



February 15, 2022

New Year: New Challenges and New Opportunities

by Chris Lorentz, OBFS President

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As we move into the new year and the implementation phase of the strategic plan, I would like to offer my appreciation and gratitude for all those who served on the team and helped develop the new [OBFS Strategic Plan](#). We are extremely thankful for everyone's hard work and are excited to move forward with the Implementation phase.

I would like to congratulate and welcome the new incoming members of the OBFS Board and thank all those who accepted our nominations. In addition, I want to thank those who responded to the article on sexual assault and harassment at the Smithsonian Tropical Research Institute. In particular, I want to acknowledge the IDEA+ Committee Chairs (Phoebe Jekielek and Tori McDermott), along with Elizabeth Long and Anne Kelly, all of whom took the lead on our discussions and our official response: [OBFS Statement of Solidarity and Commitment](#). We have a long way to go to ensure safe and productive environments for all, but we are grateful for the experience, expertise, and dedication of our members. If anyone would like to offer their input on these important issues, please feel free to do so at: [Member Feedback](#).

"I believe the best way to begin reconnecting humanity's heart, mind, and soul to nature is for us to share our individual stories."

— J. Drew Lanham, *The Home Place: Memoirs of a Colored Man's Love Affair with Nature*

Lastly, I want to thank all the Committee Chairs and Board-appointed members who have worked so diligently over the past year. This is an exciting time for the Organization, and we are looking forward to launching many new initiatives. At the same time, we recognize that many members of our community face steep challenges stemming from the pandemic and other factors. The Board is committed to providing support, services, and relief throughout the upcoming year.

OBFS Board Statement: Smithsonian Tropical Research Institute (STRI) Barro Colorado Island field station

The Organization of Biological Field Stations (OBFS) stands with women who have come forward about their sexual harassment and assault and commends you for your bravery to shine light on these injustices. Moreover, we want to support all those who have suffered similar experiences and to acknowledge the harm caused. The OBFS leadership and community are appalled and deeply disturbed by the recent reports of sexual harassment and abuses at the Smithsonian Tropical Research Institute (STRI) Barro Colorado Island field station. We also recognize this is not unique to STRI, as 75% of field scientists and trainees have experienced harassment and assault.¹ As an organization, OBFS is committed to illuminating and supporting marginalized and often silenced voices, and is striving to end sexual harassment, assault, and discrimination in affiliated field stations and marine labs.

OBFS acknowledges our own shortcomings in taking responsibility for allowing this culture to persist and recognizes the need to look at our internal policies and practices that enable sexual harassment and assault. As stated in our mission, OBFS is working with community members around the world to enhance inclusivity, equity, diversity, and accessibility of field stations and marine laboratories. We seek to continually reflect on and prioritize these issues, as we begin implementing our OBFS Strategic Plan (2021-2026). Field stations and marine laboratories should not be spaces where sexual harassment and assault are allowed to occur. However, OBFS recognizes that the culture of field stations has enabled sexual harassment and assault.

We recognize that OBFS needs to take a proactive leadership role in ending sexual harassment and assault. We commit to the following steps going forward:

Action item 1: These reports have catalyzed our efforts to critically review our current policies and bylaws. We are reviewing our harassment prevention and response and membership policies to identify appropriate mechanisms for sanctions as well as criteria for station membership.

Action item 2: We continue to promote our community's expertise in harassment prevention and response. We strongly recommend all stations develop robust anti-harassment policies, reporting structures, and support for targets of harassment and assault. Stations are encouraged to read the Report of the Workshop to Promote Safety in Field Stations to understand current best practices in harassment prevention and response. We encourage stations and field facilities to ensure that all employees and visitors are fully aware of station policies, reporting mechanisms, and avenues for support.

Action item 3: We will prioritize increasing our offerings of resources and trainings surrounding diversity, equity, accessibility, and inclusion, as well as best practices for harassment prevention and response.

Action item 4: While STRI is not currently an OBFS station member, we nevertheless feel that OBFS should take a leadership role regarding all reports of harassment and assault at field stations. We are therefore reviewing all our options for how to hold STRI and other stations accountable, and how to best support targets of sexual harassment and assault.

We lean on the powerful statements of support and recommendations distributed by colleagues including the Association of Tropical Biology and Conservation, STRI Staff Scientists, and the Ecological Society of America condemning the behavior allowed and perpetuated at STRI. OBFS welcomes suggestions to continue to improve the culture and climate of the field station community. To offer feedback or for assistance with sexual harassment policies and related areas, please reach out to members of the OBFS Board and IDEA+ (Inclusion, Diversity, Equity and Accessibility) Committee.

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Tori McDermott	IDEA+ Committee co-chair	vmmcdermott@alaska.edu
Phoebe Jekielek	IDEA+ Committee co-chair	phoebe@hurricaneisland.net

In conclusion, OBFS strongly condemns the behavior, policies, and culture that led to decades of sexual abuse and harassment on BCI and is striving to create safe, accessible, and welcoming field stations and marine labs for our entire community.

Sincerely, Members of the OBFS Inclusion, Diversity, Equity, and Access (IDEA+) Committee and the OBFS Board of Directors

¹Clancy, K. B., Nelson, R. G., Rutherford, J. N., & Hinde, K. (2014). Survey of academic field experiences (SAFE): Trainees report harassment and assault. PLoS ONE, 9(7), e102172. <https://doi.org/10.1371/journal.pone.0102172>

Affiliates and Collaborations By Paul Foster, AIBS rep

iDigBio

The Field Museum in collaboration with iDigBio and the Natural Science Collections Alliance has announced the sixth annual Digital Data in Biodiversity Research Conference, to be hosted May 23-25, 2022. This year's event will be a virtual meeting. The conference will again provide an important opportunity to explore digital data tools, techniques, research protocols, discoveries, and outcomes across all biodiversity research domains.

NSF

The NSF reauthorization continues moving through Congress. In late January, US House Speaker Nancy Pelosi introduced the America COMPETES Act of 2022. It retains the language supporting field stations and marine labs from the previous bill. The House and Senate now need to negotiate a compromise for President Biden to sign for the reauthorization to become law. Thanks to Jyotsna Pandey at AIBS for keeping us updated on the reauthorization's progress.

OBFS Code of Conduct for Meetings

OBFS is committed to providing a safe, productive, and welcoming environment for all meeting participants. All participants, including, but not limited to, attendees, speakers, volunteers, exhibitors, OBFS board members, service providers, and others are expected to abide by this OBFS Code of Conduct. This Code of Conduct applies to all OBFS meeting-related events, including those sponsored by organizations other than OBFS but held in conjunction with OBFS events, in public or private facilities. Here is a portion of the Code of Conduct; the full statement can be found here: obfs.org/obfs-code-of-conduct

Expected Behavior

- All participants, attendees, and vendors are treated with respect and consideration, valuing a diversity of views and opinions.
- Be considerate, respectful, and collaborative.
- Communicate openly with respect for others, critiquing ideas rather than individuals.
- Avoid personal attacks directed toward other attendees, participants, and suppliers/vendors.
- Be mindful of your surroundings and of your fellow participants. Alert OBFS board members or site host staff if you notice a dangerous situation or someone in distress. Board members will have name tags with a ribbon or a star to distinguish them as reporting entities.
- Respect the rules and policies of the meeting venue, lodging, hosts, or any other venue associated with the meeting.

