

# BIOFEEDBACK

Winter 2017-2018

Newsletter of the Andrews University Department of Biology



## 50 Years of Graduate Biology at Andrews University

In 1960, Emmanuel Missionary College became Andrews University. Along with this change came the development and expansion of a number of graduate programs on campus. One of those was our own Master of Arts (M.A., not M.S., at the time) in Biology program, initiated in 1965 by the faculty, including Harold Heidtke (above left), Leonard Hare (second from left), and Asa Thoreson (above right). Our first three students in the program were the wives (Marilyn Lugenbeal and Juanita Ritland, see p. 5) of two Andrews faculty members and the wife (Gayle Haeger; see p. 5) of a seminary student. They graduated in 1968, 50 years ago this coming spring.

Soon after this first graduating class, additional faculty boosted the research strengths of the department. Bill Chobotar joined in 1968, with Jack Stout following the next year (fourth and third from left, above). Others such as Bill Hughes and Dennis Woodland (fifth and sixth from left) would join at later dates and make their own contributions to the program.

The graduate program grew and at one point had nearly 20 students in it. In both 1974 and 1975, 7 students graduated from the program. 1982 ended with 10 students graduating from the program. These years, however, were the exception, with most years seeing between three and five students graduating. So the

Continued on page 4

### Alumni Homecoming 50th Anniversary Event

To celebrate the 50th anniversary of our first MS Biology graduates, we are planning a special program at the upcoming 2018 Alumni Homecoming Weekend. If you are planning a trip next fall, why not include us along the way. We would love to see you!

Whether you are able to join us or not, we would really appreciate any pictures you might have of graduate students, maybe yourself, while here at Andrews. We will include them in a slide show as we reminisce. Send digital copies to [biology@andrews.edu](mailto:biology@andrews.edu).

## Andrews Ecology Class Goes to South Florida and Cuba

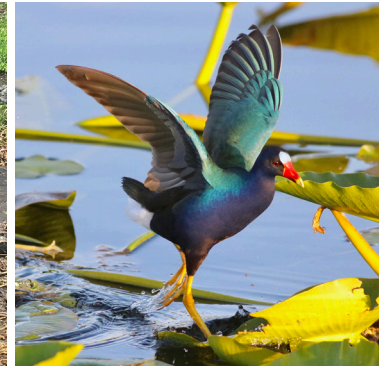
Andrews biology is no stranger to study tours to biologically interesting locations. The department has a long history of trips to South Florida dating back to the mid 1990s and students have previously participated in international biology trips to locations like Peru since the late 1960s (see below right). However, this past year our department initiated a new effort to combine our General Ecology course and our field courses. While students still have the option of taking General Ecology on campus, they now can meet that requirement by taking a field course to either South Florida or Cuba.

The field course to Florida was led by Associate Professor Daniel Gonzalez-Socoloske and Adjunct Professor Gordon Atkins. Since the class now counts as a General Ecology equivalent, students prepared for the course by learning important ecological concepts in the months prior to the trip. On March 15, 2017, professors and 13 eager students departed Andrews, leaving the snow behind for sunnier days. After two days of driving, students were introduced to Florida wildlife by observing the state mammal during a visit to the manatee observation point in Tampa Bay. "What struck me was seeing all these man-made objects, like the power plant smoke stacks, and yet right next to them you see all these wild manatees using the areas; the juxtaposition between industry and nature was intriguing," noted biology graduate student Roshelle Hall.

Students visited several important natural areas in South Florida including Big Cypress National Preserve, Everglades National Park, the Ten Thousand Islands, and the Florida Keys. Trip highlights included snorkeling with sharks in Looe Key, birding next to alligators at Anhinga Trail, and a "moderately straining" 6-mile canoe trip to an uninhabited island in the Ten Thousand Islands. "Prior to the canoe trip, I had never been canoeing and I thought nothing of it," recalled Temitope Idowu, junior biology major. "However, completing that trip required every ounce of physical and mental strength that I could muster. After canoeing, I laid down on the beach and reminisced about joyful times when my body wasn't pushed to the brink of death."

