Lenneth S. North







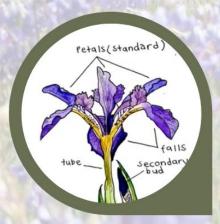
ANNUAL REPORT 2020-21

CREATIVITY PERSEVERANCE COMMUNITY

When reflecting back on this past year, our seventh as a natural history center on campus, these three words come to mind: creativity, perseverance, and community. With the abrupt transition to remote learning brought on by the Covid-19 pandemic, we found creative ways to engage with our students. We modified our popular classes to be online and even expanded our course offerings. Despite being remote, we maintained hands-on opportunities such as our Art-Science residency program, and developed numerous new internships where students conducted work independently or in teams and checked in online. And we mastered the new zoom format for public events. Amidst many unforeseen challenges, we persevered to make progress on several of our goals, including safely offering some small in-person classes in the spring, opening an in-person exhibit in the San Lorenzo Valley, making significant progress renovating our collections and classroom space, and hiring a new assistant director. And despite the isolation imposed by a pandemic, we continued to strengthen our community connections. Whether through partnering with new organizations and naturalists in our county or providing financial support and mentoring to diverse young student researchers, we continued to expand natural history education and research opportunities to our growing community.







THE NUMBERS

1,357

UNDERGRADUATES

36 INTERNSHIPS GRADUATE STUDENTS

16 CLASSES

20

16

PAID QUARTERLY POSITIONS

AWARDS & SCHOLARSHIPS

209

FACULTY & STAFF

528

COMMUNITY MEMBERS

7,075

USER DAYS

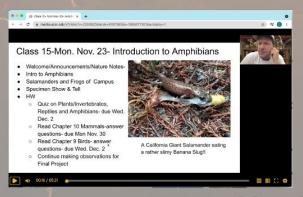


COURSES

Our remote teaching team, which was comprised of six instructors, taught a terrific diversity of classes. This included a new "Careers in Conservation" course focused on the complex effort to save the endangered California Condor, and an "Introduction to Community Science" course that trained students to use new citizen science tools. In partnership with the UCSC campus natural reserve, we engaged with over 700 first-year students using our newly developed online video-based introduction to field inquiry. And, through heroic efforts from our campus environmental health and safety department, we developed a safe inperson covid protocol which allowed us to teach one of our big field courses in-person during the spring.

Courses Sponsored by the Norris Center

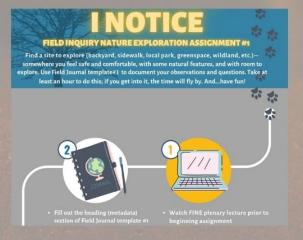
- Natural History of UCSC, Chris Lay
- Natural History Illustration (4 offerings!), Emily
 Underwood, Juniper Harrower
- Natural History of Fungi, Christian Schwarz
- Careers in Conservation, Zeka Glucs
- Introduction to Community Science, Christian Schwarz
- Natural History Field Quarter, Chris Lay & Ryan Carle





Other Courses Supported by the Norris Center

- · Biodiversity in the Anthropocene
- General Ecology
- Entomology
- Freshwater Ecology
- Ornithology
- Merrill Core Course
- Rachel Carson Core Course





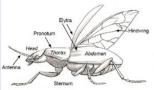
INTERNSHIPS

Thanks in large part to the tireless efforts of our third Norris Center Graduate Fellow, Justin Luong, we were able to offer a number of meaningful remote internship opportunities throughout the year. These included imaging and georeferencing more of our plant specimens, researching the history of structural racism in museums, and developing a citizen science project in collaboration with the Santa Cruz Museum of Natural History to document changes in biodiversity after the CZU forest fire in the Santa Cruz Mountains. We also supported senior intern Emma Brown to produce a comprehensive field guide to the common insects found on the UCSC campus.



Order Coleoptera (Beetles)

In the middle of a rainy, winter afternoon, a bit after dusk, In the middle of a rainy, winter afternoon, a bit after dusk, I took a walk through some grassy prairie habitat, looking for newts that were moving to their breeding pools. It was cold, around 40F, so I only expected to see a few newts in the puddles. As I moved my flashlight across the trail, I was surprised to see over to snail-eating beetles, along with a few other darkling beetle species, moving quickly along the trail. All I could think at the time wax, ah, of course there are beetles running around on a cold, rainy night. Of course.



