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next four years: graduate division pilot proposal, part II

*In the second installment of a two part story, we will continue our overview of the Graduate Division **Pilot Program**. With a goal of recruiting URM faculty and mentors in the sciences, and creating a welcoming, supportive environment to retain URM faculty and students, this second article will focus on strategies to improve our department climate and inclusivity.*

our environment

Any freshman biology student can tell you that diversity is a key indicator of a healthy ecosystem. And just as a healthy ecosystem provides sanctuary and finds strength in the richness of community, our academic community excels when we build spaces where all can feel included, accepted and equipped with the tools to succeed. To improve the climate of our department, it is important that we foster an inclusive environment for all. This goes beyond demographics. It means making sure all members of our department can thrive. Because we all share ownership of our learning and workspaces, how we define and maintain an inclusive and equitable department is the labor of active and sustained collaboration between our students, faculty, and staff.

To these ends, a Graduate Student Project Lead, funded as a full-time GSR, will be hired to focus on developing and implementing the summer research program and other departmental climate initiatives. Graduate Student Project Leads will conduct research on best practices, recruit students, help design the summer research program, and coordinate all aspects of the DEI Pilot Program. Additionally, one Graduate Student Program Assistant will be hired to supplement the work of the Graduate Student Project Lead.



students strolling Sproul Plaza

In recent years, graduate students in Integrative Biology have championed better departmental climate through the creation of Registered Student Organizations (RSOs.) Project Field Equity and Women in Science have worked alongside other graduate student programs to implement wellness and field research safety workshops and an annual wellness survey. This work has been vital in advocating for revisions to curriculum and graduate student programming, heightened transparency in the GSI assignment process and increased graduate student stipends, among other important reforms.

Annual wellness surveys indicate four major areas where we can improve our department culture to best meet the needs of our graduate students: mentorship, departmental structure/guidance, social health, and mental health. We have identified some initial strategies to improve in each of these areas and will continue to work with our community as well as our partners to further refine our approach. To these ends DEI has apportioned funding for third party consultation to establish baselines for department climate and to develop metrics to measure our success, shortcomings and blindspots moving forward. DEI has also approved funding to work with contractors and campus partners to facilitate training and develop best management practices for faculty and graduate students.

As we shape a more equitable and inclusive department DEI aims to build a more compassionate and integrated community by cultivating departmental services and enhanced communication and collaboration. Key areas DEI hopes to address include mentorship and the structures and guidance provided by Integrative Biology to its students. One of the most consistent predictors of satisfaction and success within the department is the quality and fit between mentorship approach and the student. Rather than implementing Procrustean mentorship standards, DEI hopes to establish baseline mentorship guidelines that labs can use as a springboard for conversations about mentorship best practices. To compliment, regular workshops will be instituted to promote discussion and introspection of mentoring strategies. While open-ended by design we aim to strike a balance between the academic freedoms Integrative Biology makes possible and the necessary structure that can provide students less familiar with the academic process with the leylines to effectively navigate their PhD to completion.

Perhaps most importantly, social, environment, and mental health are crucial to sustaining the graduate students, staff, and faculty of IB. Graduate students have consistently reported the social milieu as one of the highlights of being a graduate student in IB. Yet survey results and departmental discussions tell us that despite our



best efforts to be inclusive and serve the needs of all our community, we still fall short in creating a secure and welcoming environment for everyone. DEI will continue to solicit feedback from the IB department on how to foster deeper inclusion in academia. Many graduate students struggle with mental health throughout their graduate career and our department is no exception. While various students and departmental organizations have organized workshops and shared resources piecemeal over the years, part of our Pilot Program will include regular mental health workshops along with programming to improve awareness among faculty, staff, and students about mental health and how to be compassionate allies for our colleagues.

For more about DEI's specific application and implementation of funding, or to lend your voice to this conversation, check out the full **Graduate Student Pilot Proposal** and keep informed with further announcements and surveys from the DEI Committee. We recognize that our work and initiatives will never fully acknowledge the needs and intersections of identity, education and scholarship in Integrative Biology without your valued input. We encourage your participation in this dialog and your feedback on how we can create a more welcoming and supportive Integrative Biology department for all of us.

