

SCHOOL OF INTEGRATIVE BIOLOGY



College of Liberal Arts & Sciences | UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN



2020–21 Academic Year Newsletter

Public Engagement

Connecting research,
education, and community



MESSAGE FROM OUR DIRECTOR AND HEADS OF DEPARTMENT

Dear Friends,

Welcome once again to another SIB newsletter! Our theme for 2020 was Public Engagement. As the COVID-19 pandemic showed us, we are all connected in many more ways than we know. The global public health efforts to control the virus remind us of the crucial role effective science communication and engagement plays in our health, our communities, and our future moving forward. 2020 was a difficult year for us all, but our faculty, staff and most importantly our students rose to the many challenges they faced. We have been fortunate to continue to welcome new students and colleagues, launch new research initiatives, and celebrate the success of our faculty, students, postdocs, and affiliates.

Our students this year demonstrated incredible resilience and resolve, navigating online courses, developing new ways to collaborate, and redefining experiential learning. They have engaged in outreach in everything from COVID research/testing, insect film festivals, bird strike research, and more - connecting our students and broader University of Illinois community directly to the science from start to finish. We are so proud of their hard work and their commitment to succeed. You can read more about our students' accomplishments in this newsletter.

We have always been grateful for the generous support of our donors, and 2020 was no exception. Our undergraduate award winners have used this support for life-changing learning experiences, developing their research skills and building towards their future careers. We are so thankful that friends of SIB continue to add to our portfolio of undergraduate awards, allowing us each year to celebrate our students' achievements. Our celebration extends also to the recognitions our faculty receive for the incredible work they do, not only in their research but in the time and energy they devote to critical issues in their fields (pg. 11 and 15).

2020 was also an overdue reminder of the systemic inequities and discrimination many Americans continue to face. The School of Integrative Biology values equality and respect for every member of our community. Faculty, students, staff and affiliates from diverse backgrounds bring their unique perspectives together, improving our ability to solve problems and be responsive to societal needs.

Doing the work to eliminate these social disparities likewise requires centering our efforts on those different perspectives. Our SIB community is made of students, faculty, staff, alumni, and friends whose input we value as we work together to make higher education and research more equitable and accessible for everyone. You can learn more at sib.illinois.edu/dei. If you have contributions to share, please email sib@life.illinois.edu.

We always enjoy hearing from our alumni and friends, so please feel free to visit us at 286 Morrill Hall when you are next in the Urbana-Champaign area. You can also contact us at: sib.illinois.edu, or find us on social media (Facebook, Twitter, and Instagram) as [@iBiollinois](https://www.instagram.com/iBiollinois).

Sincerely,



Carla Cáceres
Director, School of
Integrative Biology



May Berenbaum
Department Head,
Entomology



Andy Suarez
Department Head,
Evolution, Ecology, and
Behavior



Andrew Leakey
Department Head,
Plant Biology

Department of Entomology – May Berenbaum

Maybe it was a sign 2020 began with a locust plague of biblical proportions in Africa; by March, the world faced the terrifying plague of COVID-19. Our faculty and students directed inexhaustible ingenuity toward meeting our tripartite mission of research, teaching and service from kitchens and living rooms. Teaching meant creating brand-new materials for online instruction for most and, for a brave few, teaching face-to-face, socially distanced and often outdoors. Some even launched new courses, including Alex Harmon-Threatt, teaching IB110 Race and Environmental Biology for general education in minority cultures. That so many earned places on the 2020 List of Teachers Rated Excellent by their Students is just extraordinary!

Bright notes in 2020 were achievements of Entomology faculty, students, and staff. Brian Allan was promoted to Full Professor; Alexandra Harmon-Threatt was named Romano Scholar on campus and Early Career Fellow by the Ecological Society of America; Gene Robinson was elected to the American Philosophical Society and, in a burst of altruism, signed up as Interim Dean of LAS for AY2020-21. Esther Ngumbi and Marianne Alleyne began their second year as assistant professors in grand style, with Esther receiving the AAAS Bhaunik Award for Public Engagement and M being elected 2022 President of the Entomological Society of America. As for alumni, at the virtual Entomological Society of America meeting, our department hosted our first virtual mixer, which featured not the usual chocolate fountain but an interactive quiz on the Arthropocalypse (including, of course, 2020's murder hornets). Thanks to all who joined us in cyberspace!

Department of Evolution, Ecology and Behavior – Andy Suarez

It has been a difficult year. With teaching and other activities primarily online, and most members of the department working from home, it has been difficult to maintain a sense of community. However, our faculty, students and staff worked hard to stay connected, and create the best possible learning environment. For example, Chris Cheng, Director of SIB's honors program, was dedicated to provide safe, in person, labs for her class. Becky Fuller and Julian Catchen also put in extra time for our graduate students and received LAS Impact Awards for their efforts. Other faculty recognitions this year include Alison Bell who was elected a AAAS Fellow, and Mark Hauber who was selected as a Fellow from both the Center for Advanced Study and from Institute for Advanced Study at Berlin. We were also very happy to see Julian Catchen promoted to associate professor with tenure.

In other exciting news, Dan Miller will be joining the Department as an assistant professor this fall (2021). Dan's research is in the area of comparative neuroanatomy, specifically looking at variation in the organization of the cerebral cortex among individuals and species. He integrates evolutionary, molecular, cellular, and systems-level approaches, bringing together faculty from several campus units including Electrical and Computer Engineering, Psychology, Anthropology, and Molecular and Integrative Physiology.

Department of Plant Biology – Andrew Leakey

It has been a tumultuous year for our students, staff and faculty, just as I am sure it was for you, as well as everyone else across the nation and around the globe. However, I'm delighted to say that our community demonstrated great resilience and camaraderie by coming together to face the challenges of teaching and research with COVID19 restrictions in place. Many people put many hours into creating engaging online versions of classes. On the other side of the computer screen, students committed themselves to learning in new ways. Graduate theses and impactful scientific papers in top journals have been written by teams from their bedrooms, dining rooms and kitchens. We were delighted that Carl Bernacchi was promoted to Professor and Amy Marshall-Colon was promoted to Associate Professor. Members of our faculty have been inducted to the National Academy of Sciences (Elizabeth Ainsworth), the American Association for the Advancement of Science (Carl Bernacchi), and lifetime membership of the American Society of Plant Biologists (Don Ort). Colleagues celebrated these successes by driving past homes waving signs and balloons or shipping gifts rather than meeting in ballrooms in Washington DC.

Looking to the future of the department, we are delighted that in Fall 2021 we will welcome Steven Burgess and Fabiany Herrera to Plant Biology. Steven will be an Assistant Professor using molecular and synthetic biology approaches to understand and improve the efficiency of photosynthesis. Fabiani will be our first DRIVE Postdoctoral Fellow and studying paleobotany in collaboration with Surangi Punyasena.