Reporting Unacceptable Behavior

- If you are the subject of unacceptable behavior or have witnessed any such behavior, please immediately notify an OBFS board member, an OBFS volunteer in a leadership position, site host staff, or local authorities.
- Or use this online reporting form: <https://obfst.memberclicks.net/obfs-misconduct-reporting>

Creating common ground to resolve misconceptions and prepare students for field experiences

By Cora Baird (UVA Coastal Research Center) and Angie Patterson (Black Rock Forest)



This work emerged from a 2021 partnership between OBFS members (the authors), the coordinator of the ESA SEEDS program, the communications coordinator for the LTER Network Office, and the Undergraduate Field Experiences Research Network (UFERN).

Broadening participation and alleviating “fears of the unknown” for underrepresented students engaging in field work requires solutions that bridge the differences found amongst students’ prior outdoor experiences, situational knowledge, and cultural backgrounds. These differences often contribute to disparate perceptions and expectations about what field station work and life is like. One feasible solution that can help realign students’ perceptions includes the creation of a short film or ‘pre-orientation site trailer’ for students and their families to learn about field station life and work associated with our programs.

A site trailer should address two elements:

1) Your program’s elevator pitch. What is the experience of doing research there and why would someone want to participate? 2) Identify concerns or misconceptions and preparation needs associated with the attributes of your program. What reality will visitors face at your site? What can you show in the video to help them understand and arrive prepared?

The reality is that each of us have had varied field experiences - some negative, some positive. So when planning your content, consider safety, including sources of risk and appropriate gear. Check your outlined contents against [Demery & Pipkin](#) and UCB’s [field safety planning template](#). Make sure to show your facilities, the local community, highlights of alumni experiences and advice they can offer visiting students, and how to access resources.

If you want perspectives from underrepresented individuals in your program, consider either 1) using individuation (‘What was your experience with safety in our program?’ rather than ‘What is our program like for a Black woman?’) or 2) inviting multiple members of an identity to have a shared conversation so that no one person is asked to speak on behalf of an identity group.

If you want to learn more about creating your own site trailer, visit these support links from The Virtual Field (OBFS) on [video creation best practices](#) and [post-production](#) and LTER’s [video storytelling and production](#) guides.

Check out this [example trailer](#).

Ecology Extended Art Project By Rita Leduc, Artist-In-Residence with Oika at Hubbard Brook Experimental Forest

[Oika Arts](#) is pleased to report much conceptual and creative progress in our pilot project called [Ecology Extended](#). This innovative Art-Sci collaboration between the NY-based artist, Rita Leduc, research ecologist at the USFS Northern Research Station, Lindsey Rustad, and Rich Blundell of Oika began last summer at the [Hubbard Brook Experimental Forest](#).

Ecology Extended explores novel pathways by which the ecological dynamics inherent in nature can extend into culture through visual art. Merging a scientist's curriculum of ecological principles with an artist's place-based, interdisciplinary practice, we are communicating a new eco-cultural paradigm through artworks, lectures, and social outreach.

The program places an artist trained in the principles of Ecological Intelligence into an active ecological research setting to create art imbued with the Ecological Intelligence of habitats in flux.

We have funding for more projects like *Ecology Extended*!

We want this project to grow! Please reach out if you are interested in learning more about *Ecology Extended*; we are actively seeking outlets to engage others in what we are doing via lectures, podcasts, casual conversations, etc. Additionally, Oika is pleased to announce that we have been awarded additional funding to launch more *Ecology Extended* projects in 2022. If you are a field station director or staff with an interest in hosting artists-in-residence please contact Dr. Rich Blundell at omniscopic@gmail.com. If you are an artist (or know one) who would like to apply for an Oika grant to develop an Oika Arts project, please contact Rita Leduc at Leduc.Rita@gmail.com.

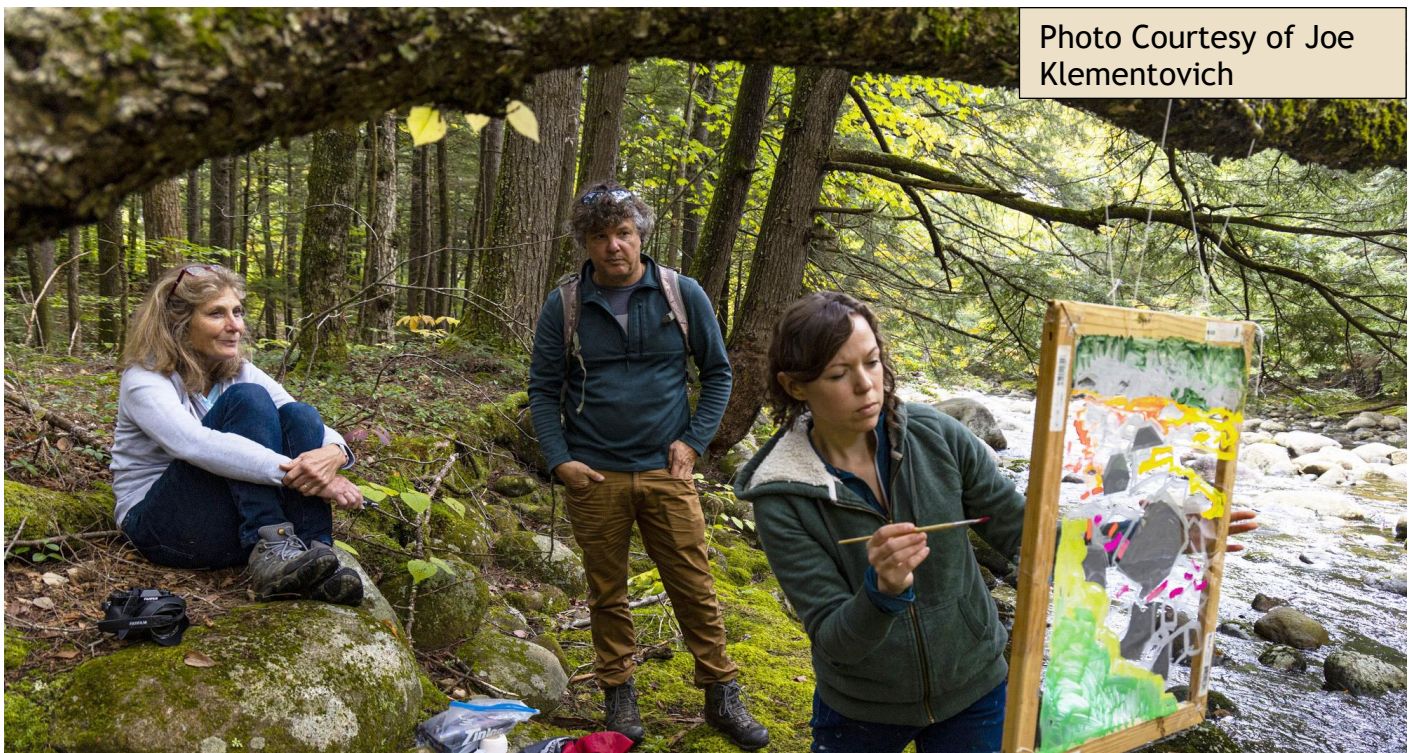


Photo Courtesy of Joe Klementovich

Station Profile: Scientific Station Nkweseko By Claudia and Andreas Hemp

Scientific Station Nkweseko is located in Tanzania, Africa in the Kilimanjaro Region (Hai District, Machame area, 3°11'04'' S, 37°14'26'' E) at 1700 meters above sea level. It is one of few field stations in Tanzania and East Africa and is located at the lower border of the montane rain forest surrounding Kilimanjaro, protected as a National Park and a designated UNESCO world heritage site. The station itself lies in the so-called Chagga Homegardens, a sustainable agroforestry system with high biodiversity, rich in former forest species and a high degree of endemics.

