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## Greetings from the Chair, Leann Kanda



Dear alumni and friends,

Wow, a lot has happened since our last newsletter! **Peter Melcher** has had his run as chair and passed it along to me. Peter was also promoted to Full Professor; **Bruce Smith** was awarded Professor Emeritus; **Dave Gondek**, **Maki Inada**, **Ian Woods**, and **Te-Wen Lo** have all been granted tenure. **Kit Muma** has joined Bruce in full retirement, and we wish them the best! **Nancy Jacobson** retired from full-time teaching, but we still benefit from her help part-time. After having been with us as a postdoc, **Nanda Cortes** is our newest faculty member. **Laura Bechtler** and **Greg Hornbrook** are fresh faces on our staff to tend to the animal and greenhouse facilities. **Jean Hardwick** has been named as a Charles A. Dana Professor, a signal recognition of exceptional faculty. Jean, Te-Wen, and Dave have each received significant NIH grants, and **Andy Smith's** research on slug glue led to a medical breakthrough and has gotten a lot of media coverage. As always, we all continue our commitment to bringing exciting courses and immersive research experiences to the current students. More than ever, the Biology Department is a thriving community, and I hope you enjoy reading this news from CNS.



ITHACA COLLEGE

School of Humanities and Sciences

## Welcome New Faculty and Staff



**Nanda Cortes** started her research group this spring and taught Principles of Biology: Ecology and Evolutionary Biology. She will also continue to teach an Ithaca Seminar and an ICC course on Evolutionary Biology. Her main research is in population genetics/genomics and evolution of neotropical birds, especially those with populations on islands. She is also interested in diversity and inclusion, and is involved in the Diversity Committee of the American Ornithological Society (AOS). As an Assistant Professor, Nanda intends to work on creating a link between Ithaca College and different Mexican institutions such as UNAM or INECOL. She knows from personal experience that working

with people from other cultures can strengthen the quality of research, enhance students' networks, and the students can learn about other cultures and perspectives.



**Laura Bechtler** is the Animal Care Technician for the Biology and Psychology departments. She cares for and monitors the health and wellness of all of our animals on campus as well as cleaning, feeding, and performing all of the husbandry duties they require. She is also a member of our IACUC Committee. In addition, Laura was a zookeeper for 8 years before working for IC. Her passion is to give the most enriching life to any animal under her care whether it be an 18 ft tall giraffe or a tiny little hamster.



**Greg Hornbrook** is the Greenhouse Manager. He propagates and maintains plants as well as cares for various animals, particularly the aquatic animals and invertebrates, that are used for teaching or with research. He studied conservation biology at the SUNY College of Environmental Science and Forestry, where he developed a deep passion for life, plants and animals alike. His interests also include living sustainably and practicing restorative ecology for the conservation of endemic species.

## Congratulations Kit Muma on Retirement



**Kit Muma** has retired from the department after 27 years of service. Kit came to Ithaca College in 1991. She has been a core member of the Biology Faculty, working especially with many of the large service courses over the years. Kit taught laboratories in Fundamentals of Biology for HSHIP students and took over the course in 1996. She also established in Primary Human Anatomy labs for PT majors, and since 2000 she has taught the lecture and coordinated the labs for this foundational course. In 2013 she developed a nonmajors course entitled “Bird Brains and Mind Games: Animal Consciousness”. Kit has also provided exemplary courses within the Biology major, including Biology of Aging and Biology of Birds. Her true love is birds, and when ornithologist John Confer retired, she flew at the opportunity to teach the Field Ornithology course as well. Over the

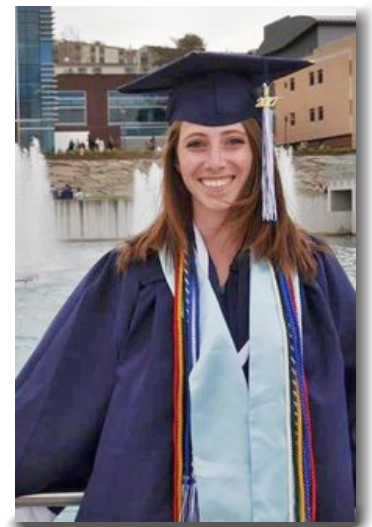
years, we estimate that more than 7000 Ithaca College students benefited from Kit’s expertise in the classroom!