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DEPARTMENTS AND PROGRAMS

DEPARTMENTS

Department of Entomology
Department of Evolution, Ecology, and Behavior
Department of Plant Biology

UNDERGRADUATE PROGRAMS

Integrative Biology
Integrative Biology Honors
IPS – Entomology
Teaching of Biology

GRADUATE PROGRAMS

Entomology
Evolution, Ecology, and Behavior (EEB)
Plant Biology
Program in Ecology, Evolution & Conservation Biology (PEEC)
Online Master of Science Teaching Biology Program (OMST)

SIB BY THE NUMBERS

STUDENTS

Undergraduate - 387
○ Out-of-state – 20
○ International – 6

Graduate – 35
○ Entomology – 8
○ EEB – 3
○ Plant Biology – 9
○ PEEC – 2
○ OMST – 13

DEGREES AWARDED

Bachelor of Science - 117
Master of Science – 22
Doctor of Philosophy – 13

FACULTY (2020)

Professors - 19
Associate Professors – 8
Assistant Professors – 8

FUNDING

The School of Integrative Biology has been supported by:

- National Science Foundation
- National Institute of Health
- US Department of Agriculture
- US Department of Energy
- US Department of Education
- US Department of Defense
- Private Support from Alumni and Friends

NEW FACES IN SIB



Eva Fischer – Assistant Professor of Evolution, Ecology, and Behavior – Eva is new to SIB and new to the Midwest. Originally from Colorado, she's still adjusting to a lack of mountains but otherwise happy to be calling Champaign-Urbana and SIB home. Research in the Fischer lab asks how brains make behavior and how nervous systems can simultaneously give rise to widespread similarities and remarkable diversity in animal behavior. The lab uses charismatic, neotropical poison frogs as its primary model system. In addition to being toxic (but only in the wild!) and beautifully colored, these animals show remarkable diversity in parental care. Current projects seek to understand the hormonal and neural mechanisms of individual variation and sex differences in parental behavior, as well as the neurobiological basis of aggression in tadpoles. In addition to research, Eva is passionate about teaching and mentoring, and very fortunate to have an amazing group of people in her lab.

Visit the lab website: ekfischerlab.com.



Jessica Fink – Academic Advisor - Originally from Bloomington, IL she has spent a lot of time in the Midwest. She started her academic journey here at Illinois in the College of Media as an advertising student in 2010. She then went to Oklahoma State University where she earned her Master's degree in Higher Education, College Student Development in 2016. Jessica bounced around the Big 10 before coming back to her alma mater in 2017. Her experience working with Housing and Residential Life gives her a unique understanding of the college student, their needs, and the various resources that this campus provides. Wanting a change and more active role in advocating for women in science and first-generation college students, she joined SIB's academic advising team. As an advisor she has a wealth of knowledge of campus resources to help students find their passion within IB.



Annetta Allison – Associate Director for Human Resources and Administration – Annetta has been a smiling face around campus since 1996. She entered into the U of I's very first accelerated cohort for the Human Resources and Industrial Relations program, where she earned her master's degree in 2017. Before arriving at SIB, she worked in several departments on campus including Beckman Institute, Computer Science, and Illinois Public Media. As an Associate Director for a multi-department research and academic unit within the School of Integrative Biology, Annetta's primary responsibility is to manage the strategic oversight for administrative and HR operations. Annetta has a passion for helping others and being an outlet for anyone needing an ear. In her spare time, loves listening to e-books, traveling, and mostly, she's glued to her Echo device talking to her three granddaughters who reside in Boston, MA.

FACULTY PROMOTION



Carl Bernacchi – USDA-ARS and Professor of Plant Biology – Dr.

Carl Bernacchi’s research focuses on the physiological responses of plants and ecosystems to global changes, specifically to address the role of natural and managed

ecosystems to rising carbon dioxide, warming temperatures, land use change, and climate extremes. Work in the Bernacchi lab scales from the level of individual plant organs, whole plants, canopies, the ecosystem and the region, utilizing a number of approaches including biochemical, physiological, biophysical, micrometeorological and ecological tools, to understand the responses of plants to global changes.



Alex Harmon-Threatt – Associate Professor of Entomology– Dr. Alex Harmon-

Threatt’s research centers on pollination ecology, with broad interests in understanding the patterns and processes that

govern plant-pollinator interactions for conservation. Research in the Harmon-Threatt lab focuses on identifying and understanding patterns in natural environments to help conserve and restore pollinator diversity. With a particular focus on bees, she and her team investigate how factors at both the local and landscape scale, (including plant diversity, isolation and bee characteristics) impact bee diversity in local communities.



Amy Marshall-Colon – Associate Professor of Plant Biology – Dr. Amy Marshall-

Colon’s research focuses on how network models can be used to to investigate and predict how plants respond to the

environment. Research in the Marshall-Colon lab uses plant models that may help resolve a growing gap between food supply and demand in the face of global climate change. These models harness the great strides in understanding of plant function from genes to whole plants to accelerate forward approaches to crop breeding and bioengineering.

FACULTY NEWS



3rd Time Freezer Challenge Win

The University of Illinois was honored by the International Laboratory Freezer Challenge as one of the top universities at implementing cold-storage best management practices and reducing energy usage for a third straight year. Twenty-one labs on campus combined to save approximately 263 kWh/day, which is the equivalent energy use of nine average households.

The Deborah Katz-Downie and Stephen R. Downie labs were specifically recognized this year for their efforts, which included maintaining and defrosting over 30 freezers and fridges, appropriately discarding approximately 30,000 samples, and sharing cold storage sample space with three research groups. Learn more: go.illinois.edu/SIBFreezerWin.

Study tracks genomic changes that reinforce darter speciation



A study published in *Molecular Biology and Evolution* explores the genomic changes that occur when two species hybridize. Becky Fuller, professor of EEB, conducted the study with lead author and former graduate student Rachel Moran. The researchers mated orangethroat and rainbow darters in the lab and analyzed the genomes of the few hybrid offspring that survived past hatching.

Results suggest that the areas of the genome that differ the most likely contribute to the reproductive incompatibility between the two species. These differences would likely disrupt cell division and could alter gene expression in hybrid offspring. Learn more: go.illinois.edu/MBEDarterSpecies.

FACULTY NEWS



Study tracks decades of life cycle changes in nonwoody plants

For 25 years, Carol Augspurger (professor emerita of plant biology) visited Trelease Woods, a 60.5-acre remnant of

old-growth forest in central Illinois, to look at the same 25 one-square-meter plots she first demarcated for study in 1993.

Since that time, Augspurger has made nearly 600,000 observations of 43 plant species, noting 10 distinct developmental stages in the plants' lives, including when they emerged in spring, how long it took them to mature, when the flowers opened and died, when the leaves began to lose their greenness and when the plants went dormant. Learn more: go.illinois.edu/AugspurgerTrelease.



Study suggests viral infection alters honey bees' behavior and physiology

Honey bees that guard hive entrances are twice as likely to allow in trespassers from

other hives if the intruders are infected with the Israeli acute paralysis virus, a deadly pathogen of bees, researchers report.

In a study published in the Proceedings of the National Academy of Sciences, assistant professor of entomology Adam Dolezal, professor of entomology Gene Robinson, and collaborators determined that the IAPV virus is changing how infected bees smell and impacting how infected bees behave to guard bees at foreign hives. Learn more: go.illinois.edu/IAPVBees.

Genomic study reveals evolutionary secrets of banyan tree

The banyan fig tree *Ficus microcarpa* is famous for its aerial roots, which sprout from branches and eventually reach the soil.



The tree also has a unique relationship with a wasp that has coevolved with it and is the only insect that can pollinate it. Ray Ming, professor of plant biology, led the study, which used identified regions in the banyan fig's genome that promote the development of its unusual roots and enhance its ability to signal its wasp pollinator. Understanding this relationship is important because of *Ficus* species' ability to produce fruits in a variety of habitats, making them a keystone species in most tropical forests. Learn more: go.illinois.edu/MingBanyanTree.



Model predicts where ticks, Lyme disease will appear next in Midwest

By drawing from decades of studies, researchers created a timeline marking the arrival of black-legged ticks, also known as deer ticks, in hundreds of counties across 10 Midwestern states.

