“We’ve come a long way, we still have a long way to go.” It wasn’t the first time Dr. tyrone B hayes would say this in our interview. A refrain, echoed throughout our conversation, the sentiment encapsulates the experiences and initiative of recently appointed co-chairs for the Department of Integrative Biology, Dr. tyrone B hayes and Dr. Eileen Lacey. The professors can each trace a long history with the department. Both would make their first appearance in the Valley Life Science Building before being hired as faculty—Dr. hayes began his PhD at UCB in 1989 while Dr. Lacey would arrive in 1994 as a Miller postdoc. A recent inductee to the American Academy of Arts and Science, Dr. hayes’ research focuses on amphibian endocrinology. His work, which has intersected with both social and environmental policy reform, has been instrumental in the regulation of herbicides responsible for birth defects and hormonal imbalances in humans and wildlife. He is also a faculty advisor for the Biology Scholars Program. Dr. Lacey’s work illuminates the
origins of sociality through her investigation of the behaviors and demography of subterranean rodents. In addition to being a Curator in the Museum of Vertebrate Zoology at Berkeley and Faculty Director of the UC’s Hastings Natural History Reservation, she and her lab have been proactive collaborators with STEM engagement and outreach programs on campus and in local public schools. In their time with IB, their experiences have not only enlightened them both to the successes and lapses of the department’s culture and approach, but have also strongly motivated them in their new appointment. As Dr. Lacey puts it: “I’ve seen a lot of things change over time, others that need to change and [I] feel like this was kind of my shot to make a difference.” Dr. Hayes has found a similar motivation and optimism in the increasing awareness for diversity, equity and inclusion raised by students in recent years. “Watching the department and the campus, I think, in a very real way recognize and focus on the disparities makes me feel that now’s the time, now’s the time when we can really make a difference.”

One of the major focuses of the chairs is to build a diverse and inclusive faculty body. While new faculty members in the department demonstrate a greater proportion of under-represented minority hires over the past 10 years, IB is still far from where it could and should be in the opinion of the chairs. As such, Drs. Hayes and Lacey intend to develop strategies for avoiding complacency in hiring and to encourage more diverse candidate recruitment. However, it’s not enough to simply hire researchers of diverse backgrounds and lived experience and to expect them to assimilate into the department. IB shares an important responsibility in adapting a more inclusive posture. As Dr. Lacey remembers from her time as a newly-hired faculty member: “[it was] very rare that a senior member of the department would come find me and say hello, ... it [was] pretty lonely and insecure.” Though much has changed, the department itself must continue to evolve into a more welcoming and responsive space; an imperative that has a personal note for both chairs.

For too long, the burden of creating an inclusive environment in Integrative Biology has rested on the shoulders of under-represented minorities, many of whom are also graduate students. Growing concern over department climate culminated in a graduate student letter to the faculty in 2020, an action which inspired and gave Dr. Hayes the courage to share his personal experiences with discrimination in academia in an open letter to his colleagues. Recalls Dr. Hayes of his graduate student experience at Berkeley: “I wish that I hadn’t always had to be the one to speak up and to talk about microaggressions and to talk about my experience here or to talk about the environment in my lab.” For the chairs, incorporating DEI in the lab is more than just workshops and reading assignments, it’s about connecting with individuals and creating a community in which everyone can feel validation, something the department has encouraged and fostered in recent years. That said, regardless of how responsive one’s advisor may be, “it’s a daunting thing to on any issue challenge your professor, who’s essentially in charge of your life,” admits Hayes. The chairs instead promote the notion that individual level connection between faculty or supervisors and their subordinates as critical.

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“It is important that people feel valued, they feel seen, and heard, and their challenges acknowledged” adds Lacey. In particular, Dr. Hayes points out that many students, specifically URM’s, have historically felt pressure “to duck down, be quiet and...just get [their] work done, and not be seen.” Not only does this have adverse effects on these students’ performance and wellbeing, it’s a paradigm that hurts all of us. In science, it is essential that people with novel solutions speak and be heard. How we find unity and consensus in our work is through an engagement that is more fully realized when we create space for others to share and exchange ideas. These values are fundamental to good science which succeeds through collaboration and an open mind. These are values equally fundamental to the construction of a stronger, more durable community. It all starts, concludes Hayes with “help[ing] [each] person understand, first, that their idea and their input are valued.”

