Animal Behavior Bulletin

2021

IN THIS ISSUE

Letter From the Director.....1
Graduate Fellowships.....2
ABEH Graduates.....3
Graduate Degrees.....4
Goodbye Dr. Smith.....4
Welcome Dr. Fudickar.....5
CISAB Lab News.....6
ABEH Major Updates.....7
Alex Black Scholarship.....8
Internships.....10
Animal Behavior Conference...11
Awards.....11
What are they up to now?.....15

Dear Animal Behavior Community,

Well, the difficult times cotinued into 2021, but I'm happy to say that CISAB's students, faculty, and staff have continued to demonstrate the enthusiasm, commitment, and grit that has allowed them to achieve remarkable things in the face of pandemic-induced adversity.

In this year's bulletin, you will see just a few examples of the many accomplishments of our students, both graduate and undergraduate, as well as exciting updates about developments in our undergraduate and graduate programs, a goodbye to Senior Lecturer Adam Smith, who has set out on an Icelandic adventure, and a warm welcome to our new Animal Behavior Lecturer, Adam Fudickar.

You may also enjoy reading about our first-ever virtual Animal Behavior Conference (thanks, COVID!). Transitioning to the virtual format was a nerve-wracking learning experience for the student Organzing Committee, CISAB staff, and me, but as usual, our graduate student organizers and staff managed to pull it off flawlessly.

As always, many thanks for all of your contributions to the Animal Behavior community. CISAB thrives on the strength of its engaged faculty and student members, both past and present.

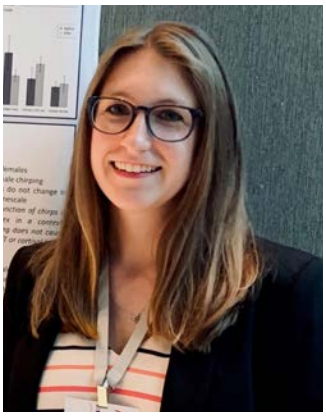
We can't do it without you!