Associate professor of entomology Brian Allan, former doctoral student Allison Gardner (University of Maine) and collaborators used these data - along with an analysis of county-level landscape features associated with the spread of ticks - to build a model that can predict where ticks are likely to appear in future years. Learn more: go.illinois.edu/TickModel.

Using Skills Learned in Class to Combat COVID-19

This article was written by Zack Tollakson, a senior in Integrative Biology who worked in the SHIELD: Target, Test, Tell laboratories on campus. SHIELD is a screening testing program and infrastructure that deploys the University of Illinois' innovative saliva test across the state. Learn more about the SHIELD program at go.illinois.edu/OnCampusTesting.

College is a unique experience not only for academic success, but for building personal and professional relationships and embracing new opportunities. COVID-19 has impacted every one of those aspects in any student's experience. As a senior, I am lucky enough to have had 2.5 “normal years.” However, even though the college experience looks a bit different now, it has given me new opportunities for both learning in the virtual classroom and working with the university’s COVID-19 saliva testing laboratory.

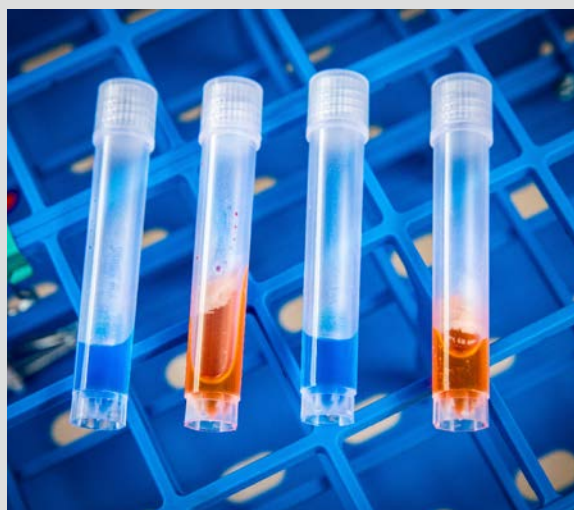


Everyone has had and continues to have a quarantine experience that is unique to them. Many of us have gone through a baking stage, a workout stage, and even a stage where you watch a TV series for so long that you forget what day it is. For many students, we are still navigating online and hybrid ways of learning. My courses have had all the same content from before the pandemic, now just delivered in a different way. My instructors adapted the material surprisingly well given the circumstances, and this semester has been even more polished than the last.

Being a STEM major, many of my classes involve a laboratory which provides hands on tasks that are crucial to my development. I am still able to work within a group, now through computer simulations of the experiments that would have required a lab coat and goggles.

In courses, students can often wonder: “This is so irrelevant to what I am going to be doing as a (insert desired job here). Why do I even need to learn this?” This can be anything from statistics to rhetorical writing to complex parts of biological systems. I don’t have to remember the exact structures of all the amino acids or the anatomy of a dissected animal, but by learning the concepts and procedures within these courses as well as learning how lab research is conducted granted me the experience of working in the COVID testing lab.

I applied to work with the campus COVID testing laboratory as an assistant after being curious to understand how the university was using our saliva to test for the virus. In that role, I help to transfer the samples into the lab, organize them, and register them into our computer system. From there, I sterilize the samples in a water bath and transport them to others who pipette the samples into well plates. These plates are later placed into the PCR machine. Polymerase chain reaction (PCR) is a method that uses enzymes to make copies of a sequence of DNA. If there is any genetic material of the virus present after this amplification, the result is a positive test.



My experience working in the lab provided me with an understanding of the science and process behind the testing that was done to determine how the university has handled the pandemic.

COVID-19 completely reshaped my senior year at University of Illinois, though not for better nor worse. When one opportunity is taken, another is given. Although I was unable to participate in my laboratory classes face-to-face, my instructors succeeded in transitioning the classes online, so I could continue to learn research and technical skills I have used in the COVID-19 lab and will be using in my career.

Yes, 2020 and 2021 have been a challenge, but students and teachers remain just as resilient and innovative as ever. ❖

Entomology Student Names New Species After Lady Gaga

According to Brendan Morris, a graduate student of entomology, treehoppers are the wackiest, most astonishing bugs most people have never heard of. They are morphological wonders, sporting bizarre protuberances that look like horns, gnarled branches, antlers, fruiting fungi, brightly colored flags or dead plant leaves. Treehoppers suck on plant juices. They sing to each other by vibrating plant stems, and they are an important food source for other creatures.

“I love outrageous forms and colors,” said Morris, who studies entomology. “It blows my mind that a group that is roughly 40 million years old has so much diversity of form – diversity, I would argue, that we don’t see in any other family of insects.”

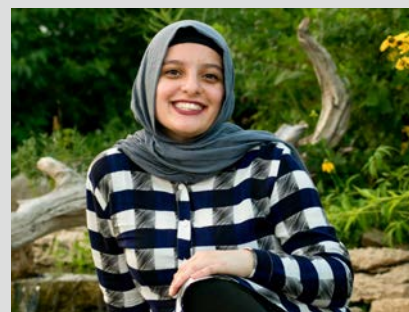
To draw attention to this group, Morris named a newly discovered treehopper species after Lady Gaga, a musical performer who has her own flamboyant, shape-shifting style. “If there is going to be a Lady Gaga bug, it’s going to be a treehopper, because they’ve got these crazy horns, they have this wacky fashion sense about them,” Morris said. “They’re unlike anything you’ve ever seen before.” The insect, now known as *Kaikaia gaga*, represents a new genus of treehopper, named by Morris and his co-author, Illinois Natural History Survey entomologist Christopher Dietrich. go.illinois.edu/TreehopperLadyGaga.



SIB Alumna Deniz Namik Awarded Fulbright Grant

Deniz Namik, Class of 2020, was one of 14 University of Illinois students and recent alumni who were offered Fulbright grants to pursue international education, research and teaching experiences across the globe. She earned a bachelor’s in integrative biology and Spanish and was offered an English Teaching Assistant position in Spain.

Namik said being a daughter of refugees has driven her to teach and create opportunities for others who seek asylum in countries like Spain and the U.S. She has deferred admission to the University of Illinois at Chicago College of Dentistry until after her Fulbright year. Planning to be an oral health educator, Namik said she will work to solve the health care inequality gap, specifically in refugee, at-risk and Spanish-speaking communities. Fifteen students from the Urbana campus were offered Fulbright awards for the 2020-21 academic year, placing Illinois among the top 15 public institutions in terms of numbers of students offered grants. go.illinois.edu/NamikFulbright.



Viralizer – Online Database to Chart SARS-CoV-2 Protein

The COVID-19 pandemic provided a unique research opportunity for six University of Illinois undergraduates who won Second Place in the 2020 International Genetically Engineered Machine (iGEM) contest.

The Viralizer team created a web tool to build visual models of the spike protein SARS-CoV-2 virus as it mutates. The hope is to give researchers crucial information about the virus as they design new drugs and vaccines. To write the tool, the students had to learn about viruses, programming, bioinformatics, DNA sequences, protein modeling, viral structures, graphic software, and antibody design. The database was built using NextStrain, an open-source project with data and visualization tools to track viruses and other pathogens and improve the public health response. Learn more: go.illinois.edu/iGemViralizer.



Citizen Science and Education to Help Protect Pollinators

Pollinators play a critical role in maintaining vibrant, healthy ecosystems, and in the production of over one hundred different crops grown in the US (USDA-ARS).