perspectives in biology: Dr. Suzanne Pierre

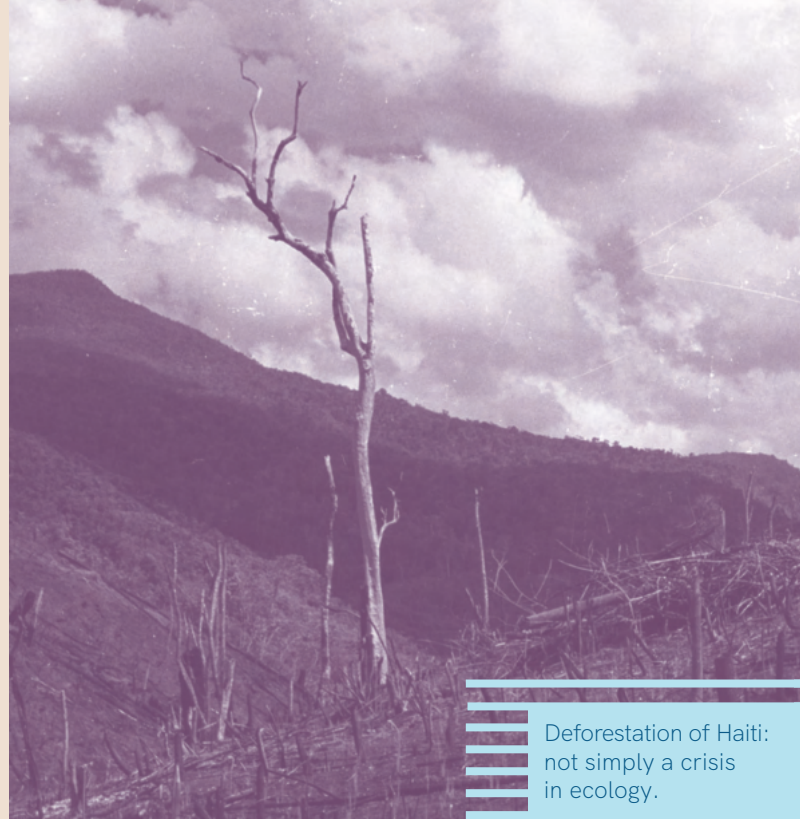


Above: Dr. Suzanne Pierre, visiting scholar at UC Berkeley

Dr. Suzanne Pierre is a global change ecologist specializing in terrestrial carbon and nitrogen cycling in plants and microorganisms. Dr. Pierre has long been fascinated by ecosystems, soils and how organisms make their living, especially plants. But her pathway to science was not clearcut. Always inquisitive and compelled by the truth, Dr. Pierre would pursue journalism as an undergraduate at New York University. But she became disillusioned with a field that she considered to be motivated largely by opinion and politics and which left little room for investigation beyond the qualitative. It was then that she turned to science and would go on to receive a PhD in ecology and biogeochemistry from Cornell University. "I saw science as a set of beautiful methods and practices, tools that have something of a power in their ability for truth making," Dr. Pierre relates. "It felt very important to me to access that power—by which I mean knowledge and the agency that comes with that knowledge." As the founder and principal investigator of the **Critical Ecology Lab**, her group is a team of graduate student researchers, faculty

collaborators, undergraduate interns as well as community partners, all working at the nexus of ecological processes and social inequities. Dr. Pierre is also a 2021 Osher Fellow at the **California Academy of Science** where she and the Critical Ecology Lab are co-curating a physical exhibit and a digital gallery with Google Arts and Culture featuring the stories, accomplishments and obstacles faced by LGBTQ women and gender minorities in STEM. Dr. Pierre completed the UC President's Postdoctoral Fellowship in 2019 in the Dawson Lab where she is currently a Visiting Scholar.

For Dr. Pierre, *critical ecology* is an approach to global change sciences which centers the role of past, present, and future social power dynamics as direct drivers of biophysical processes. Couched within the question "what is the Anthropocene?", *critical ecology* aims to investigate and explain the ways that natural phenomena which we deem "anthropogenic" are shaped by systems of racial and economic supremacy, extraction of natural resource, and social exploitation. While science increasingly incorporates human activity as fundamental drivers of ecological change, there has been very little room for including social critique of how uneven these activities have been across populations, and the disproportionate harm experienced by primarily poor and people of color over time. Starting from the theoretical assumption that social doctrines were necessary to justify the processes leading to the climate and ecological crisis, Critical Ecology Lab seeks to redefine the data we consider necessary, to more accurately draw conclusions from our research. Dr. Pierre is aware of the inaccuracies and bias found in a willingness to explain a situation in ways that conform to text-book assumptions rather than site-specific and socio-political realities. Incorporating social datasets to better contextualize and explain ecological patterns offers an opportunity to more richly understand our ecological reality as well as altered social patterns. Dr. Pierre looks to the Island of Hispaniola, home to Haiti and the Dominican Republic as a case study for where *critical ecology* can improve our understanding of human relationship to the region's ecology.



Deforestation of Haiti:
not simply a crisis
in ecology.