There are 2 main characteristics of the beetle body plan that distinguish them from other insects. Most importantly, beetle have elytra, a hardened outer pair of wings that increase their overall defense. These elytra are not used for flight, but cover the second pair of wings they use to fly. Some species have fusely tra and cannot fly at all. Their order name, Coleoptera,

IDENTITY AND NATURALISM: ENVIRONMENTAL RACISM IN OUR LOCAL COMMUNITY

The land on which UC Santa Cruz stands is the unceded territory of the Awaswas-speaking Uspi Tribe. The Amah Mutsun Tribal Band, comprised of the descendants of indigenous people taken to missions Santa Cruz and San Juar Bautista during Spanish colonization of the Central Coast, is today working hard to restore traditional stewardship practices on these lands and heal from historical trauma.

Stopping Climate Change Starts with Heart and Latinx Communities - A Tedx collaboration with Soarisa Lucero https://www.youtube.com/watch?v=MW8FjxfVE6s

This series of three newsletters centers around the themes of "Idea and the Environment." Mainstream environmentalism is still a privileged, oftentimes white, space due to the long legacy of colonialism that has been part of the movement since its beginning. We aim to explore ideas of identity and the environment by lookis are environment laresim. Western bypocries, and the future of environmentalism with an emphasis on BIPoC perspectives.



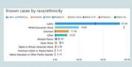
COVID-19 Risk for Latinx communities in Santa Cruz

COULTY TOOL OF THE ACT OF THE ACT

Note: For more in; the Costd-19 pandemic,



We begin this series locally, with this first newsletter looking at the effects of environmental racism on Lati communities in the Santa Cruz, Monterey, and Santa G



"Overall, I have grown so much in this internship and have had the tremendous opportunity to work with others who share my passion for social justice in environmental work and anti-colonial activism... I have pushed myself and sought out opportunities outside of the internship to expand my knowledge on representation in museums and environmental racism. I have worked on a team that I care deeply about and have been able to absorb knowledge from all of them in a way that has been incredibly gratifying. I wish to continue doing this kind of work and carrying an anti-colonial mindset through every facet of my further education and work in academia."

PAID SUMMER RESEARCH

A research team of four undergraduates led by Dr. Andy Kulikowski spent the summer re-surveying the pollinator communities in dune and bluff habitats along the Santa Cruz coast. Like local naturalist Randy Morgan did nearly thirty years ago, these undergraduates and their mentors collected data on native pollinators and their associated plants and compared their results with Morgan's data from the 1990s. The results from their work were presented at the Doris Duke summer symposium and will also be presented at the Ecology and Evolutionary Biology Research Event in Fall 2021. In Fall 2021, their data set will be further analyzed and written-up for submission to a peer-reviewed journal. We are especially grateful to the more than 100 donors who contributed funds to help us support this project!









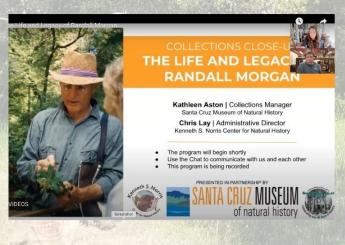


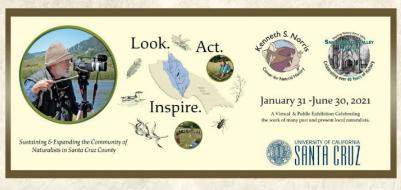
EVENTS

Our online events offered opportunities to continue to engage with our community as well as reach new audiences. This included our Director, Chris Lay, teaching a UC-wide sponsored online field safety workshop entitled "Tools for Improving Communication and Outcomes in the Field", which was attended by nearly 200 staff and faculty from many universities and agencies across the country. Many of our events were part of our "Look Act Inspire" exhibit showcasing the community of naturalists in Santa Cruz County, which we began in summer 2020. After a several month delay due to the pandemic, we were thrilled to open our in-person exhibit at the new San Lorenzo Valley Museum in Felton, which stayed open to the public for six months. During this time, we co-sponsored eight public events in partnership with both the San Lorenzo Valley Museum and the Santa Cruz Museum of Natural History. These events ranged from public talks about redwood fire ecology to new videos produced using past footage from renowned local naturalist Fred McPherson.