Cheers,

Pam

Congratulations CISAB and CTRD Fellowship Recipients

CISAB Fellowship Recipients 2021-2022



Megan Freiler
Smith Lab

Mackenzie Mills
Withnell Lab

Sierra McAlister
Hurley Lab

Tessa Steiniche
Wasserman Lab

Sarah Wolf
Rosvall Lab

CTRD Predoctoral Fellows 2021-2022

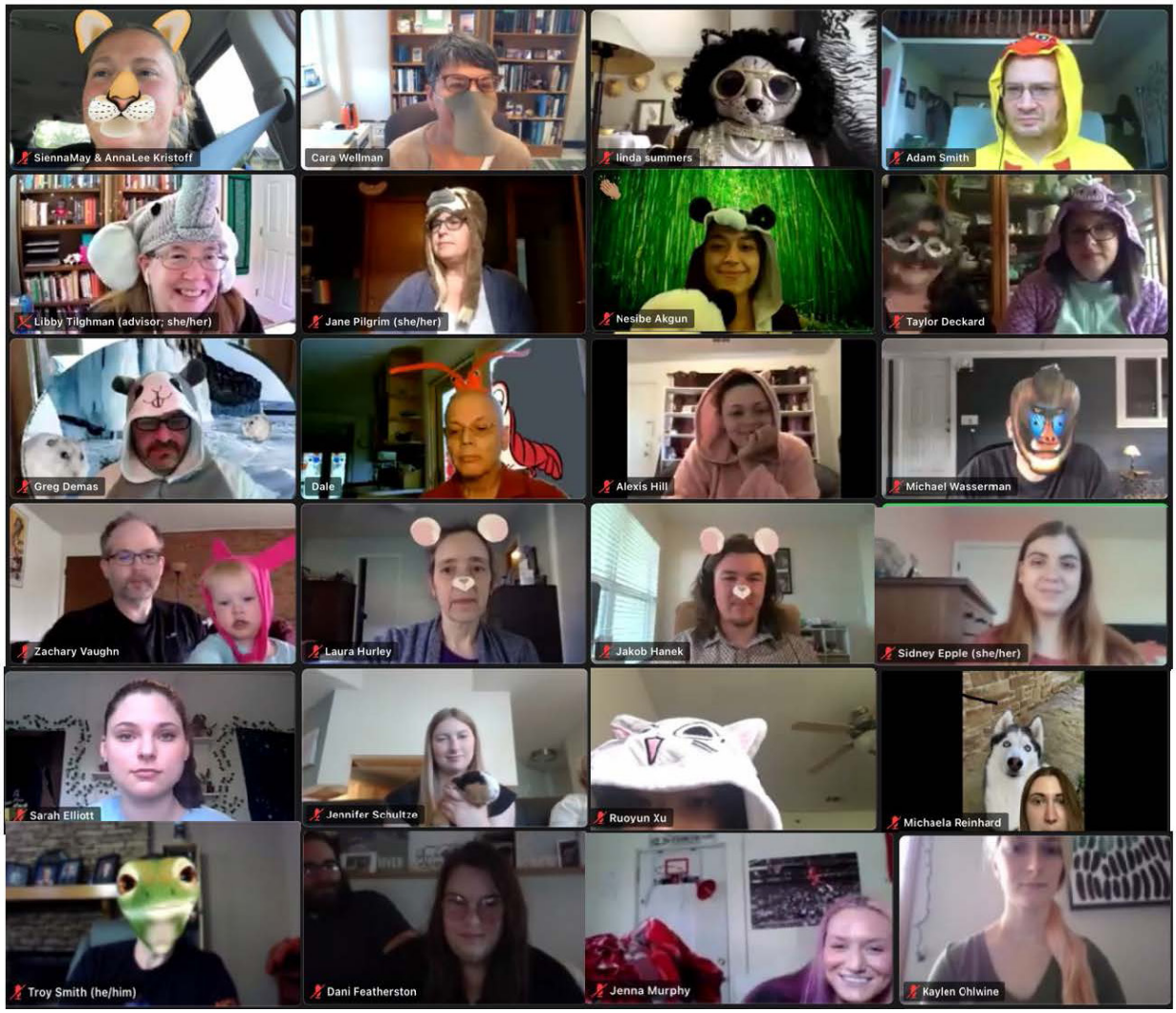
Beth Morrison
Demas Lab

Lauren Brunner
Hurley Lab

Brooke Peckenpaugh
Moyle Lab

Congratulations ABEH Graduates

In May, CISAB hosted a come-dressed-as-your-favorite-animal virtual reception for our 2021 Animal Behavior graduates



2021 Graduates

Rachel Adams
Nesibe Akgun
Cami Albers
Sarah Armstrong
Quinn Ashley
Riley Beam
Carlos Calderon
Jonah Christian
Reilly Clark
Tiernan Cutrell
Taylor Deckard
Allison Devries
Sarah Elliott
Sidney Epple
Dani Featherston
Sydney Forler
Brendan Goldspiel
Naomi Gorman
Jacob Hanek
Hannah Hicks
Alexis Hill
Anna Hill
Emma Hirsch
Kristen Kordesch
Remi Laseau
Jessica Lawson
Jacob Leverton
Anissa Liphford
Daelynn Moore
Jenna Murphy
Kaylen Ohlwine
Hayley O'Keefe
Molly Pendergast
Caine Rees
Michaela Reinhard
Jennifer Schultze
Cassandra Snay
Ruoyun Xu

Congratulations CISAB Members

PhDs and M.S. Awarded to CISAB Graduate Students 2021




Dr. Zoe Dinges, Lively Lab: SELECTION ON SYMBIOSES: HOST SWITCHING IN A MUTUALISM AND SEX VS. ASEX WITH COEVOLVING PARASITES

Dr. Elizabeth George, Rosvall Lab: HORMONAL AND BEHAVIORAL RESPONSES TO COMPETITION: HOW EVOLUTION HAS SHAPED SOCIAL AND SEASONAL MECHANISMS OF AGGRESSION IN A FEMALE SONGBIRD

Dr. Kara Million, Lively Lab: PARASITES, IMMUNOGENETIC DIVERSITY, AND MATE CHOICE IN DARTERS (PERCIDAE: ETHEOSTOMA)

Cathleen Steinbeiser M.S., Wasserman Lab: PRESENCE AND PHYSIOLOGICAL EFFECTS OF PHYTOESTROGENS IN THE DIET OF UGANDAN RED COLOBUS MONKEYS (PILIOCOLOBUS TEPHROSCELES)

Dr. Adam Smith Says Goodbye to CISAB

I am in the unusual position of having to bid farewell to CISAB and IU. As I always make sure to tell the students, you never quite know what career opportunities will present themselves. It is time for me to pursue new opportunities as well. My wife and I will be moving to Iceland this fall so that we can both follow new paths. My time as an instructor for the ABEH program has been a formative experience for me. I have been privileged to work with this group of bright, motivated, and highly-determined students for the past 5 years. The students have been the driving factor behind the growth of the major. The success of the program can be directly attributed to them, and I will miss them all dearly. I look forward to following the growth of the program, even if it's from afar. Best wishes to all!

WELCOME Dr. Adam Fudickar

Top to bottom: Dr. Adam Fudickar, Students in A350 The Animal Behavior lab collecting data for their independent research projects.

I am excited to introduce myself as the new lecturer in the Animal Behavior program. Having spent the past 9 years at IU, my family and I are thrilled to be able to call Bloomington home. Prior to my current role as a lecturer with CISAB, I spent time as a postdoc in the Department of Biology and a Research Scientist with the Environmental Resilience Institute at IU Bloomington. Prior to arriving at IU, I received my PhD from the Max Planck Institute of Animal Behavior and the University of Konstanz.

Working with undergraduates has been one of the most rewarding aspects of my work throughout my time at IU. As a lecturer, two of my primary goals are to contribute to the development of courses that meet the needs of our students and to provide high quality instruction that inspires our students to become future leaders in animal behavior. In my first semester, I have come to know many of our students in Workshop in Animal Behavior, Animal Behavior Lab, and Animal Conservation. I've learned that our students are very smart and passionate about animal behavior. They constantly exceed my expectations and have a diverse range of interests. Many of our students are future researchers, conservation practitioners, zookeepers, and educators.