Drs. Lacey and Hayes acknowledge that much of the change that will be necessary to promote a more equitable and inclusive IB and campus lie beyond the scope of their power as co-chairs. Both lament that the Bay Area housing market has made it an enormously difficult place for many to settle locally and may discourage those who are experiencing economic insecurity from attending or seeking employment at Berkeley. For these broader systemic challenges there are not always clear solutions. Nonetheless, there are initiatives that can be enacted within the department to forward the creation of inclusive spaces and community. Presently, the department is facing major challenges in weathering and recovering from COVID-19. While the pandemic has been universally disruptive, Dr. Hayes reminds us that, “both on the campus and off the campus what everybody experienced during the pandemic is ten times worse for people of color from low income.” The department must not only be aware of these disparities but also work towards mitigating the lingering effects on vulnerable communities as we recover. It’s not enough to return to what was previously considered normal and acceptable. Instead, the chairs recognize the all too apparent and disparate impacts of this pandemic as a reminder of the inequities that

“It is important that people feel valued, they feel seen, and heard, and their challenges acknowledged”

—Dr. Eileen Lacey
co-chair, Integrative Biology
exist in our society and our academic structures. For Hayes, these realities demand our introspection so that in “recovering from this crisis, [we] really make Berkeley a better place for all people.” What that will look like in the immediate future as we return to in-person work, learning, and teaching after over a year of social distancing starts with bringing people back together. Arranging social events and retreats in the fall and department functions that can encourage students, faculty and staff to connect or reconnect are small but actionable steps. Dr. Lacey or Dr. Hayes’ vision for the department requires your participation, and they welcome your continued suggestions and input as we move into the Fall semester.

**equitable academics for students with disabilities**

**an interview with Taormina Lepore**

*by Emily Bögner
PhD student, FAVE Lab*

The activism of Berkeley students led to the university becoming one of the first campuses in the United States to accommodate students with disabilities. Now, almost 60 years after the university accommodated the first student with a disability, over 3,500 Berkeley students (12% of the population) are registered with the Disabled Students’ Program. Third year PhD candidate, Taormina Lepore of Dr. Leslea Hlusko’s lab, is one such student, identifying as a person who is able-bodied and invisibly disabled. She serves as an ally on and off campus, working as a member of the Cal Disabled Student Community & Working Group, a member of the International Association for Geoscience Diversity (IAGD), and recipient of the inaugural Society of Vertebrate Paleontology (SVP) Education & Outreach Award focusing on disability self-advocacy in paleontology education particularly for adults with cognitive disabilities. As a vertebrate paleontologist, Lepore is focusing her dissertation on dental evolution, the evolution of vertebrate parental care, and science education outreach.

You’re devoting a chapter of your dissertation to the juxtaposition of biology education and disability visibility in academia. What sparked your interest to conduct research on these topics?

My interest in these fields was sparked a long time ago, so it’s amazing to be able to pursue research in biology education and disability visibility as part of my dissertation in Integrative Biology. There simply isn’t enough visibility
for disabled people and scientists in academia and the broader world. Growing up, there were very few role models in science that openly talked about mental health and disability. I was diagnosed with panic disorder and agoraphobia when I was a teenager, which can severely limit people’s lives and can result in people becoming completely homebound. I thought I couldn’t do research because of my mental health. I often thought, “how can I function as a ‘real scientist’ when I can barely get out of my house?” What about my field work as a paleontologist, which is often in isolated, open spaces that triggered my panic attacks?

For most of my life I was afraid to disclose my invisible aspects of disability because of the unspoken stigma around mental health and disabilities. I agonized over jeopardizing my standing in prior jobs or school programs because of this perceived stigma. At the same time, I didn’t feel truly worthy of a disabled identity, even though I had received treatment for my disabilities and had gone on federal disability leave. That perception changed over time, and solidified when I attended a Cal seminar led by disability advocate Alice Wong. When she mentioned the struggles of people with invisible disabilities like depression, anxiety, chronic pain, and ADHD, and insisted we had a place in the disabled community, I knew I had a community of support. I wish I could tell my past self that it’s not only okay to talk about disability and mental health, but it’s something I’d eventually find community around, and that I’d feel a sense of pride in the hard work that got me to this point in my career.