ART & NATURAL HISTORY

Our Art-Science programming continued mostly uninterrupted from the pandemic. With quarantine restrictions easing in the spring, we organized a community watercolor art workshop held outside at the arboretum. We doubled our nature illustration classes, taught by Emily Underwood and Juniper Harrower, to four sections in both winter and summer. With the anticipation of students returning to campus in the Fall 2021, we created a new exhibit, The Norris Center Archives, on display in the foyer of the Science and Engineering Library. And our Art-Science Residency program continued to blossom. This program supported 6 student artists, including 3 graduate students and 3 undergraduates, who worked with UCSC's Department of Ecology and Evolutionary Biology, NOAA (National Oceanic and Atmospheric Administration), and the UC Natural Reserves.



"Our residency project focused on following Green Sturgeon, Acipenser medirostris, as they move from the sea to their spawning grounds in the upper Sacramento river. The animations and soundscapes within this project express the sense of the calm Sacramento Delta and the busy San Francisco Bay. As a scientist, I was very impressed at how evocative the resulting collaboration was; I interact with these fish primarily through their tagging data points, and through watching the final videos I felt immediately more connected to my rare study species. Through this art collaboration I was better able to center the whole animal."





DIVERSITY, EQUITY, INCLUSION

Under the leadership of our new faculty director Dr. Rita Mehta, we formed a Diversity, Equity, and Inclusion committee of students and alumni and drafted a DEI statement with input from our community. A big aim of this committee was to help remove or substantially lessen the obstacles and challenges underrepresented students face when applying for research opportunities and foster an inclusive and transparent natural history community. As a step toward our goal, we hosted a DEI online discussion with students and alumni in fall 2020 that focused on decolonial approaches to interpreting natural history collections. Our graduate fellow Justin Luong also supported several internships focused on the history of structural racism in museums. A big focus of our "Look Act Inspire" exhibit emphasized the evolving cultural conception of a naturalist as well as actions we can take to promote more inclusion in the natural history community. As one of the barriers to attaining research experiences for people of color is the lack of financial support, our primary fundraising efforts led to supporting 4 students of color in our first summer field ecology research project.



PAST INJUSTICES IN MUSEUM
SCIENCE AND PATHWAYS FOR
BROADENING PARTICIPATION IN THE
FUTURE.

Monday, October 26th 7PM - 8PM

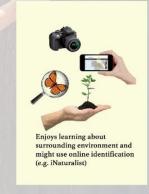
Discuss recent article on decolonial approaches to interpreting Natural History

Hear from alumna
 Desiree Loggins about her
 diversity and inclusion
 work at conservation
 organizations



Imagine a Naturalist...

Emerging Conceptions





BIG CHANGES

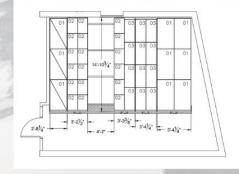
Our first assistant director Dr. Alex Krohn moved on after three years of fostering dramatic growth in our programs. Before leaving, he was immensely helpful in preparing for the transition and advertising the position widely. With a large qualified pool from across the country, we formed a committee to interview our top candidates. Our committee consisted of our administrative staff, a DEI committee member, a past teaching assistant, a representative from a collaborating local organization, and an active community member. Together, we were thrilled to welcome Dr. Gizelle Hurtado to the Norris Center. Born and raised in California, Gizelle has studied wildlife, natural history, and ecology in many parts of Northern California and in Southern New Mexico. For her Ph.D. she studied the impacts of urbanization on kangaroo rats. She has also taught undergraduate courses in Wildlife Ecology, Biology and Environmental Science. Gizelle will work as both our assistant director and instructor of mammalogy starting in Fall 202!



Outgoing and incoming assistant directors, Alex Krohn (left) and Gizelle Hurtado (right).



In addition to big staffing changes, we made significant progress on improving and expanding our facility. We updated our teaching classrooms, began a major renovation of our collections room, and solidified a plan to acquire an additional adjacent room for the Norris Center in the near future.





A plan for new cabinets in our collections room (left) and installing new whiteboards in our classrooms (right).

COMMUNITY SUPPORT

We are so grateful to our generous supporters who helped us reach our goal of fully supporting an undergraduate research team to continue local pollinator research started by Randy Morgan in the 1990s. Beginning with a hugely successful Giving Day campaign in Fall 2020, we raised over \$40,000 to support 3 students in UCSC's CAMINO program and 1 student from the Doris Duke Conservation Scholars Program in a 10 week summer research project. Nearly \$30,000 in additional donations helped us fund our new Assistant Director position, our Look Act Inspire exhibit, and increase our scholarship funds for Natural History Field Quarter. Thanks to everyone for their continued support!