In addition to learning about the ecosystems and wildlife, students were able to observe humankind's impact first hand. South Florida has experienced much change since Andrews first started visiting more than 20 years ago: Florida has added an additional 5 million inhabitants, invasive species like the Burmese python have greatly reduced native mammal populations, and large hurricanes like Andrew (1993) and Wilma (2005) have wiped out areas that we used to visit. Our next trip in 2020 will have to be modified once again as our campsite in Long Pine Key was practically wiped out by Irma this past September.

In spite of these negative impacts, students were able to see positive change in the region as well. After many decades, manatees have been recently removed from the state endangered species list due to successful conservation efforts. Students got to see these conservation efforts in action as they witnessed a manatee rescue. In addition, students got to learn about and observe several of the new wildlife passes the state has constructed to protect the endangered Florida panther from being hit while crossing roads, and they were able to see early effects of efforts to return the regular flow of water to the everglades.

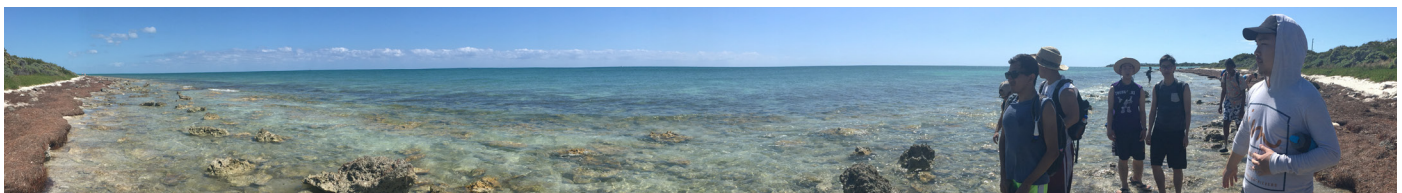


**Top:** Ready to leave the snow of Michigan! (L-R) Raymond Kashangaki, Tony Chirachevin, David Kim, Hyukje Sung, Steven Kim, Nick Chun, Temitope Idowu, Roshelle Hall, Gabby Cook, Randy Sanchez, Andrew Walayat, Talisa Tait, Dr. Daniel Gonzalez-Socoloske, and Rayford Alva. **Middle:** Roshelle Hall inspects a large female manatee. A raccoon inspects the photographer. A glass legless lizard attempts an escape. **Bottom:** Birding with the alligators at Anhinga Trail. A purple gallinule preparing for takeoff.

"As a citizen and as a Christian," reflected Rayford Alva, junior biology major, "spending a week among the many ecosystems of Florida allowed me to see the great treasures in nature that we, as guardians and protectors of these environments, have the privilege to maintain and enjoy".

## Peru Lures Biology Majors Into Hot Jungles For A Long Summer's Sweat

Above: From the AU Yearbook of 1969. The article following this title describes how Dr. Asa Thoreson took 16 students "on a trek through the jungles to find rare specimens and to study the ecology of the region." Below: Exploring Bahia Honda State Park.

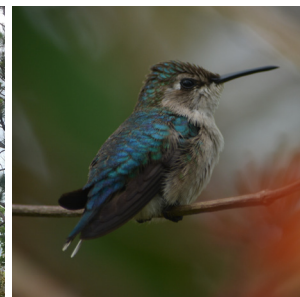


In May of 2017, 12 Andrews biology students participated in the first biology field course to the island of Cuba. The field course was taught by Associate Professor Daniel Gonzalez-Socoloske and Adjunct Professor Bill Hayes (Professor of Biology at Loma Linda University). Dr. Hayes' wife Patricia also participated in the trip and provided medical assistance if needed. Prior to the field portion of the class, students spent a week on campus receiving 4 hours of lectures daily. Students received additional lectures once in Cuba by Gonzalez-Socoloske and Hayes, as well as from several Cuban scientists, including Dr. Alejandro Barro, professor of Biology at the University of Havana, who accompanied us throughout the whole trip.

