Front Page News Story Archive

October 2022



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News Stories Posted Tuesday October 4, 2022



Three-year project kicks into high gear: Students work to purify toxic soil from mining in Zambia

Biology & Environmental Sciences, Department of: Tuesday October 4, 2022

Story and photos developed by University Communications.

Georgia College & State University students are sowing the seeds of change.

Funded through a \$300,000 grant from the National Science Foundation (NSF), an environmental science professor is leading this transformation in the centralsouthern region of Africa. His students are researching plants that may have the power to renew

vast stretches of land poisoned from mining.

The three-year program includes International Research Experiences for Students (IRES) in the summers, plus continuing research during academic years on



Dr. Samuel Mutiti

campus. It builds upon years of study by Dr. Samuel Mutiti, professor of geology and environmental sciences, who has worked tirelessly to clear Zambian soils of toxic metals.

Last summer, Mutiti took the first cohort—three undergraduate students and a graduate to Copperbelt Province and Kabwe, once dubbed the world's most toxic town due to mining. Months of dry season in the region are followed by windy months. Children play in dirt fields, breathing in air particles laden with heavy metals like lead, cadmium and zinc.

Lead causes neurological problems, brain damage and lowered IQ in children. In pregnant women, it can cause anemia and miscarriages.



The playground at David Ramushu Combined School in Kabwe.

In recent years, Mutiti's team built a concrete wall fence to block wind gusts at a playground at the David Ramushu Combined School in Kabwe. They buried contaminated dirt, encapsulating it with a layer of clean soil. In the future, Mutiti hopes to add plants that are known to pull pollutants from soil into their roots and stems.

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Each site has its own suite of pollutants, challenges and other factors.

- Mutiti

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"One of the things we focused on last summer was the selection of contaminated sites as good candidates for experimental phytoremediation," Mutiti said. "We visited many different sites, collected different plants and soil samples for analysis. Each site has its own suite of pollutants, challenges and other factors. Which site will be ideal for future research?"

For the IRES project, Georgia College students collaborate with peers at the Colorado School of Mines to study heavy metal pollution and phytoremediation—the use of plants to clean contaminated environments. They're also looking for ways to reuse the plants.

Georgia College's portion of the NSF grant is \$165,000 to send four students for research to Zambia this summer, four next summer and another cohort in summer 2024.

- The first cohort spent six weeks in Zambia working with Mutiti to identify contaminated sites. They networked with students at the University of Zambia, government officials at the Ministry of Mines and various environmental organizations.
- Organizers are in the process of choosing next summer's cohort. Four students will be funded to return to identified sites and grow plants that pull ground toxins into stems and leaves, leaving behind cleaner soil.
- In summer 2024, the last cohort will test plants for accumulation of toxins and determine if any parts are safe to be used for other purposes such as food, medicine or biofuels.

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I really appreciated the amount of inclusion we were allowed. Almost immediately we were put into situations where we were able to express our thoughts and ideas on things, which was really cool.

- Senior Abby Logan

Senior biology major Abby Logan of Dacula, Georgia, was in the first cohort. She has a pre-med concentration and minor in public health but was new to the topic of soil remediation. Even so, Logan felt her input mattered in every conversation.

"I really appreciated the amount of inclusion we were allowed," Logan said.

"Almost immediately we were put into situations where we were able to express our thoughts and ideas on things, which was really cool."

"We were able to see where we could make impacts," she said, "and how the science we're learning about and currently researching can make a difference in people's lives."



Alana Stevens with Dr. Mutiti doing field work in Zambia.

Senior Alana Stevens of Buford is majoring in environmental science with a minor in geology. She also knew little about the research going in. Now, she and Logan are lead researchers in Mutiti's lab on campus.

I didn't know about phytoremediation or Phytomining when I signed up for this. I remember hearing those words for the first time and feeling very intimidated. But now, I just feel very inspired - Alana Stevens

"I didn't know about phytoremediation or Phyto-mining when I signed up for this. I remember hearing those words for the first time and feeling very intimidated. But now," Stevens said, "I just feel very inspired."