Although there were no research expectations from her position, Kit continued active in research during summers at the Queen’s University Biological Station in Ontario; she won numerous Provost summer research grants to support this work. Her interests have led to scholarly contributions on a variety of topics including timing of hummingbird migration, host-parasite relationships in dragonflies, sex ratios and the effect of climate change on red-winged blackbirds, auditory sensitivity in diurnal moths, and bird-window collisions on college campuses.

Kit and her husband Bruce Smith (who retired from the department in 2014) are returning to live in Canada where they will continue some research projects while setting aside quality time for kayaking. They also hope to travel back to New Zealand and the South Pacific where they went on two of their sabbatical trips. We will miss them both!

## Student Achievements: National Recognitions

In recent years numerous Biology and Biochemistry students have received national awards and scholarships for their achievements. **Cailin Harro ('17)**, **Cynthia Becker ('18)**, and **Collette Piasecki-Masters ('18)** each received the Phi Kappa Phi Fellowship, which includes an award in support of graduate studies; Cailin is pursuing her DVM at Michigan State University College of Veterinary Medicine and Cynthia is at Woods Hole Oceanographic Institute - Massachusetts Institute of Technology. Collette will be beginning at Upstate Medical this coming year. **Jaime Lisack ('16)** was awarded a Fulbright Scholarship, which took her to study at the University of Würzburg, Germany. **Dallas Fonseca ('18)** received the Barry Goldwater Scholarship in 2017, and followed that with a National Science Foundation Graduate Research Fellowship to support his graduate work at the University of Minnesota.



Cailin Harro ('17)



# Research Highlight: Field Research in Puerto Rico

Over the course of the last few years, **Peter Melcher** and **Susan Witherup** have developed field research studying invasive and native plants on the beaches of Puerto Rico. They are working on the invasive coastal species *Scaevola taccada* and its impact on the native species *Scaevola plumerie*. Susan had been conducting field collections to assess changes in DNA of the two species at several field sites and Peter's role is to measure the physiological responses of these species in their native habitats to assess plant fitness and understand which traits give the invasive species the upper hand in the native habitats. This work also involves collaborations with faculty at the University of Puerto Rico, and plans for establishing a student exchange. The success of this project has excited the interest of other IC biology faculty to get involved and help expand the Puerto Rico experience into a broad, multifaceted, and ongoing field program.

Students get to travel to Puerto Rico for field data collection. In 2017, **Adriana Morales-Gomez ('17)** went with Peter and Susan. **Miranda Ella ('19)** traveled with Susan over spring break 2018 to Culebra, Puerto Rico to compare post-hurricane plant populations of *Scaevola* to pre-hurricane populations. What she found was that more damage to the shorelines occurred during the strong nor'easter of winter 2018 than with Hurricane Maria. She witnessed some devastated shorelines, where much of the shoreline plant populations had been lost. In August 2018, Peter made another trip, and **Sophia Pitti-Daly ('19)** took the lead on field work. **Dave Gondek** and **Mikayla Heid ('21)** joined them to begin a project on the microbial community of the bioluminescent bay. This summer, Susan, **Nanda Cortes**, **Abby Wine ('20)**, and **Mason Awe ('20)** went down. Susan also offers a January trip to the island as part of her popular Biology of Oceanic Islands course.



**Miranda Ella ('19)** surveys storm damage in Culebra over Spring Break 2018.



Working hard at the beach. Left: Dave, Mikayla, Sophia, and Peter. Right: Mason, Abby, Nanda, and Susan.



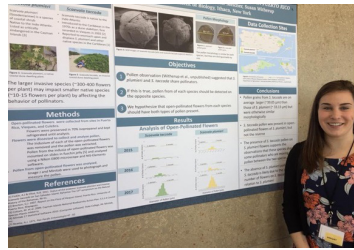
**Sophia Pitti-Daly ('19)** and **Mikayla Heid ('21)** collect bacterial samples from the bioluminescent bay.