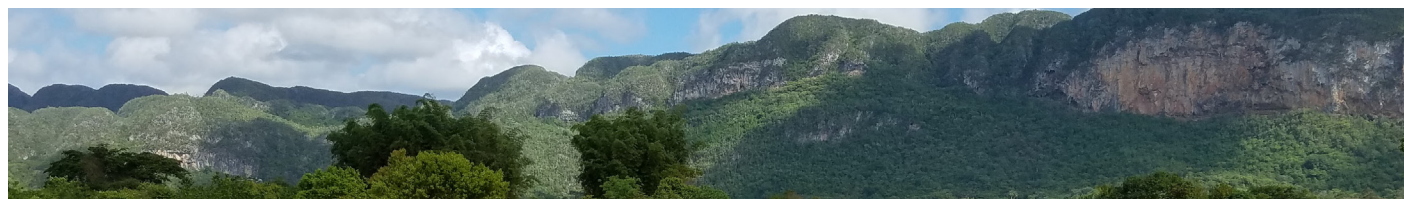
The course was designed to allow Andrews students to interact with local Cubans as much as possible and be enriched by that opportunity. "Dr. Barro's dedication to Cuba and its biodiversity really impacted me," said Adam Weir, sophomore biology major. "His sacrifice and the obligation he felt towards conservation increased the value I found in Cuba's unique biodiversity and conservation in general." Most nights were spent in private homes with host families, which allowed our students to really connect and bond with the local Cubans. "When I first met our host families in Viñales, I was very touched by their generosity despite having so little," Ben Hiramoto, sophomore biology major, remembers. "I was practically a stranger living in their home, but they made me feel like I was a part of their family. Although it has been quite a while, I will always cherish the friendship that we've made. Their kindness continues to inspire me to be there for others."

Students spent a total of 14 days in Cuba and were able to visit several unique ecological areas within the archipelago including the valley of Viñales with its unique limestone "mogotes," Zapata swamp where the endangered endemic Cuban crocodile is found, and the Isla de la Juventud (formally known as Isle of Pines) where Dr. Gonzalez-Socoloske has been studying manatees for the past 4 years. For many, like Daniel Jhang, junior biology major, this was their first experience outside of the US. "Experiencing a whole new culture was just eye-opening." Others experienced outdoor activities like snorkeling and caving for the first time during this trip.

Trip highlights included observing bats and other cave creatures in Viñales, observing reef fish, manatees, and sea turtles during the snorkeling trips in the Bay of Pigs and Punta Frances National Park in the Isla de la Juventud, and observing almost half the endemic birds of Cuba including the bee hummingbird and the Cuban tody. Most importantly, students were able to interact on a personal level with several Cuban biologists and with the host families and learn about life in Cuba. Like the trip to Florida, students were presented with both the negative and positive effects that humans have had on the environment, and a special time was given where we were all able to share and discuss what our responsibility toward the environment is as Christians. "As a Christian, we are called to be stewards of the earth," said Juliane Johnson, sophomore biology major. "The main conclusion I left with is to care for everything to the best of my ability: people, animals, and plants." Andrews biology plans to return to Cuba with another group of students in the summer of 2019.



**Top:** On Isla de la Juventud, sitting on Soviet-era ruins. With Cuban professor Alejandro Barro (bottom right, sitting down) and wildlife biologist Eddy Garcia (right with blue shirt). A female bee hummingbird, the smallest bird in the world, and a giant anolis lizard, in the Zapata swamp. **Left:** Exploring a cave system in a limestone karst called a "mogote" in the Viñales valley. **Below:** Julie Johnson snorkeling in the Bay of Pigs. Isabelle Hwang posing with a Jack that she caught. **Bottom:** Group photo in the Valley of Viñales where Cuban tobacco is grown. (L-R) Patricia Barry-Faillers, Trey Lawson, Delroy Brockett II, Daniel Jhang, Javier Patterson, Adam Weir, Ben Hiramoto, Gianni Zanatta, Jesse Castang, Nina Woodard, Isabelle Hwang, Joshua Ahn, Julie Johnson, Dr. Bill Hayes; not pictured, Dr. Daniel Gonzalez-Socoloske.



## 50 Years of Graduate Biology

Continued from page 1

graduate program has remained small and personal, with a total of just 156 graduates over its 50-year history.

