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Dear BQ/QUBES Community,

As the semester kicks into high gear we are reaching out with a quick reminder that BioQUEST has your back! We have open office hours twice a week where our team is on hand to answer questions and offer support. Whether you are writing a new grant proposal, leading a fall Faculty Mentoring Network, looking for resources to use in your courses, or just surviving another semester you got this, and we are here to help!

Sincerely,

Sarah Prescott (BioQUEST Executive Director) & Deborah Rook (BioQUEST Deputy Director)

P.S.
If you're coming across this newsletter on the QUBES website, you can subscribe here to keep in touch!

In this newsletter:

BioQUEST News

Partner Corner
News and Opportunities

QUBES Corner

- **22 open educational resources** were published to the QUBES Library in August! Browse the new resources here.
- **Featured Resources**
  - from *CourseSource*: Animal Behaviour Case Study Lessons in Communication, Migration, and Parental Care Using the Jigsaw Approach

Community Spotlight:

BCEENET's First Published CURE

Sexual Dimorphism CURE: Exploring Melanized Wing Patterns of Pieridae Butterflies Authors: Paula A. Trillo, Elissa S. Sorojsrisom, Carly N. Jordan, Janice L. Krumm

Summary: Sexual selection has been shown to play an important role in the evolution of wing patterns in butterflies, Melanization is also used for thermoregulation, and can be seasonally plastic in Pieridae butterflies. Pieris rapae, the cabbage white butterfly, is an invasive species and is abundant in natural history collections. In this Course-based Undergraduate Research Experience (CURE), students will explore variation in sexually dimorphic wing patterns of Pieridae butterflies using digitized natural history collections (dNHC) data. Students will learn how to organize and clean digital collections data, navigate data portals for information, use mapping software to demonstrate species distributions, and use image analysis software to measure phenotypes. You will also have the opportunity to participate in a cross-institutional research project, contributing to and analyzing a shared dataset. Find this resource on QUBES.

This resource includes three Case Study lesson plans using the Jigsaw approach that allows students to explore animal communication, migration, and parental care. https://doi.org/10.24918/cs.2022.25

- Distributions CURE- Exploring Species Distribution Changes and their Drivers

  This course-based undergraduate research experience (CURE) from BCEENET uses digitized natural history collections data to answer questions about species distributions and their drivers. doi:10.25334/FSR4-MQ46

Event Round-Up

Link directly to featured events below or browse all events on our calendar.

Sept. 27 AAAS Webinar: STEMM Professional Society DEI Self-Assessment Report Launch Event

Oct. 7 BioQUEST Partner Summit

Oct. 21 Expanding the ecological tent with environmental data science: A case study using the National Ecological Observatory Network

Oct. 25 NSF Includes Alliance - STEM-OPS 2022 Annual Convening: Access to STEM Education and Careers Is a Human Right, Not a Privilege.

Oct. 29 Ohio PKAL Regional Network Fall Meeting Evidence-Based Practices in Undergraduate STEM Education

Oct. 28 LSMRCE- 2022 LSMRCE Annual Conference, STEM Ecosystem: Diversity, Partnership, Empowerment

Nov. 1-3 2022 Annual ITEST Meeting

BioQUEST News

Register Today for the BioQUEST Partner Summit 2022!

October 7, 3:00 - 5:00 PM (EST)

Join us in promoting your partnership with BioQUEST at the upcoming Partners Summit!

Partner leaders and community managers are invited to the BioQUEST Partner Summit 2022. Together, we'll celebrate your accomplishments, strengthen and connect our communities, and make your work with BioQUEST more visible.This virtual event will feature asynchronous lightning talks and posters from partner leaders to showcase the excellent work we've done together and synchronous opportunities for networking and discussion with leaders in the BioQUEST/QUBES community. Learn how other groups are using the QUBES platform, find new collaborators and resources, and brainstorm ways to overcome project challenges. Are you the leader of a project that is not yet a BioQUEST partner? Join us to learn about the benefits of partnering with BioQUEST and meet fellow project leaders.

Learn more and register here!

Featured Publications

We are so proud of the amazing scholarly work that is coming out of our community. Congratulations to the authors and thank you for your work.

Ecosphere, August 2022

"Building Communities of Teaching Practice and Data-Driven Open Education Resources with NEON Faculty Mentoring Networks"

Kusum Naithani, Megan Jones, and Kristine L. Grayson

As "big data" becomes increasingly central to biology research there is an increased need for STEM professionals with strong data skills. Limited training for STEM educators around teaching with data could limit the extent to which data literacy is emphasized in undergraduate classrooms To address this need, the NEON data education fellows program coordinated faculty mentoring networks (FMN) that included both NEON scientists and university faculty. In this manuscript they share successes, pitfalls, and lessons learned from their FMN experiences.