## Student Conferences

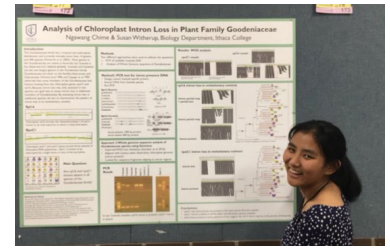
### National Conference on Undergraduate Research 2017

We regularly have students participate in NCUR (National Conference on Undergraduate Research). NCUR 2017 was hosted at the University of Memphis, Tennessee and the IC Biology and Biochemistry programs were well represented! **Colette Piasecki-Masters ('18)**, **Danielle Bucior ('18)**, and **Adriana Morales-Gomez ('17)** took research from the Witherup lab on *Scaevola* plants in Puerto Rico, while **Alycia Summers ('17)** and **Janelle Harter ('17)** represented the Kanda lab and reported on behavior in Siberian dwarf hamsters. **Anna Tarren ('18)** and **Ambra Munlyn**

('17) from the Cluett lab discussed lipoproteins and cholesterol transport. The Hardwick lab's **Meghann Muldowney ('17)** presented research on neuropeptide expression in cardiac ganglia and the Woods lab's **Victoria Wright ('17)** presented on genomics of neuron development. **Cailin Harro ('17)** isolated and characterized, while **Cassandra Papaleo ('17)** examined the gene sequence of, proteins in slug glue from the Smith lab. **Allan Bowen ('17)** also examined proteins, but from auxin signalling in plants, working with the Ellis lab in Chemistry. Finally, from the Gondek lab, **Ian Wolf ('17)** took research on host cell effects on *Chlamydia*.



Abby Wine ('20) (left) and Ngawang Chime ('18) (right) presented posters at ECSC '18.



Jelani Williams ('20) (left) was one of several IC students to receive Best Presentation in their Field at ECSC '18.

## ECSC 2018 was Hosted at IC

The 72nd annual Eastern Colleges Science Conference (ECSC) was held here at Ithaca College in spring 2018. With over 300 participants from 17 institutions, it was a great opportunity for our students to show off their research to their peers. IC Biology students go to this conference in most years, but as hosts we had an outstanding participation of over 30 students from our department!

## ECSC 2019

This spring, 8 Biology students went down to the 2019 ECSC at Manhattan College. **Katie Hutton ('19)**, **Lydia Loiselle ('19)**, and **Joseph Rorick ('19)** presented on neurotransmitter expression and receptor sensitivity from the Hardwick lab, **Juhi Kapoor ('20)** talked about dwarf hamster behavioral response to fetal stress in the Kanda lab, and **Zaira Sylvain ('19)** took her work for the Cluett lab on cholesterol trafficking. **Miranda Ella ('19)** presented her analysis of the population genetics of Puerto Rican *Scaevola* plants with Susan Witherup, and **Carolina Gaudenza ('19)** discussed her work with Te-Wen Lo on *C. elegans* gene expression.

## St. Jude National Symposium for Undergraduate Research

**Katie Hutton ('19)** also had the prestigious opportunity to present research from the Hardwick lab at the St. Jude National Symposium for Undergraduate Research, Memphis, TN. This conference was by invitation only and included a small number of undergraduates from across the country. Katie presented on her work to determine the ion channels responsible for Neuropeptide Y responses in the guinea pig cardiac neurons.



**Katie Hutton ('19)** in Tennessee for an invited talk at the St. Jude Symposium.

## Ithaca College James J. Whalen Academic Symposium

The Whalen symposium showcases research from all across the college, and each year Biology students receive recognition for outstanding work. In spring 2018 the Woods Lab was highlighted as **Madison Chlebowski ('19)** and **Elizabeth Freilich ('18)** each took Winner of Outstanding Student Research Presentation, and Mady reprised as a Winner again in 2019!



# Biology Department's 60th Anniversary

Former and current students and faculty came together for the Biology Department's 60th Anniversary celebration, which coincided with the College's 125th Anniversary celebrations in Fall 2017. The Handwerker Gallery highlighted our specimen collections with a stunning exhibit that ran during the anniversary events. After an open house afternoon on campus, we had an evening dinner and reception. Current students shared posters on their research with alumni and former faculty. We were delighted to see so many of our extended family again!