This small size has allowed close mentoring and effective research – our graduate students have gone on to varied careers and together have made large impacts on the world. Altogether, 49 of our graduates have gone on to PhD programs, 39 have joined the faculty of a college or university, and 16 have received an MD, DO, or DDS degree. Another 18 graduates have entered the teaching profession at the high school level, including a number of our recent graduates. Others have begun a science career in technical assistance or sales, while some have left the field of science for a variety of careers. We have composed a timeline of the program (below) in which a sampling of our graduates throughout the years is shown.

The success of our graduate students might be attributed to, at least in part, the excellent mentoring from our faculty. A few of our long-time faculty members have made oversized contributions to this mentoring enterprise. Bill Chobotar has seen 22 theses through to completion, Jim Hayward another 18 (Bill and Jim also served for many years as grad program coordinators, see timeline below), and Jack Stout a hefty 38 theses over his time here at Andrews – 25% of all theses in the department! You might say that, while Asa Thoreson started the Andrews graduate program administratively, the above three faculty have been critical to pushing forward the research and mentoring so important in a graduate education.

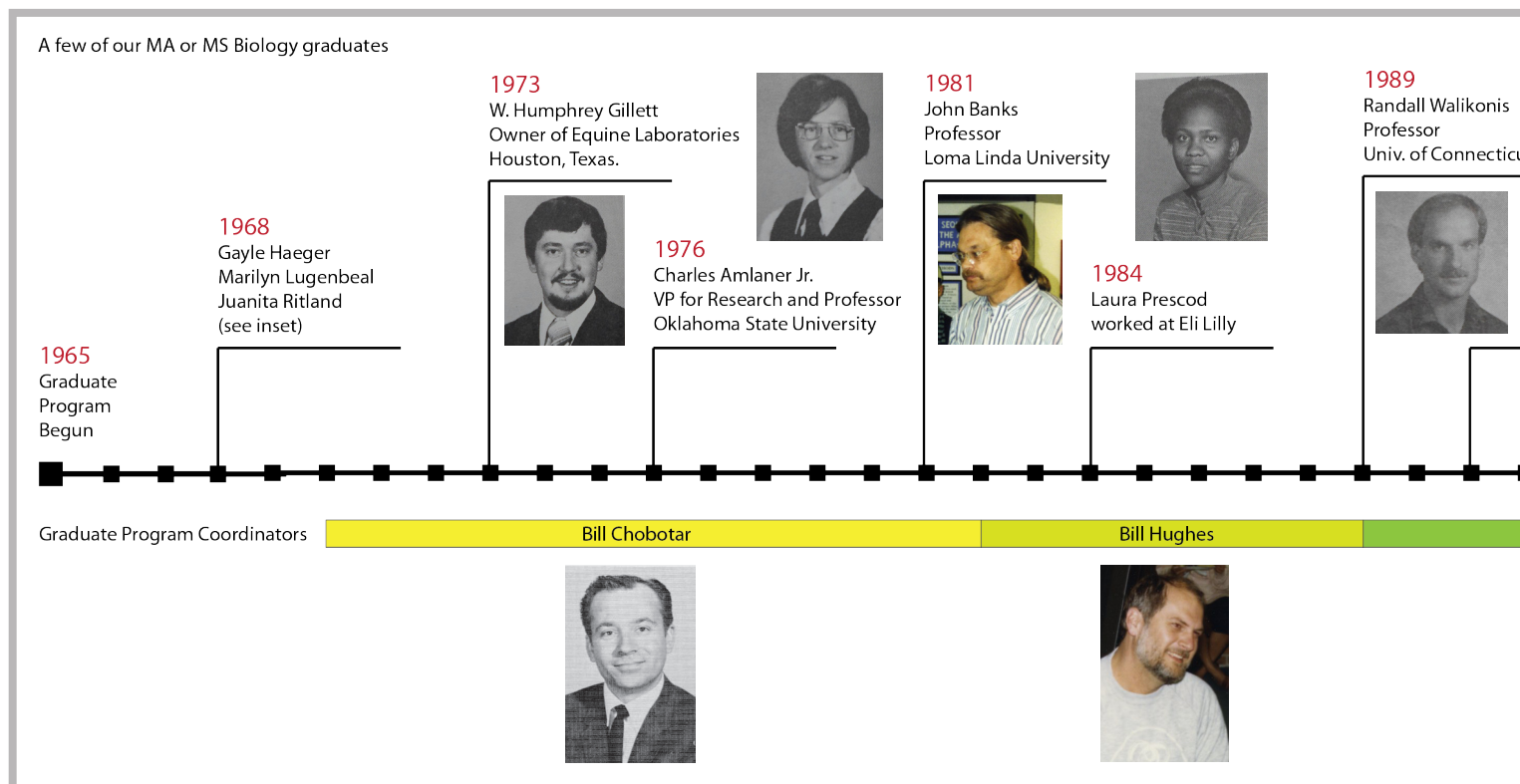
This mentoring of graduate students has gone hand-in-hand with a connection to the broader research community. Bill Chobotar has served for many years, and continues to serve, as editor of *Parasitology Research*. Jack Stout had a successful and NSF-funded lab through which many current biology faculty in Adventist colleges throughout the country have passed (see picture of his lab in 1981). Jim Hayward, along with Shandelle Henson, has also had continuous NSF support for many years



