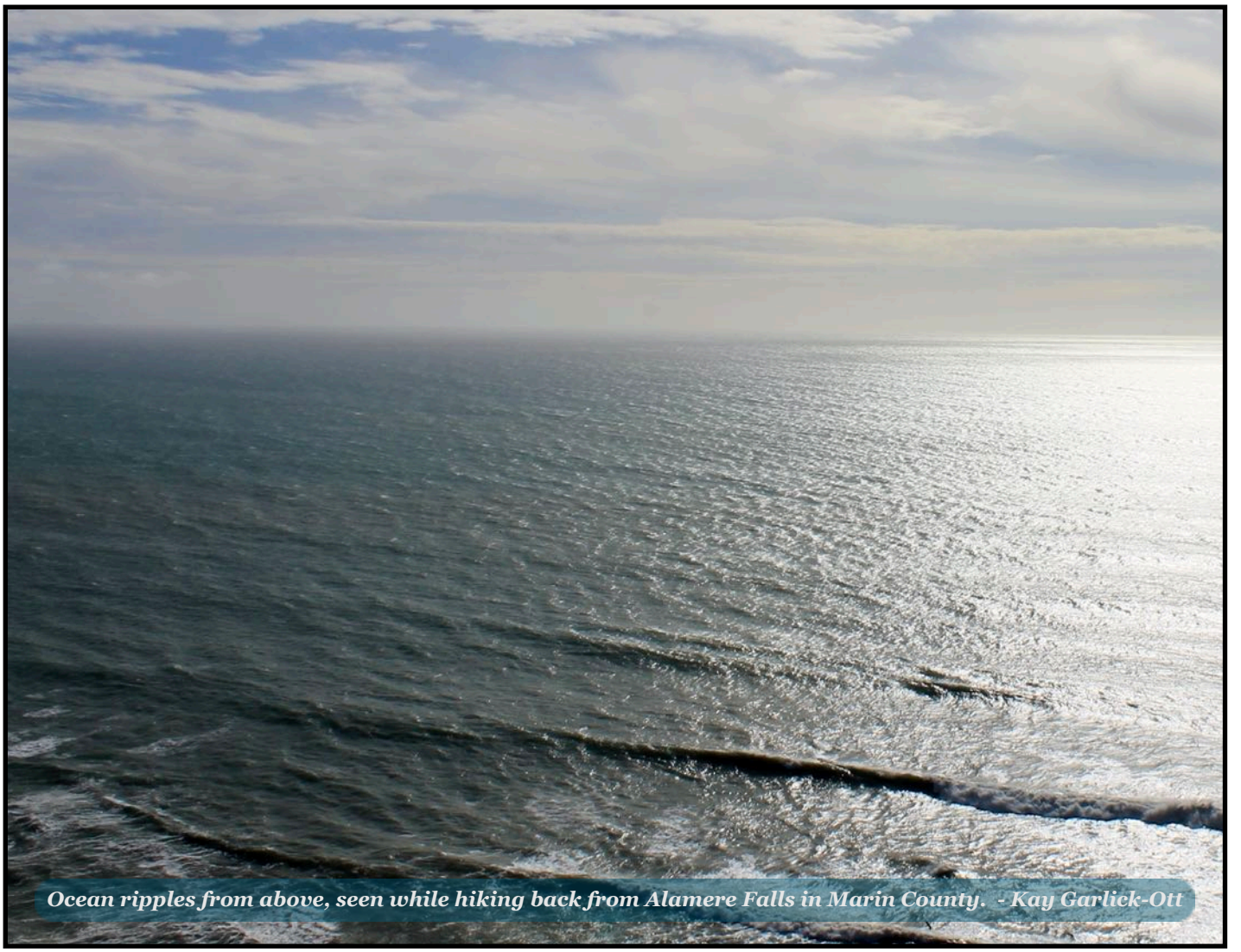
The Aggie Brickyard

assembling the blocks of ecology at UC Davis

SEA CHANGE



Ocean ripples from above, seen while hiking back from Alamere Falls in Marin County. - Kay Garlick-Ott

✦ COVER: ***Joni Tuesday on the road to Tásmam Koyóm, in the Sierra Nevadas, after the Dixie Fire. - Abbey Hart***

LETTER FROM THE EDITORS

"...Of his bones are coral made,
Those are pearls that were his eyes,
Nothing of him that doth fade,
But doth suffer a sea change,
into something rich and strange..."
—William Shakespeare, The Tempest

We chose 'Sea Change' as our theme to honor the ever-evolving, sometimes dramatic, sometimes minute changes we have all experienced over the last year. *The Brickyard* aims to capture a moment in time of the slow, inexorable transformation of the GGE as students enter, make the program their own, and move on to new pursuits. The theme showed up in this edition in discussions with faculty on how the field of ecology has changed (**Faculty Q&A p. 5**), the upheavals in our personal lives and how those are inextricably linked to our work (**p. 22**), the evolution of the Odyssey (**p. 11**), new student experiences (**Student Q&A p. 23**), graduations and goodbyes (**p. 25**). Transformation is not always apparent to those going through it. For some of us, fall quarter 2021 felt like someone told us to jump into a freezing cold ocean and swim to the other side. But now, looking back across the ocean, we may be able to see where we've traveled and how the experience changed us. We may also be better able to see the beauty in the people and things that stayed the same, even as our world was rocked by change.

Of course the world has changed, as it always does. Every single person has experienced this shift in their own way and we want to honor the beauty and difficulty therein. Sometimes, the tides can shift but you're still standing on the same sand. Change this year has been scary, exciting, world-changing, mind-bending, big, small, fast, slow, whatever—and even if we feel that *nothing* has changed, we owe it to ourselves to honor the collective transformation that our community has faced, grieve what once was, and focus clear-eyed on the future. And wherever you are on your own sea-change, whether coming or going or staying right here, we at *The Brickyard* wish you all the best.

Sincerely,

Your Aggie Brickyard Editors

"Let's go in the garden
You'll find something waiting
Right there where you left it lying upside down
When you finally find it, you'll see how it's faded
The underside is lighter when you turn it around
Everything stays right where you left it
Everything stays
But it still changes
Ever so slightly, daily and nightly
In little ways, when everything stays"
— Rebecca Sugar, Adventure Time

PLANET JANET

Letter from the Chair, Janet Foley

♦ December 6, 2021

Janet Foley - UC Davis

"If the only thing I can accomplish as chair is to be kind, I'll consider that a win."
- J. Foley GGE Chair

Year Two of the pandemic and my being chair of GGE. It's been wonderful getting to meet students in person—for the Odyssey, the fall welcome, setting up our mentoring committee, meeting the EGSA leadership....

Much as I LOVE being home with my cats, and they love chewing on my fingers while I try to type, the face-to-mask has been the best. For me, the last year has been trying to keep my research program intact, pretty successfully, teaching via Zoom (*sigh* but we're in person now), dealing with some house issues (leaking sinks x 2 with mold and we found ancient rat damage; roof replacement; new fence to the east), and my community volunteer work, which I hold very dear.

Unpacking all this; our lab's work these days is basically population viability work and habitat restoration for the endangered Amargosa vole in the Mojave Desert. We got a good BLM grant this year to keep this moving... and work on the ecology of ticks, responses to fire, and the Rocky Mountain spotted fever epidemic. My other grad group, the Master of Preventive Veterinary Medicine, grew quite a lot in the last few years, so I've been able to teach in-person to a class of twenty-one from literally twelve different countries. In the community, I'm loving our free clinic for pets of the homeless (Davis-PAW), the Yolo County Restorative Justice Partnership, and our St. Vincent de Paul Society — ask me any time about what we do!

In the GGE, we've welcomed our new leadership in Admissions, Exec, EGSA, Diversity, and others, while the AoE advising team has remained pretty stable. I *think* I've learned many if not most of the ins and outs of basic group logistics. Together with JoAnna, it's been a pretty steep learning curve with a lot of things that need to be done, both daily and in the longer term. I continue to do and approve actions I think I have authority to do, ask for input for larger things from Exec, and if it's really large, it goes to the whole Group. This serves me well, but we heard loud and clear how important accountability and transparency is to our group, so that is a key goal. I just want to add one more goal, which used to make me roll my eyes but has become so critical to me, and that is **to be kind.**

Sitting on an email for an extra day if you're tempted to be curt, asking to chat with someone in-person if email is likely to raise the temperature, biting your tongue vs. telling people how they ought to behave (if it's minor), and asking people if they're ok or if you can help. I know my nerves have been frayed, and we hear that from everyone, I think because we're dealing with so much chaos and instability, fears, and we can't experience the normal reassurance we often get when we do work in-person. If the only thing I can accomplish as chair is to be kind, I'll consider that a win.

