

BIOFEEDBACK

Winter 2025-2026

Newsletter of the Andrews University Department of Biology



Ecuador and the Galápagos Islands: a trip of a lifetime!

by Mindy McLarty

Study tours have a long history at Andrews University, and this year was no different. In May, Professor Daniel Gonzalez-Socoloske led a group of 16 students on a field ecology and natural history study tour of Ecuador and the Galápagos Islands. It was an amazing trip, and many memories were made that will last for a lifetime! As a small country with great topographical variation, Ecuador provided us with lots of distinct habitats to explore.

Our first couple days were spent in and near Quito, where we landed. Exploring Quito's city center provided a glimpse into its history and culture. The surrounding inter-Andean valley habitat provided us with sweeping vistas of high elevation grasslands and towering volcanoes, including the sighting of an Andean condor! After two days in Quito, we crossed the Eastern Cordillera of the Andes and descended through the cloud forest. Appropriately, the weather was cloudy for the first stop at Papallacta, a small mountain village situated at an altitude of 3,300m (10,800ft) where we hiked along a mountain stream spotting birds, wild orchids, and other flowers, and then warmed up with a swim in the local hot springs. Continuing down the Andean slope, the next stop was to see the cloud

forest specialty: hummingbirds. Even in the pouring rain, the bright colors and frenetic activity of the hummingbirds did not disappoint. Ten species were spotted while we fed the birds directly from feeders in our hands.



Ecuador and the Galápagos continued

The next day brought us to the edge of the Amazon rainforest, and from here the Río Cuyabeno became our highway. As our luggage was being loaded onto the boats to head to our river lodge, we learned why the Amazon is called a rainforest—even in ponchos, everyone was quickly soaked by the heavy downpour! The boats started downriver, and as the downpour lessened we noticed the forest come to life. Macaws, toucans, and other birds called as they flew overhead. Woolly, saki, and squirrel monkeys resumed their foraging in trees along the river's edge. An evening trip after settling into our lodge led us to a small pod of river dolphins near the entrance to Laguna Grande and a swim in the lake for anyone who was brave enough. The return trip back to the lodge was slower as the boats navigated the dark and the guides kept a sharp eye out for caiman and other nocturnal wildlife.

A jungle hike occupied the following morning. Once again we got the full experience of the rainforest with torrential rain while trekking through the forest, but, while wet and muddy, there were still lots of things to discover. Favorites of the crowd were the leafcutter ants and tiny frogs in the leaf litter. We also got to see the structure of a rainforest starting with the soil horizons all the way up to the canopy. Later in the evening we took a second hike, this time in the dark, when the cast of characters changed. Frogs and insects now dominated the soundscape. Whip scorpions, leaf insects, snakes, and even night monkeys were spotted. A few caimans were spotted from the boats on the way back to the lodge.

The next days included more culture and wildlife. At a village we were informed about the local culture and food, samples of which had been prepared for our lunch, and the method of harvesting cassava and processing it into flour was demonstrated. The traditional healer for the local area also shared with us about their traditional medicines and practices. More wildlife sightings included butterflies, a couple of stops to see sloths that had been spotted, red howler monkeys, a troop of squirrel monkeys leaping across a narrow point of the river, and a colony of bats. Then it was time for the long drive back up the eastern slope of the Andes to Quito.

Back in Quito the following day, the group visited Cotopaxi National Park centered around Cotopaxi, one of the highest active volcanoes in the world standing tall at 5,897m (19,347ft). While we did not summit Cotopaxi, the highest point of the trip was reached here at 15,000 ft. Time was spent exploring the sparse slopes, noting the low-growing vegetation and looking for high elevation specialists, such as the Ecuadorian hillstar, one of the highest dwelling hummingbirds.

Early the next morning, we headed to the airport for a flight to the Galápagos Islands. Excitement was running high as we landed and headed to the harbor to board our home for the

next five days, *the Golondrina*. Immediately we got a firsthand view of the legendary gregarious wildlife as we stepped around a sleeping Galápagos sea lion on the dock. Further on, at the first stop of the ship, we were again treated to several young sea lions playing in the shallows. After a short snorkel on the other side of the island, we headed back to the ship which then started its overnight transit to the northwest tip of Isla Isabela.