From 1989 to 1996 researchers conducted ethnobotanical and ethnozoological projects, including later projects on vegetation and Orthoptera, all financed by the German Research Foundation (DFG). From 2010 to 2018 the research unit "KiLi" was established, again financed by the German DFG. Climate and soil data as well as monitoring selected groups of plants and animal groups resulted in a wealth of data from all major habitats.

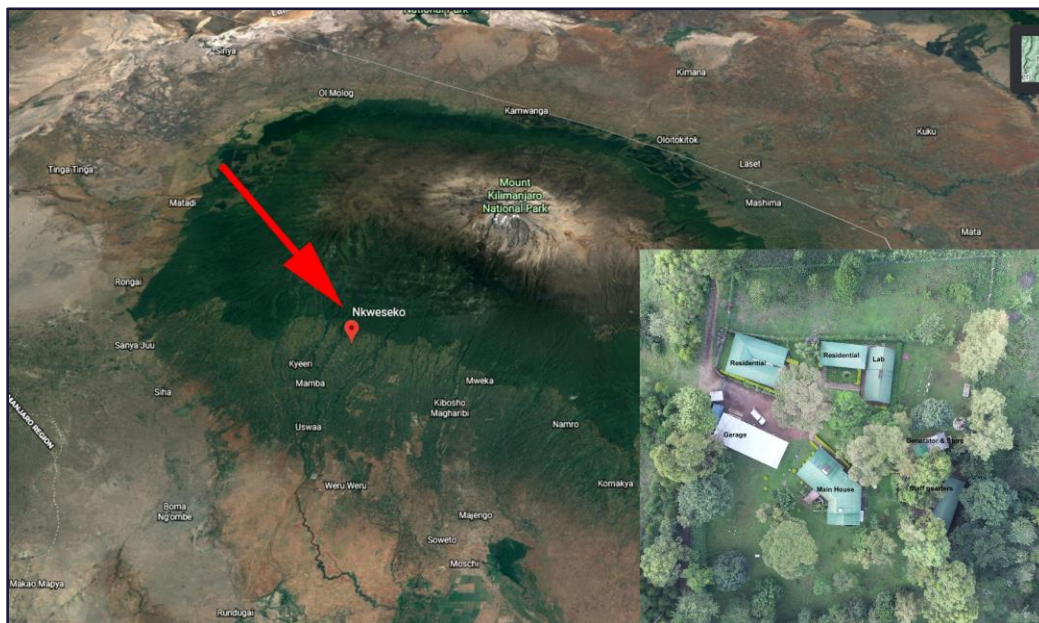
A booklet summarizing the results and providing more insight into study design, participating Universities and Institutes in Tanzania and Europe, and available data can be downloaded at:

<https://kili-ses.senckenberg.de/en/publications/literature/>

In the frame of the KiLi Project a rain map together with a high-quality physiographic map as a base for ecotourism, nature conservation and land planning at a scale 1:100,000 for the entire Kilimanjaro massif was developed.

The map is obtainable at: https://www.hochgebirgsforschung.de/weitere_karten.php.

The finding of the tallest trees of Africa on one of the research plots of KiLi attracted world-wide attention (Hemp et al. 2016). In 2020, a second research unit was granted by the DFG with the first phase starting just now and running until 2024. In the second research group, in addition to continuing recording long-term climate and vegetation data, is a focus on socio-economic topics. Scientific Station Nkweseko hosted numerous smaller projects from various European, American, and Asian countries collaborating and supporting scientist teams in logistics, and facilitating field work.



Scientific station Nkweseko (red arrow) located at the southern slopes of Mount Kilimanjaro, Tanzania, at the lower border of the rain forest. Inset shows housing and laboratory.

Source of satellite image: Google Earth.

Image courtesy Claudia and Andreas Hemp.

Meet Your New OBFS Officers

Congratulations and welcome the following individuals to their new positions beginning April 1, 2022!

The new officers are (photos below, left to right):

President: Lesley Knoll

Secretary: Beth Norman

Member-At-Large: Teresa Schueller

Member-at-Large (Early Career Rep.): Scott Thomas

Thank you to everyone who ran on the ballot and to voting members who participated in the 2021 OBFS Election.



Thank You and an Invitation

Sarah Oktay deserves OBFS' sincere acknowledgment for her many contributions to this organization. Sarah has served on the board in varied capacities, most recently as Editor; she now passes that baton to Stacy McNulty. Sarah will remain active with OBFS as Co-Chair of the Development Committee with Brian Kloeppe. Thank you, Sarah!

With the launch of the new Strategic Plan, international matching program, IDEA+ initiatives, and training opportunities in Development, among other projects, it is an exciting time for OBFS and a great time to get more involved with the organization.

Committee invitation: please consider joining one of the OBFS standing committees. Reach out to the chair(s) of the committees in which you are interested: obfs.org/governance.

In particular, we would welcome individuals to work with Jason Tallant as Network Coordinator, Mary Hufty as Historian, Lisa Busch & Vanessa Trujillo with Outreach and Communications, and Paul Foster with the Collaborations Committee.

Send your news and articles for the next edition to newsletter@obfs.org
by April 15th

In the News

Recent Publications

Click the link to access; some may require sign-in

[Beltran, R. S., E. Marnocha, A. Race, D. A. Croll, G. H. Dayton, and E. S. Zavaleta. 2020. Field courses narrow demographic achievement gaps in ecology and evolutionary biology. Ecology and Evolution 10:5184–5196.](#)

[O'Connell, K., K. L Hoke, M. Giamellaro, A. R. Berkowitz, and J. Branchaw. 2021. A Tool for Designing and Studying Student-Centered Undergraduate Field Experiences: The UFERN Model. BioScience. biab112.](#)

[O'Connell, K., Hoke, K., Giamellaro, M., Berkowitz, A., & Branchaw, J. \(2021\). Designing and Studying Student-Centered Undergraduate Field Experiences: The UFERN Model. BioScience, Preprint.](#)

[Race, A. I., R. S. Beltran, and E. S. Zavaleta. 2021. How an Early, Inclusive Field Course Can Build Persistence in Ecology and Evolutionary Biology. Integrative and Comparative Biology 61:957–968.](#)

[Race, AI, De Jesus, M, Beltran, RS, Zavaleta, ES. 2021. A comparative study between outcomes of an in-person versus online introductory field course. Ecology and Evolution 2021; 11: 3625– 3635.](#)

[Shortlidge, E. E., A. Jolley, S. Shaulskiy, E. Geraghty Ward, C. N. Lorentz, and K. O'Connell. 2021. A resource for understanding and evaluating outcomes of undergraduate field experiences. Ecology and Evolution. Vol. 11, Issue 23. Pages 16387-16408.](#)

[Swing, K., E. Braker, P. Fiedler, I. Billick, C. Lorentz, and D. Wagner. 2021. Growing Threats to the Scientific and Educational Legacies of Research Stations and Field Courses. BioScience.](#)

[Zavaleta, E. S., R. S. Beltran, and A. L. Borker. 2020. How Field Courses Propel Inclusion and Collective Excellence. Trends in Ecology & Evolution 35:953–956.](#)

Mark your calendars - the Annual Meeting is in the US Great Lakes!