Workshop in Animal Behavior is designed to provide a space for students ito explore research and internship opportunities, network with their peers, and gain exposure to a variety of careers in animal behavior. Dr. Adam Smith, my predecessor, did a fantastic job lining up a great group of guest speakers for the workshop this fall. Among the visiting speakers, students heard from Dr. Rob Shumaker, president of the Indianapolis Zoo, and Frankie Chipparoni, an IU Animal Behavior alumn and current shark conservation biologist working in South Africa.

Students in Animal Behavior Lab had a semester packed with experiments focused on animal aggression, taxis, and circadian biology. Experimental design and scientific writing are a major emphasis in Animal Behavior Lab. It was exciting to see the students make significant progress in both areas over the course of the semester.

News from the Mechanisms of Behavior Lab

From Lab Director David Sinkiewicz

The Mechanisms of Behavior Laboratory has adapted to the uncertain times of the COVID19 pandemic. We have maintained our ability to support your research in a safe and reliable manner. We limited the number of simultaneous users to three to ensure social distancing and had no reports of illness or transmission throughout.

Even during the period of restricted use, many projects were completed. This year we have seen a resurgence in steroid hormone extractions and assays. We have also had the opportunity to develop serotonin assays, expanding the repertoire into peptide hormones as well.

The QuantStudio 6 Flex quantitative thermocycler and its flexibility to use both a 384-well or 96-well plate has attracted researchers from within the animal behavior community as well as from the Biology department at-large. Within the last year this tool has enabled our users to measure gene expression and parasite load, determine knockdown effectiveness, and genotype animals.

The pipetting robot has continued to provide users with consistent and reproducible results in the qPCR assays. This year, in conjunction with the Newton Lab, we are using it to process a high-throughput yeast mating project. Consider using our pipetting robot for any high-throughput or high precision pipetting project you may have!

The cryostat is a regularly used piece of equipment in the CISAB Lab. While classes were predominantly online we were able to put the cryostat in an open teaching lab, enabling both use and training to continue. If you are a user who is looking for it, the cryostat is back in the electrophoresis room in Biology 348.

As always, the Mechanisms of Behavior Lab is a source for training and learning. We continue to provide space and equipment for you to train your undergraduate and graduate students, as well as your post-docs and even the faculty themselves! Our facility is even contributing to projects in the undergraduate animal behavior lab class. We continue to see a number of new faces and even provide direct training with the lab director.

This year, the Mechanisms of Behavior Lab has also accepted some external projects. We will be contributing data to projects from Loyola Marymount University, Appalachian State University, and Kent State University. These projects include both PCR data and hormone assay data.

The future looks bright for our lab and our users!

Program In Animal Behavior Courses

New Animal Conservation Courses

Anyone who has spent time around college students over the past decade has likely observed a change in their feelings about conservation and environmental change. They are becoming exceedingly aware of and concerned about the environment, and many are looking for ways to contribute to identifying solutions. This fall, we offered two new courses that give our students the opportunity to learn about recent advancements in conservation science and hear from a range of conservation practitioners.

Animal Conservation ABEH-A401

Following an introduction to the history and traditional methods used by conservation biologists, students learned about important sub disciplines in conservation science (e.g. conservation physiology, conservation genetics, and toxicology). Students also met with guest conservation scientists from academia, the Indiana Department of Natural Resources, The Global Center for Species Survival, and The Sycamore Land Trust to learn about the diversity of approaches taken by conservation practitioners.

This course counts towards the Evolutionary/Ecological Perspective.

Avian Conservation: Environmental Change and Resilience ABEH-A401

Migratory birds mark the changing seasons, and their numbers reflect the health of the ecosystems they inhabit. Birds also provide valuable services to both natural and agricultural systems, along with unique opportunities to engage in both scientific inquiry and environmental policy. A recent study published in *Science* found that over the past 50 years, North American bird populations have declined by nearly 30%; that's nearly 3 billion fewer birds in the sky than there were 1970. To stop the staggering loss of these animals that have cultural, ecological, and economic importance, we must identify the causes of their decline, advocate for appropriate changes in conservation practice and policy, and broaden awareness of the need for an urgent response. Given the opportunity, natural populations exhibit resilience, the potential to bounce back. What is needed is a multi-pronged approach to conservation to identify the causes of the decline and generate solutions that will work to reverse the losses.

2021 Alex Black Memorial Scholarship

Riley Beam Interned at the Henry Doorly Zoo in Omaha, Nebraska

Top to bottom: Riley cared for a Pink-bellied turtle, a baby Eastern indigo snake, and baby black-spotted collared lizards; Riley with Ben, a sulcatta tortoise .

I completed my internship in the desert reptile department, and learned so much during those three months of hands-on husbandry. One aspect of husbandry that I had the opportunity to learn was daily and consistent medical care. A pink-bellied turtle was suffering from a case of shell rot and had to have disinfectant and topical antibiotics applied to his shell every day.