In Zambia, students started their days early, traveled a lot, slept in youth hostels, and enjoyed African foods, like nshima—a thick porridge of white corn eaten with leafy greens and meat.

Mutiti lauded the work of his first cohort. Students learned to adapt, meet challenges head on, change plans at a moment's notice and work with people from all backgrounds at an international site. They developed good work ethics, learned laboratory techniques at other universities and networked with professional scientists.

He's proud of the way students broadened their perspectives and took ownership of the work, while gaining confidence and leadership skills. Students practiced critical thinking. They used logical reasoning and solved problems, as well as analyzed and interpreted data.

The knowledge they gained didn't come to a stop when the trip ended.



Alana Stevens and Abby Logan in the lab with Dr. Mutiti at Herty Hall.

Logan and Stevens are using what they learned last summer to continue research on campus and guide other students who hope to be part of the next Zambian cohort.

"I'm enjoying it," Stevens said, "because I feel like I've done projects in school where I've started to answer a question, and I don't quite get to the finish line. So, I'm really excited about this project and seeing what it becomes, because it does feel really big, and it will have big impacts."

Since soils couldn't be removed from Zambia, the group is working with the Environmental Protection Agency (EPA) to find contaminated soils in Georgia. If polluted soils can't be located, they'll add lead and metals to dirt to get the right amount of contamination for their research.

This soil will be used to plant sunflowers in the rooftop greenhouse at Herty Hall, along



Ashley Clark and Wiley Bundy work with soils at Herty Hall.

with other plants capable of growing in high concentrations of metals.

Graduate biology student Ashley Clark of Augusta is working on this aspect of the research. It's his job to locate plants that pull toxins, like one he's currently researching: hemp.

Some plants will be allowed to grow normally in clean soil. Others will be planted in contaminated dirt. Amendments like chicken manure, compost and other microbes will be used to see if they help plants absorb toxins.

Junior Wiley Bundy of Savannah is majoring in environmental science with a minor in geology and concentration in hydrology. She'll water the plants—some overabundantly—to see if metals leach into groundwater.



Abby Logan and Alana Stevens testing soil in Zambia last summer.

Ultimately, this research not only helps protect humans—but it will propel students toward future goals.

In Zambia, Stevens discovered a love for fieldwork. She enjoyed meeting within a group, discussing what they did in the field that day and compiling information. She'd like to work in a research lab after graduation and continue programs that have global impact.



Alternate Text

Logan said the project will look good on her graduate and medical school applications.

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We were put out of our comfort zone and had to push ourselves and do things differently. We learned a lot and had a lot of trial and error, It will benefit us as professionals in whatever field we go into, because at least we tried and failed and

continued to try again, so we could keep working. That's a good experience, even if it is hard.

- Abby Logan

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News Stories Posted Tuesday October 11, 2022



Georgia College students work to improve health in Baldwin and surrounding counties

Center for Health & Social Issues: Tuesday October 11, 2022

Story, video and photos developed by University Communications.

As the 15th-century historian Thomas Fuller once said: "Health is not valued till sickness comes."

That's why students at Georgia College & State University's <u>Center for Health &</u> <u>Social Issues</u> (CHSI) intertwine health screenings with other attractions like fun and food.

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We try to meet the public on their terms and on their turf, and people are just blown away by these events.

- Dr. Francis

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Public health majors and student nurses gather wherever the populace is likely to be found. At monthly food drives, neighborhood meetings or holiday gatherings— they can be seen chatting and laughing with residents; giving finger prick tests for diabetes; tightening blood pressure wraps around residents' arms and handing out health materials.

"We try to meet the public on their terms and on their turf, and people are just blown away by these events," said Dr. Damian Francis, epidemiologist, assistant professor of <u>public health</u> and director of CHSI.

"Our success in a community is going to depend on community buy-in and whether residents really support what you're doing," he said. "That's why we go into the community often. Residents see us, and they know we're committed to them and to their health."

Since taking over the center in 2020, Francis has led more than 60<u>Georgia College</u> students in conducting health screenings. In that time, they've assisted more than 1,000 residents in Baldwin County and more than 200 in Hancock, Houston and Macon-Bibb counties.