◀ ***Rockweed isopod found while tidepooling in Bodega Bay during Odyssey 2021. - Margot Flynn***

▼ ***A Crotch's bumblebee*** **(Bombus crotchii),** ***an endangered bee, pollinates a serpentine sunflower*** **(Helianthus blander)** ***at the UC McLaughlin Reserve. - Becca Nelson***

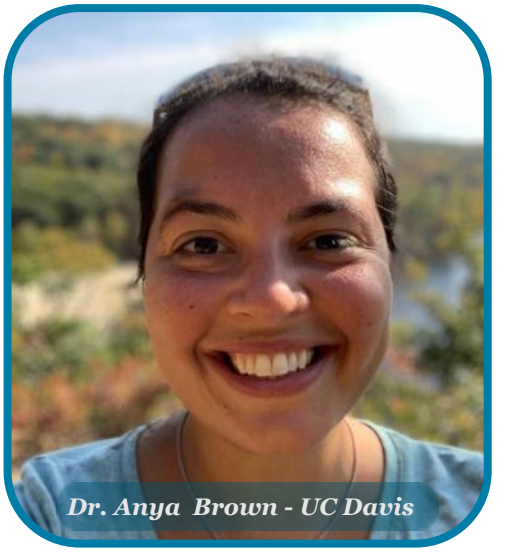
FACULTY Q&A

We wanted to highlight two faculty members to understand their perspectives on the field of ecology and how it continues to morph. Brickyard Staffer ***Paige Kouba*** *interviewed Dr. Anya Brown, a brand new hire who focuses on marine ecology, community ecology, microbial ecology and coral reefs. This interview was conducted via video call and has been edited for length and clarity.*

Have there been any changes in the field since you were a graduate student that you think have really improved Ecology?

So I mean, full disclaimer, it's only been like three years. I felt as a student that there was maybe an archetype or a specific kind of way you needed to be, in order to be a marine ecologist or to be an ecologist, and I think that's changed a lot over time, even over the past decade. When I was starting out, I really thought ecology is mostly like field ecology, going out traipsing in the mud and figuring things out like that.

Have you ever read [Graham and Dayton 2002]? There's this wonderful figure in this paper, if you think of the ecological disciplines as a ribbon that starts branching and branching and branching. It's interacting with other disciplines within itself and bringing it together and [there's] this kind of ebb and flow of what we think of as ecology. I guess right now I'm thinking of it as very branching, there's just a lot of different ways that you can be an ecologist.


Dr. Anya Brown - UC Davis

I think it's also hard because there are so many fun things to think about that you look at when you look at the question in a system or environment. When you ask a question, you can think of it from so many different directions. It's sometimes hard to narrow it down. There has been a change towards more kinds of questions that are really focusing on the effects that humans have on the environment, either through climate change or other human disturbances, and a huge interest in the people who want to go into ecology and sciences trying to make the world a better place. It's not just about answering some of those basic questions, it's also about feeding back and giving to society as a whole. I think that increasingly we're trying to be better about communicating our results to the general public or incorporating the general public into ecology. I'm excited to see where that will go, and things like Twitter and Facebook and social media can kind of help that in some ways. Our jobs are becoming increasingly about not just doing really good science, but having some way to give back.

Have you personally had any significant changes in perspective throughout your career that shaped the kind of scientist and educator you are today? What brought those about?

Part of my career as a scientist has also been combined with growing up, if that makes sense. You start by feeling like you have to be a certain type of [person], fit into a box in order to be a scientist. At some point, I think I tried to do that, and then I gave up on it, and it was very freeing. But I think that's also sort of part of growing up. I have no idea what it was like before I started, obviously, but I feel very lucky to start my academic growth when I did.

Throughout my graduate career, I was really lucky to find … cohorts and supportive communities to help me become a better scientist, a more well-rounded scientist. Both at [University of] Florida and at [University of Georgia] I was part of a women in science group. It was great to have that: "Hey, these are some things that might come up, and here's a group of people who can help you work through them," or "Here are some

resources for thinking about getting jobs," or "Here are some other people to interact with around campus who are doing science in different ways and … you can see different paths that people can take." I think it's really nice to have a lot of examples of what it looks like to be a successful scientist.

What "sea change" do you hope is on the horizon for the field?

It'll be really interesting, in the next decade or so, to see how science literacy changes because of how important it's been throughout this pandemic. We probably look at graphs more now than we ever have before.

If we look at marine ecology of days past you can trace it back to like, three people. So I'm hoping for more different types of people [to get involved]. I think that will help with increasing variation and ideas and ways of thinking about similar problems that we have. Some of the things that we've been asking for the past hundred years we are still asking today, and so I think it would be nice to get varied points of view on those ideas … because people from different experiences are looking at these questions. ◆

Work Cited

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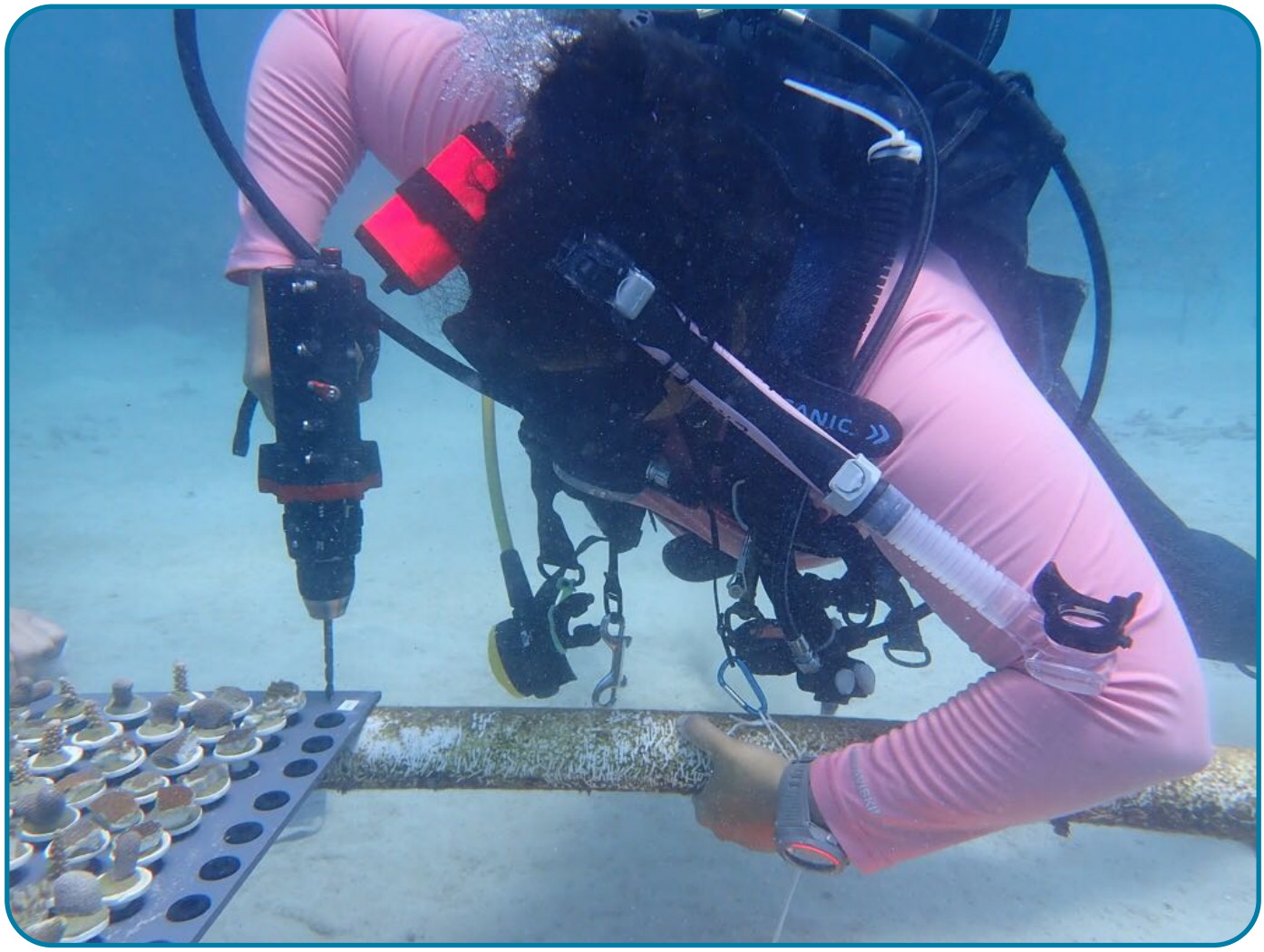
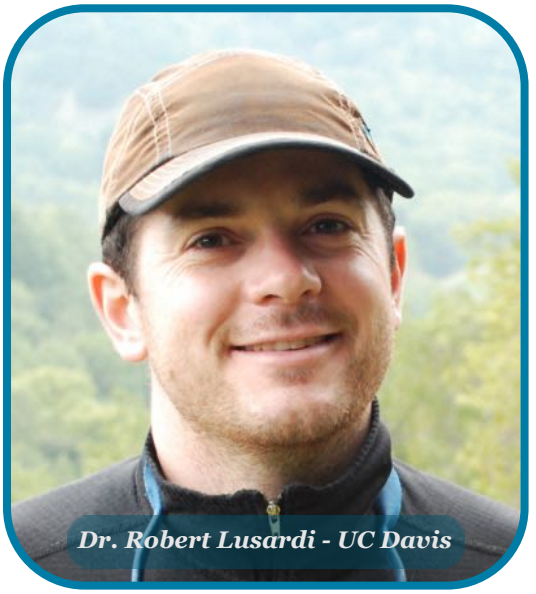


Dr. Brown mounting growing coral on underwater nursery. - Courtesy of Dr. Brown

FACULTY Q&A

Our second interview is with Dr. Robert Lusardi, a GGE alum, now researching stream and food web ecology, native fish conservation, aquatic species interaction and applied conservation ecology in the Center for Watershed Sciences. He is Adjunct Faculty in the Department of Wildlife, Fish, and Conservation Biology (WFCB) and is the California Trout Coldwater Fish Scientist. Brickyard Staffer ***Brandi Goss*** *spoke with Dr. Lusardi; the following interview has been edited for length and clarity.*

Have there been any changes in the field since you were a graduate student that you think have really improved Ecology?