Members of the Physiology Research Group (1981): (L-R) Keith Snyder, Stanley Cooper, Gordon Atkins, Scott Ligman, Jack Stout, Kathy Koudele, Dan Schoun

now. More recent faculty members continue to serve the broader community: Daniel Gonzalez-Socoloske serves as associate editor of the *Latin American Journal of Aquatic Mammals*, Rob Zdor serves as editor of the *Journal of Applied Microbiology*, and Shandelle Henson serves as Editor-in-Chief of *Natural Resource Modeling*.

Continuing the legacy laid down 50 years ago, new students and faculty fill the halls of Price Hall. The year 2017 saw three students, Mindy McLarty, Athena Smith, and Jemma McLeish, complete their theses, adding their contributions to the collective scientific knowledge (see page 7). 2017 also saw six new students begin the program (see page 6). They have come in with wide-ranging interests and plan to begin their adventures in research, from cancer biology to paleontology, in the coming months. Thanks to recent financial and curricular improvements in the program, we expect to see this number of entering students continue in the coming years. A master's degree in biology from Andrews University has been proven to be a valuable experience.



## 1968: Our First Master's Program Graduates

**Gayle Haeger** and her husband Gerald had recently graduated from PUC (Gayle with a BS in Biology) and had come to Andrews so that Gerald could pursue studies at the Seminary. Looking for work while her husband was studying, Gayle found a job teaching 6th grade at a local public school in Galien, MI. A friend of Gayle's, Marilyn Lugenbeal, whose husband, Ed, was an instructor of religion at Andrews, was teaching high school science in Three Oaks, MI, and so they carpoled to work each day. Upon learning about the start of a biology master's program at Andrews, Marilyn encouraged Gayle to also apply. So began the first master's degree in biology at Andrews University. Gayle completed her thesis research under Dr. Leonard Hare. She comments that Dr. Hare was "an incredible teacher", always excited about new discoveries, and always signing his notes with a picture of a rabbit. She worked with Dr. Hare in the analysis of free amino acids extracted from jimson weed following long day or short day exposure.



the "fossil forests" of Yellowstone National Park (this required no trapping of mammals!).

**Juanita Ritland** was, well, married to Dr. Richard Ritland. During the 1960s, the Ritlands were living in Berrien Springs where Dr. Ritland was the director of Geoscience Research Institute. Juanita already had earned an undergraduate degree in biology, so when the Department of Biology decided to offer a master's degree, she decided it was something she wanted to do. Moreover, she had worked alongside her husband and the Lugenbeals for several field seasons in the "fossil forests" of Yellowstone National Park. This became the topic of her research. She and Marilyn Lugenbeal worked closely together on their respective projects.