I taught high school biology and other related sciences for seven years, in public and private schools. I saw my students struggle with disability the same way I had, and it really changed the way I thought about being a present, visible mentor for my students. Coming into the IB PhD program, I was encouraged by my advisor to pursue my interests in both integrative biology and science education research. Incorporating research on disability visibility in science education felt like a natural fit. If I can help others with disabilities and make college biology education and outreach a little more equitable through my research, then I’m all for it!

I’m also interested in disability self-advocacy through my research projects, because my younger sister, Katrina, is a disabled adult. She has some learning and cognitive disabilities as a result of contracting meningitis when she was a couple of months old. Katrina is an amazing sister and person. Her disabilities are different from mine, but we both face similar challenges and have a shared outlook on life as self-advocates. We’ve been involved in outreach work together for disabled adult learners to engage with paleontology, and it’s been awesome, impactful, and a lot of fun.

**Invisible disabilities are among the most common types of disabilities reported by college and university students. Can you tell us a little more about your experiences as an invisibly disabled person and ally?**

Having a panic disorder and agoraphobia—the same family of disorders that includes
Obsessive-Compulsive Disorder (OCD), general anxiety disorders, phobias, and Post-Traumatic Stress Disorder (PTSD)—can make it difficult to move around in spaces that are overstimulating for a highly sensitive brain. Having one of these disorders means that the symptoms are present for more than six months on average, and they interfere with your daily life in some way, making them different from the usual anxiety or stress we all feel from time to time. Depression often coexists with anxiety, though my depression symptoms are pretty stable these days.

Brains are evolutionarily set up to be aware of any potential threats to their continued existence. This mechanism is a really great adaptation for getting out of a potentially deadly or harmful situation. But with panic disorder, the perceived threat crops up at times that are totally irrational. For me, it usually manifests itself when I’m walking alone to unfamiliar places, through big open spaces, while waiting for certain forms of public transit, and in large arenas or up high in buildings or balconies. I feel some aspect of this almost every day. It’s a feeling of being unable to escape from a place that feels extremely intimidating or unknown, plus a sense of isolation and a fear that I’ll embarrass myself or even get physically ill in public.

One thing I do appreciate about my anxiety is that it helps make me an aware and empathetic person. In combination with ADHD, it helps me focus on tasks I need to complete with laser attention (as long as something isn’t distracting me too much!) For all the times I feel a panic attack coming on while waiting at a bus stop or navigating to a new building on campus, I also feel a big sense of relief and self-kindness once I expose myself to those feared situations. It helps me walk in others’ shoes. A mixture of these consistent exposures, plus relaxation techniques like meditation, support from family and friends, and medication, helps me function.

How do you feel general public perceptions of disability have changed in the U.S. since the first disability laws were enacted?

In my opinion, public perceptions of disability have changed enormously since the very first disability laws were enacted in the early 1960s. Just hearing the changes in societal attitude and classification of disability through my older relatives and acquaintances in the disability community, the power of these changes is really striking.

In the 1960’s, legislation began to consider people with “special needs” or “cognitive disabilities” (there was a different, outdated slur term used back then) as actual human beings with some rights, rather than people who were institutionalized,
shunned, and locked away. After the Americans with Disabilities Act (ADA) was passed in 1990, discrimination against people with disabilities was finally prohibited on the national level. Think about that! Before ADA, people with disabilities could be fired, denied housing, denied government communication accommodations, refused transportation, and essentially ignored or mistreated simply for being disabled. People who were wheelchair or mobility device users didn’t have the simple right to access buildings without ramps or curbs without curb cuts. People with autism, cerebral palsy, or Down syndrome could be refused a job no matter how qualified they were, on the basis of being disabled.

If you’ve ever ended up temporarily disabled, say by using crutches, you can still see where the barriers to daily life exist for many people. The virtual work of the COVID-19 pandemic has also thrown a spotlight on accessibility barriers in workplaces.

Unfortunately change is slow when the majority of a population isn’t impacted by these barriers. With these laws comes required removal of societal and environmental barriers, and an even slower shift of public opinion around the word “disabled”. Language has changed to be slightly more accommodating and less outright derogatory. Disabled people are better able to take ownership of the disabled identity and our sense of disability community. Educational systems are slowly recognizing that terms like “gifted” and “special needs” can do more to divide and stigmatize students than they can to help. I’ve seen a difference in my own educational experiences as a student and a teacher, as well as my sister’s experience, over the last 25 years or so.