Dr. Robert Lusardi - UC Davis

I think there have been a lot of changes. I think the big one is that there is a greater appreciation for a diversity of thought, which I really appreciate. There's also more respect for creative thinking around how things "work" in Ecology. With that has come less ego and more compassion. That, of course, could also be a function of my surroundings, but that's been my general feel over the last 10 years or so. I think Davis is really on the forefront of some of these changes in how we engage with diversity in science. As I step outside of the Davis community and work in more rural parts of the state I see some differences; there's a little more dominance in the discussions of folks who have been there a long time and know the system really well, which makes some sense. But I hope moving forward that the shift towards having more room for new and diverse voices expands further into the scientific community and natural resource management, because I think that it's always good to bring in fresh minds and different perspectives to tackle tough problems.

Have you personally had any significant changes in perspective throughout your career that shaped the kind of scientist and educator you are today? What brought those about?

To some extent I always wanted to be an applied research ecologist, but probably more so now than ever. There are just too many natural resource issues right now to do anything but applied research. There was also likely a time in my life where I thought that 'I wanted to be associated with academia and write papers on ecological theory in the aquatic sciences', etc., but I've gotten largely away from that. Theory is really important, and I still enjoy learning about it and it informs my scientific perspective, but I think equally important is how it informs applied conservation. So, my perspective is to apply science as best as possible to make good policy decisions that ultimately improve conservation. This began to evolve during graduate school under Dr. Peter Moyle's mentorship, but was really solidified through my work with individuals from different fields, from diverse perspectives, and from diverse organizations. Working at the Center for Watershed Science, which is inherently interdisciplinary, also really shaped this perspective. I've also just sought out opportunities to work with agencies, NGOs, and rural and Indigenous communities and those interactions have also enforced the importance of applied work for me.

What "sea change" do you hope is on the horizon for the field?

For me, part of it is related to diversity in the sciences that I referenced earlier. I'm the Co-Chair of the JEDI Committee with WFCB and not forgetting about the issues that were brought to our attention last summer, keeping that work up, and continuing to bring those different perspectives from different backgrounds into discussions is really important. For example, working in stream ecology and with salmon I do a lot of work with Native American communities and I think it is so important for people like myself to be reaching out and actively collaborating with communities outside of academia. I also hope that we move away from solely relying on what's already in the literature and really value creative ideas and solutions in ecology because there are so many deviations and variations in natural systems and it requires diverse and creative thinking to get an understanding of those systems. Keeping the discussion and the formulation of ideas open and fluid is so important and increasing DEI in science is a big part of how we get there. Finally, I hope that we continue to move toward more interdisciplinary approaches to complex ecological problems, which I try to incorporate into my research on a daily basis. ◆

Dr. Lusardi in the field, holding a juvenile salmon. - Courtesy of Dr. Lusardi

RECENT STUDENT PUBLICATIONS

Astorga, A., Moreno, P., **Rojas, P.**, Reid, B. 2021. Where the rivers are born: Intact Forested Watersheds in Occidental Patagonia. In Castilla, J. C., Armesto, J. J., y Martínez-Harms, M. J. (Eds.), *Conservación en la Patagonia chilena: evaluación del conocimiento, oportunidades y desafíos*. Santiago, Chile: Ediciones Universidad Católica, 600 pp.

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John, C., and E. Post. 2021. Seasonality, niche management and vertical migration in landscapes of relief. Ecography. 44, 1–13. https://doi.org/10.1111/ecog.05774

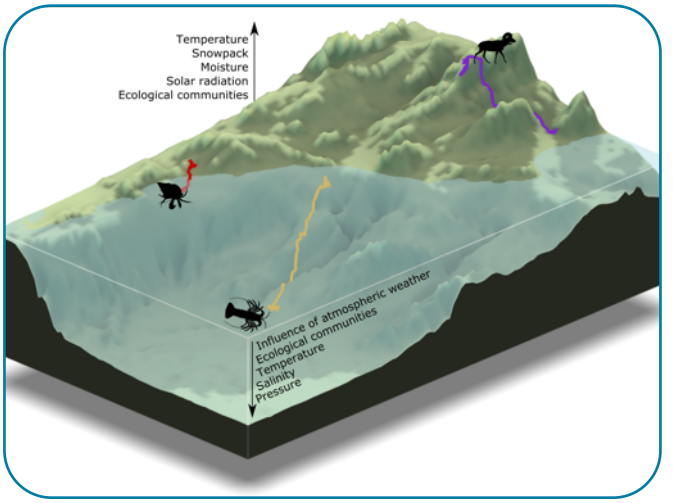

Figure from our recent Ecography review (John & Post 2021). Animal migrate seasonally up and down mountains, across coastal barriers, and over continental slopes. We explore how these "landscapes of relief" generate environmental variation, how climate change stands to impact historic patterns of variation, and what this means for vertical animal migrations - Christian John

Karasov-Olson, A., M. W. Schwartz, S. A. Skikne, J. J. Hellmann, J. D. Olden, D. J. Lawrence, J. T. Morisette, G. W. Schuurman, S. Allen, C. A. Brigham, D. Buttke, A. J. Miller-Rushing, M. Trammell, and C. Hawkins Hoffman. 2021. Co-development of a risk assessment strategy for managed relocation. Ecological Solutions and Evidence. 2, e12092. https://doi.org/10.1002/2688-8319.12092

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Rypel, A. L., P. Saffarinia, C. C. Vaughn, L. Nesper, K. O'Reilly, **C. A. Parisek**, M. L. Miller, P. B. Moyle, N. A. Fangue, M. Bell-Tilcock, D. Ayers, and S. R. David. 2021. Say goodbye to "Rough Fish": Paradigm shift in conservation of native fishes. Fisheries. 46, 605-616. https://doi.org/10.1002/fsh.10660

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Stoll, J. S., **E. J. Oldach**, T. Witkin, K. Reardon, D. C. Love, and P. Pinto da Silva. 2021. Rapid adaptation to crisis events: Insights from the bait crisis in the Maine lobster fishery. *Ambio*. https://doi.org/10.1007/s13280-021-01617-8

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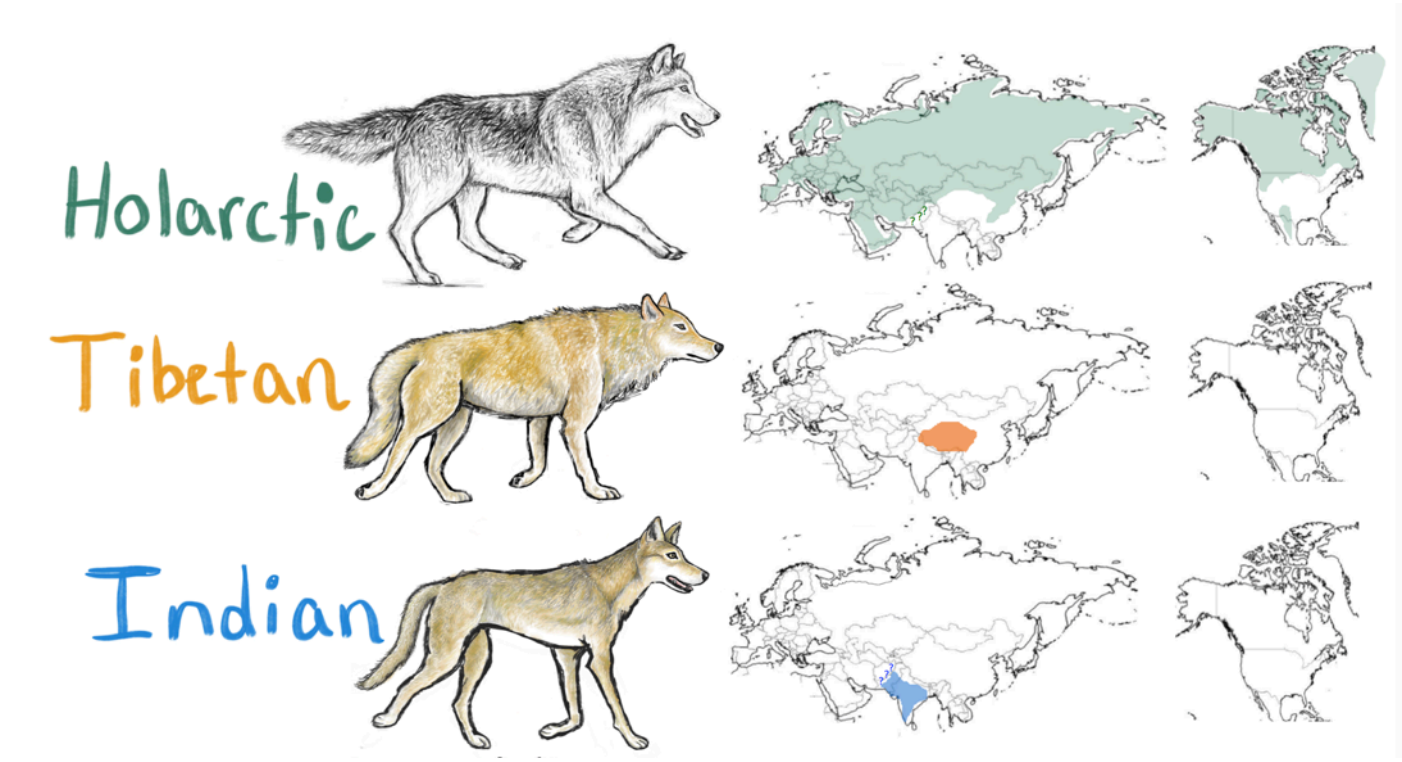
Toczydlowski, R. H., L. Liggins, M. R. Gaither, T. J. Anderson, R. L. Barton, J. T. Berg, S. G. Beskid, B. Davis, A. Delgado, E. Farrell, M. Ghoojaei, N. Himmelsbach, **A. E. Holmes**, S. R. Queeno, T. Trinh, C. A. Weyand, G. A. Bradburd, C. Riginos, R. J. Toonen, and E. D. Crandall. 2021. Poor data stewardship will hinder global genetic diversity surveillance. PNAS. 118, 10–12. https://doi.org/10.1073/pnas.2107934118