**Marilyn Lugenbeal** (BS Biology '65) was frustrated with the rough crowd of students in Three Oaks, and so jumped at the opportunity to enter the newly formed master's program at Andrews. Dr. Ritland thought she could complete her degree within one year, and liked the fact that Marilyn's husband, Ed, was a theologian with interest in geology. Marilyn recalls taking a class in mammalogy with Dr. Seidel in which trapping and preparing small mammals was required – she decided that she would collect roadkill instead! Marilyn completed her thesis under Dr. Richard Ritland, studying

Following the completion of their degrees in 1968, each of these graduates went their own ways. The Haegers traveled to Peru, where they served as missionaries for 7 years. After returning, Gayle eventually found herself teaching science at Upper Columbia Academy, inspiring many students until her retirement just two years ago. Marilyn Lugenbeal found that, in addition to her love for biology, she also loved accounting. She combined these two fields through a career in healthcare accounting, most recently at Mass General Hospital in Boston. Juanita Ritland taught kindergarten in the Eau Claire public schools for several years after completing her degree.

Many thanks to Gayle, Marilyn, and Juanita for sharing your stories with us. I'm sure you will agree that fifty years goes by fast!



**1996**  
Jere Clayburn  
Vice Principal  
Fletcher Academy



**1991**  
John Henley  
Professor  
Mayo Clinic



**2002**  
Catherine Founé  
Scientist  
Vestaron

**2007**  
Natalie Graham  
Health Science Policy Analyst  
NIH



**2012**  
Brianna Payne  
Science Teacher  
Pinetree Academy

Jim Hayward



Tom Goodwin



Pamela Litvak



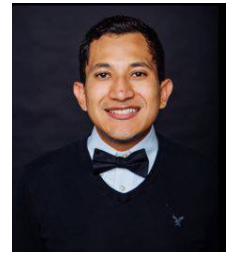
Peter Lyons



## Some events of the year...

### A Weniger Fellow

Randy Sanchez, senior biology major and J. N. Andrews Scholar, was the recipient of the Weniger Fellows Scholarship, for excellence in spirituality, academics, civic service, and leadership. Randy is now studying medicine at Loma Linda University, where we are sure he is continuing his reputation for excellence in these areas! All the best, Randy!



Front row (L-R): Dr. Peter Lyons, Connor Swihart, Celeste Richardson, Eddie Lee, Jasmariee Anderson, Jeonghyeon Bae, Brandi Seawood, Joshua Li; Middle row (L-R): Dr. Rob Zdor, Chris Nwoke, Xochitl Graham, Janelle An; Back row (L-R): Jordan Councill, Emerald Norman, Joshua Stewart, Jonathan Samuel, Justin Johnson

### BioBoost!

Another school year began with BioBoost, a program to help freshman through the hurdles of Foundations of Biology. Shown are some of those who took part. A good time was had by all... and a little hard work.

### Returning student missionaries

Three of our biology majors spent the previous year serving as student missionaries. Matthew Rajarathinam assisted medical personnel in Pucallpa, Peru. DahEun Harning was in Congo, where she helped Congo Frontline Missions train locals in basic health care. Alex Wilson served as a volunteer at Mwami Adventist Mission Hospital in Zambia. They are shown here pointing to countries where they served.



(L-R): Mat Rada, Priscilla Kyi, Elise English, Suzann Rangel, Jonathan Samuel, Alexandra Toscano, Anita Dyman, Joshua Stewart, Hannah Chi, Claud-Ian Martin, and Tom Goodwin.

### Service to our community

This year began with a day set aside for service. The day was called "Change Day"—all students, faculty and staff of the university were invited to participate in one of dozens of local service projects. Our biology department chose to encourage students to spend the day either at Sarrett Nature Center (shown) or at Jean Klock Park in Benton Harbor. Those who went to Sarrett spent their morning landscaping around the nature center. Those who traveled to Jean Klock Park spent several hours pulling spotted napweed, a noxious and invasive species. Many bags were filled... although we wondered of the environmental impact of the bags!