Erroneously, the literature has characterized soil erosion and deforestation in Haiti as the outcome of rapacious and careless residents and has not considered how forced migration, colonization, and poverty can escalate degradation. Furthermore, models that have only explored the ecology of Haiti often do not truly compare against historic erosion and forestation rate. Instead, establishing false equivalencies between the island and other unrelated ecosystems such as the British Isles have led to problematic conclusions in addition to management solutions.

With her postgraduate training focused on geochemistry and hydrology, Dr. Pierre's journey to incorporate the human condition into her approach was informal and self-actualized, borrowing from political ecology and critical theory texts which have grown into an impressive reading list of peer-reviewed literature and books which she has incorporated into the Critical Ecology Lab page. Early on, Dr. Pierre found aspects of ecology "contrary or impervious to the experiences of marginalized groups of people, which motivated me to explore critical theories of power and the natural world, and to question assumptions with respect to how science is conducted, interpreted,



“...the experiences of marginalized groups of people, motivated me to explore critical theories of power and the natural world, and to question assumptions with respect to how science is conducted, interpreted, and presented in our results.”

—Dr. Suzanne Pierre

and presented in our results.” Today, whenever she works on a project she takes time to consider the place and takes responsibility for learning the deeper history so that she is not blindered in her investigation to socio-cultural and local environmental realities that might otherwise be overlooked in the discourse. This summer, Dr. Pierre and her colleagues in the Critical Ecology Lab will offer a workshop series introducing scientists to concepts of critical theory to help share what they’ve learned.

But the Critical Ecology Lab is about more than how we integrate the human condition with science, it is

also about resisting systems of oppression that can exist in academia and creating a space for inclusion. “In my experience the culture of academia is oriented toward self promotion, harmful-competition, and an emphasis on publishing first, most often, and in the right journal, sometimes at the expense of personal health and happiness. This is especially detrimental when researchers come from backgrounds with less support, wealth, and resources for mental and emotional health maintenance”. Dr. Pierre argues that for those of marginalized backgrounds, this creates a culture of deep alienation, and enforces hierarchies of oppression. “We wanted an environment that is a refusal of this type of culture by instead prioritizing compassionate and genuine interaction that validates and pushes us to be our best.” Together, with her associate Kunal Palawat, Dr. Pierre set up relationship agreements which you can view on the lab website. A list of shared and aspirational values and community guidelines, these agreements help manage potential conflicts, establish mutual respect and inclusion, and better organize the lab. “The purpose is not just to be better people and scientists but to also heal and create resilience.”

Part of the Critical Ecology Lab’s commitment is to offer graduate students access to support for complementary graduate training that can guide students to a richer appreciation of their research sites. Currently hosting masters and PhD students from 5 different universities Dr. Pierre aims to build a cohort of individuals in her lab who can find support through each other and through trainings on how to face the challenges encountered in a traditional academic setting. For all her many accomplishments, Dr. Pierre shared her own lingering hesitations and impostor syndrome in academics. “Maybe some people reach a point where they think they are 100% a scientist rather than just pretending. But I think for many it’s not easy to feel worthy or comfortable with the title of scientist and certainly that’s much harder if you come from a marginalized group.” It is personal experiences which have made the promotion and success

of people of color and traditionally oppressed peoples a priority in her lab and broader work.

Dr. Pierre and her colleagues at the Critical Ecology Lab extend those efforts to the arts where they will be co-curating an exhibition at the California Academy of Science this summer. A partnership with curator Lauren Esposito, the exhibit is part of Cal Academy's external collaboration in their ongoing **IF/THEN** Gender Equity project. The exhibit: **New Sciences**, will explore equity for queer, gender minority, and people of color backgrounds in science. The Critical Ecology

Lab worked to curate portraits, overall narrative, and first person stories of 25 people of color and queer persons who work in or adjacent to the sciences. "Rather than focusing on oppression or discrimination experienced by the queer community and people of color, this exhibit celebrates the beauty of queerness and the ways in which the queer community can be a doorway to understanding and producing scientific knowledge." The exhibit examines how the interface of science and queerness enrich community and all our lives.

upcoming events + campus resources

- DEI, Justice and Belonging **calendar page** for July & August
- 5 July—Artists for Black Lives Fundraiser, family friendly art fair, Lake Merritt Pergola
- 22 July—Hip-Hop Workshop: Making Music as a Pathway to Diveristy, Inclusion & Allyship, Asian Art Museum of San Francisco



Have a story or event you would like to see featured in upcoming newsletters? Email us at DeiNewsletters@gmail.com



Supervisors—please circulate this newsletter to lab members and staff who may not be on our listserv.