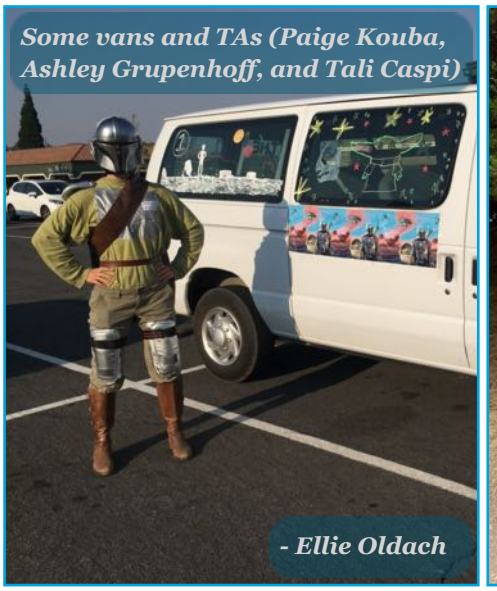


"The grey wolf (Canis lupus) expanded its range across Holarctic regions during the late Pleistocene. Consequently, most grey wolves share recent (<100,000 years ago) maternal origins corresponding to a widespread Holarctic clade. However, two deeply divergent (200,000-700,000 years ago) mitochondrial clades are restricted, respectively, to the Indian subcontinent and the Tibetan Plateau, where remaining wolves are endangered. No genome-wide analysis had previously included wolves corresponding to the mitochondrial Indian clade or attempted to parse gene flow and phylogeny. We sequenced four Indian and two Tibetan wolves and included 31 additional canid genomes to resolve the phylogenomic history of grey wolves." Check out Lauren Hennelly's recent paper in *Molecular Ecology* to learn more!

Artwork by Lauren Hennelly

Journey of the Historic Odyssey 2021

Tara B. Pozzi



I would like to start the story of this year's odyssey with an ode to the vans that set the stage for Odyssey 2021: the Vandolorian, Burning Van, Van Gogh, Van Safari, and Van Fiction. Our fearless TAs led us on a multi-day extravaganza where we saw four UC Reserves, sweated through 100 degree weather, and did our darndest to stay away from ticks. Odyssey seemed to be just as it always was with punny vans, costumes galore, and enthusiasm that could blow your socks off. In-person Odyssey was back, after a COVID-hiatus, and the stoke levels truly reflected that. This year's format was different than in the past though – it was going to be a two-part journey. The first part was to be spent in the Sierras and the second part along the California Coast with a stopover evening in Davis. Without further ado, here is our journey of what ensued over the following six days.

Odyssey Pt. 1 brought Chipotle, carnivorous plants, and a Fosse-inspired flash mob

With "Won't You Take Me to Funkytown?" as our muse, the vans left Davis in the dust as we headed to Sagehen Creek Field Station for two nights and three days. A quick provisions stop in Truckee and we were amongst the trees of the Sagehen Experimental Forest by early afternoon. Our first afternoon consisted of an orientation to the research station and a walk around the field area by former GGE student and now Reserve Director, Ash Zemenick. The evening was then fueled by Chipotle burritos and chatter as we began to get to know one another.

The next morning, we awoke to the smell of fresh air and the morning chirps of songbirds. After breakfast we had a disease ecology talk from Dr. Janet Foley that left us all feeling a little creepy-crawly and on the lookout for ticks. This was followed by a bug and plant tour from Reid Kenny (in a toga) where he located a tiny carnivorous plant among many other exciting finds. It was activities like this that left GGE first year, Ben Rivera, saying: "to make friends through botanizing has been the best social experience I've had in academia in a long time (possibly ever!)".

The afternoon was spent playing games, painting an art installation, and relaxing in the creek that runs through the reserve. And in true Odyssey fashion, the night concluded with a dance party. Disco ball, early 2000's hits, funky dance moves and all. An early morning preceded by a late night left us a little tired, but the excitement of new friendships helped us all rebound for another day of bonding. Plus, the Fosse-inspired flash mob got the blood flowing.

Quail Ridge was the second UC Reserve we hit on the Odyssey. While the heat was a tad overwhelming, it was mediated by the interesting talks given by Shane Waddell and Ashely Grupenhoff about the ecology of the chaparral landscape around the reserve and the unfortunate fire that burned most of the reserve in 2020. After a fun and engaging two and a half days, the Odyssey took a quick hiatus in Davis for the evening before coming together again the next morning for part two.

Odyssey Pt. 2 felt refreshing by the sea, held an abundance of wildlife, and ended with an epic costume party in the rain

With warm layers in tow, we were all ready to be cozy on the foggy California coastline. The Bodega Marine Laboratory was the third reserve we visited. We got to tour both the inside and outside of the reserve. Unsuspectedly, us first years arrived back to the vans to learn this day happened to feature one of GGE's famous traditions.

That night we stayed at a local campground where we had a bonfire and delicious pizza, along with a gorgeous sunset. The next morning greeted us with a tide-pooling opportunity with GGE student Angie Korabik and an interesting talk from GGE student Becca Nelson about her research at McLaughlin. Our final evening was spent at our fourth reserve, McLaughlin, where reserve director Cathy Koehler gave us an orientation to the history of the land the reserve sits on, as well as ongoing research.

With a bowl of delicious curry in our bellies, the night rolled on with a Q&A session with the Odyssey TAs and the ultimate costume dance party. And not only was it raining costumes that evening—it was raining water as a storm blanketed the reserve! While the party may have ended a little early that evening, we went to bed resting easy, knowing that this would not be our last gathering.

Two-part Odyssey, twice the fun?

This was the first year the Odyssey was split into two parts, and it brought just what the doctor ordered, especially after a year of limited social interactions. Ben reported that he "loved the little one-night break in the middle. It helped me catch my breath, re-center, and approach the rest of the trip with even more excitement!" The overnight in Davis also gave other first years, who could only make a couple days of Odyssey (due to family, work, or personal life commitments), the opportunity to join or leave. Marie Fleming, another GGE first year, reported "I deeply appreciated the chance to join Odyssey late. I had a quick turnaround moving to Davis after driving cross-country from the east coast for the start of the program. The two-part option was perfect for me, I was able to recuperate after a long journey and didn't feel like I missed a beat."

Community-building IRL

The last few days we had spent together truly fostered the community-building that one can only hope for when taking a risk and moving to a new place, especially when all we knew was "virtual Davis." However, the Odyssey quickly abated those fears because of its dedication to fostering social relationships and friendships. Ben reported that he "had never even been to Davis before in my life. Odyssey gave me a chance to get the inside scoop from older students and has helped me adjust after moving across the country... [it] helped me build a cabal of friends and allies that have already proven critical to my academic success and mental health. Having that established before the term even started was such a blessing!"