Nancy Pierce's Search Committee from Fall 2000! Left to right: Jean Hardwick, Steve Thompson, Nancy Pierce, Marc Servetnick



Left to right: Melanie (Powers) Fraites ('01), Flora Tierney ('18), Lizzie Frielich ('18), and Shannon Allen ('18).



Robert Nichols ('14), Andrew Becker ('14), and Austin Waltz ('14) check out the beautiful Handwerker Gallery exhibit.



Liz Pratico ('03), Jason Diaz ('09), and Lauren Hodkinson ('18)



Ashley Hong ('12) and Stephanie Feely ('12)



Left: Jamie Blair ('99), Adri Morales ('17), Ngawang Chime ('18), Adam Longwich Capoferri ('13), Susan Witherup, Lauren Hodkinson ('18), Sally Yraita ('18) and Nanda Cortes. Below: Sally and Chime tell Steve Thompson about their research.



Emily Powers ('15) with Te-Wen Lo



## New Courses

Our course offerings are always evolving to reflect current interests and hot new topics. Here's a small sample of new electives and non-major courses we are teaching.

### *Electives:*

- Biology of Oceanic Islands (Peter Melcher and Susan Witherup)
- Biostatistics Practicum (Leann Kanda)
- Immunology (Dave Gondek)
- Evolution of Adaptations (Andy Smith)

### *Non-majors:*

- Island Biology (Susan Witherup)
- Plagues and People (Dave Gondek)

### *Honors:*

- Humans and Alcohol (Brooks Miner)
- Paradigm Shift: History and Philosophy of Science (Rebecca Brady)

## And Back In The Day...

The department's first marine biology course!  
"It was the best bio class ever." **Dr. John Tolli ('72)**

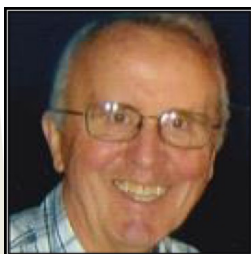


## In Fond Memory

Since our last news, the Department has lost two dear people, alumnus Don Bertolini and retired faculty member Bob Jenkins.



Dr. Donald R. Bertolini passed in August 2016. Dr. Bertolini was a proud and dedicated alumnus of Ithaca College, Class of 1971. His quest for knowledge motivated him on to a doctorate in Biology at Wesleyan University. His career as a research scientist in pharmaceuticals culminated as executive director of Bristol-Myers Squibb. Don graciously created the Bertolini Endowment at IC, which provides funds for student research in biology and biochemistry. Many of our students and faculty have greatly appreciated all of his support and interest over the years. We continue to honor him and greatly appreciate the family's continued support to our students in his memory.



Dr. Robert Roy Jenkins passed away in September 2016. Formerly a Corporal in the United States Marines, Bob took his doctorate in Exercise Physiology at the University of Illinois. He taught anatomy and physiology at IC for 34 years. He started Campus Crusade for Christ on the Ithaca College campus and enjoyed teaching from the Bible. He retired in 2000, while he was still healthy enough to spend his time helping others in need through his Bethel Grove Church.



# Research Lab Happenings

## Summer Scholars Program

While there is a longstanding tradition of summer research in the department, the last two years have seen the genesis of the School of Humanities and Sciences Summer Scholar Program. Students in the Summer Scholar program come from all disciplines, from Biology to English. In addition to 8-10 weeks of full-time research, our Summer Scholars now engage in community activities that help them network and learn to communicate their research with people from the broad range of other disciplines. Each summer the Biology faculty mentor around eight students.