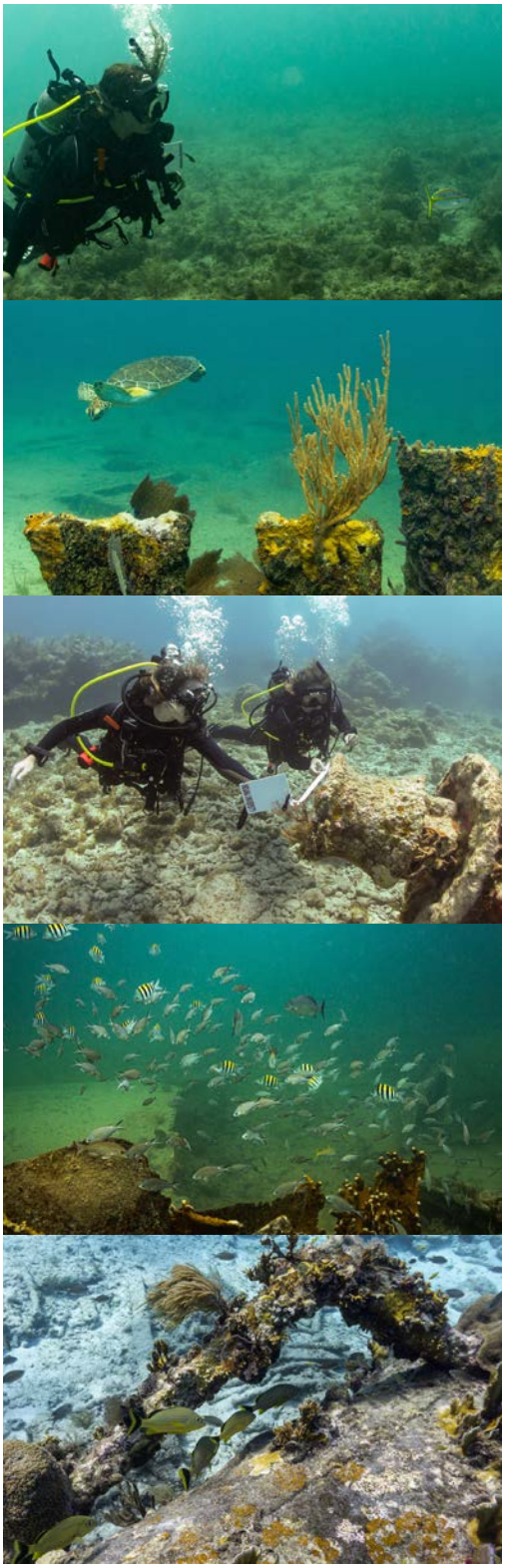
One of my favorite moments was when the baby eastern indigo snakes hatched. They are incredibly picky eaters, so I learned from the keepers how to entice them to their food using scenting methods. The zoo had quite a few Black-Spotted Collared Lizards hatch this summer. Lizards require much more care than snakes do, and hatchlings are no exception. They were incredibly tiny when they were first moved into their new tanks, too fragile to handle, and could only have ½" crickets, as opposed to the full-sized crickets that the adults get. Part of my routine every morning was to handle each hatchling once it was big enough, so that when they get older, they can be handled for more diverse feeding and possibly vet visits.

The zoo has four sulcata tortoises, easily my favorite animals to take care of. Like everything else that eats browse, their favorite food is mulberry, but Ben will eat anything that tastes good. These guys are actually very easy to take care of, so long as they have a proper habitat setup and can hide from the sun.

Zookeeping and animal husbandry are not glamorous: I've had more conversations about poop and regurgitation this summer than I have in my entire life! Much of my daily routine was mundane, such as cleaning the cricket tanks and doing water changes. However, all those little tasks in some way affected the animals that I was there to learn about, and as an intern, it is so important to learn those basic tasks to better understand how husbandry is supposed to run. I also discovered gaps in my education, such as taxonomy and basic herpetology. Nonetheless, I put what I've learned so far at school to good use, especially in designing my internship project. After graduation, I hope to pursue a masters degree in genetics, and eventually a doctorate in Herpetology, to continue the advancement of reptiles' care in the zoo world.

2021 Alex Black Memorial Scholarship

Courtney Eshelman interned at the Florida Keys National Sanctuary field project with the Center for Underwater Science



During my internship with Quiescence Diving Services in Key Largo, Florida, I gained an incredible amount of knowledge about the diving industry and the activities it facilitates. As far as my day-to-day role, I learned how to safely operate high pressure systems such as tanks, fill stations, and compressors. I would greet our customers and guide them through the process of diving, making sure they were prepared to enter the water column and stepping in to adjust any missteps. I learned about equipment servicing – how to take a regulator apart and put it back together – as well as boat operation and management. I helped to educate guests on what it means to interact with the environment within the Florida Keys National Marine Sanctuary. I learned how to moor up a boat to a mooring buoy, lay an anchor properly when there isn't one, and how to safely set a downline for a descent. I developed my knowledge of species identification and gained familiarity with our local species, which allows me to answer many of our guests' curious questions.