It created a place for us all to spend uninterrupted time with one another and talk, and share experiences and concerns about this new chapter of our lives. Marie shared that "Odyssey was extremely helpful in developing a sense of the community and culture of the GGE. The Odyssey leaders did a wonderful job engaging with us honestly about the diversity of experiences that would await each of us in this next chapter of life. It was a helpful opportunity to connect with others in and affiliated with the program. The Odyssey felt like a safe and hopeful way to start in-person activities in Davis." As we move forth through our time at Davis, we can look back at the Odyssey as a crucial moment for helping us build a strong foundation of community. ◆

Catherine Courtier and Alana Luzzio showing off tide pooling finds at Salmon Creek Beach in Bodega Bay. - Margot Flynn

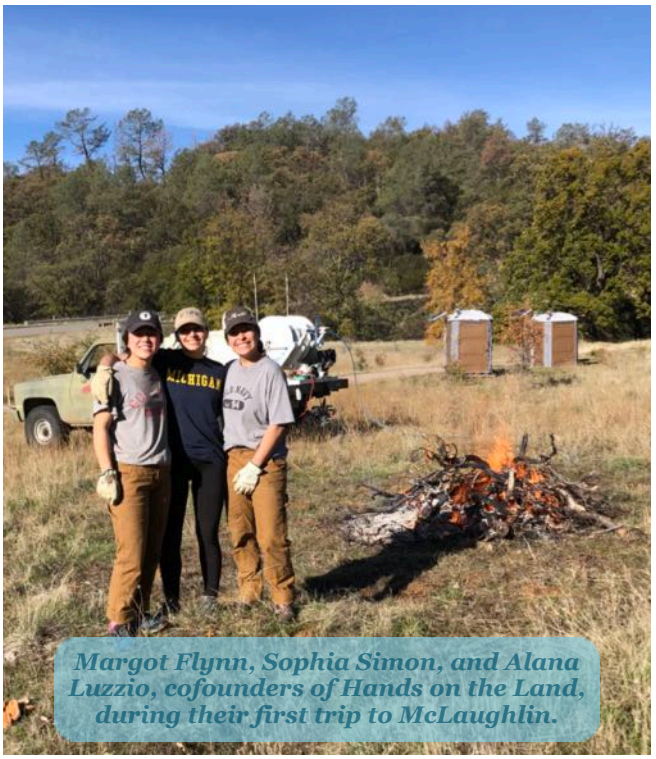
Hands on the Land

Text and photos by Sophia Simon, Alana Luzzio, and Margot Flynn

Ecology's etymological origin lies in the Greek *oikos* and *logos*. Translated literally, ecology is the study of the house. It's these roots that call us to care for our environment and those within our community like we would our own homes. Driven by these principles and inspired by the working minds and hands around us, we formed a graduate student-run organization to work on the land and cultivate a mindset of place-based renewal among people at UC Davis and beyond.

Our group, Hands on the Land, is founded in the belief that working together can nurture a thriving ecosystem. We will coordinate monthly trips to McLaughlin Reserve where the group will work towards renewal of functional landscapes at McLaughlin by removing non-native species, prepping land for prescribed and cultural burns, and engaging in group activities to promote a sense of place.

Brainstorming our organization, Hands on the Land, after a day of clearing and burning downed wood left from the Rocky fire which charred parts of McLaughlin Reserve in 2015. Left to right: Cathy Koehler (reserve director), Ameen Lotfi (prospective GGE student), Sophia Simon and Alana Luzzio (1st year GGE students)



Margot Flynn, Sophia Simon, and Alana Luzzio, cofounders of Hands on the Land, during their first trip to McLaughlin.

Hands on the Land also serves as a foundation for the development of creative solutions to facilitate respectful reconnection with the land. In order to collectively care for our home, we seek to engage community members and academics from all disciplines. We are actively collaborating with Professor Robin Hill to create a community art sculpture workshop with her graduate students utilizing downed manzanita wood collected at McLaughlin. Other collaborations include integration with Professor Brett Milligan's Landscape Architecture class and collaborating with GGE student, Becca Nelson, to work alongside her plant-pollinator research on serpentine and non-serpentine soils.

Our renewal work and these collaborations have the potential to address large scale issues, such as climate change, by reimagining ecosystem functioning with small, local solutions. Through community engagement and creative land management, we hope to restore functional landscapes and sustainable mindsets together.

If heading out to McLaughlin to share stories and good times sounds like your cup of tea, email aluzzio@ucdavis.edu, sosimon@ucdavis.edu, or mtflynn@ucdavis.edu to learn about how you can get involved!

Burn pile of downed wood from the 2015 Rocky Fire.

Oscar Chavarria (front) and Reserve Director Cathy Koehler (back) overseeing a controlled burn on small patches of grassland.

Executive Committee Update

Paige Kouba and Andrea Broad

Of all the many acronyms that make up our graduate group, the GGE Executive Committee is definitely one of them. The EC is a governing body made up of student and faculty representatives. We deliberate on, and vote to approve, things like faculty membership, degree requirements, and course offerings. Along with the chair and the two student reps, the EC includes members from Admissions, Awards, and Diversity Committees, as well as the JDPE program with SDSU. We are your elected student reps: Andrea Broad, returning for her second and final year in the post; and Paige Kouba, beginning her term this fall.

Our job as student reps is to present student perspectives during EC meetings. Last year, much of the EC's work concerned systemic injustice and equity issues enumerated in the GGE student petition from summer 2020. The EC drafted and approved guidelines for the management and use of all GGE email listservs and worked with the Awards Committee to increase transparency in funding offers for students. We enacted a policy to accept Category 7 faculty members, a designation that grants the ability to serve on multiple degree and guidance committees to qualified academics/researchers who, under previous language in the bylaws, were not able to serve before. We voted on new GGE membership applications and reviewed current faculty membership, a process that will occur every three years. Our chair Janet Foley pursued mentorship training for faculty members, including the Graduate Advising and Mentoring Pilot Program, which was completed this fall. The EC will vote on any suggestions that come about as a result of the program. In our most recent meeting, we reviewed and approved changes to the holistic review process from the Admissions Planning Committee, which formed last spring. In the upcoming Winter Quarter meeting, we will vote on bylaws edits concerning the faculty member to replace the chair in the event of emergency and review plans for a "Mini-Odyssey" experience for the 2020 cohort in late February.

Your student reps are grateful to serve the GGE as voting members of the EC. This year, we are especially eager to move forward with discussions on student awards and financial support, especially to increase transparency and communication from advisors to students. Furthermore, we are advocating for programs and reforms to improve student experience and wellbeing, including mentoring and DEI training for students and faculty alike. As always, we welcome any questions or comments about this year's efforts by the Executive Committee. You can reach us at ambroad@ucdavis.edu and pvkouba@ucdavis.edu.