OBFS 2022
Central
Michigan
Biological
Station,
September
14th – 17th.

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[The Virtual Field](#)



Instagram



May 2022 Newsletter

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OBFS as Community

by Lara Roketenetz, President

I recognized the power of OBFS at my first conference in 2016 at the Sitka Sound Science Center in Alaska. It was a defining time in my new position as a Field Station Manager for the University of Akron (Ohio) when I realized I had the support and understanding of others doing similar work around the world. Our shared missions to advance scientific knowledge, promote understanding of the natural world, and provide educational field experiences for students of all ages, are strengthened by working together. Through OBFS, I found friendship, advice, mentors, and community.

As we work to further strengthen our bonds with each other and invite more people into this organization, our strategic plan will make sure that we build a professional space that is welcoming, safe, resilient, thoughtful, equitable, and accessible. Our Collaborations, Membership, and IDEA+ committees are planning a membership survey to assess where we are and where we want to go as a community; our International committee is developing cross-cultural connections and curricula between field stations; our Development committee has ideas to raise funds and friends; an Art/Science group has new collaborations; the list goes on. Please join a committee to bring your expertise into the community – we are better together. Thanks to the committee chairs and members, and especially to Chris Lorentz, who as Past President will be working tirelessly to advance the strategic plan goals.

We look forward to hosting you on Beaver Island at Central Michigan University's Biological Station in autumn. We hope gathering in person again will help us continue to grow as a community. I encourage you to connect with your local/regional stations and other OBFS members before then too – our collective community is strengthened by connecting more often through our shared experiences. Please do not hesitate to reach out to your OBFS board with suggestions, questions, or comments.

A Career in Field Stations By Stacy McNulty, Editor



OBFS President Lara Roketenetz notes:

Scott Thomas and I met up this year for the Biggest Week in Birding at Magee Marsh Wildlife Area, Ohio.

As the saying goes, birds of a feather flock together!

Scott Thomas has been working at field stations at every stage of his career. At present, Scott is a National Science Foundation postdoctoral fellow hosted by Murray State University in Kentucky. He received a Bachelor's Degree in biology from the University of Mount Union in Ohio in 2011. Graduate work took Scott to study amphibian population ecology at the University of Akron, and he received a Master of Science in biology in 2013 and a PhD in Integrated Bioscience in 2020.

Scott says "it's hard to imagine how a single step of the last decade of my life could have been possible without field stations existing both for me and for the people who worked before me." At Mount Union, he took ecology labs at the university's Huston-Brumbaugh Nature Center. As a next step in his career, Scott studied demographic factors associated with changes in abundance of spotted salamanders (*Ambystoma maculatum*). The long-term salamander data at the University of Akron Field Station (UAFS) in Ohio enabled Scott to compare developmental traits of different populations and led him to explore how elevation and other gradients affect population dynamics of the tiger salamander (*A. mavortium nebulosum*) at the Rocky Mountain Biological Laboratory (RMBL) in Colorado.

He is now a principal investigator at RMBL and planning an educational program at Murray State's Hancock Biological Station similar to a successful K-12 program at UAFS. Scott spent many years offering salamander walks to get people engaged, especially kids. He said it is rewarding to see repeat visitors on these walks from past years – a field station is an ideal place to engage people.

Scott says "my time at these very different field stations has given me a deep appreciation of their keystone role in facilitating place-based and collaborative science, education, and environmental appreciation in diverse populations." To that end, Scott focuses on keeping students safe and protected at RMBL and elsewhere. For instance, the Research Experiences for Undergraduate (REU) program is one way to engage college-age students in the technical and other skills needed for field science while promoting the well-being of these early-stage scientists as they prepare for a career in research.

Field stations factor heavily into Scott's current work as well as his background and training. He uses field stations for recreation, networking, mentoring, teaching, and educational outreach. Scott has served in various roles ranging from interfacing with donors to living at and serving as caretaker of a UAFS property for nine years. One can confidently say Scott knows field stations inside and out. The ever-present need for resources to keep field station facilities running and staffed is clear to Scott, as is the role of field station advocacy. Scott's extensive field station experience will serve him well in his new role on the board of OBFS.

Collaborations Corner By Paul Foster, Chair, Collaborations Committee

OBFS Collaborations

Station Exchange Program – Travel Awards

The Collaborations Committee is announcing a station exchange program. Travel awards for up to \$1000 / event will be given to facilitate short 2-3 day exchanges with a host station inviting participants to learn more about a common theme or topic. The events should be held in the Fall 2022.

An announcement will go out via the list serve on July 1 with more details about the application process.

Liaisons Sought

The Collaborations Committee is also seeking liaisons to the organizations that have an important connection with OBFS to facilitate the flow of information between other groups and OBFS. Organizations include: NSF, LTER, ESA-SEEDS, NAML, UFERN, The Virtual Field, US Federal Land management agencies and NGOS and tribes.

If you have an interest in serving as a liaison to one of these organizations, please let me know. Contact pfoster@bijagual.org.

Affiliations

ESA-SEEDS

The Ecological Society of America received a \$100,000 gift from Philip Taylor to support the Henry L. Gholz SEEDS Field Trip Endowment¹. Henry Gholz (1951-2017) was a long-time NSF Program Director in the Ecosystems Studies program and helped lead efforts in the LTER, NCEAS, and ESA-SEEDS programs. The endowment will fund ESA-SEEDS field trips including to LTER sites and biological field stations.

National Science Foundation

The US National Science Foundation is accepting public comment on revisions to its Proposal & Award Policies & Procedures Guide².

Among the changes for submission is a requirement when applicable for a Plan for Safe and Inclusive Field/Vessel/Aircraft Research (PSI-FVAR). This establishes NSF's expectations for creating safe and inclusive environments in the field and specifies the content for of the plan. The public comment period closes on June 13, 2022.