Over the coming days our boat moved from island to island, where we continued to discover the unique biodiversity of the Galápagos. Our travels led us to see numerous bird species including the well-known endemic flightless cormorants. We donned snorkel gear to check out underwater habitats that included sea lions, marine iguanas, and so many sea turtles it was hard to avoid accidentally touching them! While hiking we spotted lava lizards and Galápagos racers. On Fernandina, the youngest island, a hammerhead shark was spotted as the ship moved into its new anchorage. In Urquina Bay of Isabela island we learned about the history of the islands and spotted marine iguanas lounging on the lava rocks, bright red Sally lightfoot crabs scavenging among them, as well as an interesting interaction between a Galápagos hawk and a Galápagos mockingbird. While snorkeling on Isla Sombrero Chino we encountered Galápagos penguins, amongst a kaleidoscope of other critters.

At last, it was time to head back to Isla Santa Cruz where we would be departing the Galápagos. Before our departure, we made a short visit to the Charles Darwin Research Station to learn about the cactus forests and the captive breeding programs for the giant tortoises. However, it was now time to head back to the mainland for our last two days in the cloud forests on the Western Cordillera of the Andes and some fun activities to cap off our trip to Ecuador. These included a cable car ride over the forest canopy, ziplining, tubing on the river, and a visit to an artisanal chocolate factory. The final day of the trip focused on culture with a presentation on traditional clothing, a visit to a local market, and a demonstration on traditional textile production. At the end of the day, it was time to head to the airport and bid farewell to Ecuador.

This journey through Ecuador and the Galápagos offered far more than breathtaking landscapes and unforgettable wildlife encounters—it became a living classroom where students learned by doing, exploring, questioning, and discovering together. Study tours like this one cultivate a depth of understanding and personal growth that simply cannot be replicated within the four walls of a traditional classroom. They strengthen bonds between students, broaden perspectives, and inspire confidence through shared challenges and transformative experiences. Thanks to the continued generosity of our alumni, future students will also have the opportunity to step into the world, learn from it directly, and return with insights and memories that will shape them for years to come.





Wildlife and landscape photos by Daniel Gonzalez-Socoloske

Retirements and Arrivals



Dr. Tom Goodwin arrived at Andrews University in 1994, following a PhD at the University of Kansas and four years on the faculty of Loma Linda University. He is a world expert in the biology of fossil and modern ground-dwelling squirrels, with approximately 30 publications over the years. He plans to continue to do research in this area in his retirement, and so we are happy that we will continue to see him around!

Dr. Goodwin is known for his skill in the classroom, most recently in our introductory Foundations of Biology sequence. He is organized and passionate about the subject matter, engaging his classroom in all topics from molecular to paleontological. He may not be aware of this, but the short 'goodbye' video posted by our Biophilia student club on Instagram has been seen almost 25,000 times! If not quite 'going viral', we think that still makes him a star of social media!

In addition to his skills in paleontology and teaching, Dr. Goodwin has maintained a broad interest in the relationship between scientific study and the Christian faith, and has mentored many a student to value the contributions of both in a loving and pastoral way. God bless you, Tom, as you enjoy the greater flexibility and quality time with loved ones that retirement brings.



Dr. Amanda Moore has joined our faculty this year! Dr. Moore started her working career following a degree in Speech-Language Pathology and Audiology. While she enjoyed the subject material, she found that her real love was in applying her interest in hearing to the study of animals. She completed an MS in Biology here at Andrews and then went on to a PhD program at the University of Cincinnati, where she worked with seals, manatees, and canines to understand their hearing and to support the conservation of mammal hearing by minimizing noise exposure. She will be continuing this work in acoustic ecology and the effects of environmental noise on mammals here at Andrews.

Dr. Moore is currently teaching in our Anatomy and Physiology sequence, and will be teaching Systems Physiology in the coming year. She is an engaging teacher, already showing her creativity in this realm with licorice DNA and other sweet treats in the classroom! In addition to her culinary skills, Dr. Moore has also contributed creatively to our departmental vision and social life.

Thank you, Amanda, for joining our team in the Department of Biology!