As the oldest dive shop in Key Largo, we have a strong relationship with many marine biology organizations such as the Reef Environmental Education Foundation and the Coral Restoration Foundation. I assisted with many of their trips, seeing first-hand what marine science and scientific diving look like while also networking with potential future coworkers. While doing all of this, I was also able to grow myself as a diver. I increased from 20 dives at the start of my internship to over 70 by the end of it. My max depth increased from 64 to 118. I was able to experience up close the ocean and coral reef habitats that I have developed a great passion for, which is the only way to truly learn their secrets and specialties.

This internship was by far the most incredible thing I have ever done. An extra bonus: I was offered a paid position to take a semester off classes. So, I'm still here, and I plan to volunteer directly with the Coral Restoration Foundation to learn about and participate in coral harvesting and outcropping.

Top to bottom: Courtney Eshelman identifying yellowtail snapper, green sea turtle, Courtney with fellow student taking measurements at the Winch Hole, school of fish (sergeant major and brown chromis) on the Benwood, the knee of the mast on the Brass Pin Wreck, displaying a load of biology (blue grunts, sponges, sea fans, fire coral, and massive star coral) and the potential to serve as a biological monitoring station.

Internship News

Gray Hite enjoyed an internship with Coral World Ocean Park in the U.S. Virgin Islands

I was lucky enough to spend six months as a marine mammal and tropical bird training intern at Coral World Ocean Park in the US Virgin Islands. I worked with South American sea lions, Atlantic bottlenose dolphins, a few species of macaws and rainbow lorikeets. I learned from everyone I worked with, including how to train animals and how challenging yet rewarding this field can be. I never knew what my day would look like; every day was different. One day I would be cleaning sea lion pools and taking pictures for interaction programs and another day I could be feeding a dolphin during an actual tropical storm. Somehow my last year combined hard work with some of the happiest days of my life and I'm forever grateful. I can't wait to graduate so I can continue working with amazing animals.

Sarah Armstrong interned as a Small Game Technician with Indiana Department of Natural Resources

Top to bottom: Sarah doing telemetry in the field and holding a banded American mourning dove.

I was hired as a Small Game Technician at the beginning of the pandemic and was able to spend most of my time working independently in the field or remotely from home. In the field, my first project was performing population surveys on woodcocks. This involved traveling several nights a week to a remote location and listening for the unmistakable call they make around sunset. Other projects throughout summer included trapping and banding mourning doves and Canada geese and auditory population surveys on grassland songbirds, which have greatly declined in the recent past due to loss of habitat. There were often opportunities to assist in other areas within the DNR. I worked with the herpetologists to look for a specific species of frog, and with the furbearer biologist performing reproductive tract dissections on otter carcasses to determine their reproductive status at the time of harvest. One of my favorite things I learned during this position is tracking animals using radio telemetry. I tracked bobwhite quail that had previously had transmitters placed on them to assist with a long-term study to increase bobwhite quail populations across the state. This winter, I was excited to be part of a small group of people who tracked, observed, recorded, and placed leg bands on the few whooping cranes left in the country. Without the internship requirement, I may not have had the initiative to leave my full-time position for an unknown, intermittent job with the DNR. I am so happy that I did and can't wait to see what the future brings!

2021 Animal Behavior Conference

2021 ABC Goes Virtual

The 27th annual IU Animal Behavior Conference, and our first virtual conference, brought together animal behaviorists from across the country—and the world. About 420 people from more than 75 institutions across the country, from Arizona to New Jersey, and from as far away as Turkey, Hungary, the UK, and France participated in the conference. This year, about two-thirds of our attendees were students—both graduate and undergraduate. It was especially gratifying to the Animal Behavior faculty to welcome back CISAB alumni, including, for instance, Mikus Abolins-Abols, Ali Ossip-Drahos, and Ashton Asbury.

This year's conference featured a mini-symposium on animal cognition in honor of founding member Bill Timberlake. In addtion, an innovation for this year's conference was a virtual careers panel, in which CISAB alums were invited back to share career advice with our trainees. The panel was such a success that we've decided to make it a regular feature of the conference.

Cover designed by Michelle Benavidez

CISAB Exemplar Award 2021: Karen L. Bales

Dr. Bales earned a master's degree in Anthropology from the University of Tennessee, and then followed that up with a PhD in Biology at the University of Maryland, where she studied the relationships among hormones, dominance, and maternal care in golden lion tamarins. She completed her postdoctoral training with Sue Carter, and has spent her career as a professor at University of California Davis and the California National Primate Research Center. The thread that ties her graduate work and postdoctoral training together is an interest in understanding the neuroendocrinology of pair bonding and biparental care, and the comparative approach she takes to answer that question. Dr. Bale's lab focuses on how neurohormones such as oxytocin and vasopressin influence social monogamy and biparental care in two monogamous species, prairie voles and the coppery titi monkey, and contrasts their findings with nonmonogamous species such as rhesus macaques. Dr. Bale's work has important implications for human disorders characterized by impaired social interactions, such as autism. Karen has trained dozens of graduate and undergraduate students and postdocs, in the process publishing well over 100 journal articles, reviews, and book chapters, which in all have been cited almost 6000 times. Impressively, she has been continually funded by the NIH and NSF since joining the faculty at UC Davis.