The University of Illinois is a leader in pollinator research, with our researchers making major contributions to ecological research and pollinator preservation. Our scientists are studying pollinators at every level, from the identification of the bee genome to the study of how landscape dynamics can impact pollinators. They are examining the ways disease can impact behavior, how diet can help or hinder pollinator development and health, and how pollinator behavior can inform our conservation efforts.

Much of this research offers insights that will help land managers, citizens, and scientists better understand and support our pollinators. Read on to learn more about what our researchers and students are doing to bring pollinators to the public!



I-Pollinate: *Conduct Research in Your Own Backyard*

I-Pollinate is a citizen science research initiative designed to collect state-wide pollinator data. I-Pollinate enlists citizen scientists to participate in three research projects and collect data on:

- **monarch egg and caterpillar abundance** – to see how egg laying and growth respond to different landscape variables;
- **pollinator visitation to ornamental flowers** – to determine which flower species create the best environment to host butterflies, bees, and flies;
- **bee demographics** – to establish long-term monitoring of Illinois honey bee and bumble bee populations. Participants submit photos of the bees in their area to BeeSpotter. Learn more: beespotter.org.

The initiative includes video trainings, pollinator identification resources, frequently asked questions and more. I-Pollinate is a collaboration between U of I Department of Entomology, Illinois Extension, Illinois Natural History Survey, and the Office for Mathematics, Science, and Technology Education. Visit: ipollinate.illinois.edu.



Pollinarium: *Learning through Experience*

The University of Illinois Pollinarium is the first free-standing science center in the nation dedicated to increasing awareness and appreciation of pollination as a remarkable ecological partnership and an essential ecosystem service. Originally the first Bee Research Facility on campus, the center was repurposed for pollinator outreach in 2009.

Each year, the Pollinarium hosts educational camps and events for attendees, who range from preschoolers to undergraduates to Osher Lifelong Learners, community groups, beekeepers, agritourists and drop-in campus visitors. Learn more: pollinarium.illinois.edu.



Pollen Power: *Hands-on Science for Middle School Students*

Pollen Power is a week-long summer day camp focused on girls entering 6th, 7th or 8th grade. Coordinated by Adrienne Gulley, the camp features activities and tours across campus on pollinators, pollination, and everything in between.

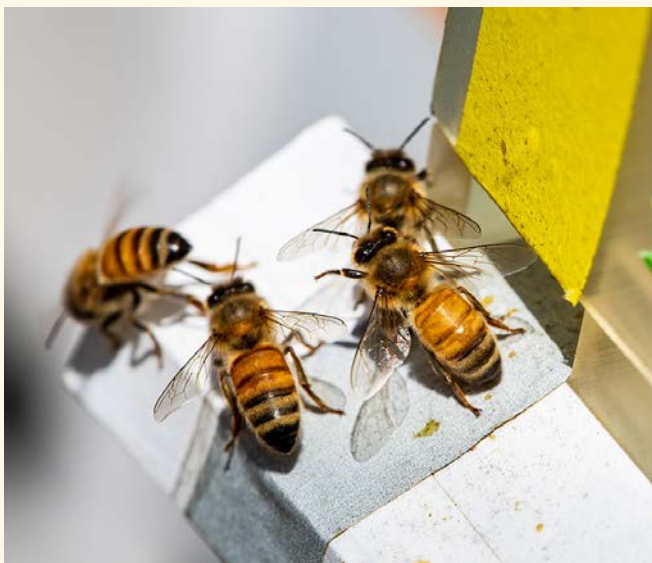
Previous camp attendees wrote a script and selected images to create their own “weather report” forecasting/backcasting how pollen levels were in the distant past and the near future. In another activity, students used microscopes to help create 3D data sets of pollen grains to compare it to ancient pollen and create a timeline through different periods. The camp has included visits to the greenhouses, Fab Lab, Pollinatarium, and SoyFACE facility, and more.

Visit: pollensummerncamp.illinois.edu.

Beescape: *Get a Bee’s Eye View of Your Landscape*

Beescape is an online tool and community to help beekeepers (or anyone interested in bees) understand how the landscape surrounding an apiary, garden, or farm stacks up in terms of floral resources bees can find, the insecticides they encounter, and for wild bees, the nesting sites that are available.

The online tool allows users to select a specific location -- their apiary, home garden or farm -- and obtain landscape-quality scores for the surrounding region, up to 5 kilometers away. Users also can examine the crops that are being grown in the areas around them. Learn more: beescape.org.



Bee Research Facility: *Science to Inform Action*

The Bee Research Facility, originally housed in the Pollinatarium until 2009, is home to several different studies currently ongoing, examining issues such as:

- behavioral and neurological impacts of pesticides,
- role of diet on bees’ ability to fight off disease,
- neurological and behavioral variation in a hive, and more.

Student Research Experience – Graduate and undergraduate students at the Bee Research Facility work collaboratively with faculty mentors to set up experiments, collect data, and gain more insight into the research process. Learn more and read one student’s research experience at the bee research facility:

go.illinois.edu/BarcodeBeeBlog ❖

Profiles of Public Engagement in Media and Societies

Our researchers engage in science communication and outreach at every stage in the research process, from interpreting and sharing results directly to working with the media and our professional societies. Professional societies help to further the field, grow collaborative relationships, and advance the public interest. Collaborating with the media can help researchers tell a true to life story of the research process and what results can tell us. Learn more about three SIB researchers who are using their expertise and voices to support greater conversation between the public and the science.

Alex Harmon-Threatt, associate professor of entomology, has received a Public Voices Fellowship, which aims to help professors learn more about discussing their research with a broad audience. To amplify voices of expertise on pressing issues, the fellowship allows professors from groups largely unrepresented in the news media to pair up with journalists from places such as CNN, New York Times, Wikipedia, and more.



Fellows explore how credibility works, how ideas spread, when and why minds change, and how ideas play out over time and space. The Public Voices Fellowship is an initiative launched by The OpEd Project in partnership with leading universities and foundations nationwide.



Marianne Alleyne, assistant professor of entomology, has been elected as Vice President-Elect of the Entomological Society of America (EntSoc). She will begin her term as Vice President beginning November 2021, and President beginning November 2022. She has served in multiple ways since becoming a student member in 1995 and has been committed to science communication, including as an EntSoc Science Policy Fellow from 2014-2016.

Alleyne has furthered greater diversity, inclusion, and equity in science by co-developing the EntSoc Code of Conduct Statement and co-creating the EntoAllies program. “Entomology is crucial for biodiversity, food security, and public health, and we need to support good science policy with our work, both as the EntSoc and as individual researchers.”

Esther Ngumbi, an assistant professor of entomology and African American Studies, received the Mani L. Bhaumik Award for Public Engagement with Science (AAAS). This award from the American Association for the Advancement of Science is presented to scientists and engineers in recognition of their contributions to public engagement with science.

The AAAS cited her "ambitious priorities," which include "helping the world meet sustainability challenges, diversifying the global community of scientists, and practicing and teaching science communication." Read more from Esther on p. 15 of this newsletter, and learn more about Esther's award:



Biology Integration Institute Awarded \$12.5 Million by NSF

The National Science Foundation (NSF) announced a five-year, \$12.5 million grant to integrate biology to a collaborative team based in the Carl R. Woese Institute for Genomic Biology (IGB). An interdisciplinary team of 27 professors from microbiology, plant biology, entomology, ecology, evolution, computational biology, and education, including evolution, ecology and behavior professor **Carla Cáceres** and associate professor of plant biology **Katy Heath** as co-principal investigators. Together with the other team leaders and collaborators, they will integrate recent discoveries about the impact of microbial symbiosis on evolution and ecology. The new institute, Genomics and Eco-evolution of Multi-scale Symbioses (GEMS), will include molecular, organismal, computational and theoretical approaches.