Society for Conservation Biology

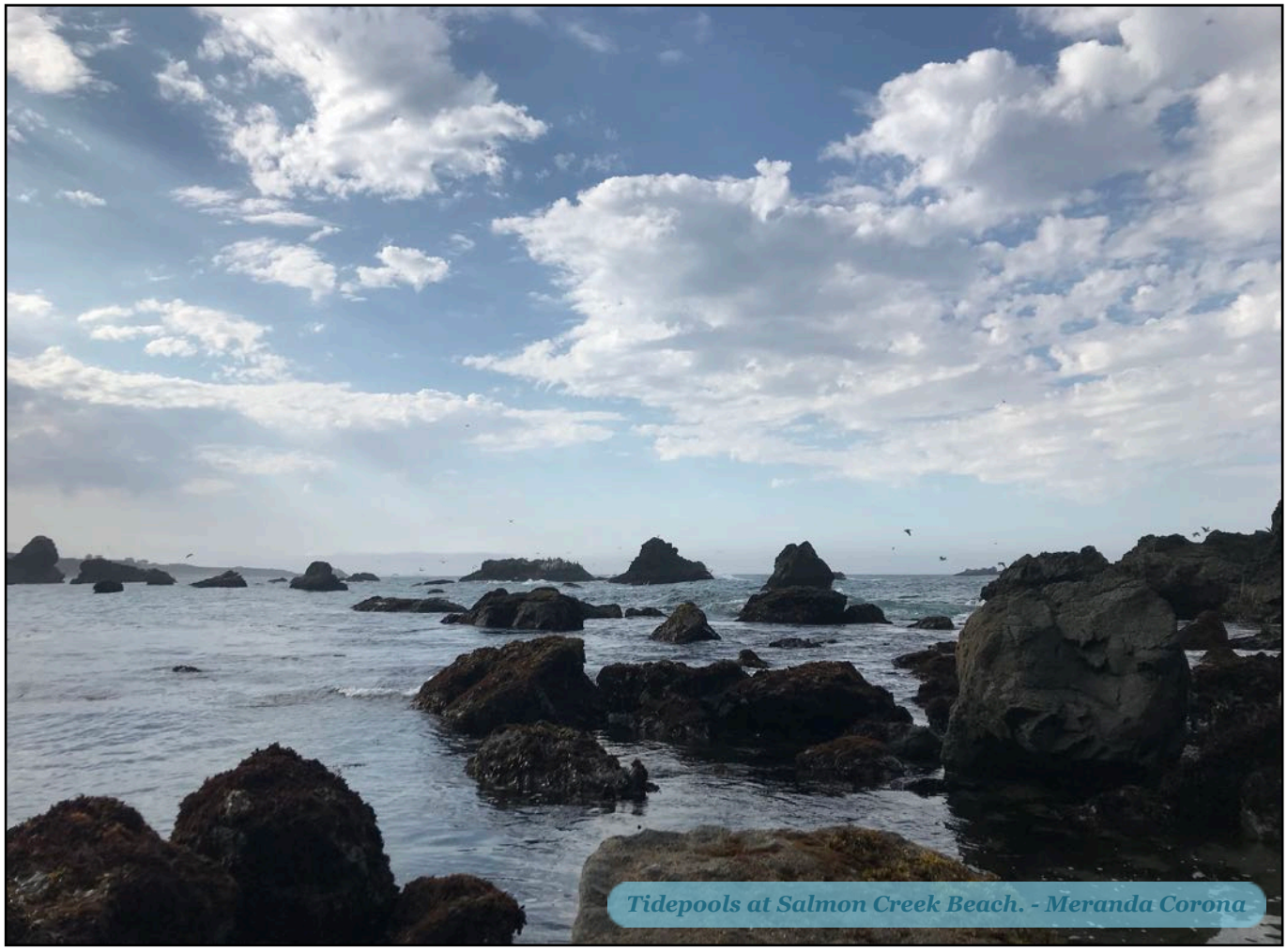
Ann Holmes

Mark your calendar for SCB's 2022 conference happening just a couple hours away in Reno next July! Planning is underway; please reach out to Ann (aholmes@ucdavis.edu) if you would like to join the local organizing committee! The biennial North American Congress for Conservation Biology represents an important facet of SCBNA's work to foster communication among conservation scientists and practitioners in North America.

This event brings together conservation professionals and students working across a wide variety of disciplines and institutions for discussion, innovation, and opportunities in science. The goal of NACCB is to provide a forum for presenting and discussing new research, developments, and strategies that will inform policy changes and conservation practices to address today's conservation challenges. Most importantly, these conferences connect our regional community of conservation professionals and serve as the major networking outlet for anyone interested in conservation in North America.

Our attendees are concerned with the science and practice of conserving biological diversity. NACCB is continental in scope, bringing together conservation professionals and students from every sector of the field including the biological and social sciences, management, policy and planning. Attendees work for universities, government agencies, non-governmental organizations, First Nations, private foundations, and publications. They are scientists, students, managers, decision-makers, writers, educators, and other conservation professionals from throughout the world. Many come to present, learn, discuss and enjoy the incredible networking opportunities of this event.

See https://scbnorthamerica.org/ for conference information and connect with our chapter at https://davisscb.wixsite.com/scbdavis.



Tidepools at Salmon Creek Beach. - Meranda Corona

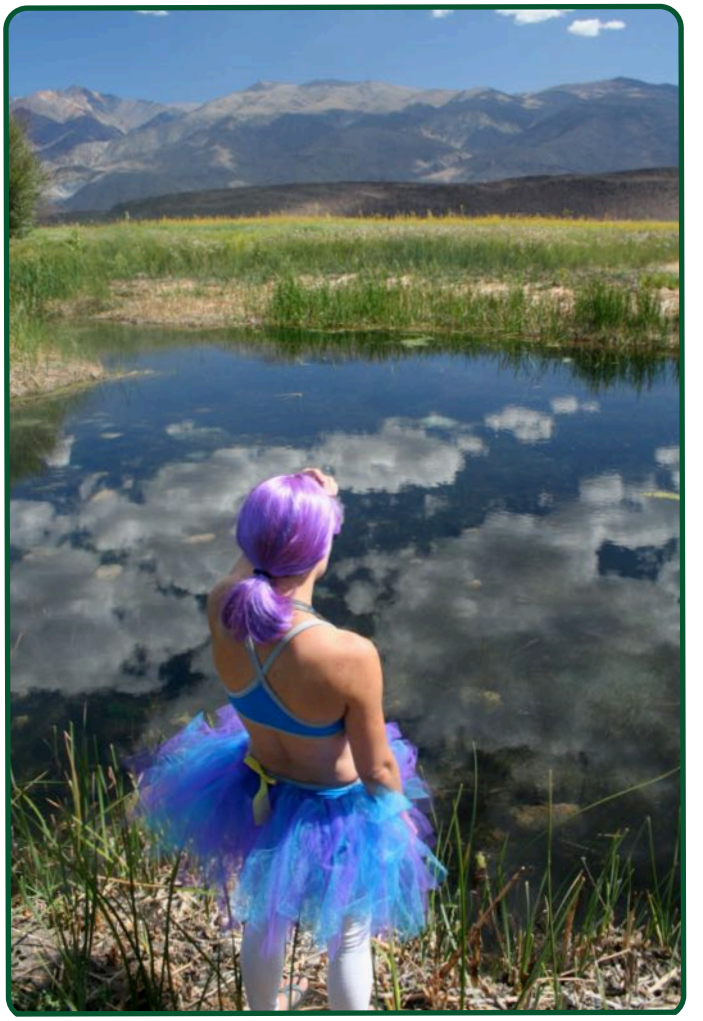
Social Committee Update

Hollis Jones and Tali Caspi

In the era of virtual hangs, the GGE Social Committee has had to get creative. In Spring and Winter of 2021 we hosted a virtual Pet Parade, Cooking Master Class (thanks Alice Tung and Emilie Graves for teaching us how to make polenta and mushroom ragout and chocolate mousse!), a crossover trivia night with the Society of Water and Environmental Grad Students, and the first ever virtual recruitment weekend! But after over a year of virtual hangs and zoom fatigue we were craving community more than ever, and were also eager to welcome the 2021 cohort to Davis in classic GGE fashion.

COVID and ever-evolving variants have kept us on edge, but as we've all gotten vaccinated and boosted we've been able to begin to safely connect in-person again. For many students this has brought much needed balance to our lives with the return to our labs and offices on campus and being able to visit family and friends we haven't seen in too long. As UC Davis has transitioned to in-person classes and activities, campus has come to life and the GGE Social committee is excited to begin to reconnect face-to-face as well. In Fall we hosted our coziest event yet: an outdoor Hot Chocolate Movie Night complete with a buffet of hot chocolate fixings and featuring the classic, the beloved: Shrek!

We have a whole new batch of members from the 2020 and 2021 cohorts with exciting ideas and we can't wait to bring you more events in 2022. Welcome and **thank you** to Elsie Platzer, Lily Klinek, Sophia Simon, and Brooke Wainwright! If you are interested in joining us in planning social events or have ideas for cultivating community please reach out any time!



Lauren Camp admires the view during GGE Odyssey 2009. Read about how Lauren and other alumni have supported the Odyssey, p. 18

EGSA Update

Lauren Redosh, Logan Brissette, Summer Schlageter

Hi GGE'ers! We are your EGSA Co-Chairs for 2021-2022 and we're excited to take a more active role in the community that we love. We look forward to continuing supporting the Diversity Committee (DC) and our various EGSA sub-committees throughout the year. We kicked off Fall quarter with a virtual meeting and heard from newly elected sub-committee reps about all the fun things to come this year. We are looking forward to the return of beloved in-person EGSA events, including the Grad Student Symposium in February, Mardi Gras Charity Gala in March, and more!

This year, we welcome new and returning Committee Chairs:

Diversity Committee: Fred Nelson
Treasurer: Reed Kenny
Academic/Symposium Committee: David Mitchell & Mickie Tang
Public Engagement Committee: Mandy Frazier
Social Committee: Tali Caspi & Hollis Jones
Open Lab Meeting: Christian John & Sierra Winter
Charity Committee: Bradyn O'Connor

Please do not hesitate to reach out to any of us at any time if you have any questions, ideas, or concerns—we are here for you!