CBE—Life Sciences Education, September 2022

"Sustainability and Justice: Challenges and Opportunities for an Open STEM Education"

Carrie Diaz Eaton, Kaitlin Bonner, Karen Cangialosi, Bryan Dewsbury, Maggie Diamond-Stanic, Jason Douma, Michelle Smith, Robin Taylor, Jeremy Wojdak, and Krystie Wilfong

This essay provides a general orientation to OER and describes communities developing OER for STEM education. It then moves on to address important sustainability challenges for OER and the role of Open Education in promoting social justice in classrooms.

If you have published a paper related to your work with BioQUEST and/or the QUBES platform, please let us know (send the link to Molly)!

Partner News and Opportunities

EDSIN Exploratory Report

With funding from the National Science Foundation, the Environmental Data Science Inclusion Network collaborated with a number of organizations to convene a series of small workshops of current and past faculty at **Tribal Colleges and Universities (TCUs) and Historically Black Colleges** and Universities (HBCUs). From these

conversations, we generated an Exploratory Report to discuss the strategies and resources that might best support student success in Environmental Data Science at TCUs and HBCUs.

We are requesting your feedback on the findings from this draft report if you have experience at a TCU or HBCU. The purpose of this feedback form is to provide the broader community a voice to also weigh-in on identifying the assets and collaborative activities that support environmental data science education or education in any data science field. This feedback is limited to informing the final Exploratory Report and will be available to the public on the EDSIN website.

Artificial Intelligence and Learning: NSF ITEST Projects At-A-Glance.

Take a look at STELAR's new publication on Artificial Intelligence and Learning: NSF ITEST Projects At-A-Glance. This publication highlights the areas being explored by a variety of NSF funded projects, to provide an overview of what has been funded within the ITEST portfolio to date, and to inspire others to join these research efforts.

Confronting Failure: Approaches to Building Confidence and Resilience in Undergraduate Researchers

Edited by Lisa A. Corwin and Louise K. Charkoudian (Haverford College) with Jennifer S. Heemstra

In this open-access book, authors from a range of disciplines—from geosciences to drama—capture how failure manifests and can be productively supported in a range of undergraduate research experiences. Whether the learning environment is a STEM research lab, a course-based undergraduate research experience (CURE), a humanities summer undergraduate research experience, a library, or the stage, students can benefit from support when they experience a gap between an expected/desired result and their lived experience. These perspectives and disciplinary contexts address failure from different vantage points and lenses, with the common focal point of nurturing undergraduate success through leveraging failure as an opportunity to build confidence and resilience. Represented are different institutional types, classroom and non-classroom environments, and programmatic and individual efforts. Download your free copy here.

DEI and Social Justice in STEMM Blog

ASCN Working Group 5 is calling for blog posts around diversity, equity, inclusion (DEI), and social justice in science, technology, engineering, mathematics, and medicine (STEMM) programs, classrooms and departments. Some potential areas for discussion include:

- Changing the culture around introductory "weed out" courses
- Defining what diversity, equity, inclusion, and social justice mean in the classroom
- Creating diversity statements for STEMM departments
- Approaching positionality in the classroom
- Addressing the pushback to Critical Race Theory on campuses
- Including historically marginalized students in decision-making processes

Posts will be shared with educators and administrators and hosted on the ASCN Blog. Anyone working on incorporating DEI and justice into STEMM programs and education is welcome to post. Our posting criteria may be found on the submission page. All posts will receive comments from an editing team prior to posting. Please consider contributing to our ongoing discussion!

Other Opportunities

Georgetown Biology is recruiting a new assistant professor of Microbiology. Apply here. Review of applications begins on November 1st.

Emory University is searching for an Undergraduate Research Director. Apply here.

First-Year Research Initiative Coordinator, Assistant/Associate Teaching Professor of Biology at Pennsylvania State University (University Park Campus), starting in Fall 2023, who will also teach in our first-year introductory biology courses. Apply here.

The Improving Undergraduate STEM Education (IUSE) Program and Robert Noyce Teacher Scholarship Program are seeking proposal reviewers to serve on virtual panels for the 2022-2023 cycle. Interested individuals can fill out the following reviewer interest surveys:
IUSE Reviewer Availability Survey 2022-2023
Noyce Reviewer Availability Survey 2022

A team of researchers from UC, Irvine are conducting a study about Latine and Hispanic teaching-focused faculty's pathways to the professoriate. Participants will receive a $50 dollar gift card upon completing the interview.

You are eligible for our study if you:

- Are a teaching focused professor in a STEM field
- Self-identify as Latino/a/e or Hispanic
- Are within your first 5 years of your first teaching focused faculty position
- All interviews will take place via zoom and participation will be 1-2 hours.

If you are interested in this study please fill out this brief google form.

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