Footnotes

¹ <http://esa.informz.net/z/cjUucD9taT0yNDcwNjM1JnA9MSZ1PTUxNzU4NzMyMSZsaT0yNDgwNDQ1OA/index.html>

² <https://www.federalregister.gov/documents/2022/04/13/2022-07941/agency-information-collection-activities-comment-request-national-science-foundation-proposalaward>

“Endless and proper work”: Long term data collection at UMBS

By Jenny Kalejs, University of Michigan Biological Station - jennkale@umich.edu

Every Tuesday morning at 9am, you can find UMBS Resident Biologist Adam Schubel in the same place. And it's not the administrative office for coffee break.

Rain or shine, Schubel makes the familiar trek from his office, past the student cabins, and down the forested two-track near the “BioTron” underground soil science facility, until a break in the canopy marks the entrance to the “UV Field” – a popular site for atmospheric monitoring projects. The work at hand is no exception.

Schubel's weekly pilgrimage is in service of the National Atmospheric Deposition Program (NADP) National Trends Network, organized in 1977 by the U.S. State Agriculture Experiment Stations (SAES) to measure acids and nutrients in precipitation and their effects on the environment over time. NADP monitoring provides critical data that answer questions about the causes and consequences of acid rain – a phenomenon known to harm forests, soil, water, and their living inhabitants, as well as human health and the integrity of stone and metal structures.

Since 1979, UMBS has been counted among NADP's 260 site network. The longevity of the project allows researchers to better understand how human actions and natural events impact precipitation chemistry, and the sheer number and vast geographic distribution of sites help draw out local versus global trends.



UMBS Resident Biologist Adam Schubel.

According to Schubel, participation in NADP monitoring is a sterling example of UMBS's broader commitment to careful collection of useful long-term data – and how these data can help disparate sectors work together for the good of the world.

“For me, the NADP demonstrates how scientists working in concert with policy makers, regulators, and the private sector can diagnose and address issues of ecological health,” says Schubel. “This is an example of how scientific monitoring, sound policy, and regulatory enforcement can solve environmental problems and create jobs.”

(continued on page 7)

International Committee Events By Rhonda Struminger and David Maneli

<p>¡Estás invitado a la primera Conversación de Café Virtual el viernes 27 de mayo!</p> <p>El Comité Internacional te invita a disfrutar de un café, un té, un vino (dependiendo la hora) que represente algo de tu sabor local. Ofrecido en español e inglés, discutiremos cómo su estación biológica se conecta con su comunidad.</p> <p>Algunas preguntas que nos haremos:</p> <ul style="list-style-type: none">• ¿Quiénes son sus vecinos?• ¿Qué tanto o qué tan poco su estación biológica es parte de su comunidad?• ¿De qué manera te conectas con tu comunidad?• ¿Es la conservación una prioridad en sus interacciones?	<p>You are invited to the very first Virtual Café Conversation on Friday, May 27!</p> <p>The International Committee invites you to bring a coffee, a tea, a wine (depending on the time) that represents something of your local flavor. Offered in Spanish and English, we will be discussing how your field station connects with your local neighborhoods.</p> <p>Some questions we will be asking:</p> <ul style="list-style-type: none">• Who are your neighbors?• How much or how little is your station part of your neighborhood?• In what ways do you connect with your neighbors?• Is conservation a priority in your interactions?
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¿Cuándo? Depende de donde estés ...

When? Depends on where you are ...

9:30 - 10:30 AM PT
10:30 - 11:30 AM MT
11:30 - 12:30 PM CT
12:30 - 13:30 PM ET
18:30 - 19:30 PM CET

Donde? En ZOOM. Usar ID de reunión: <https://us06web.zoom.us/j/82406567777>

Where? On ZOOM. Use meeting ID: <https://us06web.zoom.us/j/82406567777>

Please RSVP on the [OBFS FB event page](#)
Por favor, responde lo antes posible en la página de [Facebook en el evento del OBFS](#)

Station Profile: TREES

Toucan Ridge Ecology and Education Society

By Mathieu Charette

We are pleased to celebrate our 10th year of operations as the world is opening up again. Like many, we have used this down time to renovate our space, restructure our organization, and pursue our original objectives, including: long-term wildlife monitoring and research, capacity-building in Belizean ecologists, and promoting sustainable alternatives to slash-and-burn agriculture techniques used in subsistence agriculture. We partner with area rural communities as well as collaboration with NGOs to develop local solutions to world conservation issues.

The T.R.E.E.S Research Center is situated in the Maya Mountains of central Belize on 194 acres of lowland broadleaf forest with about twenty acres of organic tropical orchard. We are part of the Selva Maya, the largest expanse of tropical forest in the Americas after the Amazon. It hosts a huge biodiversity of plants and wildlife with numerous endemics only found in Central America.

The Center is home to the Toucan Ridge Ecology and Education Society (T.R.E.E.S), the Toucan Ridge Bird Observatory (T.R.B.O), and TREESBelize Farms. The facilities include: tropical cabins, dining hall/classroom, commercial kitchen, an outdoor screened-in classroom, processing lab and outdoor bird and bat processing lab. We can host up to sixty students and we focus on ecology and conservation or community service-based groups. In addition to field courses, we also offer wildlife ecology workshops and six-week internship positions on a variety of topics each year.

Our focus is vertebrate monitoring, but we also partner with entomologists, botanists and riparian specialists. We have monitored 56 species of bats detected to date through mist-net capture and acoustic monitoring. This includes one IUCN-listed species and one additional species on the Belizean National Red-list and forty other mammal species including IUCN-listed Baird's tapir (*Tapirus bairdii*), white-lipped peccary (*Tayassu pecari*) and black howler monkey (*Alouatta* sp.). We documented over 328 species of birds through bird banding, eBird accounts, transects and point counts. IUCN-listed birds include Cerulean Warbler (*Setophaga cerulea*) Great Curassow (*Crax rubra*) and Golden-winged Warbler (*Vermivora chrysoptera*). For amphibians and reptiles, 139 species with at least two IUCN-listed species have also been documented.

We believe strongly in conservation through education and will continue this ideology for our 2022-2023 season.

Contact: Mathieu Charette (M.Sc.), (He/Him)
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mcharette@treesociety.org
Phone: 604 612-9329 (CAN) or 501 626-4954

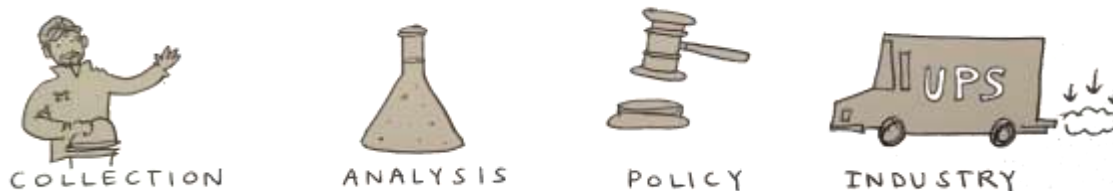


Front page Image and page 6 images of bird mist-netting and TREES facility credit Mathieu Charette