2021 Animal Behavior Awards

Rowland Award 2021: Kara Million

Kara is pursuing a PhD in Biology. Her research in Dr. Curt Lively's lab focuses on understanding the behavioral ecology of darters, which both Kara and Curt describe as "a beautiful little fish." Kurt describes her research as "stellar" and her mentorship of undergraduates as "exceptional." Kara has mentored seven undergraduates during her time at IU, almost all of whom have been from disadvantaged or underrepresented groups in STEM. Three of her undergraduate mentees have earned co-authorships on her published papers, with three more undergraduate co-authorship in the works. One of her mentees, Eries Smith, cites the "grace, scientific inquiry, intellect, self-advocacy, and passion" that Kara modeled as a major influence on their career aspirations. Sierra Reese, who worked with Kara through CISAB's REU program, says that Kara is one of the most inspiring mentors she's ever had, and that her work with Kara pushed her to join an ichthyology lab in her home institution and was seminal in her decision to pursue a PhD in Biology. Kara is also a dedicated student member of the CISAB community, and has been actively involved in organizing the Animal Behavior Conference throughout her graduate training. We are especially grateful for her excellent chairing of the undergraduate poster judging committee for the last few years.

Hanna Kolodziejski Award 2021: Kayleigh Hood

A student in Laura Hurley's lab, Kayleigh is pursuing a PhD in Biology, investigating the role of serotonin in how environmental context modulates a mouse's perception of communication calls. Kayleigh applies her animal behavior skills to volunteer work at the Bloomington Animal Shelter, where she has implemented interventions to decrease stress in the shelter dogs and provide enrichment. Kayleigh is also a committed advocate for social justice, participating in direct actions like protests and marches, as well as writing to legislators and other government leaders. Kayleigh's service also manifests in a strong interest in pedagogy, mentorship, and outreach. As part of her participation in the Graduate Women in STEM teaching workshop, Kayleigh co-organized a STEM activities day at a local elementary school, and developed a demonstration of neural connections for the children. Kayleigh is a strong proponent of diversity in science, and translates this belief into action via her one-on-one mentorship of underrepresented students in the lab through CISAB's REU summer research program, the Louis Stokes Alliance for Minority Participation program, and IU's Center of Excellence for Women & Technology. According to Dr. Hurley, Kayleigh's mentorship is student-centered and focused on their development of lab and more general research skills through working with them to develop their own independent projects. Her mentees have described her as "patient, kind, and insightful" and say they "couldn't have asked for a better introduction to lab work. Finally, Kayleigh is currently teaching a course on her own this semester, while also co-instructing a readings course for a fellow graduate student. All this, while serving on our undergraduate curriculum committee for the Animal Behavior program.

2021 Animal Behavior Awards

Goodson Prize for Art in Science 2021 Co-Winner: Stacey Tecot

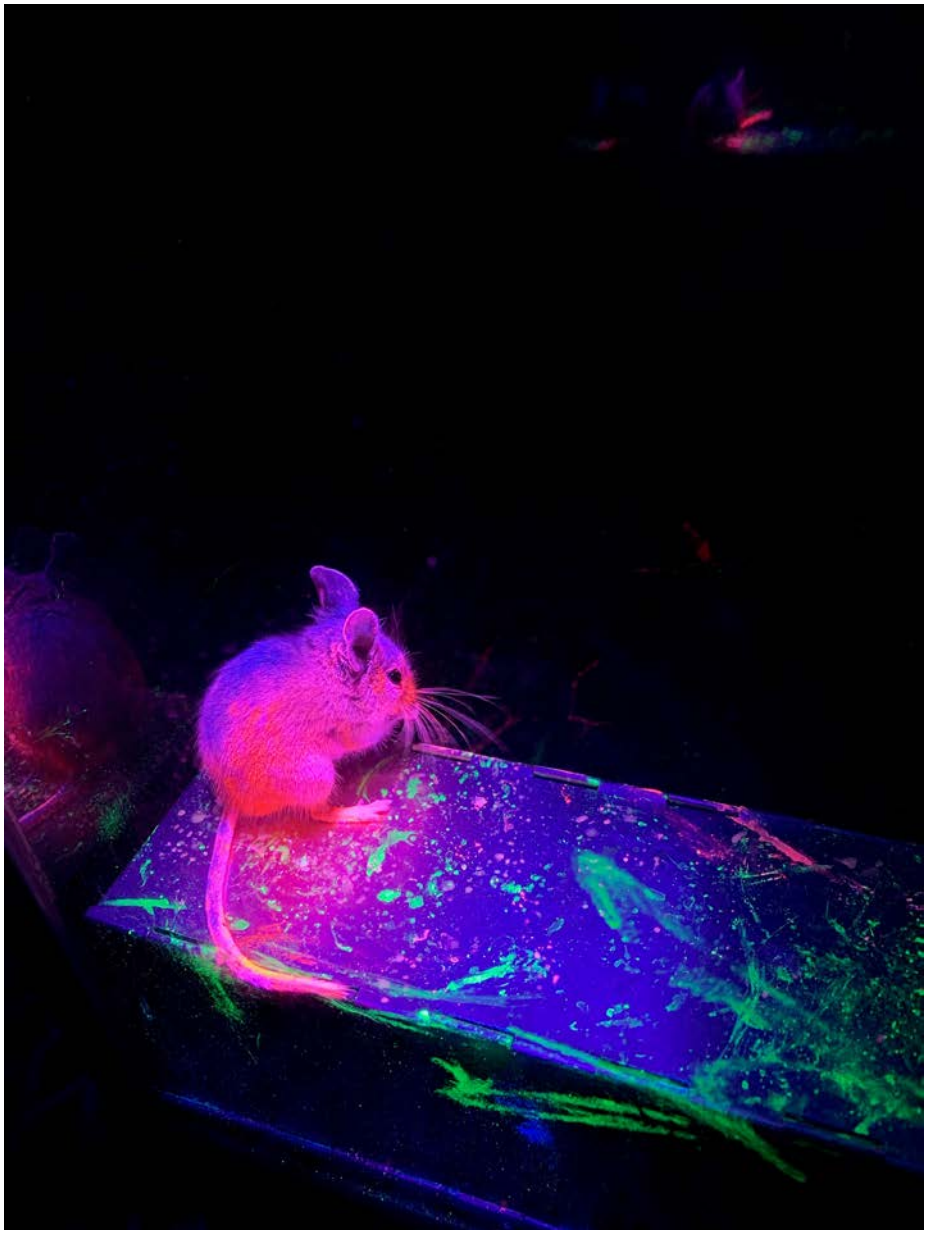
A fossa drinking from a dish washing station at Ankoatsifaka Research Station in Madagascar. During drought years, fossa such as this one come into the camp in search of water.