## A Special Thank You

The full richness of experience we strive to provide each of our students is made possible by the families and friends who have made gifts to the department. We sincerely appreciate the support for students to gain research experiences and pursue academic goals that would otherwise have been beyond their reach. We are particularly pleased to acknowledge with gratitude the awards which provide ongoing assistance to the program:

*Dr. James D. Albert '78 and Bette Ann Sacks Albert '80 Scholarship*

*The Bernard Family Fund for Undergraduate Research in Biology*

*Bertolini Endowment*

*The Jack and Flo Bernard Scholarship*

*Jason Dickens Book Fund*

*The George A. Gonzalez-Gallardo '79 Scholarship*

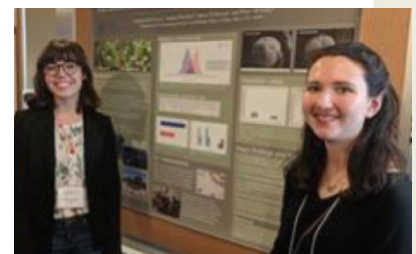
*Fred Kastenbaum PreHealth Award*

*Larry Metzger, M.S. '87, Memorial Scholarship*

*Thomas J. '02 & David C. '05 Metzger Undergraduate Research Fund*

## Melcher Lab

Peter's lab has continued field and lab work on the ecophysiology of invasive plants in Puerto Rico (see Research Highlight), resulting most recently in **Adriana Del Grosso (ENVS '18)** and **Sophia Pitti-Daly ('19)** presenting at the Northeast section of the American Society of Plant Biologists. Other research projects in the Melcher lab include studies aimed at understanding freezing and drought tolerance in plants with collaborators at the University of Vermont and the Norwegian University of Life Sciences and they have just submitted their third major grant to NSF (fingers crossed!). Students in his lab have also contributed to collaborative research involved in understanding how plants regulate stomata with colleagues at Cornell University. And, recently, a peer-reviewed paper was published from his lab, with **Adam Zelehowski ('17)** and **Robert Griffin-Nolan ('13)** as lead author, on understanding the role of green light in powering photosynthesis.



**Sophia Pitti-Daly and Adriana Del Grosso** at the NE meeting for American Society of Plant Biologists.

## Inada Lab

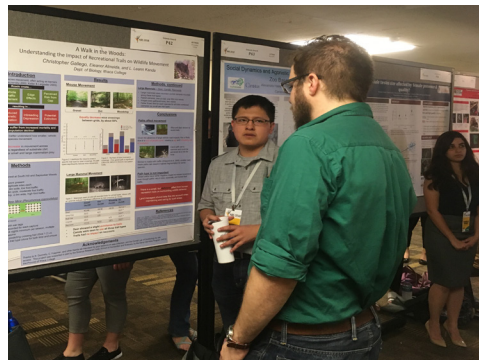
Maki was granted tenure and promotion in spring 2016. The Inada lab is studying the regulation of gene expression in unicellular organisms, namely yeast. Currently, they are using high throughput



mutagenesis methods to study the role of an unusual domain in the enzyme RNA polymerase on gene expression. In 2018, **Jelani Williams ('20)**, **Lexi Burian ('20)**, and **Jared Barends ('20)** presented posters at ECSC, and Maki presented work at the RNA Society Meeting and at the Bermuda Principles Impact on Splicing Meeting. Last fall Maki was a coauthor on a paper in *American Journal of Respiratory and Critical Care Medicine* on advances in lung precision medicine. Over last summer, Maki had a health setback with the reoccurrence of lung cancer. However with amazingly targeted radiation therapy, she is on the road to recovery. What's more, she's on the road to Japan, where she is spending her sabbatical at the Riken Institute in Kobe learning exciting new single-cell RNA sequencing techniques.

## Kanda Lab

As usual, Leann has several different projects going. In 2016 she published a paper on saw-whet owl movement with retired faculty member **John Confer**, and helped the **Gondek** lab on a paper on mouse microbiomes (see below). Last year, she and **Amir Abdulhay ('12)** and **Caity Erickson ('12)** published on the stability of dwarf hamster personalities despite environmental enrichment. Leann has also just wrapped up a multi-year study on whether recreation trails affect wildlife movement (spoiler, they do). Current research in the lab focuses on whether maternal stress shapes offspring personality, while field work includes using lawn flamingos to test if urban and rural wildlife have personality differences. **Cara Hoefen ('19)**, **Emily Hutton ('19)**, **Chris Gallego Lazo ('19)**, **Cole Unmann ('19)** and **Alaina White ('20)** presented posters on these latest projects at the Animal Behavior Society conference in August 2018 in Milwaukee.