### A new crop of graduate students

This year we had six new graduate students enter our MS in biology program. We are excited to have them with us, as they add much to our department. Two of our graduate students come with teaching experience. Christian McDonald (BS '14) taught science for three years at Grand Rapids Adventist Academy, while Tendai Hunyenyiwa (BS, Southwestern Adventist University) taught science for the past year at Ketchum Adventist Academy in Oklahoma. Christian is interested in molecular things, particularly genomics, while Tendai is interested in the world of cell biology. Another two of our graduate students, Priscilla Kyi (BS '17) and Christina Rosette (BS, Washington Adventist University), have broad interests in cell and molecular biology. The remaining two of our graduate students, Austin Menzmer (BS, Southern Adventist University) and Jeremy McLarty (BS '17), have interests in paleobiology. We look forward to hearing more of their biological discoveries in future editions of *Biofeedback*.

Current MS Biology students, entering class of 2017. (L-R) Priscilla Kyi, Austin Menzmer, Jeremy McLarty, Christian McDonald, Christina Rosette, and Tendai Hunyenyiwa



## Publications



The Seabird Ecology Team, coordinated by Jim Hayward, professor emeritus of biology, and Shandelle Henson, professor of ecology, has published the following peer-reviewed articles this year: "Time Lags



Associated with Effects of Oceanic Conditions on Seabird Breeding in the Salish Sea Region of the Northern California Current System" (*Marine Ornithology*) by Rashida Smith (BS' 2017), Lynelle Weldon, professor of mathematics,

Jim Hayward and Shandelle Henson; "Predation by Common Ravens on Eggs of Rhinoceros Auklets and Kleptoparasitism by Bald Eagles" (*Wilson Journal of Ornithology*) by Gordon Atkins, adjunct professor of biology, and Jim Hayward; "Copulation Call Coordinates Timing of Head-tossing and Mounting Behaviors in Neighboring Glaucous-winged Gulls" (*Wilson Journal of Ornithology*) by Gordon Atkins, Ashley Reichert (BS' 2016), Henson, and Hayward; and "Daily and Annual Habitat Use and Habitat-to-Habitat Movement by Glaucous-winged Gulls at Protection Island, Washington" (*Northwestern Naturalist*) by Hayward, Henson, Jennifer Bove, Chris Bove, and Cory Gregory (BS' 2007).



Tom Goodwin, professor of biology, co-authored a paper with Robert Martin in the *Journal of Paleontology* entitled "Ground squirrels (Rodentia, Sciuridae) of the late Cenozoic Meade Basin sequence: diversity and paleoecological implications."

## Presentations

Ben Navia, associate professor of biology, and student Chelsea Kent presented a poster at Neuroscience 2017 in Washington, D.C. The poster was entitled "Phonotaxis and neural responses in male-exposed female *Acheta domesticus*".



Daniel Gonzalez-Socoloske, associate professor of biology, and Mindy McLarty, graduate student, were co-authors on a conference presentation, "Juvenile tarpon and bonefish habitat characterization in Isle of Youth, Cuba" at the Bonefish and Tarpon Trust 6th International Science Symposium in Weston, Florida.

Roshelle Hall, graduate student co-advised by Daniel Gonzalez-Socoloske and Peter Lyons, associate professor of biology, presented a poster, "Genetic diversity of the eastern massasauga (*Sistrutus catenatus*) in Berrien and Van Buren Counties, southwest Michigan." at the Biology of Snakes Symposium in Rodeo, New Mexico.

Shandelle Henson, professor of ecology, was the plenary speaker for the Conference on Biology and Medicine through Mathematics (BAMM!) in Richmond, VA. She spoke on "Rising Sea Surface Temperatures and Tipping Points for Seabird Colonies".

Rob Zdor, professor of biology, presented at the Annual Meeting of the American Society for Plant Biology. This work, co-authored by Warit Chirachevin, Honors student, demonstrated that elevated sand content correlates with increased mustard seed meal (MSM) inhibition of velvetleaf seed germination and growth.

Isabelle Hwang presented her Honors research at the National Collegiate Honors Conference, Atlanta, GA, in November. The title of her poster was "Effects of Eggshell Coloration on Egg Cannibalism among Glaucous-Winged Gulls."

## Graduate Theses

Three graduate students defended their theses and graduated this year:

Mindy McLarty was mentored by Dr. Daniel Gonzalez-Socoloske. Her research focused on the habitat usage of manatees on the sunny isle of Cuba. Her thesis was entitled "West Indian manatee (*Trichechus manatus*) habitat characterization using side-scan sonar."