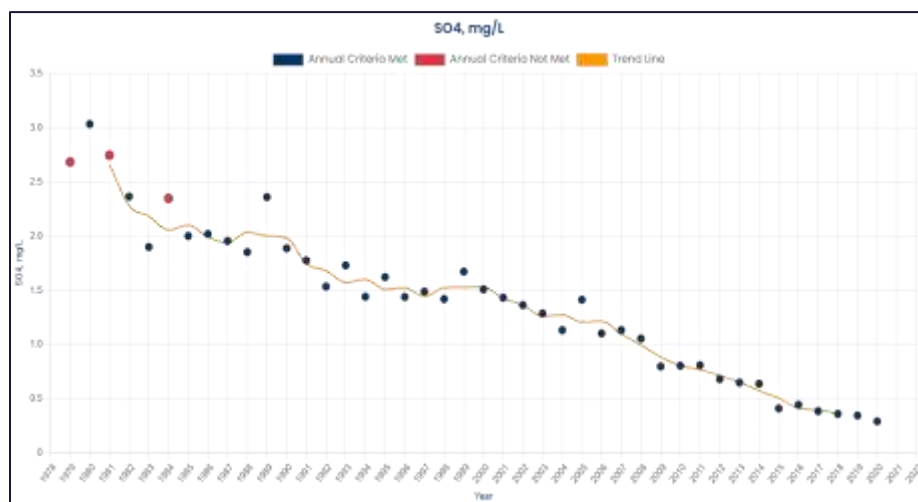
(continued from page 4)

He elaborates. “UMBS pays me to work on this program a few hours a week, and in the interest of public and environmental health, 259 other operators across the country are out there doing the same work. The program supports two fully staffed analytical labs in Wisconsin.

The program is a driver and benefactor of scientific research and technological innovation. Among other private companies, NADP utilizes the services of the United Parcel Service. UPS powers their trucks with General Motors engines. The EPA regulates the sulfur content of the gas that fuels those engines. NADP provides a good example of how we can align systems to benefit people and the planet.”



History supports Schubel’s notion. NADP data proved critical in informing Congress’s 1990 decision to amend the Clean Air Act after long term trends across the entire North American continent identified sulfur dioxide - a byproduct of fossil fuel combustion - as a key element of overly acidic rain.



Decline in sulfate concentration in precipitation at UMBS 1979-2020. (Source: National Atmospheric Deposition Program)

A 2010 Environmental Protection Agency (EPA) report suggested that the amendment was a huge success: emissions were down by fifty percent, damaged ecosystems were bouncing back, and heart attacks and respiratory conditions attributed to poor air quality were down by tens of thousands of cases per year.

Results like these underscore UMBS’s commitment to long term monitoring – as part of networks like NADP, and through the independent and collaborative work of our students and research community. In tandem, these projects help us better understand how humans, climate, and other factors interact to determine the composition and health of both northern Michigan, and the world.

Renowned poet-naturalist Mary Oliver once wrote: “To pay attention: this is our endless and proper work.” In this spirit, you can expect Schubel’s endless and proper work to continue at the UV Field each Tuesday morning. If you see him, bring him a cup of coffee.

In the News

Thank You

Vanessa Trujillo is the new Chair of the Outreach and Communications Committee. We very much appreciate her willingness to oversee this important role.

Thank you to Lisa Busch, for all your years of service on the committee.

LTER Data for Environmental Education - Marty Downs, [LTER](#)

The lterdatasampler R package is designed to curate LTER datasets and provide accessible examples for learner-friendly environmental issue and statistics teaching.

- Learn more <https://lternet.edu/stories/ready-to-teach-r-environmental-datasets-the-lterdatasampler-r-package/>
- Direct link to package: <https://lter.github.io/lterdatasampler/>
- Share your feedback with Authors Allison Horst and Julien Brun: <https://github.com/lter/lterdatasampler#how-to-provide-feedback>

Recent Publications

Click the link to access; some may require sign-in

Jones, Jabari C., and Susan Washko. 2021. More than fun in the sun: The pedagogy of field trips improves student learning in higher education. Journal of Geoscience Education <https://doi.org/10.1080/10899995.2021.1984176>

Mark your calendars - Annual Meeting in the US Great Lakes!



OBFS 2022
Central
Michigan Univ.
Biological
Station,
September
14th – 17th

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[The Virtual Field](#)



Instagram



OBFS IDEA+ Spotlight

BY TORI MCDERMOTT AND PHOEBE JEKIELEK

The IDEA+ (Inclusion, Diversity, Equity, Accessibility, plus) committee will host a spotlight in the Newsletter. This spotlight may include tips related to improving DEI+ (Diversity, Equity, Inclusion, Justice, plus), best management practices for creating an inclusive environment, highlights from DEI work being completed by OBFS members and more!

In this inaugural spotlight, the IDEA+ committee seeks to recognize and celebrate, Indigenous Peoples’ Day that occurred in the United States on October 10th, 2022.



Bullroarer, from the Kalapálo Amazonian community, used to communicate over long distances. Image from National Museum of the American Indian.

While there are many ways to celebrate Indigenous Peoples’ Day, we can celebrate and recognize Indigenous People and the lands they cared for everyday through Land Acknowledgements. Land Acknowledgements can be spoken at the beginning of meetings, placed on your station’s website, and posted around your station.

A Land Acknowledgement should be motivated by genuine respect and support for Indigenous People. The best way to create a Land Acknowledgement is to reach out directly to local Indigenous communities and Native Nations. *Continued on p. 7*

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Banner, inset photos: OBFS members at Central Michigan University’s field station, Beaver Island, Michigan, USA

DEVELOPMENT HAPPENINGS

Ten OBFS members and the Development Committee organized a friend- and fund-raising event on September 17th in Traverse City, MI.

The event featured a beautiful and educational three-hour boat ride aboard a research and teaching vessel from the Inland Seas Education Association's Captain Thomas M. Kelly Biological Station (ISEA) with dinner after the tour. Attendees had one-on-one conversations with OBFS members who shared the importance of field stations to the public.

OBFS members from several area field stations participated, including Au Sable Institute, Pierce Cedar Creek Institute, University of Michigan's Biological Station, and Michigan State University's W. K. Kellogg Biological Station.

Development Activities

The Development Committee facilitates awareness of and resources for OBFS and provides advice for members on creating station-based development programming.

The committee, co-chaired by Brian Kloepfel and Sarah Oktay, meets monthly to discuss the needs of the OBFS community regarding fundraising and building a donor base. At the annual meeting, presenters share ideas and best practices in a concurrent session.

Below: OBFS hosts Sarah Oktay, Stacy McNulty, Brian Kloepfel and Lara Roketenetz set sail.



STRATEGIC PLAN UPDATE—BY CHRIS LORENTZ

With the release of the OBFS [Strategic Plan \(2021-2026\)](#) at the 2021 Annual Meeting, the Board set the plan in action, prioritized items for Year 1, and began implementing several initiatives.

Notable among these are an overhaul of the website to be completed by the end of the year, a Matching Program for International Field Stations, a fund-raising/friend-raising event in conjunction with the 2022 annual meeting, and a comprehensive member survey to be launched in the fall.

“The goal of the Science Policy Internship is to raise the awareness of the work and value of field stations, with policymakers as the target audience.”