\$10,000+

March Conservation Fund
Tamia Marg and Tom Anderson
Mike Temerin and Galina Pomotalkina

\$1,000 - \$9,999

Anonymous
John, Peggy, and Karen Holl
Rita Mehta and Jack Redwine
Joanna Miller
Robert Stephens
Beatrice Van Horn
Valley Women's Club
Robert Weiner and Karen Rhodes

\$200 - \$999

Anonymous
James Berkey
Dennis Brown
Ted Cranford & Kathleen Langan
Abigail Faulkner & Hobart Guion
David Hart
Ann Harvey
Lorraine & Ted Kinnamon
Michael Lay & Sally Ryan
Phyllis Norris
Jane Orbuch & Bryan Cockel
Lise Peterson & Donald Peattie
Linda Wilshusen & Rock Pfotenhauer

Up to \$200

Jenny and John Anderson Jean & Frank Andrews **American Online Giving Foundation** Anonymous (*3) **Rozy Bathrick Barbara Banfield Bruce Bannerman Emily Barnett** Zerina Berovic Hannah Braun Nicole Britton Martha Brown & Breck Tyler Michael & Frances Bolte Marican Caculba Ryan Carle Marissa Castillo Justin Chan Katherine Chen Merry Colony and J. Tampi **Kevin Condon Kyle Donohoe** Diane Donham Michael Drob **Eric Engles and Lisa Frankel** Carleton Eyster Marcia & Michael Fein **Darrow Feldstein Larry Ford and Susan Merritt Brook Gamble**

COMMUNITY SUPPORT

Up to \$200 continued

Judy Glass

Frank Gravier and Catherine

Carlestroem

Rebecca Hendricks

Franciso Hernandez

Elizabeth M. Hubert

Jenna Hurley

Maria Geluz

Greg Gilbert & Ingrid Parker

Megan J. Gnekow

Kaleb Goff

Jessica and Matthew Hallisey

Graham Hamley

Karen Holl & Michael Loik

Alicia Fennell

Bartley Fong and Carolyn Kernkamp

Kristine Karnos

Chelsea Kintz

Lori & Gregory Kintz

Jeannine Koshear

Neal Kramer

Alex Krohn

Meaghan Krohn

Monique Krohn

Douglas Krohn

Chis Lay and Elizabeth Andrews

Josephine Lesage

Allison Lieber

Allison Lin

Ernest and Oggi Lin

Alison Lindberg

Christopher May

Roy Dev Mehta

Katie and Forest Monsen

Kendra Morgenrath

Dan Ness

Veronica Ness

Todd Newberry

Caroline Niblett

Jeannette & Peter Onorati

Kristin and Ricardo Palma

Amy Patten

Julian Perez

Erika Perloff and Paul Keel

Stacy Philpott

Sarah Rabkin & Charles Atkinson

Shoo Shoo Salasky

Frank Sapa

Dustin Smucker & Katherine Oates

Misha Shambayati

Carol Shennan

Guadalupe Solano

Allegra Stahl

Georgia Stigall

Paul Sweeney & Joann Deutch

Lynne Tan

Charles Tralka

Sara Tralka

Eric Vigilia & Suzanne Lee-Vigilia

Jerry and Robynn Walters

Laurel Wee

Sarah Wheatley

Bryanna Whitney

"You showed me that the world, which was the one thing that I loved most in life, is more amazing and interconnected and beautiful and overwhelming than I ever could have imagined."

Natural History Field Quarter Student

WHAT WE DO BEST

With the return of students to UCSC in fall 2021, we are thrilled to once again resume what we do best: working directly with our students to teach them about the natural world and helping them develop the skills to become the environmental leaders of the future. While a year ago we were hastily protecting the collections when the campus was evacuated due to the CZU forest fire, this fall we will complete significant renovations to both our collections room and classrooms. Last September we began a year full of mostly remote teaching; this coming quarter we will welcome back a full set of classes and a new cohort of student interns to our workspace. Last year nearly all of our events were online. Now we can hardly wait to help many first-year students explore the natural lands of their new homes on campus. And we're excitedly making plans for a big in-person event in spring 2022 to celebrate fifty years of natural history education and research at UC Santa Cruz.



Our summer "Pollinator Pals" research team