Athena Smith worked with faculty mentors Jim Hayward and Shandelle Henson. The goal of her project was to better understand the factors affecting egg predation. The title of her thesis was "Glaucous-winged gull predation on chicken eggs treated with a UV-blocking agent."



Jemma McLeish was co-advised by Dr. Denise Smith and Dr. Desmond Murray (Chemistry). She synthesized a series of organic molecules and analyzed their effect on the growth of breast cancer cells. The title of her thesis was "Synthesis of arylidene heterocycles and evaluation of their anticancer activity on the AU565 breast cancer cell line."



A large contingent of Andrews biology faculty and students attended the annual meeting of the Michigan Academy of Science, Arts, and Letters (MASAL) held this year at Western Michigan University. (Front, L-R) Andrew Chirachevin, Tom Goodwin, Brenden Croughan, Athena Smith, Rashida Smith, Mindy McLarty, D'Shauna Edwards, Chelsea Kent, Darly Magno, Heaven Shin, Erika Bauza, Linnea Burke, Peter Lyons, Temitope Idowu, Adam Weir; (Back, L-R) Ezra Panjaitan, Daniel Gonzalez-Socoloske, Hyukje Sung, Shandelle Henson, Jim Hayward, and Ben Navia.



## Alumni Calling Songs

**Donald Fahrback** (BA Biology, '51) sent us a note about a year ago, telling us of his enjoyment of walking and reading and his retirement from medical practice in Munising, MI several years ago. We are saddened to hear that Don passed away recently on April 17, 2017. We send our sympathies to his family and friends, and look forward to meeting him again on that resurrection morning. An obituary can be found at <http://www.bowerman-funeralhome.net/notices/DrDonald-Fahrback>.



**Dexter Beary** (BA Biology, '51) lives in Spokane, WA. Following his time at Andrews, Dexter received an MA from Western Michigan University and a PhD from Loma Linda University. He taught biology at Southwestern Adventist University for many years. He is now 92 years old, enjoys supporting Adventist missions, and still dabbles in research at home.

**Philip A Lewis** (BA Biology, '61) lives in Seaman, OH, where he is retired from the US Environmental Protection Agency.

**Nancy Anderson** (BA Biology, '72) is Professor in the Department of Dermatology at the Loma Linda University School of Medicine. In her spare time, she enjoys hiking, swimming, and raising big dogs!



<https://medical-center.loma-lindahealth.org/provider/anderson-nancy>

**John R. Clough** (BS Biology, '78) lives in Livingston, TN, where he practices urgent care and family medicine. He is an avid fly fisherman.

**Dean Preddie** (BS Zoology, '93) completed his MD at Washington University in St. Louis. He continued for specialty training at Wayne State and Columbia Universities. He is now a practicing nephrologist and Medical Director of American Access Care of Brooklyn, in Brooklyn, New York.



<https://www.azuravascularcare.com/physicians/dean-preddie/>

**Libby Megna** (BS '10, MS '12) is pursuing a PhD in avian systematics and hybridization at the University of Wyoming. Libby was a member of the Seabird Ecology Team during her time here at Andrews.



**Doug Nyakundi** (BS Biology, '11) completed his DDS at Loma Linda University and is now practicing dentistry in Centerville, Ohio.



**Shelley (McLarty) Reich** (BS Biology, '13) completed an MS in biology at Walla Walla University, and has recently begun a PhD in the Molecular, Cellular, and Evolutionary Biology program at the University of Utah.



We'd love to hear from you! And we'd love to share important events in your lives with other alumni via this newsletter. Send us an email or letter to let us know what is new in your life. Below are some suggestions if you don't know what to say! 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 \_\_\_\_\_



Check out our new facebook page! We think this will be an effective means of communicating departmental news. Like us!

[www.facebook.com/AUBiology](http://www.facebook.com/AUBiology)

### 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](mailto:biology@andrews.edu)  
[www.andrews.edu/biology](http://www.andrews.edu/biology)



Editor: Peter J. Lyons