Dr. Wong holds a PhD from Loma Linda University, where his love for cancer prevention research began. He came to Andrews following a variety of posts at other institutions, including at Union College, Pacific Union College, and Caribbean Union College in Trinidad and Tobago. He then moved to mission work in Hong Kong and Macau, where he served as Principal of Macao Sam Yuk SDA School.

In 2016, Dr. Wong joined us at Andrews University. His interests in cancer biology nicely complemented other research interests in the department, and he enjoyed taking students to meetings of the American Association for Cancer Research, an impactful experience for many of his students. His teaching in the department ranged from environmental science to anatomy and physiology, histology, and microbiology. His histology class developed a reputation for being extremely challenging, but extremely beneficial to those who took it, particularly those moving on into medical careers.

While Dr. Wong was the most well-dressed member of our department on most days, he also enjoyed donning his ugly Christmas sweater for the annual Christmas party where he served as unofficial photographer. Other days found him in fishing gear at the river! We hope that you are enjoying your retirement, Brian, catching lots of fish and taking lots of photos!

Research from the Department



Benjamin Navia, Professor of Biology, and David Mbungu, Associate Professor of Biology, co-authored a paper with Dana Vi Husana (MS 2024) and Jessica Rim (BS 2021) in the *Journal of Insect Behavior* entitled “Phonotactic behavior of male cricket *Acheta domesticus* in relation to age and syllable period” This is one of the few papers that evaluate phonotactic behavior in male crickets as it relates to age and syllable period. Most of the work has been done in females, as they are the ones exhibiting the behavior to find males. They found that in males, phonotaxis is independent of age and syllable period. Interestingly, age and syllable period are the two most important factors in determining phonotaxis in females. The cricket lab continues its long standing tradition of providing research opportunities for our undergraduate students.



Daniel Gonzalez-Socoloske, Professor of Biology, coauthored a research paper in *Aquatic Mammals*. In “Predation of a sperm whale (*Physeter macrocephalus*) by Killer Whales (*Orcinus orca*) in Guanaja, Honduras,” Gabriela Ochoa (Florida International University), Eric Ramos (Mote Marine Laboratory), and Gonzalez-Socoloske provide the first documented case of sperm whale predation by killer whales in the western Caribbean Sea, adding to the hypothesis that killer whales in tropical waters have a generalist diet. Also this year, Gonzalez-Socoloske was coauthor on an In Memoriam in the *Latin American Journal of Aquatic Animals* remembering the life of colleague Eric Ramos, who was a rising star in the field and whose life ended much too soon, and an editorial with Miriam Marmontel in the same issue of the *Latin American Journal of Aquatic Animals*.



Peter Lyons, Professor of Biology, co-authored a book chapter together with Lloyd Fricker (Albert Einstein College of Medicine) on “Carboxypeptidase A6.” This was published in the *Handbook of Proteolytic Enzymes*, considered the premier source of information on such enzymes. Last year he shared the success of being awarded an equipment grant from the Department of Defense. This year the lab has received the equipment and has made great use of it! A paper reporting work by students that made extensive use of the instruments is under review right now! Additionally, April saw Dr. Lyons, Anders Jeronimo, and Konstantin Zubkov attend the annual meeting of the American Society for Biochemistry and Molecular Biology in Chicago. Always a learning experience!



Jim Hayward, Research Professor Emeritus, and Shandelle Henson, Professor Emeritus of Mathematics, together with co-authors Jake W Kroepel, Noelle L Koliadko (BS 2020), Tae Hyun Lee (BS 2023), Brandi Seawood (BS 2021), and Adriana Luna, published “Cannibalism of second eggs and the adaptiveness of egg-laying synchrony in Glaucous-winged Gulls (*Larus glaucescens*)” in *The Wilson Journal of Ornithology*. In this study they continue to explore egg laying synchrony as an adaptive response to egg cannibalism when sea surface temperatures are high. They find that laying of a second egg after cannibalism of the first was not an adaptive response.