“Symbiosis is the process where two organisms come together to form emergent traits that neither has alone. All around us there are nested symbiosis, with microbes like bacteria and viruses at their center,” said collaborator and co-leader microbiology professor Rachel Whitaker. “The inspiration behind GEMS is to integrate biology since all too often, fields of biology are siloed by funding, approach, language and culture.”

Collaborators include researchers at Illinois and from the University of Chicago, Indiana University and UNC Greensboro, with partners in outreach efforts in local school districts, scientific societies, and a variety of programs that aim to address the ethnic and racial disparities that exist in STEM (science, technology, engineering and mathematics) fields. NSF support will allow this team to work toward a bold vision that not only uses the study of symbiosis to integrate across science, but to thoughtfully and effectively engage K-12 students and the broader public, and to break down historical barriers to creative idea generation. Learn more: go.illinois.edu/NSF-GEMS. ❖



30 Years of Crop and Climate Data Simulate Future

Over the past 30 years, a network of 14 long-term research facilities spanning five continents has simulated future levels of carbon dioxide (CO₂) to forecast the impact on crops. Importantly, these ‘Free-Air Concentration Enrichment’ (FACE) experiments are conducted outside in real-world field conditions to capture the complex environmental factors that impact crop growth and yield. In a review published in *Global Change Biology*, **Lisa Ainsworth** (USDA-ARS and professor of plant biology and crop sciences) and **Stephen Long** (professor of plant biology and crop sciences) synthesize 30 years of FACE data to grasp how global crop production may be impacted by rising CO₂ and other factors.



While CO₂ increased yields, it also caused important quality losses; many crops showed lower mineral nutrient and protein contents. This yield response is also much smaller under the conditions of low nitrogen fertilization, which is the situation for many farmers in the world’s poorer countries. Alarmingly, what has become apparent since the first review is that our major food crops become considerably more vulnerable to pests and diseases at higher CO₂. On a more positive note, the authors show that there is sufficient genetic variation within our major crops to overcome some of these negative effects and capitalize on the yield benefit of higher CO₂.

“We are driven by a motivation to prepare for the future and to identify the traits that are going to be important for maximizing this CO₂ response while dealing with the aspects of global change that may drive down yields,” Ainsworth said. “The last 15 years have taught us to account more for the complex interactions from other factors like drought, temperature, nutrients, and pests.” Learn more: go.illinois.edu/FACEFutureCrops. ❖

37th Annual Insect Fear Film Festival – Crustaceans

The Department of Entomology, together with the Entomology Graduate Student Association, hosted the 37th Annual Insect Fear Film Festival in February 2020. Held every spring, the festival is an opportunity to see movies focused on insects, interact with the insects in our petting zoo, and dispel some fears of these incredible, fascinating creatures!



The theme of the 2020 festival was crustaceans, a large and diverse group of animals such as lobsters, shrimp, krill, crabs, and more. Crustaceans look like marine versions of insects, with their antennae and segmented bodies. The resemblance is not by chance. Crustaceans and insects are related – more closely than scientists once thought.

Crustaceans have become more important to entomologists in the last decade, said May Berenbaum, the department head of entomology and founder of the film festival. “Crustaceans are not insects. But the science community has realized that insects are probably crustaceans.”

Both insects and crustaceans are arthropods, characterized by segmented bodies, exoskeletons and legs with joints. Genomic studies have revealed that the two groups have a common ancestor. “It’s kind of like Ancestry.com for arthropods. You never know what will turn up in your family tree,” Berenbaum said.

The festival’s films included two short films and two feature length films, covering everything from the inventor of “Amazing Sea Monkeys” to giant radiation-altered crabs to a parasitic isopod eco-horror story set in the Chesapeake Bay.

The festival’s insect petting zoo included the usual assortment of insects, including hissing cockroaches, grasshoppers and beetles, as well as tarantulas and other arthropods. New additions for the festival featured crustaceans such as triops, clam shrimp, colorful ornamental freshwater shrimp, crayfish, a tangerine-and-white species of roly-poly bugs (also called pill bugs) and spider, blue and vampire crabs.

In 2021, the EGSA held the 38th IFFF (featuring fleas!) online, to ensure festival attendees could participate safely. To learn more about the Insect Fear Film Festival, please visit: go.illinois.edu/EGSA-IFFF. ❖



GEEB Bird Strike Survey

For birds, glass windows can be deadly. During the day, birds can be tricked into seeing foliage, either through the building or as a reflection, and at night lights and reflections from the building can become dangerously disorienting. Between an estimated 365 million to 988 million birds are killed each year in the United States due to collisions with glass windows.

In 2019, the Graduate Students in Ecology & Evolutionary Biology (GEEB) first launched the Bird Strike Survey to assess which buildings on campus had the most window collisions by migrating birds.

The survey (now with two years of data) aims to identify problem buildings and gather data for recommendations and proposals for future work, supported by a major grant from the university's Student Sustainability Committee. Bird collisions with buildings are particularly important to study in Champaign-Urbana, which is situated directly on the Mississippi Flyway, a bird migration route critical to hundreds of bird species.

Alec Luro, Sarai Stuart and Rachel Skinner, graduate researchers in the School of Integrative Biology, led the survey. As of November 2020, the survey found 489 individual birds representing more than 30 species that died due to building collisions on campus.

“(Birds have) evolved over millions and millions of years, but they never had to deal with glass before,” Luro said. “If you think about (the) Beckman Institute, where the windows are mirrored, they’re seeing trees. They’re not seeing a window, something to avoid, they’re seeing images of things they’d normally fly to.” According to the results, 159 of the surveyed birds collided with Beckman.



Fifty-two student researchers participated in the survey, which involved collecting birds on the Engineering, Main, and South quads during two three-week survey periods in 2019 and 2020. Most of the bird collisions were found during migration season.

The data from the surveys will help inform better building practices for the University in the future, particularly to retrofit existing buildings to make them more bird-friendly and to consider bird collisions as a factor when designing new campus buildings. This would include using bird-friendly glass (as tested by the American Bird Conservancy) used for windows higher than 80ft from the ground.

The remains of the birds that were collected will be used for a bird skin workshop to be held at a later date. Participants in the survey will learn how to prepare a bird skin for preservation, and how these skins are used for study and instruction.

For more information on the survey, please visit: go.illinois.edu/GEEBBirdStrike.

After 2020: Thoughts on Food Security in a New Era

The year 2020 was hard, but it also summoned thoughts of how to start anew. The College of Liberal Arts & Sciences asked professors from across the college for their thoughts on how, considering last year's challenges, we can still move forward toward a brighter future. Two of our SIB professors offered their thoughts on equitable food security. To read more and access the LAS News Magazine, visit: las.illinois.edu/news/magazine.



Esther Ngumbi
*Assistant Professor
of Entomology, African
American Studies*

On Equitable Food Solutions:

"Food insecurity in the United States and around the world continues to rise in part because of the COVID-19 pandemic. In 2020, we witnessed food systems disruptions in rural and urban cities alike. The pandemic exposed the fragility of our existing food systems.

Moreover, it also made it clear that hunger and food insecurity disproportionately impact marginalized communities and people of color. Meanwhile, we continued to witness many environmental issues such as drought and flooding, all linked to the changing climate. Impressively, measures and initiatives that were in existence and available to citizens before the pandemic including foodbanks and several federal benefits really made a difference.