Their major function is operating a pop-up health clinic and assisting with a drivethru food distribution, occurring the third Wednesday of each month at the Collins P. Lee Community Center on Harrisburg Road, Milledgeville. The Middle Georgia Community Food Bank provides a truckful of fresh and canned foods. Items are boxed and handed to residents who line up early outside in their cars—as many as 300 a month—for the 10 a.m. event. Sometimes, local churches and Habitat for Humanity also provide free clothing onsite.



Dr. Damian Francis.

While residents wait, they're greeted by students who conduct health screens and pass out information sheets. Each month, they focus on a different health topic like heart disease, obesity or Alzheimer's and refer people without doctors to clinics.

On a hot day recently, about eight nursing students darted car-tocar offering their services and talking about prostate cancer. About half the residents agreed to have their blood pressure checked and finger pricked for diabetes.

Tanner Cobb of Savannah organizes this event each month. He graduated last year with a degree in public health and is now getting a master's in <u>health</u> and human performance.



Dr. Talecia Warren watches as a nursing student administers a finger-prick test for diabetes.

Originally, he wasn't sure what to do in life. But, once he started health screenings, Cobb wanted to multiply the great feeling he got from helping others.

Cobb is a Type-1 diabetic and understands the importance of preventive health measures.

"I'm really open to serving and doing any kind of health promotion I can, because ever since I started, I haven't stopped, and I love doing it," he said. This event is like ants going in all directions but it's beautiful, organized chaos because everyone has a job, and I fell in love with the fact everyone has the same motive, which is to serve the community. I can't even describe how happy it makes me feel to see other people getting what they need. It makes me feel like we're doing something good for the community. We're bettering their lives, and that makes me want to keep doing it.

- Tanner Cobb

Dr. Talecia Warren, assistant professor in the <u>School of Nursing</u>, often accompanies her nurses to the monthly food drive. Being in the community is different from hospital settings, allowing students to meet residents on a more personal level.

It also helps them keep track of patients. They see familiar faces each month, which enables them to ask residents if they remember to take their medicines. They rejoice when blood pressure levels improve.

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The best feeling in the world is knowing that you actually made a difference. - Dr. Warren

"Getting to see patients that I have not seen outside the hospital and to see them out in the community doing well—that feels good," Warren said. "The best feeling in the world is knowing that you actually made a difference."

"One of the things I love about the liberal arts is getting to know your community. As a nurse," she said, "I know it doesn't just stop at the hospital. If you meet people where they are and give them the resources they need, then that decreases their need to go to hospitals which are already overfilled."

Senior Avery Urban of Atlanta chose nursing because she enjoys science and likes being social. After graduation in December, she might do labor and delivery. Meeting everyday people from all walks of life is preparation for that.

"It definitely feels good to help people," Urban said. "This school offers a lot of different options to go into the community and do that. It's nice to be able to give back to a place that's given us so much."

In addition to the monthly food drive, about 10 public health students help Francis



Senior nursing major Avery Urban checks a woman's blood pressure.

plan and promote other monthly events. These include health screenings and education in various neighborhoods, on campus and in Baldwin County, Macon, Houston County and Sparta.

Each month highlights a different health issue. Sometimes, flu or COVID-19 vaccine shots are available.

Last month, CHSI held a mental

illness awareness day at the Wellness Center on West Campus called "Rocking with Mental Illness." Participants destressed by painting rocks.

Upcoming events include health screenings alongside barbecue at a fall festival, a breast cancer awareness parade, 5K run/walk and trunk-or-treat. In November, students will be at the Georgia Veteran's War Home on Veteran's Day to help residents quit smoking. In December, there'll be HIV testing for World Aids Day.



Dr. Warren gives instructions to her nursing students recently at the Collins P. Lee Community Center in Milledgeville.

These health screenings are in addition to several research projects Francis is also working on. These deal with food deserts in Baldwin County, developing a way to measure statewide obesity-reduction efforts and creating a common framework to measure racial disparities nationwide.