River Dolphin Research in Bangladesh

This past August, Professor Daniel Gonzalez-Socoloske traveled to Bangladesh to begin a collaborative study of the Ganges river dolphins with recent zoology graduates from the University of Chittagong. The work was funded by a National Geographic Society grant (the second that Dr. Gonzalez-Socoloske has received) and a faculty research grant from Andrews University. The study aims to learn more about the acoustics of the rarely studied and seen species. The team was able to successfully deploy two types of hydrophones to record the echolocation and vocalization sounds produced by the elusive dolphins. In addition, Professor Gonzalez-Socoloske led a two-day workshop at the Zoology Department of the University of Chittagong on dolphin study techniques including necropsy methods and the use of hydrophones and drones. Professor Gonzalez-Socoloske was accompanied on this pilot study by fellow National Geographic Explorer and photographer Fatima Tuj Johora. Johora, who is from Bangladesh, and Gonzalez-Socoloske have submitted a larger grant proposal to expand the project and bring greater awareness to the Ganges river dolphin species both locally and internationally.



In Memoriam



Lysandra Joelle (Acre) Otto (BS Mathematics/BS Biology, 2015)

October 20, 1988 – August 24, 2025

Joelle (as she preferred to be called) was a precocious, caring child who learned to read when she was 4 and loved people and especially animals, who seemed to be drawn to her. She fostered dogs for the humane society and had many pets. She loved serving people and spent four summers working at camps. She developed a passion for evangelism and spent a summer as a literature evangelist. She and her family had a tradition of attending short-term mission trips with Mexico Missions and Beyond, and Joelle's competitive nature showed as she raced professional bricklayers to see who could finish first on the brick gable ends.

Joelle completed high school through home schooling and then attended Andrews University, where she graduated with a double major in Mathematics and Biology in 2015. Joelle had a gift for teaching and tutored in the Math Center all four years of her stay at AU, then served two years as a student missionary in Egypt. At Andrews, Joelle served as president of Nagilah Grace, a traditional Jewish dance group that performed during many events including Passion Play weekends. She researched ancient songs and dances and taught her team to bring biblical culture to life. She also taught at a few different schools when she wasn't working on her MS in Mathematics at the University of Toledo, which she did until COVID-19 interrupted her studies.

In March 2023 Joelle met Jonathan Otto online, and when she found out that he was a cowboy and a farmer she was thrilled since she had always wanted a garden of her own. At Andrews she had joined the community garden, and during one greenhouse visit she stepped in to help an overwhelmed cashier. Impressed by her knowledge, the staff connected her with a job opportunity, and soon she was managing a farmers' market near Chicago, work she enjoyed for several years. In March 2024, Joelle married Jonathan and was able to garden to her heart's content on the couple's farm near Collegedale, Tennessee.

Jonathan, Joelle, and Joelle's son, Azeriah, went on many outdoor adventures. Some of their fondest memories were of camping in the upper peninsula of Michigan and strolling the rocky beaches of Lake Superior under the stars with UV lights in hand, looking for yoooperlites. Another great adventure was geocaching, which led them on some grueling bicycle rides and hikes through the Appalachian Mountains of Tennessee. They also loved rafting the Hiwassee River and camping, just about anything outdoors, but one of Joelle and Jonathan's favorite activities was walking in a corn maze.

The family's outdoor adventures ended on August 24, 2025, when Joelle gave birth to her son Samuel only thirty minutes before she died from an amniotic fluid embolism, a very rare and typically terminal event.

Joelle's life was full — full of love for God, her husband, chil-

dren, family, people, animals, and service. She was intelligent, courageous, compassionate, and dedicated. Though her years were too few, her impact was immeasurable, and the memory of her faith and kindness will live on in all who knew her.



Ina Jeanne Salisbury (MS Biology, 1981)

March 30, 1942 – April 16, 2025)

Ina Jeanne Salisbury, of Newark, NY, passed on Wednesday, April 16 at age 83.

A memorial service was held on Wednesday, April 23, at Park Presbyterian Church, 110 Maple Ct., Newark NY 14513. Burial followed at Rest Haven Cemetery in Phelps, NY.