**Chris Gallego Lazo ('19)** explains his field research at the Animal Behavior Society.

## Hardwick Lab

The Hardwick lab continues their study of the effects of neuronal remodeling in the autonomic nervous system following myocardial infarction with the support of an NIH grant awarded in 2016. In 2015, Jean, **Shannon Ryan ('12)**, **Emily Powers ('15)** and other collaborators published on the role of the hormone angiotensin II on cells in this system. Jean and Shannon are also coauthors with colleagues at East Tennessee State University and UCLA on a potential treatment to reduce symptoms after a myocardial infarction. **Flora Tierney ('18)** and **Shannon Allen ('18)** joined Jean to present work at the 2017 Society for Neuroscience conference in Washington, DC. Meanwhile, Jean has been named a Charles A. Dana Professor of Biology; Dana Professorships are 5-year endowed appointments awarded to a select few Full Professors with outstanding teaching, research, and service who are leaders of Ithaca College. A great honor richly deserved!



The annual "IC Neuroscience reunion dinner". Front row: **Shannon Allen**, **Ally Girasole**, Jean Hardwick, **Meghann Muldowney**. Back row: **Flora Tierney**, **Lizzie Freilich**, **Madison Chlebowski**, **Matt Chiraboga**, **Nathan Leslie**

## Smith Lab

It's been an exciting few years for slug glue and the Smith lab. Over the past several years Andy Smith and his students have identified several essential design features that make this glue so tough and sticky, producing a 2015 study with **Alex Wilks ('15)**, **Holly Garbacz ('15)**, **Sarah**

**Rabice ('14)** and **Cailin Harro ('17)**, a 2017 paper with **Cassandra Papaleo ('17)**, and a 2019 paper with **Christopher Gallego Lazo ('19)** and **Kimberly Fung ('16)**. A research team at Harvard has designed a new medical adhesive based on the Smith lab's findings. The new slug-inspired glue is dramatically stronger than any current medical adhesive. Andy was interviewed by media outlets such as the Washington Post, The Smithsonian Magazine, and PBS News Hour because of his contributions to the development of this glue. In addition he was interviewed on the podcast "Tell Me Something I Don't Know". **Rebecca Falconer ('19)** and **Chris Gallego Lazo ('19)** presented at the 2019 American Society for Biochemistry and Molecular Biology, where their work also received international public press! The prominence for Andy and his lab isn't just in the popular press, and Andy has been an invited speaker at several international professional conferences, including a keynote address at the Society for Experimental Biology in Sweden, and the keynote address for another international conference in Cambridge, UK.

## Gondek Lab

Dave Gondek received tenure and promotion in spring of 2017, and has just returned from a fall sabbatical. His lab continues to examine the impacts of host-pathogen interactions of bacteria such as *Chlamydia trachomatis* and is focused on the role of cell death (apoptosis) in determining host specificity by the bacterial pathogen. Dave just received an NIH grant to support this work. Dave has also taken his first field research trip to Puerto Mosquito (Bioluminescent Bay) in Vieques, Puerto Rico, to begin a study on the bacteria and other microbes living there (see Research Highlight). In 2016, Dave published on how probiotics change the microbiome of mouse guts when recovering from antibiotics, with Leann Kanda and **Hannah Grazul ('16)** as lead author. Dave and Leann have continued this project as a collaboration between Microbiology and Animal Behavior.

## Lo Lab

Te-Wen Lo was recently granted tenure and promotion (Spring 2019). This wouldn't have been possible without the hard work and enthusiasm of the Lo Lab members past and present. This is highlighted by numerous student authored publications (**Lauren Skelly '16**, **Dallas Fonseca '18**, **JC Alexander '18**, **Jason Webb '19**, and **Emily Siniscalco '19**). In addition, the Lo Lab has actively presented their work annually at the Upstate New York *C. elegans* Meeting and at the ASBMB and International *C. elegans* Meetings. Current NIH funded research in the Lo Lab is focused on understanding how fibroblast growth factor signaling specificity has evolved.



Camouflaged in the greenhouse: **Abby Wine ('20)**, **Maddy Trombley ('19)**, **Susan Witherup**, **Lauren Hodkinson ('18)**, and **Taylor Yowan ('19)**.