Having a finger in so many pies-in addition to teaching-is difficult.

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What others see as community service, I see as saving lives.

- Dr. Francis

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But it's also what drives Francis.

Growing up in Jamaica, he saw how lifestyle and social factors resulted devastated families through chronic illness. That made him go into epidemiology.

"What others see as community service," Francis said, "I see as saving lives."

"My passion to improve health and wellbeing through research is driven by a sense of duty," he added. "For Beethoven, it was his gift and passion for music that led to Symphony No. 5. For me it is the personal experiences and training that fuels my work in public health."

Click here for more information on other <u>research</u> students at CHSI are doing.



Flannery O'Connor made lasting impression on longtime author

Alumni : Tuesday October 11, 2022

In 1954, Susan Lindsley of Peabody High School, '54, met American-famed author Mary "Flannery" O'Connor, '45. Although Lindsley's mother was childhood friends with O'Connor's mother, Regina, when both lived in Milledgeville, Georgia, it wasn't until after Regina and O'Connor left Savannah and moved to Andalusia that Lindsley and O'Connor met. The O'Connor land and Lindsley land shared a milelong fence for many years, even before Regina and O'Connor moved to Andalusia.

"Flannery walked into my house on her crutches, carrying a smile," Lindsley said. "When I saw her dressed in her deceased father's clothes, I loved her instantly, for I wore dirty jeans and a sweat-soaked shirt."

O'Connor told Lindsley that she wore her father's clothes, because it would be a waste to discard them.

"Genius and very practical, with a barn full of common sense," Lindsley said.

Regina came over to talk "farm business" with Lindsley's mother.

"They had a rousing conversation," Lindsley said. "Flannery spoke barely a word after introductions, but sat and listened. I began to wonder if she were already plotting a new story based on the political topics of conversation."

O'Connor was a great listener. Then, she wrote about everything happening around her and even included her mother, Regina, in many of her stories.

When displaced World War II refugees worked on Andalusia, O'Connor took notice and wrote about them, as well.

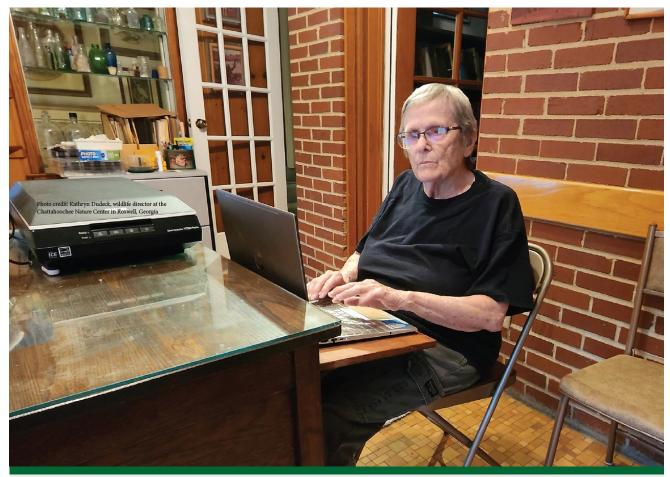


Susan Lindsley

"Flannery could take reality and give it a twist, usually while laughing," Lindsley said. "It didn't matter how serious the moment was. She could see the humor in any situation."

When O'Connor first showed Lindsley the room where she wrote, she noticed her desk didn't face a window or the door to her room.

"Flannery told me to always face the wall, because if I didn't, I could be easily distracted," Lindsley said. "So, I always face the wall when I write. It really works."



To this day, Susan Lindsley faces the wall when she writes to avoid distractions.

Since Lindsley lived outside of the city, she didn't enjoy the same close-knit associations that many of her Peabody School classmates had. She wrote often, spending her lunch hour and time at home writing.

One of her favorite written works is a poem about a tree that she wrote while she was a student at Mercer University. That poem took first place in the university's poetry contest.

"Everyone said it was about the crucifixion and resurrection, but it was only about a tree," Lindsley said. "Therefore, I hesitate to interpret any meaning into another's works."

Lindsley also wrote her first novel while in college and her second before age 25.