Further, we recently established a “Science Policy Internship” with Conner Philson, a PhD. Candidate in Ecology & Evolutionary Biology at UCLA and a Graduate Fellow at Rocky Mountain Biological Laboratory. The internship is funded by the National Science Policy Network’s SciPol Scholars Program.

The goal of the Science Policy Internship is to raise the awareness of the work and value of field stations, with policymakers as the target audience. Conner will be working with an Ad hoc Advocacy Committee, chaired by Jennifer Gee. Deliverables will include an infographic fact sheet to inform policymakers about field stations and a toolkit to empower and support individual field stations to engage policymakers on their local and state levels.

Related to this, several OBFS members worked closely with Joe Bischoff, Principal with Cornerstone Government Affairs in D.C. to support the NSF reauthorization legislation and to add specific references to FSMLs. We are happy to report that the Senate bill now includes our field station and marine lab language that was included in the House bill.

These items and others, outlined in the strategic plan, are helping us reach our vision to be an indispensable resource for the field station community, enhancing the value and sustainability of its members with fairness, integrity, transparency, and inclusivity.

Chris Lorentz is OBFS Past-President

SUMMER INTERN AVOIDS GATORS, LEARNS SCIENCE

—BY LILLIAN DOLL,
UNIVERSITY OF
SOUTH CAROLINA

Lillian is a senior in environmental science at the U of SC.

Right: Lillian Doll helps Dr. Skip Van Bloem collect tree diameters in a rather unusual way.



From early days in the field covered in bug-repelling and other protective gear to afternoons in the lab learning that organic chemistry is cooler than I initially thought, my experiences from a summer Environmental Biology Internship at the Clemson University Baruch Institute of Coastal Ecology and Forest Science (BICEFS) in South Carolina, USA broadened my horizons as a young scientist in many ways.

Dr. Stefanie Whitmire and Leah Gregory invited Ashley Weaver and I to join their lab for the summer to continue a project that began during Stefanie's course on Ecosystems of the Lowcountry. Our project on porewater chemistry in tidally-influenced freshwater wetlands aimed to study the effects of salinization on microbial metabolic activity. That sentence may be packed with biogeochemistry jargon, but it also encompasses many months of rich and memorable experiences.

Because of this project, I had the pleasure to meet a healthy-sized alligator in the thick of our study site, but only after it spotted me first – unnerving, to say the least. Walking carefully past an alligator on a boardwalk of single 2'x4' planks hoping it decides the view is fine from a distance is an excellent way to prepare for a morning of field work.

At BICEFS I picked up technical skills too, such as coaxing fickle lab instruments into conducting nutrient analyses. Preparing reagents and lab instruments was when I felt closest to fulfilling every young science-minded individual's goal of playing "mad scientist," though lab safety protocol usually got in the way of seeing that goal through.

One of my favorite parts about working in a field station environment was the proximity to other researchers engaged in projects of incredible variety that were also based in my study system. Sometimes I got lucky when these other researchers needed a helping hand and I was available to accompany them in the field that day. Those are the precise circumstances that led to me, an intern hired to assist on a biogeochemistry project, sitting on top of a recently sawed-down tree in the name of science.

STATION EXCHANGE PROGRAM (SXP)

As part of the Strategic Plan implementation, OBFS has launched a station exchange program to facilitate professional development opportunities between member field stations.

The intent of this program is to provide mini travel awards to facilitate field station staff travel to other field stations in the OBFS network for shadowing, cross-training and mentoring opportunities.

For more details contact: Andy Rappe, adrappe@ufl.edu.

Photos for Web Site Wanted

OBFS is revamping its web site! Share some of your best photos of people, highlights, activities and scenes from all types of stations. Send pictures via this form:

<https://forms.gle/KdiNKAEAUG4TM8iLA>

- by Paul Wetzel,
Treasurer

Left: View from the Ameriflux tower in Michigan.

KEEPING WATCH: UMBS AMERIFLUX SITE — BY JENNY KALEJS

Above the canopy of mid-aged northern hardwoods, aspen, and old growth hemlock west of camp, a sentinel keeps watch over University of Michigan Biological Station's (UMBS) 11,000 acres. The "AmeriFlux tower" is one of the most iconic pieces of research infrastructure in the station's catalog — and not just because of its impressive 150 foot stature.

The metal tower is equipped with an array of sophisticated tools that measure ecosystem CO₂, water, and energy *fluxes* — the rate of flow of gases and other properties. It is one among a network of PI-managed sites in North, Central, and South America established to collaborate and compare data across major climate and ecological biomes.

But despite belonging to a vast network, the UMBS AmeriFlux tower distinguishes itself impressively. According to Co-PI Dr. Gil Bohrer, Professor of Civil Environmental and Geodetic Engineering at The Ohio State University, the UMBS tower boasts *the highest quality long term data on forest carbon dynamics in the world*. But what makes the data so rich?

For one, longevity. "We belong to a select club of 'Core Sites'," says Bohrer. "Very few flux towers in the world have been running for 20 years straight, with so few gaps in data collection."

Continued on p. 7





The SSLI Campus, situated in Kruger National Park in northeastern South Africa

VIRTUAL CAFÉ TOPIC—FIELD STATIONS IN NATIONAL PARKS

The OBFS International Committee invites you to join a Virtual Café conversation on Field Stations in National Parks. We will hear from Donovan Tye at the SSLI Campus in Kruger National Park and discuss ideas around research and training collaborations with park management agencies, funding mechanisms and governance structures of field stations situated inside national parks. Please join us to share your ideas and experiences!

Some questions we will be asking:

- How is your partnership with the national parks agency structured?
- In what ways do you collaborate with your local protected area management authority?
- In your experience, what have been the key challenges and opportunities of working inside a protected area?

Join OBFS Across the Globe!

When? Thursday, Nov 17

Time Zone: Depends on where you are

Pacific Time, USA: 09:00 / 9:00 am
 Eastern Time, USA: 12:00 / 12:00 pm
 Central European Time: 18:00 / 6:00 pm
 South Africa: 19:00 / 7:00 pm

Duration: 1 hour

Where? Join Zoom Meeting

<https://us06web.zoom.us/j/89528302797>

Meeting ID: 895 2830 2797

One tap mobile

+13092053325,,89528302797# US

Find your local number:

<https://us06web.zoom.us/u/kdWnj8YosS>

WATCH FOR THE 2022 OBFS ELECTION MATERIALS!



Photo: A snapping turtle hatchling makes its way into the fresh water on Beaver Island, Michigan

The Virtual Field Contact Information

Angie Patterson, Mount Holyoke College;

Itchung Cheung, Hatfield Marine Science Center;

Sarah Oktay, Center for Coastal Studies;

Hilary Swain, Archbold Biological Station;

Kerry Winger and Claudia Luke, SSU Center for Environmental Inquiry

Gina Baleria is with Sonoma State University

THE VIRTUAL FIELD —BY GINA BALERIA

[*The Virtual Field*](#) (TVF) is breaking down barriers for underrepresented students and broadening public awareness about the value of field stations and marine laboratories (FSMLs).

This was the take-home message at a TVF-hosted workshop and concurrent session at the 2022 [OBFS](#) annual meeting. The hands-on workshop showed attendees how to submit project videos, and the session explored how virtual experiences increase FSML use and appreciation.