Moving on to 2021, there is an urgent need to ramp up the initiatives that worked and to further use knowledge and lessons learned during the pandemic to create policies and solutions to mitigate this worrying trend, create equitable food systems and to strengthen food production at the household, community, and national level. Concrete solutions and initiatives to mitigate food insecurity must be rooted in data evidence. Institutions like the University of Illinois Urbana-Champaign are better placed to continue to harness research, discovery, engagement, learning and extension to meet our collective food needs." ❖



Stephen Long
*Ikenberry Endowed
University Chair of
Crop Sciences and
Plant Biology*

On the Science of Food Supplies:

"Photosynthesis is directly or indirectly the source of all of our food and much more. No institution in the modern era has made more contributions to understanding the mechanism than the University of Illinois.

Now, through the Bill & Melinda Gates Foundation, the U of I leads an international consortium (RIPE) that is converting this understanding via artificial intelligence to predict how the process can be made more efficient and in turn bioengineering these changes into crops to achieve sustainable yield increases.

Test-of-concept has demonstrated three independent lines of bioengineering that have resulted in large production increases, in one case a 30 percent increase in soybean yield on our university farm.

Now, the team is focusing on future-proofing these traits and moving them into the staple crops of sub-Saharan Africa. Globally, this new route to increasing crop yields will benefit the environment by requiring fewer inputs per unit of harvest and avoiding the need to cultivate yet more land to meet growing demand."

Learn more at ripe.illinois.edu. ❖



SIB ALUMNI AWARDS – 2020 WINNER AND NOMINATIONS

The School of Integrative Biology has a tradition of teaching and research excellence over 150 years old, when courses in Zoology, Botany, and Entomology were first taught at the University of Illinois. Our departments were founded in 1884 (Zoology/EEE, Genetics and Development, Animal Biology), 1901 (Botany/Plant Biology), and 1909 (Entomology). In the last century and a half, our faculty have had the pleasure of working with tens of thousands of undergraduate and graduate students who have gone on to change the world through their impactful and cross-cutting work.

To celebrate these accomplishments, in 2019 the School of Integrative Biology created the Alumni Achievement Award and the Outstanding Young Alumni Award:

- The **Achievement Award** recognizes outstanding professional achievement that demonstrates the value of an education (BS, MS, or PhD) from the University of Illinois.
- The **Outstanding Recent Alumni Award** recognizes a recent graduate (within 10 years of final Illinois degree) for outstanding or noteworthy professional achievement.

2020 Alumni Achievement Winner: Steve Caldwell



Steve Caldwell | Class of 1993

Senior Manager of Validation and Change Control, Illumina

Adjunct Professor (Applied Biotechnology M.S. program), University of Wisconsin

The contribution Steve has made to our School is more than note-worthy, it has been transformative. When a call went out to our IB community four years ago to help

engage our undergraduates and improve career success, Steve leapt at the opportunity to give back to his alma mater, helping to develop the first ever Integrative Biology career course (now a permanent course: IB292 Translating your IB Degree into Career Success).

As the co-instructor for the course, Steve has served as a constant resource for the instructors, collaborators, and students (95 students and over 110 hours in the classroom!), providing insights, developing course content, networking with alumni, recruiting participants, mentoring students, and much more.

Learn more about Steve: go.illinois.edu/CaldwellAlumniAward.

“Don’t focus your career search or learning solely based on labels or your specific degree. What’s more important is how you use your knowledge, how you adapt in life, choosing what you want to experience and how you want to live. See if you can find creative ways to apply your knowledge; you’ll be surprised at what opportunities exist.”

2021 Nominations

Nominations may come from alumni, faculty, commercial enterprises, college of campus advancement personnel, friends of the University, or other academic institutions that employ Illinois graduates. Nominees must have earned a BS, MS, or PhD in Biology (with or without a concentration), Botany, Ecology, Evolution and Conservation Biology, Entomology, Genetics and Development, Integrative Biology, or Plant Biology.

To learn more, or to access nomination information, please visit: sib.illinois.edu/alumni/awards. Applications are received on a rolling basis and evaluated each December. ❖

FACULTY AWARDS

USDA-ARS and plant biology researcher Lisa Ainsworth elected to NAS



Lisa Ainsworth, a research plant physiologist with USDA-ARS and professor of plant biology and crop sciences has been elected to the National Academy of Sciences.

Ainsworth was recognized for her research on how crops are impacted by pollutants such as ozone and carbon dioxide.

Entomology researcher Brian Allan recognized for student impact



Brian Allan, associate professor of entomology, was identified through the Chancellor's Senior Survey as a faculty or staff member who has made a positive impact on graduating seniors at Illinois. The survey, is administered to all graduating seniors as a way to better understand their experiences at Illinois.

EEB researcher Alison Bell and USDA-ARS and plant biology researcher Carl Bernacchi elected to AAAS



Alison Bell, professor of EEB, and Carl Bernacchi, USDA-ARS researcher and professor of plant biology, have been elected 2020 Fellow of the American Association for the Advancement of Science.



Bell studies the evolution of behavior in the three-spined stickleback, using genomics and other tools to understand the causes and consequences of individual behavior differences.

Bernacchi is a USDA-ARS scientist investigating the impacts of climate change on crop physiology, energy fluxes between the atmosphere and plant canopies, carbon sequestration and crop canopy responses to stress.

EEB researcher Alison Bell and entomology researcher Alex Harmon-Threatt named Romano Scholars



Alison Bell, professor of EEB, and Alex Harmon-Threatt, associate professor of entomology, have been named Richard and Margaret Romano Professorial Scholars for their leadership and research.



Bell's research on stickleback fish could help inform and improve our understanding of the nature and variance of behavior.

Harmon-Threatt's research examines how local and landscape features can impact pollinator diversity and restoration.

USDA-ARS and plant biology researcher Carl Bernacchi named Dean's Distinguished Professorial Scholar



Carl Bernacchi, USDA-ARS researcher and professor of plant biology, has been named one of the inaugural LAS Dean's Distinguished Professorial Scholars in recognition of his contributions in education and research to the University.

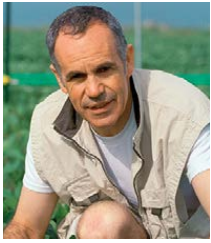
EEB researcher and SIB Director Carla Caceres receives Leadership Award from Office of the Provost



Professor of EEB and Director of SIB, Carla Caceres received the Executive Officer Distinguished Leadership Award from the Office of the Provost, which recognizes outstanding academic leadership and vision by an executive officer within a college or campus unit.

FACULTY AWARDS

Plant biology and crop sciences researcher Stephen Long named Stanley O. Ikenberry Chair



Professor of plant biology and crop sciences Stephen Long was named the Stanley O. Ikenberry Endowed Chair, in recognition of his work in photosynthesis and addressing food insecurity.

Entomology researcher Alex Harmon-Threatt elected Early Career Fellow by ESA



Associate professor of entomology Alex Harmon-Threatt has been named an Early Career Fellow of the Ecological Society of America. This honor was bestowed for her critical research in native bee ecology and conservation, as well as for excellence in teaching and public outreach.

Plant biology researcher James O'Dwyer selected as Radcliffe Institute Fellow



Associate professor of plant biology James O'Dwyer was named a 2020-2021 fellow at the Radcliffe Institute for Advanced Study at Harvard University. As a fellow, O'Dwyer will pursue an individual project in a community dedicated to exploration and inquiry, focusing on overlaps between biological and social complex systems.