## Witherup Lab

Susan Witherup has continued her research projects surrounding *Scaevola* species (Fan Flowers) in Puerto Rico. The project is focused on describing the genetic diversity and pollination biology of the Caribbean native *Scaevola plumieri* (Inkberry). Research has involved using microsatellites to study genetic diversity and observing pollinator visitation, nectar content, and floral volatiles to study pollination biology. They are also interested in comparing these data to an invasive species in the same genus, *Scaevola taccada*. Susan's students **Lauren Ryan ('16)**, **Adri Morales ('17)**, and **Lauren Hodkinson ('18)**

traveled to Culebra and Vieques to make collections for microsatellite analyses. **Collette Piasecki-Masters ('18)** analyzed nectar composition and **Ngawang Chime ('18)** analyzed chloroplast genome data. **Miranda Ella ('19)** traveled to Culebra to study regeneration from hurricane Maria. **Abby Wine ('20)** and **Maddy Trombley ('19)** are continuing the genetic analyses. **Mason Awe ('20)** has begun an exploration into floral volatile profiles between the two species.



## Miner Lab

Brooks Miner's lab is now in its fourth year of research exploring how aquatic organisms have evolved to tolerate challenges in their environment, including UV radiation and thermal stress (both heat and cold). Lab members have presented their research at several scientific conferences, including the Ontario Ecology, Ethology and Evolution Colloquium: **Cynthia Ulbing ('17)** in 2017 (where she was awarded Best Undergraduate Oral Presentation), and **Julia Muuse ('19)** and **Winona Platt ('20)** in 2019. Most recently, Brooks traveled with four students to the national Evolution 2019 conference, where **Alyssa Meta ('21)**, **Katrina Webster ('21)**, and **Sarah Cargill ('20)** each presented research posters, and **Sarah Scherbak ('20)** gave a talk. The Miner Lab has also been active collecting *Daphnia* water fleas from ponds and lakes in NY and beyond, including a May 2018 collecting trip that took Brooks and **Sarah Scherbak ('20)** from Ithaca to central Michigan and back in only 5 days, with 14 bodies of water sampled and over 1200 miles driven (in one of IC's hybrid sedans).

## Cluett Lab

Ed Cluett's focus on cholesterol trafficking within cells has been expanding. The Cluett lab has been investigating the role that cholesterol plays in the misfolding of amyloid precursor protein into the amyloid beta protein, whose buildup is associated with Alzheimer's Disease. Most recently, **Claire Levitt ('19)** took her work on this exciting new area of research to the 2019 meeting of the American Society for Biochemistry and Molecular Biology.

## Woods Lab

Ian Woods received tenure and promotion in the spring of 2017. In addition to ongoing work about the development and function of sensory neurons, Ian Woods and his lab has been recently pursuing exciting connections between these neurons and tissue regeneration. The Woods lab is particularly active in the Upstate New York Zebrafish Meetings. **Victoria Wright ('17)** and **Renee Felter-Rodriguez ('17)** presented at the 2017 meeting, and in 2018 **Elizabeth Freilich ('18)**, **Madison Chlebowski ('19)**, **Taylor Yowan ('19)**, **Kevin Tran ('18)**, and **Nishat Rahman ('19)** each presented research. **Elizabeth Freilich ('18)** and **Madison Chlebowski ('19)** also joined the Hardwick lab at the Society for Neuroscience 2017 meeting; Lizzie's work focused on the effect of the gene *Cart3* on fin regeneration, and Mady's research has explored the mechanisms of somatosensory nerve development.

## Cortes Lab

Nanda's lab studies population genetics of birds (microsatellites, mitochondrial DNA and genomics), mainly of Ravens and Neotropical Orioles. To better understand the speciation process, the students in her lab will also be working with song variation and morphometry between populations within species. Nanda has also begun a collaboration with Susan Witherup to understand the status of birds, especially the Troupial, in Puerto Rico after Hurricane Maria. Although an ornithologist, Nanda contributed her genetic expertise to a 2019 paper on population genetics in Shenandoah salamanders. This summer, **Yanely Alonso ('20)**, **Ikraan Sheekh Nuur ('22)**, **Amelia Suter ('21)**, and **Victoria Eastham ('20)** joined Nanda for behind the scenes tours of the National Zoo, including exhibit houses and the genetics lab of the Smithsonian Conservation Biology Institute.