— Lauren, Logan, and Summer

Odyssey Fundraiser

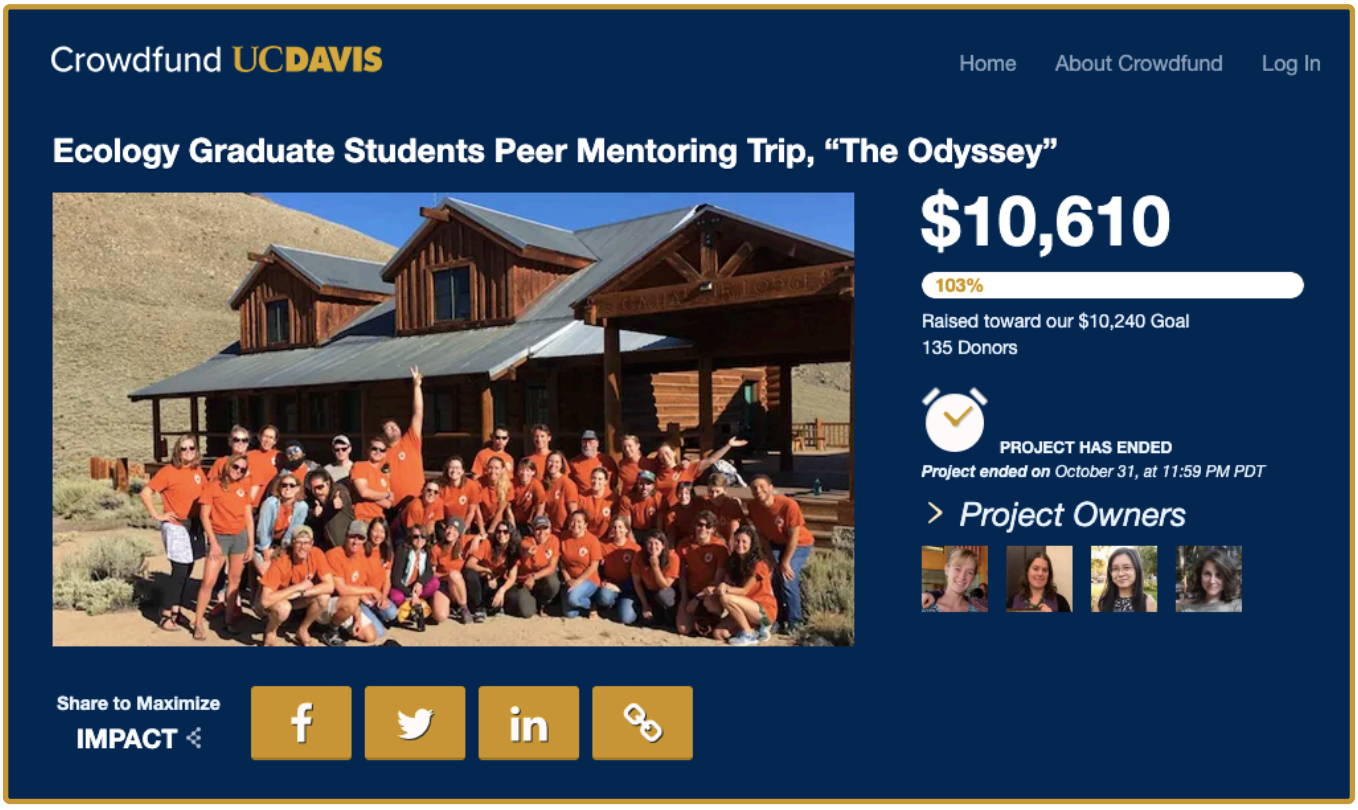
The Odyssey Crowdfund Team

This fall, fires and smoke kept us off the usual White Mountain Odyssey route, so after a traditional stop at Sagehen, the Odyssey group visited Bodega Bay for the first time in GGE history. Tidepooling, touring Bodega Marine Lab, sunset hikes on the beach: it was a trip to remember. In October, not long after our triumphant return, a team of students launched the first-ever Odyssey crowdfunding campaign, supported by the UC Davis Crowdfund program. We sought donations from students, alumni, faculty, and friends, reaching out to Davis ecology graduates from as far back as 2000. We set a goal of $10,240 to support costs like food, lodging, guest speaker fees, and small grants for future students who might miss work or incur childcare costs in order to attend Odyssey. What's more, after 2020's historic (but Zoom-fatiguing) virtual Odyssey, we hoped to support an in-person mini-Odyssey for the second-years.

Our community came out in force to support this goal. We received gifts from 135 donors, more than any of the other 19 projects in this fall's Crowdfund cohort. Donations came from 18 states and three countries. In the end, we surpassed our goal, raising $10,610 over the course of the one-month campaign. People donated in memory of beloved classmates, in honor of non-traditional students everywhere, or just to celebrate flamingoes or bristlecone pines. It was inspiring and exciting to see our GGE family coming together to support future students.

The five of us on the fundraising team volunteered for this project because we believe the Odyssey is a very special part of the support the GGE provides to its students. We all have cherished memories of our own Odysseys—carnivorous plants, beautiful hikes, fun/helpful TAs, and community building opportunities of all kinds. We also have ideas about how to make the Odyssey even more welcoming, accessible, and helpful for all future GGE students. We are beyond grateful for the donations and support everyone gave. From all of us, and on behalf of all GGE students, thank you for your generosity.

Sincerely,
The Odyssey Crowdfunding Team
Paige Kouba, Mollie Ogaz, Liza Wood, Mickie Tang, and Alana Luzzio



The Odyssey project page on the UC Davis Crowdfund website shows the fundraising total. - UC Davis

ART AND SCIENCE

Oceanography

Becca Nelson

What a strange thing to see and not see
the sea. A single wave
or the mantis shrimp.

Try reaching the horizon,
and you get flat blue brightness.

Try a grain of sand,
and you get the remains
of a cliff where two people
sat and watched the gulls at sunset.

Beyond your field of vision,
fish dart. A cuttlefish bone
bleaches with sun.

Not the myth but what surrounds it—
cold brine and hours spent on the water.
A chiton plasters rock. Rain clouds gather.
The reef teems with unnamed species.

Call it Scorpio or Maui's hook or the stars
that appear above the sea. Fall asleep in the sand
and wake to waves. You'll forget where you
are and when except for
the shearwater's wail.

Cliffs at Bodega Bay. - Becca Nelson

Out of Place (Grounded balloon in an almond orchard). - Amanda Wong

Birthday Balloon

Amanda Wong

One day of the year
Celebrate with a balloon
Lasts for a lifetime

Goldfields

Becca Nelson

Sun petals
in their luminosity—
let me be
a field of breath,
a vast greenness.

Point Reyes

Becca Nelson

Windswept in fog light,
at last. A falcon hovers
above the scraggly lupines.
Waves thunder. Clouds drift.
Elk meander among the sun-drenched
manzanitas. Promise this bliss,
dirt-caked and dazzling.

Joni Tuesday helping collect acorns in the Sierra Nevada. - Abbey Hart

Lupines (Lupinus *sp.) and poppies* (Eschscholzia *sp.) in bloom at Table Mountain. - Becca Nelson*

The New Body Problem

Emily Purvis

I spent my early twenties crushing trail marathons, embarking on solo backpacking trips, and gallivanting around seasonal field ecology jobs. My identity was inseparably bound up in my way of life: I was a trail runner, a mountaineer, a field scientist. I felt that my existence was defined by a deep relationship with landscape, and my body allowed me to experience myself as a tiny but necessary speck of our richly complex and delightfully animate world.

When I sustained a traumatic foot and ankle injury during field work in 2017, I didn't think much of it. I would bounce back, I always had. But over the next several years, as I struggled to access appropriate medical care, my mobility progressively declined, and I was in constant and excruciating pain. The pain was an ocean, unfathomably vast, impossible to hold. A disciple of grit and determination, I didn't grasp the enormity of my suffering until my whole body began to shut down, first slowly, then all at once.

When I finally surrendered, it was too late. The initial injury had cascaded into a series of obliterated tendons and ligaments, degenerated joints, bone spurs, lower leg bones no longer tethered to my ankle. In 2020 I underwent one round of major surgeries, then a second. I spent months in bed followed by months in intensive physical therapy. Years of unconscious compensation caused severe damage to other parts of my body as well. Next week I'll undergo a third set of major surgeries.

Modern medicine can produce miracles. I'm fiercely grateful for every single step I take, as well as the enormous team of doctors and physical therapists standing behind me. While I've regained basic mobility, I am left with permanent physical limitations and other chronic health problems. Standing on my own two feet, yet unable to chase the shadow of my former self, I often feel I am living in a liminal space between ability and disability. I'll never again be a runner or a field scientist. I've deeply mourned the loss of such fundamental parts of my identity, of how I relate to and understand myself and the world. Never before have I grieved something as internal as selfhood. A complete and utter heartbreak. This process has also required me to confront deeply internalized ableism: why have I constructed so much of myself around what my body can do? Which sorrows are rooted in love and loss, and which in prejudice?

This reckoning is both personal and professional. Unable to access the rugged backcountry, I am uprooted from the foundations of my technical scientific skills and, more significantly, the epistemological framework underpinning my understanding of ecology as a whole: my capacity to make sense of the natural world has always stemmed from immediate experience, from moving through places in a particular way. As I juggle endless doctor's appointments with pain and fatigue and tending to chronic illness, I'm left with far less time and energy to dedicate to my work. In an academic environment that demands an extraordinary amount of productivity, I can't help but wonder: circumscribed by my new body, do I still deserve to pursue higher education? How does our relentlessly ableist system limit who can be an ecologist?

The wave's fist clutches, releases. Moving through pain and heartbreak, I find myself on the shores of a new self. I'm softer now, more generous, more forgiving. The natural world brings me a renewed sense of joy: my slowness a compulsory meditation, cultivating the tremendous gift of perpetual astonishment. And I'm still a marathoner—the past 20 months of rehab has been the most arduous physical endeavor I've ever undertaken. Every day I wake up and face the terrifying uncertainty of where all this aggressive medical treatment is going to get me. Never before have I displayed such unwavering courage and tenacity.

What is the relationship between embodiment and identity? What happens when we are reborn, as we always are? All I know is that I'm fundamentally different now. A sea change of the self.