Goodson Prize for Art in Science 2021 Co-Winner: Rubin Turin

A gladiator tree frog, shot in the Serra da Canastra National Park during field work investigating variations in the tree frog's advertisement calls.

2021 Animal Behavior Awards

Goodson Prize for Art in Science 2021 Runner-up: Gretchen Andreasen



A woodland deer mouse covered in non-toxic fluorescent powder. Gretchen used this powder and UV light to track the mouse's path through the woods during escape behavior.

What are they up to now?

Michelle Benavidez, Biological Anthropology, ABD: Fish and Wildlife Health Biologist with the Indiana Division of Fish and Wildlife

It has been a long and arduous journey, but I am currently in the home stretch of my PhD program. The biggest challenge over the past couple of years was negotiating how to do research when my field site in Panama was closed due to public health concerns. Because of the uncertainty of the timing for reopening, I had to make new plans if I wanted to stay on my academic timeline. So, I reevaluated my goals and found a new method for answering my research questions using captive primates here in Indiana. It meant that I would have to forgo the amazing adventures of fieldwork in the tropics, but I am also ready to complete the academic chapter of my life.

As I entered my final year as a PhD student at IU, I was struck by the realization that I would need to find something to do after graduation. Over the summer, I searched job boards trying to find something that piqued my interest and was local (I have really grown to love Bloomington over the past five years!). As luck would have it, the Indiana Division of Fish and Wildlife opened a position for a Fish and Wildlife Health Biologist for Southern Indiana. I applied, was hired, and started late August 2021. I am still settling into the position, but have already been involved in some exciting animal health projects. One of the main priorities right now is monitoring reports of sick and dead wildlife throughout the state. Via an online reporting tool, people throughout the state provide details about sick or dead wildlife they observe. We then use this information to monitor population-level trends, which aids in predicting and monitoring disease outbreaks. Another priority is monitoring deer health in the state. Right now, a focus is chronic wasting disease (CWD), a fatal and incurable disease of deer. While it has not been confirmed in Indiana, it has been discovered in surrounding states. We actively monitor deer populations to increase our chances of early detection. While it is not possible to prevent CWD from moving through the state, we can slow the spread by implementing management strategies in areas where it is detected. Aside from my direct responsibilities as a health biologist, I also have the opportunity to work with other biologists at my office. The highlight of the fall was working with the nongame mammologist field team to trap, tag, and release endangered Allegheny woodrats in their habitat, which includes caves, rocky crevices, and steep cliff faces. After the long COVID stretch, it was a nice reprieve to be back in the field – especially during the fall in southern Indiana!

In September, I also took a position as the Communications Assistant for Global Environmental Change (GEC), which is a high-impact environmental journal. This position primarily entails creating and managing a Twitter account for the journal (check out @GEC_Journal on Twitter!!!). The most exciting thing for me is the opportunity to explore cutting-edge environmental research publications. Since most of my interests primarily revolve around animal health, I seldom read papers from journals such as GEC. But, since life is dependent on a healthy environment, reading these papers is giving me the ability to apply a broader context to my own work and research.

Although all these activities sometimes make life feel overwhelming, I am managing to survive with the support of my family, friends, and colleagues. If all goes as planned, I will be Dr. Benavidez Westrich by Spring 2022!

What are they up to now?

Frankie Chipparoni, Marine Biology off the South African Coast



Six years ago, I decided to leave Chicago and study animal behavior at Indiana with no specific career in mind, just knowing that I wanted to do something with animals, specifically marine mammals. During my degree, I drifted a bit and focused more on primatology, but it made me realize how much I love and appreciate studying the culture of various species.