TVF connects field sites and marine labs from all over the world in one virtual space and began in response to COVID-19. OBFS members banded together to create cross-site virtual experiences allowing undergraduates to compare ecosystems. Two NSF grants - RAPID and RCN Incubator - funded the creation of modular virtual training materials and faculty recruitment from minority serving institutions and community colleges. To date, TVF has reached people from 200 universities in 17 nations.

“It was one of the few good things to come out of COVID,” said Kerry Winger, educational outreach & communications lead at Sonoma State’s [Center for Environmental Inquiry](#). Winger led training on ways to participate in Live-from-the-Field, a series of virtual events engaging undergraduates in conversations with field researchers at FSMLs.

“TVF is a powerful tool for reducing barriers to... field experiences, building public awareness about the value of FSMLs, and increasing collaboration.”

Now, as students return to in-person learning, TVF is a powerful tool for reducing barriers to high-impact field experiences, building public awareness about the value of FSMLs, and increasing collaboration.

TVF “brings people to FSMLs who traditionally aren’t able to get out into the field, including people with disabilities, those without means or time to visit, and those uncomfortable or intimidated going into the field,” said Winger. “Just... showing people what it’s like is enough to break down a barrier.”

Winger said TVF “wouldn’t exist without OBFS,” and it provides value to members. “People normally might have a two-minute conversation – ‘that’s cool that you’re doing that thing. See you next year.’ But now they can actually say, ‘you want to collaborate on this material?’ It’s ok that you’re thousands of miles apart. There’s a way to work together.”

Thanks to OBFS member participation, TVF has grown into a robust collaborative, educational, and transformative space. The TVF Leadership Team is currently seeking additional funding to continue growing access, inclusion, and reach to ensure broader impacts.

KEEPING WATCH: UMBS AMERIFLUX SITE—CONTINUED FROM P. 4

In addition to continuity, core sites are chosen based on ecosystem representation, length of prior data record, quality of existing data, and established ability of site PIs – including Bohrer, UMBS Associate Research Scientist Dr. Luke Nave, and UMBS researcher Dr. Chris Gough – to provide continuity in site management. Site PIs are quick to recognize the efforts of UMBS Research Scientist Dr. Chris Vogel, who maintains tower operations and continuous data collection on site.

Another reason the UMBS tower is special is the critical linkage between AmeriFlux datasets and other robust long term UMBS-based terrestrial and climate research – including Gough’s [Forest Accelerated Succession Experiment](#) (FASET) and [Forest Resilience Threshold Experiment](#) (FoRTE) on forest plant diversity, age, and disturbance. In conjunction with this supporting ecological context, AmeriFlux data help answer questions about carbon storage and exchanges of gases and energy in terrestrial systems, the influence of vegetation type, land use, and disturbance history, and the effect of seasonal and long term climate changes. Plus, the dataset is open source, which means scientists from all over the world can use it to better understand complex environmental processes.

“The wealth of ecological data together with the meteorological and flux data make for a powerful combination,” says Bohrer. “We have UV index, soil moisture, and leaf index data, both weekly and seasonally. This ecological data provides context and helps make sense of the flux.”

He elaborates. “Our monitoring is dual. Our AmeriFlux tower exists in the middle of a large-scale forest disturbance experiment, so we’re collecting flux data that we can compare with data on forest age, diversity, and tree mortality. Manipulations like this usually happen in a small plot or greenhouse. Our situation is really unique.”

AmeriFlux monitoring aligns seamlessly with UMBS’s commitment to long term data collection – especially as it pertains to climate change. Investigating flux dynamics as a product of ecosystem context means better understanding how changes in forest structure affect outlook for carbon sequestration, greenhouse gases, and climate related changes that are only becoming increasingly urgent. The watch continues.

IDEA+ Spotlight—continued from p. 1

If you are interested in learning about the Native lands your station may be on or if you are traveling and want to know whose lands you may be on, we recommend two resources. You can text the phone number 907-312-5085 with any zip code, city, or state or visit Native Land Digital at <https://native-land.ca/> to learn lands of the Indigenous People you may be on. Native Land Digital also has a [mobile app](#) to show Indigenous territories and languages that may be associated with the land.

The [Smithsonian American Indian Museum](#) honoring Original Indigenous Inhabitants: Land Acknowledgement resource page was used to develop this spotlight.

For additional resources or if you would like to submit content for the IDEA+ Spotlight, please reach out to OBFS IDEA+ Co-chairs Tori McDermott (vmcdermott@alaska.edu), Phoebe Jekiel-ek (phoebe@hurricaneisland.net) or email diversity@obfs.org.

HOW TO FIND USwww.obfs.org/[@joinobfs](https://www.facebook.com/joinobfs)[@OBFS-FieldBio](https://twitter.com/OBFS_FieldBio)[YouTube](https://www.youtube.com/channel/UC...)[The Virtual Field](#)**TRANSITIONS —BY PAUL FOSTER**

Black Rock Forest. Isabel Ashton will become the new Executive Director of Black Rock Forest on November 10, 2022. She succeeds Bill Schuster who after 30 years as ED will remain at Black Rock as a Senior Ecologist.

Jasper Ridge Biological Preserve. Jorge Ramos became the Executive Director of Jasper Ridge Biological Preserve on October 1. He replaces Tony Barnosky.

University of Kansas Field Station. Former KU Field Station Director Ken Armitage passed away on January 6, 2022. Ken was a long-term researcher at Rocky Mountain Biological Lab studying marmots and also served on RMBL's Board of Trustees. Ken was Vice President and President of OBFS from 1986-1989. <https://doi.org/10.1093/jmammal/gyac062>

National Science Foundation. Assistant Director for Biological Sciences Joanne Tornow retired from NSF at the end of September 2022 after 23 years. Her acting replacement is Simon Malcomber, a systematic botanist by training.

RECENT PUBLICATIONS

Click the links to access; journal subscription may be required

Messenger et al. 2022. [Course-based undergraduate research to advance environmental education, science, and resource management](#). *Front Ecol Environ*; 20(7), doi:10.1002/fee.2507.

“...a global synthesis of field data collection, mapping the geography, temporal extent, and type of data collected by students worldwide, and calling attention to the associated benefits and challenges for course instructors.

Shaulskiy, S., A. Jolley, and K. O’Connell. 2022. [Understanding the Benefits of Residential Field Courses: The Importance of Class Learning Goal Orientation and Class Belonging](#). *CBE—Life Sciences Education* 21:ar40.

This study found positive associations between the field station setting and scientific literacy as well as future science plans. The authors found class learning goal orientation and class belonging related to relationships between the field station setting and scientific literacy as well as future science plans. The results have implications for enhancing field course design, increasing access and inclusion in field education, and for understanding the mechanisms for the benefits of residential field courses. This was a [UFERN](#) project.

Shinbrot et al. 2022. [The Impact of Field Courses on Undergraduate Knowledge, Affect, Behavior, and Skills: A Scoping Review](#). *BioScience:biaco70*. doi:10.1093/biosci/biaco70

Organization of Biological Field Stations

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