Plant biology and crop sciences researcher Don Ort honored by ASPB



Professor of plant biology and crop sciences Don Ort received the Charles Reid Barnes Life Membership Award from the American Society of Plant Biologists (ASPB), an annual award for meritorious work in plant biology.

EEB researcher and Head Andy Suarez named Jeffrey S. Elowe Professor in IB



Professor and Head of EEB Andy Suarez was named the inaugural Jeffrey S. Elowe Professor in Integrative Biology.

Suarez' research examines the social organization and developmental plasticity in ants.

Two plant biology researchers rank among world's most influential for third year running



Two plant biology researchers have been named to the 2020 Clarivate Analytics Highly Cited Researchers List: Stephen Long and Don Ort.



This is the third year in a row that these two researchers have been named to the list, which recognizes researchers who produced multiple papers ranking in the top 1% by citations for their field.

Their work focuses on improving photosynthetic efficiency and addressing the effects of global change factors on crop responses and yield.

UNDERGRADUATE SCHOOL HONORS

The following students graduated in 2020 with distinctions.

Distinction

Anna Dmitrievna Dmitrieva
Anna C. Grommes
Alan Hsieh
Veronika Rae Laird
Zoe T. Schnitzler
Skyler Chloe Tiarks
Justin Thomas Wong

High Distinction

Laura Ann Goralka
Shalyn A. Keiser
Emina Sipic

Highest Distinction

Hayley E. Ban
Lincoln Nian Taylor
Xiaoyu Yang

UNDERGRADUATE STUDENT AWARDS

Robert H. Davis Research Scholarship
Edward Huang

Robert H. Davis Excellence Scholarship
Alex Alvey

Camp Family Research Awards
Veronica Bokla
Rebecca Ducay

Spyros Kavouras Summer Research Award
James Kosmopoulos

Joann Kavouras Memorial Scholarship
Meghan Blaszyński

iBio Summer Internships
Cassandra Afseth
Angela Alburei
Gabriel Harmon

Oliver J. Bell Merit Scholarship in IB
Tara Entezar

Richard Ware Family Scholarship
Briana Rivera

Judy Willis Scholarship
Eric Chen

IBH Sophomore Achievement Scholarship
Malika Basu

IBH Junior Achievement Scholarship
Jillian Zwierz

Dr. Stamatiki Blanas Scholarship
Izabella Lach

Dr. Kevin and Julia Kays Scholarship
Jacob Andersen

Chester W. and Nadine C. Houston Scholarships
Claire Chalkey
Jessica Cuthbert
Ciara Johnson
Harsha Namburi
Ndidiamaka Ojiako
Abby Weber
Fahren Zackery

Bee Research Award
Justine MacAlindong

SIB Alumni Award
Haley Fuoco
Alyssa Petko
Katharine Stenstrom

Dr. Kirk and Mrs. Shannon Moberg Scholarship
Eric Arredondo

Robert J. Graesser Research in Plant Biology
Emina Sipic

Entomology Research Award
Tyler Blackwell
Anna Grommes

AB/AAP Summer Research Fellowships
Eric Arredondo
Ayomide Averehi
Elina Back
Anthony Guaman
Lisbeth Perez
Zoe Trujillo
Fahren Zackery

TEACHERS RANKED AS EXCELLENT

Rankings by Students in Integrative Biology Courses Taught in 2020

Marc Elie Adaime
Brian Allan
Phil Anderson
Nick Antonson
Rebecca Batstone
Carl Bernacchi
Alison Bell
May Berenbaum
Charles Burroughs
Carla Caceres
Ben Clegg
Kat Coburn
Jessica Conroy
Amanda Curtis
Elsa de Becker
Charles Dean

Adam Dolezal
Joe Edwards
Eva Fischer
J. Matthew Flenniken
Caroline Friedmann
Becky Fuller
Anna Grommes
Larry Hanks
Alex Harmon-Threatt
Mark Hauber
Edward Hsieh
Cody Jones
Kenny Jops
Alessa Laserna Cowal
Shelby Lawson
Andrew Leakey

Kira Long
Joanne Manaster
Amy Marshall-Colon
Taylor McClellan
Lauren McDaniel
Christian Millan-Hernandez
William Montag
Brendan Morris
Kylee Noel
Allison O'Dwyer
Ken Paige
Elena Pelech
Jennifer Quebedeaux
Alex Riley
Diane Roeder
Hannah Scharf

Rachel Skinner
Katherine Strailey
Sarai Stuart
Andy Suarez
Lisa Surber
Christina Swanson
Lincoln Taylor
Annaliese Wargin
Jim Whitfield
Loralee Wilson
Patrick Wilson
Andrew Wsalek
Dessiree Zerpa Catanho

GRADUATE STUDENT AWARDS

Our graduate students are incredibly talented and valued members of our community. Congratulations to our award winners for 2020!

Robert Emerson Memorial Award

Ingrid Romero Valero (Advisor: Surangi Punyasena)

Lebus Graduate Scholar Awards

Charles Dean (Advisor: May Berenbaum)
Stephany Virrueta Herrera (Advisor: Kevin Johnson)

Harley J. Van Cleave Research Awards

Colby Behrens (Advisor: Alison Bell)
Sana Saboowala (Advisor: Ripan Malhi)
Georgia Seyfried (Advisor: Wendy Yang)
Jonathan Tetlie (Advisor: Alex Harmon-Threatt)
Sarah Winnicki (Advisors: TJ Benson & Mark Hauber)

Francis M. and Harlie M. Clark Summer Fellowships

Nick Anderson (Advisor: Alex Harmon-Threatt)
Joseph Edwards (Advisor: Wendy Yang)

Francis M. and Harlie M. Clark Research Support Grants

Marc-Elie Adaime (Advisor: Surangi Punyasena)
Nicholas Antonson (Advisor: Mark Hauber)
Jules Chabain (Advisor: Phil Anderson)
Hannah Darcy (Advisor: Phil Anderson)
Hannah Demler (Advisor: Lisa Ainsworth)
Matt Flenniken (Advisor: Brian Allan)
Cody Jones (Advisor: Ken Paige)
Shelby Lawson (Advisor: Mark Hauber)
Alec Luro (Advisor: Mark Hauber)
Kevin Ricks (Advisor: Anthony Yannarell)
Hannah Scharf (Advisor: Mark Hauber)
Rachel Skinner (Advisor: Chris Dietrich)
Sarai Stuart (Advisor: Gene Robinson)

GAANN Fellowships

Rose Aubery (Advisor: Surangi Punyasena)
Colby Behrens (Advisor: Alison Bell)
Josh Gibson (Advisor: Andy Suarez)
Shelby Lawson (Advisor: Mark Hauber)

Program in Ecology, Evolution and Conservation (PEEC) Biology Summer Research Grants

Sulagna Chakraborty (Advisor: Brian Allan)
Alice Doucet Beaupré (Advisor: James O'Dwyer)
Sada Egenriether (Advisor: Angela Kent)
Kira Long (Advisor: Jeffrey Brawn)
Tolulope Perrin-Stowe (Advisor: Alfred Roca)
Gabriel Price (Advisor: Anthony Yannarell)
Sarai Stuart (Advisor: Gene Robinson)
Nicholas Sutton (Advisor: James O'Dwyer)

Edwin M. Banks Memorial Award

Hannah Darcy (Advisor: Phil Anderson)
Hannah Scharf (Advisor: Mark Hauber)

Odum-Kendeigh Research Awards

Colby Behrens (Advisor: Alison Bell)
Jules Chabain (Advisor: Phil Anderson)
Cody Jones (Advisor: Ken Paige)
Alec Luro (Advisor: Mark Hauber)