Graduating during the pandemic added an extra level of stress when applying for jobs, but I was lucky enough to work for a marine biology consulting company on Vancouver Island for a few months post grad. I was trained to be a marine mammal observer (MMO), where I observe for various government projects and assisted teaching an Indigenous community how to run a transect survey to better protect their waters. While talking with my boss, I realized I was interested in direct action. She guided me to apply for Sea Shepherd, a non-profit activist organization that focuses on anti-poaching and protecting the ocean.

Sea Shepherd asked me to come to Mexico for a few weeks to help fix up a ship before it goes out to sea for a three-month long campaign. Going as a deckhand, and not a marine biologist, felt like a step backward, but I figured I should at least try, as it might get my foot in the door to be called back for campaign. Being on ship with people from all over the world all there for the same reason was life-changing and inspiring. Unfortunately, due to the pandemic, and some poacher issues in Mexico, the campaign was unable to happen.

After returning home, my manager from ship asked me to join him in South Africa on an investigative documentary on the disappearance of the great white shark off South Africa's coast. After working with him remotely for a few months, and working as a waitress to save up money, I joined him for three months in Gainsbaai, South Africa. Gainsbaai used to be one of the great white shark capitals of the world--15 years ago cage-dive operators would see 40+ individuals in a single day--but over the years the numbers have trickled to zero. The government claims that recent orca predation has pushed the sharks to migrate. However, after interviewing top scientists, dive operators, surfers, and activists, it is clear there are bigger problems going on. Overfishing and mislabeling of shark meat has culled the majority of the smaller shark species populations. However, we also focused on the "bather safety" nets and drumlines in the water along eastern South Africa's coast, Kwazulu-Natal. Spending weeks reviewing the Kwazulu-Natal Shark Board statistics was devastating and sobering. Every single species caught was listed somewhere within the IUCN red list. Further investigation found that the global great white shark population is estimated at only 3,500, with these nets killing nearly 20 every year.

Staying in this line of work can be difficult: sometimes it can feel like the whole world is against you. But all my doubts are dispelled after seeing animals thrive in their natural habitat, so I will keep fighting for them.

What are they up to now?

Eden Long: Bureau of Land Management/Wild Horse and Burro Program

I was driven to make the most of the opportunities CISAB and IU had to offer and ended up dabbling in many things in my undergrad. I graduated in May 2019 with a major in Animal Behavior and minors in Environmental Science, Biology, and Psychology. Fairly early on I knew that I wanted to pursue the conservation route, but I took a somewhat winding road to get to my current position with the Bureau of Land Management. After my freshman year I completed a summer internship at WildCare followed by a year-long position on their Education Team. This was a great way to get some hands-on wildlife experience, and I still use many of the skills I learned there. I was then fortunate to spend a summer in the Indiana Louis Stokes Alliances for Minority Participation program that enabled me to conduct behavioral research with Dr. Laura Hurley and Ph.D. candidate, Kayleigh Hood. Their mentorship and guidance were invaluable to me. I highly recommend anyone tempted by research to look for opportunities in a lab that interests you on campus.

My big directional breakthrough happened while I studied abroad in Christchurch, New Zealand in the spring semester of 2018. At the University of Canterbury I was able to take interesting and unique classes that applied well to my Animal Behavior major back at IU. One of those classes was taught by a Dr. Elissa Cameron, formerly a wild horse researcher in the United States and in New Zealand. I was very excited about her research, and she gave me names of professors to contact when I returned to the United States. I found an opportunity to work post-graduation on a research project in Utah on wild horse behavior. Unfortunately, they needed someone to start earlier than I could leave Bloomington. Instead, I spent the following year in an AmeriCorps term in Flagstaff, Arizona with the American Conservation Experience. I got to explore my environmental science minor by participating in ecological restoration projects. We worked with partners like the National Parks Service and Forest Service. After completing AmeriCorps, I started the 2020 field season for Utah wild horse research. It was tough work, but I learned how to collect data independently in harsh and remote settings. In May 2021, I began as a Range Technician for the Bureau of Land Management and Wild Horse and Burro Program based out of Billings, Montana. I spent my first summer conducting fieldwork on the Pryor Mountain Wild Horse Range and getting to know the program in Montana and the Dakotas. My primary responsibilities are gathering data on the range, but I have also had the opportunity to help with mustang adoptions. It has been a lovely way to gain familiarity with working for a public agency, and I hope to continue to work in wildlife management in the future.

I am so grateful for the space IU and CISAB created for me to learn and pursue my passions. I look back on my experience very fondly. I am happy to be a resource to any incoming and current CISAB students interested in working with wildlife (especially wild horses!).


Contributions to CISAB help support our scholarship and fellowship programs, travel awards for graduate and undergraduate students, the Animal Behavior Conference, and more.

Please consider donating to CISAB at myiu.org/one-time-gift. Type 'ANIMAL' in the Search Box to find "Program in Animal Behavior Fund"

Animal Behavior Program
Center for the Integrative Study of Animal Behavior
Indiana University
409 N Park Avenue
Bloomington, IN 47405
812-855-9663
cisab@indiana.edu
animalbehavior.indiana.edu