Conference:** We partner in hosting this education conference along with ESA and SSE. Typically, a BSA staff member and/or a member of the Education Committee participate on the Life Discovery planning committee and BSA funds their travel to the conference (registration and sometimes hotel costs for planning committee members are covered by the conference). BSA also helps to advertise the conference to the BSA membership and helps to pick speakers that would appeal to BSA membership interests.

- **[LDC 2023](#) will be held March 23-25<sup>th</sup> at FAMU (Florida Agriculture and Mechanical University, an HBCU) in Tallahassee Florida. Theme: Variants in Biology Education: What can we learn from pandemics?**
- Jennifer Hartley and Phil Gibson are representing BSA on the planning committee for LDC 2023. Catrina also plans to attend and as Jennifer and Catrina will present a paper on the PlantingScience F2 project, the two of us plan to use F2 grant funds to cover our travel.

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### **Papers under review:**

Westbrook, A., J. Taylor & C. Adams. “Digging Deeper into Student-Teacher-Scientist Partnerships for Improving Student Achievement and Attitudes about Scientists” was submitted to The American Biology Teacher on 10/21/2022

### **Presentations/Booth Recruitment Planned:**

A discussion session about PlantingScience was held at the BOTANY conference on Tuesday morning 8:00AM and featured a Q&A with a PlantingScience teacher from Anchorage (Naomi Tomco, Service High School, Anchorage, AK) and MPST members (Yanni Chen, Israel Borokini). PlantingScience also had a booth in the BOTANY exhibit hall. PlantingScience is also planning to have a booth at the upcoming National Association of Biology Teachers Conference in Indianapolis, Indiana Nov. 10-13. Jennifer and Catrina have a paper accepted to co-present at the Life Discovery Doing Science Education Conference in March. We are also exploring ways to get PlantingScience students from the local area involved in the Botany 2023 conference in Boise, ID.