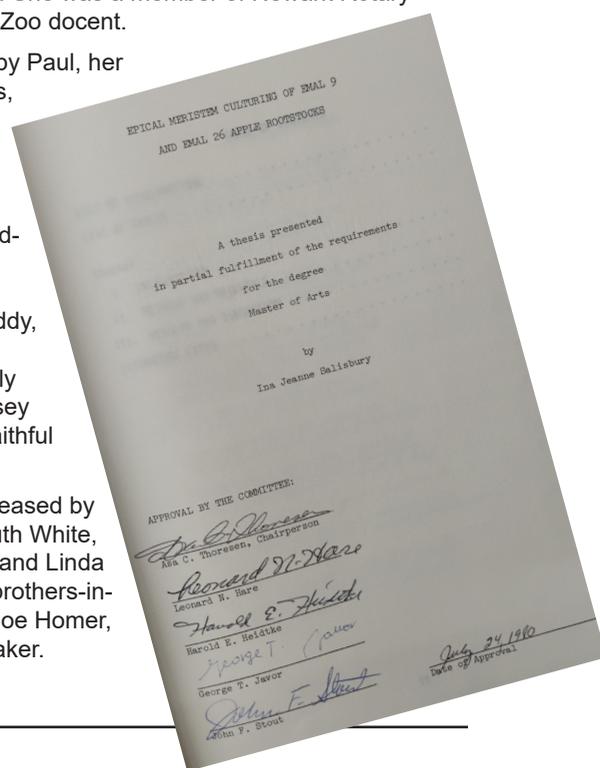
Jeanne grew up in Kalamazoo, MI and graduated from

Michigan State University with a BS in Biology. She earned her Masters in Biology in 1981 from Andrews University. She was a math and science teacher for 24 years at Newark High School, and prior to that in Michigan, as well as an adjunct professor at Southwestern Michigan Community College.

While at Newark High School she started the Math Team and volunteered as girls tennis coach. She served as a high school track official for 33 years. She was a member and deacon of Park Presbyterian Church. She enjoyed music, playing the piano and guitar, and also was a member of the church choir and bell choir. Jeanne was an avid runner and biker, participating in triathlons and traveling the country with Paul on bike tours. In retirement, Jeanne and Paul spent 15 years volunteering with Habitat for Humanity and Living Waters on missions in NY, West Virginia and Mexico. She was a member of Newark Rotary and a Seneca Park Zoo docent.

Jeanne is survived by Paul, her husband of 60 years, sons Michael (Gina), Kyle, grandchildren Rachel Nucci (Alec) and Zachary, great-grandson Rowan Nucci, brother-in-law John (Diane), and Ken Eddy, sisters-in-law Mary Salisbury (Phil), Sally Zelonis (Mark), Betsey Homer (Joe), and faithful companion Louie.

Jeanne was predeceased by parents Karl and Ruth White, sisters Joann Eddy and Linda Wagonmaker, and brothers-in-law Phil Salisbury, Joe Homer, and Scott Wagonmaker.



Alumni calling songs



Faith Kaluba (BS 2022) began a PhD this year in Molecular and Cellular Biology at Van Andel Institute (VAI) in Grand Rapids, MI. Faith was also first author on a paper in *Nature Metabolism* in September. In her paper, entitled “An alternative route for β -hydroxybutyrate metabolism supports cytosolic acetyl-CoA synthesis in cancer cells,” she and coauthors explored the relationship between cancer and diet. And, on top of all of this, Faith was married this summer! Congrats, Faith!



Ehren McClarty (BS 2011) completed her Doctor of Veterinary Medicine at the University of California, Davis in 2015. She then completed a residency and took a position as Assistant Professor of Surgical and Radiological Sciences at her alma mater, UC Davis School of Veterinary Medicine. Ehren was recently honored with the Up-and-Coming Alumni award at the annual Spirit of Philanthropy banquet during this past September’s Alumni Homecoming Weekend.



Masy Domecillo (BS 2022) began a PhD in Biochemistry and Molecular Biophysics at the California Institute of Technology (Caltech). She is doing her thesis in the lab of Dr. Francis Arnold, 2018 Nobel Laureate in Chemistry! Masy was also co-author on a paper in the *Proceedings of the National Academy of Sciences (PNAS)* entitled “Conformational regulation of two essential activators of bacterial cell elongation.” Congrats, Masy! We’ll be looking forward to hearing about future discoveries!