Student Q & A

*Sea change may sound like a majestic process, but often our lived experiences of transformation are equal parts weird, wild, and wonderful. Navigating sea change can be a challenge, but one we readily undertake for the joys of community and learning. Brickyard staffers **Lily Klinek** and **Kay Garlick-Ott** spoke to four GGE students about their experiences both mooring at campus and looking ahead.*

1. What sea change do you hope to manifest in the near future?

Catherine: I'm really hoping to get more involved in mentoring undergraduate STEM students in the near future. I would love to leverage my background managing fellowships to share information on paid opportunities and careers in STEM for undergraduates or recent graduates, and how to navigate the process of applying to graduate school.

Lupita: As with most other graduate students, I often struggle with time management. This has been worsened by the switch to in-person courses and meetings which add the extra element of commuting to and from campus. Being new to Davis and getting used to biking around has been a nice change of pace from life in San Diego, and I hope to adjust my time management skills.

Grace: I hope to work on changing my self-confidence as it is limiting my ability to get the most from graduate school. I also hope to get better at saying no to things as I find I often spread myself too thin trying to please everyone. I want to work on being more forgiving to myself when I make errors or fall behind on my self-set expectations.

Andrea: With Covid strongly impacting my first-year experience and limiting opportunities to build community within GGE and throughout UC Davis, I am hoping to become more involved in the community and to put more effort into this aspect of my GGE experience. With campus returning to in-person this year, I've already felt a positive impact in fostering my community and I hope to continue riding this wave!

2. What is your water? *(...or, what nourishes you and keeps you thriving?)*

Catherine: I actually love spending time in the water! When I lived in San Diego this took the form of ocean swims with my coworkers, snorkeling, and paddle boarding, but in Davis I satisfy my water activity cravings by swimming in the ARC's amazing outdoor pool. I also have to credit my dog with keeping me sane. If he didn't need to be exercised for multiple hours a day I would definitely spend way too much time working. We love to go on hikes and explore new neighborhoods together! Finally, I love to stress-bake. I'll be taking baking suggestions for the GGE movie night/finals week!

Lupita: My water is my family, friends, and nature. Whenever I am feeling overwhelmed or need to feel grounded, I find myself grabbing my Chacos and some friends and hitting the trails. Being outdoors is a great way to reset and check in with myself, as well as remember why I chose to pursue higher education.

Catherine Courtier

First-year GGE PhD

Studies natural resource economics and ecosystem services of conserved and restored habitats

Lupita Barajas

Second-year JDPE

Studies arctic microbial ecology

Grace Rosburg

First-year GGE MS

Uses genetic tools to answer ecological questions

Andrea Odell

Second-year GGE PhD

Studies marine ecology

Grace: My water is walking, running, hiking, biking, or swimming outside without my phone. Leaving behind my phone really forces me to be present with my thoughts and is incredibly helpful when I am feeling overwhelmed.

Andrea: Funny enough, normally, my water would be to participate in activities that make me dehydrated and crave water... literally. I love to get outside and be active—whether that's going for a run, kicking the ball around, or playing volleyball. However, I recently partially tore my ACL which has forced me to find a new source of water. I'm still figuring out exactly what that is, but lately it has been practicing my ukulele and binge-watching TV shows. Would love any suggestions!!

3. Any funny or intriguing moments since you arrived at Davis or returned this fall?

Catherine: I feel like every time I walk to a new part of campus I find another outdoor enclosure of animals. I just saw some donkeys the other day!

Lupita: By far the most intriguing event that's happened is my living situation in Davis. I was struggling to find a place when I first moved up from San Diego for my second year and, lo and behold, I met my roommate. She is a fascinating woman with so many stories, sometimes I wish I could talk to her all day instead of going to class. From rallying for civil liberties to walking with lionesses, she is by far one of the coolest people I know.

Grace: On Week 3, I ate it down a flight of stairs in the library. It was quite a loud fall in an otherwise very silent area.

Andrea: Definitely any opportunity to dress up in costumes, which is a big deal in the GGE! It's always so great to see what ideas people come up with and to also challenge myself with my own creative ideas. GGE really understands the assignment when it comes to costumes!

Odyssey van at Quail Ridge - Andrea Odell

CON-GRAD-ULATIONS!

Fifty-five GGE-ers underwent the sea-change of graduation between Fall 2020 and Summer 2021. We caught up with a few of them…

2020 Graduates

Amy Collins is now a Postdoctoral Research Fellow at Colorado State University, where she is examining the effects of light pollution and urbanization on nocturnal bird migration.

Mikaela Provost recently completed a postdoc at Hopkins Marine Station in Monterey, CA working on abalone in Baja, Mexico and will be starting a new postdoc with NOAA doing climate vulnerability assessments for fishes managed by the California Department of Fish and Wildlife. She also had a kid! Her name is Vera.

Sarah Friedman is now a Research Fish Biologist at the NOAA Alaska Fisheries Science Center based in Seattle.

Mollie Ogaz worked as a research specialist for the Center for Watershed Sciences at UC Davis, and now works at Cramer Fish Scientists in West Sacramento as a Biologist.

Evan Batzer joined Google as a Data Scientist working on Search. He's in the Bay Area now, still doing a lot of science and experimentation, though traded plants for queries.

Connor Dibble joined Scoot Science as a Data Engineer. Scoot is an ocean data company building analytical and forecasting tools to facilitate sustainable growth in aquaculture. It is a small shop, but growing quickly. Connor welcomes GGE folks getting in touch to learn more about the field of conservation technology!

Frank Fogarty started as a lecturer at Humboldt State University in Fall 2019 while completing his dissertation. He continues to work as a lecturer and research associate at HSU, where he teaches ornithology, conservation and management of songbirds, and a course advising senior capstone projects in the Wildlife Department.

Kate Tiedeman started a postdoc at the Max Planck Institute of Animal Behavior in Konstanz, Germany.

Annelise Del Rio is living in Olympia, WA, working for the Puget Sound Partnership as a salmon scientist supporting Puget Sound salmon recovery through science and policy. Outside of work she's enjoying biking, hiking, and exploring the Pacific Northwest with her husband and dog.

Aviva Rossi finished her PhD while helping her own graduate students at another institution finish their theses, while teaching 4 courses from home, while doing fieldwork, while overseeing Zoom-from-home school for her two children - which altogether is an accomplishment she will add to her CV from now on. She's now a Research Director at The Gulch Environmental Foundation, a small non-profit focused on sustainable land-based solutions to climate change. She has also been teaching at the University of San Francisco and the College of Marin.

Jan Walker is an ecologist with the Southern California Coastal Water Research Project (SCCWRP), where she is developing assessment tools and programs for coastal wetland ecosystems. She lives in Long Beach with her husband, Dan, and dog, Kudzu.

Christopher Adlam moved to Oregon with family when COVID hit, and he now works as an Extension Fire Specialist at Oregon State University, using the skills and passion developed at UCD to support communities in using prescribed fire and Indigenous cultural burning.

2021 Graduates

Jessica Rudnick is in a boundary spanning role as an extension specialist for CA Sea Grant and the Delta Stewardship Council (CA State Agency), working on social science integration in the Delta. Still living in Davis, mostly working remotely, and enjoying a little more time for road trips, hobbies and true weekends in post-grad life!

Adam Pepi is currently a postdoc in the Uricchio lab at Tufts University, where he is integrating ecological and evolutionary approaches to understand how local environmental adaptation influences population responses to climate change in North American butterflies, using genomic and citizen science data.

Hannah Fertel returned to the Bay Area and is now working as a researcher in Scott Stephen's Wildland Fire Science lab at UC Berkeley (Go Bears!). Outside of work, she's been spending much of her time making music, baking, and playing with her pup, Rosie.

Lisa Rosenthal is working as an ecologist with the USGS in the Sequoia and Kings Canyon field station, splitting time in Sacramento in the off-season and in Three Rivers during the field season. While not strictly working on forest diseases anymore (her PhD topic), she is still focusing on lots of dead trees, and now surface fuels as well, to improve our understanding of fire risk in the southern Sierras.

Alana Chin is doing a postdoc in the Hille Ris Lambers lab at ETH in Zurich, Switzerland! Everyone should visit!

Kristin Dobbin is currently living her (previously unknown) remote postdoc life dreams to the fullest: working on action-oriented research for implementing California's Human Right to Water at UCLA by day and snuggling her puppy in Sacramento by night.

Kristen Elsmore is now working for the California Department of Fish and Wildlife, as a scientist focusing on kelp restoration and management.

Victoria Dearborn moved back to the east coast and is now living in Brooklyn. She works as a City Research Scientist for the City's Bureau of Recycling & Sustainability, helping with data analysis, policy research, and planning a large city-wide waste characterization study. She is happy to be back in the big city, closer to family, and in a place with real seasons—sorry Davis! ;)

Congrats to newly-minted Dr. Collins, Dr. Friedman, and Dr. Provost! (courtesy photos)

The Aggie Brickyard

Goat overlook in the Enchantments region, Washington state; this photo by Dave Ayers won first prize at last year's Graduate Student Symposium in Ecology. The 15th annual Symposium will be Friday, February 4th, 2022, in 3001 PES and online. For more info and to register: http://egsa.ucdavis.edu/symposium-event-page-and-archive.

Want to get involved? Comments, Corrections, or Concerns?

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