Evolution, Ecology and Behavior Summer Stipend Awards

Nicholas Antonson (Advisor: Mark Hauber)
Alessa Laserna (Advisor: Ken Paige)
Bradley Scott (Advisor: Phil Anderson)

Herbert Holdsworth Ross Memorial Awards

Jason Karakehian (Advisor: Andrew Miller)
Brendan Morris (Advisor: Chris Dietrich)

Philip W. Smith Memorial Award

Claire Johnson (Advisor: TJ Benson)

Fred H. Schmidt Summer Scholars

Elizabeth Bello (Advisor: Marianne Alleyne)

Entomology Spring Award

Nick Anderson (Advisor: Alex Harmon-Threatt)

Entomology Summer Stipend Awards

Matt Flenniken (Advisor: Brian Allan)
Teresia Njoroge (Advisors: May Berenbaum & Chris Stone)
Rachel Skinner (Advisor: Chris Dietrich)
Eric South (Advisor: Ed DeWalt)

Harold C. and Sonja J. Labinsky Award

Hannah Demler (Advisor: Lisa Ainsworth)
Li'ang Yu (Advisor: Ray Ming)

Govindjee and Rajni Govindjee Award for Excellence in Biological Research

Dessiree Zerpa Catanho (Advisor: Ray Ming)

Graduate Students in Ecology and Evolutionary Biology (GEEB) Symposium Awards

Best Overall:

- Samantha Capel (Advisor: Ken Paige)

Most Outstanding Talk by a Ph.D. Candidate:

- Colby Behrens (Advisor: Alison Bell)

Most Outstanding Talk by a MS Candidate/Pre-Prelim Ph.D.:

- Sulagna Chakraborty (Advisor: Brian Allan)

Plant Biology Summer Stipend Awards

Marc-Elie Adaime (Advisor: Surangi Punyasena)
Cecilia Prada Cordero (Advisor: Jim Dalling)
Ingrid Romero Valero (Advisor: Surangi Punyasena)
Stuti Shrivastava (Advisor: Amy Marshall-Colon)

Ellis MacLeod/DuPont Award for Outstanding Teaching by a Graduate Student in the Department of Entomology

Nicholas Anderson

Award for Outstanding Teaching in Plant Biology

Ingrid Romero Valero

John G. & Evelyn Hartman Heiligenstein Outstanding Teaching Assistants

Jennifer Jones
Tolulope Perrin-Stowe
Nick Sutton

Sharon Gray Memorial Award

Nicholas Anderson
Anna Grommes

Career Connections: New Resources for Students and Alumni

In 2017, the School of Integrative Biology launched its Alumni Mentoring Program, an initiative designed to grow alumni-driven career development courses and mentorship for current students. In those three short years, over 70 alumni mentors have shared their experiences with hundreds of SIB students.

This year, to build on this incredible success, SIB is proud to announce Career Connections, a resource hub and program for both our alumni and students. Our alumni have gone on to exciting fields in all kinds of industries and professions, and the SIB Career Connections is your place to hear from and contribute to our community.

“This past year has been a difficult one for all of us, and we wanted to make sure that nobody was going through this alone,” said Christina Swanson, Alumni Mentoring Program Coordinator. “Career Connections is a way for our entire community to support one another and to ensure everyone has access to the career development resources they need to succeed.”

Just as Integrative Biology itself shows us the myriad connections in the natural world, so too are our connections integrated within our community. Our workshops, career support groups, mentoring and other resources allow alumni in all stages of their career to contribute what they’ve learned and experienced in their professional journey, as well as gain insights from others.

The reason the Alumni Mentoring Program has been such a success (and expanded into the Career Connections!) is because of the participation of alumni like yourself, so if you have even a few minutes we would love to hear from you – even just to say hello and add your job title to our growing list.

“I discovered a direction I want my career to follow after graduation.”

“Hearing from IB alumni helped me open my mind up to potential careers I had not previously considered.”



Christina Swanson
SIB Alumni Mentoring
Program Coordinator

To explore Career Connections, please visit:
go.illinois.edu/SIBCareerConnections.

To learn more about how you can get involved, please visit: sib.illinois.edu/alumni.

For more information, please contact Christina Swanson at alumnimmentor@sib.illinois.edu. ❖

How Can I Stay Connected to SIB?



We would love to hear from you! Our website includes all our recent news, research updates, events and more, and can be accessed at sib.illinois.edu.

Our alumni play an important role in helping to guide and mentor our undergraduate students through the SIB Alumni Mentoring Program. For more information about the program, and to get involved, contact Christina Swanson, sillima2@illinois.edu or visit sib.illinois.edu/alumni

SIB is also active on social media! Be sure to like and subscribe to stay up to date on all our news and events.

For everything else, send us an email at sib@life.illinois.edu. We look forward to hearing from you and celebrating your success. ❖



@iBiollinois

Giving to the School of Integrative Biology

Alumni and friends play a vital role in the success of our students, faculty, and staff.

Your investment supports the best and brightest students with fellowships and scholarships, supports world-renowned faculty and their innovative research and teaching, and funds essential upgrades to laboratories, classrooms, and technologies.

You can make a gift online, by phone, or by contacting Braden Shain with the LAS Office of Advancement. For more information, please visit: sib.illinois.edu/alumni.

In addition to outright gifts, you can support the School of Integrative Biology as part of your overall financial, tax and estate planning with deferred gifts such as bequests, charitable trusts and annuities. We will work with you to arrange options most suitable to you. ❖



If you are interested in learning more about these or other gift options, please contact:

Braden Shain, Associate Director of Development
LAS Office of Advancement
bshain@illinois.edu | Office: (217) 300-9993

School of Integrative Biology

University of Illinois

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Urbana, IL 61801

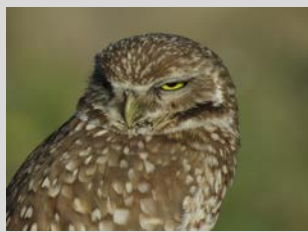
Congratulations to our 2020 Photography Contest Winners!

Categories were Nature: Landscape, Nature: Organisms, Biologists at Work, and Biological Imaging

1st Place



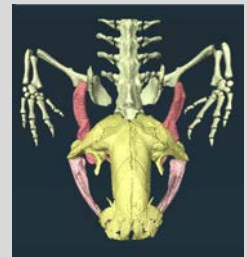
“You Call This Global Warming:
Snowfall at Joshua Tree”
Andrew Wsalek



“Burrowing Owl”
Sarah Winnicki



“Working Hard or
Hardly Working?”
Lynette Strickland

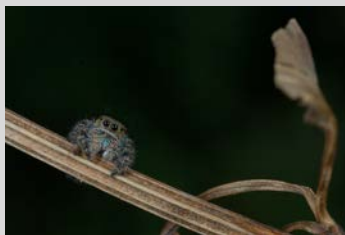


“Little Water Dragon”
Hannah Darcy

2nd Place



“Piles of Sand”
Alessa Laserna



“Well, Hello”
Rachel Skinner



“Photographer’s Grip”
Andrew Wsalek



“Miscellaneous Hexapoda”
Ed Hsieh

3rd Place



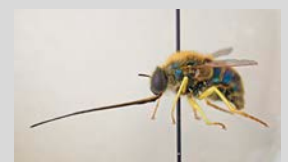
“Irish Cliffs”
Shelby Lawson



”Soybeans are
Organisms Too”
Cody Jones



“Documenting the
Day’s Catch”
James Whitfield



“Acroceridae”
Scott Clem