Priscilla Kyi (BS 2017, MS 2019) recently completed a PhD in Cell and Developmental Biology, focused on vascular biology, from the Medical College of Wisconsin. Earlier this year she co-authored an article in *Biology Open* entitled “Alveolar epithelial paxillin in postnatal lung alveolar development.” Congrats, Priscilla, on your graduation, and all the best in future endeavors!



Andre Moncrieff (BS 2014) recently began a position as Assistant Curator of Birds, Sam Noble Oklahoma Museum of Natural History and Assistant Professor, School of Biological Sciences, University of Oklahoma. You can read more about his work at moncriefflab.org. He continues his work in ornithology, as it intersects with systematics and population and landscape genetics.



Tendai Hunyenyiwa (MS 2019) completed a PhD in Cell and Developmental Biology, focusing on the molecular mechanisms of angiogenesis, from the Medical College of Wisconsin. She has taken a postdoctoral research position at the Cleveland Clinic. All the best, Tendai, as you make new discoveries!



William “Monte” Bermeo (BS 2013) completed his MD at Western Michigan University School of Medicine. He then moved to Loma Linda University for his residency in family medicine. Most importantly, he has recently moved back to Berrien Springs, where he currently serves as a family medicine specialist in our local clinic. Welcome back, Monte!



Erika Bauza Nowotny (BS 2018, MS 2020) completed a PhD in Craniofacial Biology at the University of Southern California. She also co-authored a paper this year in *Biomedicine* entitled “Treating white spot lesions and non-carious cervical lesions with amelogenin peptide-based hydrogel.” Congrats, Erika!



Two students completed and defended their Master’s theses this past August. Konstantin Zubkov completed a thesis showing that “Carboxypeptidase O and GCPII have redundant functions in C-terminal amino acid cleavage.” His work opened up the possibility for further investigations into the role of carboxypeptidase O in neurons and neuronal signaling. Serena Sarsah completed a thesis describing a “Transcriptional and translational analysis of RASGRP1 in lymphoblastoid cell lines from bipolar and non-bipolar individuals.” This work explored the expression of a gene implicated in the pathophysiology of bipolar disease. Serena is now working as a Research Assistant at the University of Pittsburgh. Congratulations to you both as you pursue new challenges and opportunities!



Congrats to our graduates of 2025!

Here some of our faculty and graduates pose for a post-graduation photo. (l-r, Danielle Song, Angel Gabriel Orellana Campana, Jasmin Galarza, Jordan Magakat, Dr. Robert Zdor, Katherine Pierre, Ntaki Francine, Dr. Daniel Gonzalez, George Isaac, Dr. Peter Lyons, Hope Park, Jessica Yi, Dr. Benjamin Navia, Dr. Marlene Murray)



The impact of an education at Andrews University

The Department of Biology at Andrews University believes strongly in undergraduate research. The experience of tackling a project, for which nobody knows the answer, is second to none. It develops persistence, critical thinking, and curiosity in our students, all attributes critical for a successful career.

Our ability to perform research with undergraduate students that is published in the peer-reviewed literature is a unique aspect of our educational program. This, together with supportive and innovative classroom teaching for foundational learning, and a faith-affirming Seventh-day Adventist environment that facilitates the exploration of God's two books, scripture and nature, makes Andrews University a special place.

Our goal is to change the world, one student at a time.

To the right, many student researchers involved in research this year, 2025-26, pose for a photo outside of the Science Complex. Below, Eunseo Cho (working with Dr. Robert Zdor) and Anna Rybachek (working with Dr. Tom Goodwin) share about their research at the annual Honors Symposium.



We'd love to hear from you! Send us an email or letter to let us know what is new in your life. Photographs are great too.

Name: _____

Address: _____

Year you graduated from AU _____ AU degree _____

Other degrees since graduating from AU _____

Your current employment _____

Your current interests and activities _____

BioFeedback
is the annual newsletter
of the Andrews University
Department of Biology

Address correspondence to:

BioFeedback
Department of Biology
Andrews University
Berrien Springs, MI 49104

biology@andrews.edu
www.andrews.edu/biology

Editor: Peter J. Lyons



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