Tori Eastham, Amelia Suter, Yanely Alonso, and Ikraan Nuur at the National Zoo.

# Alumni Happenings

**Emily Conklin ('16)** continues in the Ph.D. program at the University of Hawaii. She has also received a NSF-GRFP (graduate research fellowship) to support her work. **Kit (Straley) Harcourt ('11)** is an ornithologist completing her Ph.D. in the Organismic and Evolutionary Biology program at University of Massachusetts, Amherst. **Ashley (Bell) Anderson ('11)** is about to start teaching middle school math in Redmond, Washington, after several years teaching biology at the high school level. **Elise Edwards ('11)** has just returned to Ithaca to begin a Ph.D. at Cornell in Natural Resources Conservation. **Robert Nichols ('15)** continues in the Ph.D. program at UC Berkeley. Last year, he taught a much needed and highly successful Molecular Cloning course at the University of Makerere in Uganda.

**Keyla Tumas ('13)** is in the Georgetown University/NIH Ph.D. program. **Charlin Pereira ('14)** is at Iowa State University Vet School, while **Amber Moore ('14)** is at the University of Illinois Vet School. **Amanda Joy ('06)** received her Masters in Science Education from Syracuse University and became Educational Manager at the Pittsburgh Botanic Garden. She's now the co-founder of the Wrinkled Brain Project, which creates materials for science education. **Ali Chesney ('09)** received her Ph.D. studying prion disease at University of Wisconsin-Madison and is now a Toxicology Study Director for preclinical pharmaceutical drug safety assessment for a contract research organization. After a Ph.D. at University of Illinois-Urbana Champaign and a post-doc at Duke University, **Liz Pratico ('03)** is now Associate Director CPD at bluebirdbio, a gene therapy company.

We've begun alumni involvement in our Biology Seminar Speaker series and meetings with the Pre-Health Society. Alumni who have come back to speak with us include:

**Sarah Garcia ('09)** recently received her Ph.D. from the University of Utah. **Joe Goodliffe ('09)** earned an Anatomy & Neurobiology Ph.D. from the Program in Cell & Molecular Biology, Boston University School of Medicine. **Jamie Lisack ('16)** traveled on to Germany upon her IC graduation to complete her Fulbright Fellowship at Universität Würzburg. **Kiran Madura ('81)** was a professor in pharmacology prior to becoming the Director in Biochemistry at the Robert Wood Johnson Medical School, Rutgers University. **Julia Schmidt ('13)** took a gap year in Vietnam before entering the Physician's Assistant Program at Yale. She is also enjoying all the fun (and hard!) firsts that come with being a new mom. **Carolyn Vitale ('08)** earned her MD at Temple. She then became a Pediatric Critical Care Fellow at the University of Michigan. **Jennifer Kimball ('05)** talked to IC students about her postdoctoral work in agricultural plant breeding at North Carolina State University. She has since become an Assistant Professor at University of Minnesota-Twin Cities. **Adam (Longwich) Capoferri ('13)** is now studying at the Graduate School of Biomedical Sciences at the University of Massachusetts Medical School. **Dan Weller ('12)** completed his doctorate in Food Sciences at Cornell. After a postdoc there, he is now moving to University of Rochester. **Aaron Bloom ('08)** spoke to the Pre-Health society about his experience as a resident in the Department of Anesthesiology, University of Minnesota. **Joshua Messinger ('14)** is in the Ph.D. program in Molecular Genetics and Microbiology at Duke University. **KathyAnn (Katie) Lee ('15)** lives in Manhattan, and is putting her ace zebrafish skills to work in the lab of Florence Marlow at Albert Einstein School of Medicine to research egg development and maternal control of early development. She also fosters rescue kittens!

Want to let us know what you are up to these days, personally or professionally? Reach out to your favorite faculty or drop Nancy Pierce (npierce@ithaca.edu) a line, we would love to hear from you!