But there’s still much more work to be done. Even here on campus, when students pressed for a disability community center in 2019, prominent equity professionals pushed back with the rationale that disabled people don’t have a community. I’ve heard people who aren’t disabled still have strong emotional reactions to the word “disabled”, as if it’s a curse or something they would never wish to consider as part of their identity. Two married disabled people risk losing half of their federal disability benefits in the U.S., which advocates insist is a denial of marriage equality. So the stigma and barriers are still very real, and are going to continue to be there.

Concluding thoughts—how can we be more inclusive in our daily language and practices and become more involved with disability advocacy on campus?

In my opinion the best thing we can do is talk with disabled students and colleagues, and get to know our lived experiences. Invite your lab group or museum to have open dialogue about inclusive community, and keep doing that. One disabled person’s experience isn’t going to be the same as the next. Help disabled people in our communities feel supported and recognized, rather than a second thought.

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For National Hispanic Heritage Month we recognize Ynés Enriquetta Julietta Mexía (1870-1938), one of the most prolific botanists of her time.

Over the course of her 16 year career Mexía collected over 150,000 specimens in Colombia, Chile, Brazil, Mexico, Peru and the United States. She was also the first to formally catalog the flora of Denali National Park and to describe the genus *Mexianthus* (pictured left) which was subsequently named in her honor. The daughter of Mexican diplomats, Mexía got her start in biology late in life after moving to the San Francisco Bay Area from Mexico City in 1909 to receive treatment for debilitating mental health. During the 10 years she resided at the Arequipa Sanatorium in Fairfax California she developed an insatiable interest in the natural world, honing her taxonomic skills as part of her treatment. It was through her correspondence with acclaimed California Academy botanist Alice Eastwood that Mexía found the encouragement to enroll at UC Berkeley and pursue a career in botany. Mexía attended her first classes at the UC Herbarium in September of 1921 at the age of 51. Her brief but dazzling career, cut short by lung cancer, has been considered integral to the taxonomic classification of American flora. Mexía’s specimens can be visited at the Smithsonian, British Natural History Museum and locally at the California Academy of Science and UC Herbarium. Her original writings—both formal botanical descriptions and harrowing accounts from her expeditions—are archived at UC Berkeley’s Bancroft Library.

The same holds for our teaching practices, where simply reaching out to students receiving Disabled Student Program (DSP) accommodations and being a supportive mentor can make a world of difference. Never assume someone wants to identify as disabled, or any other term, unless they disclose this to you. For example, my friends in the D/deaf and Hard of Hearing (HoH) communities often will reject the disabled term in favor of Deaf and HoH culture and pride in its own right. But don’t be afraid to simply ask people what they prefer and how you can be a better ally. It can take a great deal of emotional and physical energy to constantly advocate for our needs, always proving we need accommodations, often feeling a bit burdensome in doing so. Just taking the steps to say “I recognize you, and want to support you, how can I help?” is an incredible thing.

For on-campus resources, please check out the Disabled Students’ Advocacy Group on campus, and the upcoming Disability Cultural Center in the Chavez Student Union. College of Letters and Sciences offers a minor in Disability Studies as well as interdisciplinary courses in these topics.

**in history: Ynés Mexía**

*by C DeCurrens*

*IB Staff*

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This semester the Department of Integrative Biology offers a seminar series focused on providing tangible tools for increasing diversity, equity, and inclusion in academia. For example, tools for being more inclusive in your teaching and mentoring (and how to evaluate them), recruitment of undergraduate and graduate students, and effecting broader longer-term institutional change. Drawing upon a diverse array of UC Berkeley and outside speakers at various stages of their careers we hope you will gain skills that will be of immediate value and help you forge your future DEI goals.

**Who:** All members of the IB and Museum communities (students, postdocs, staff, faculty, etc.) are encouraged to participate, enrollment not required.

**Organizers:** Charles Marshall (IB/UCMP), Lisa White (UCMP), Rauri Bowie (IB/MVZ)

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**Seminar on Tools for Increasing DEI in Academica Fall 2021**

**When:** Tuesdays, 4.00-5.00pm via zoom.

**Credit:** Enroll in IB 298: Special Study in Integrative Biology, 1 Unit. Attendance is the only requirement.

**upcoming events + campus resources**

- DEI, Justice and Belonging calendar page for September & October
- 18 Oct.—UC Berkeley Graduate Diversity Fair Kick-off. 18-22 October.

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.