"As an inspiration, Flannery wrote about everything going on in Milledgeville, which taught me that it's okay to write about anything," she said. "I especially love the twist she used in her stories.

"A Confederate Civil War Veteran sat on stage at Georgia College & State University (GCSU) when his much younger wife graduated," Lindsley said. "A Late Encounter with the Enemy" is the same event basically, but O'Connor put a twist on it." Lindsley also likes to add something unexpected to her short stories.

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"Some of my writings deal with race and situations from my youth. Some deal with nature. Some deal with crime and punishment. And some are just fun. I want the times pictured to be remembered as they were."

- Susan Lindsley

Inspiration to create a story can come at a moment's notice.

"Sometimes I wake up from a dream at three o'clock in the morning and hit the computer," she said. "In one of my stories, I dreamt about a guy going fishing who had not been on vacation. But when he opened his refrigerator, it was already full of fish."

One of Lindsley's nonfiction books includes her adventures as a counterfeit game warden who, with the aid of fellow hunters, was in pursuit of poachers. She also wrote a couple of books based on events happening while she attended college.

Overall, Lindsley wrote 18 books. The last one, "Return to Yesterplace," has a list of all her books in it. Through the years, she has received more than 80 accolades including certificates, plaques and medallions for her stories, poems, limericks and books.

Today, Lindsley's penning a set of two nonfiction books about white-tailed deer. She's inspired by observing their activities in her yard. One book covers the deer and all the activities they go through, from infancy up until they die. The other book covers the life, sexual growth and activities of the bachelors. The first book will be released in late 2022.

She says writing fiction or nonfiction is work, but it is fun to her.

Her fiction books include the adventures of her friends who hunted with her. She also writes about Milledgeville and Baldwin County characters including politicians, cattle rustlers and moonshiners.

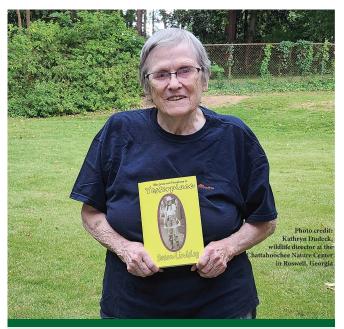
Some of her works are based on actual events in Milledgeville and Baldwin County history. Lindsley still gets emotional remembering some of them.

"I feel laughter and anger," she said. "I still laugh when I think about the gal who forced lawmen to take her on a still raid. At times, I'm angry about some of the politics and crime."

On the lighter side, the extent of Lindsley's imagination can be discovered in her books.

"It's fun to have a lion jump out of a TV set or Bigfoot save a hunter's life," she said, "also, to let someone die and be resuscitated and then paint portraits of those he met in the hereafter."

O'Connor inspired Lindsley to use people she knows as characters, as well as local events and sites in her writing.



Susan Lindsley holds her book "Yesterplace."

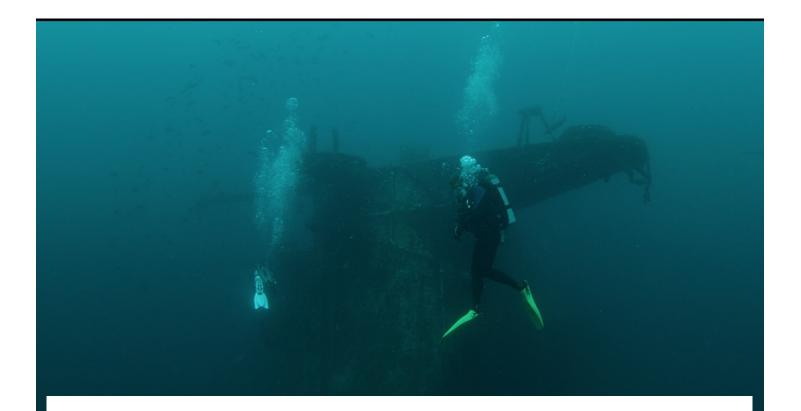
"Flannery encouraged me to write about who and what I know," she said. "I still write about the people and events I know of, unless I go off into some weird world of space or time warped age or the inhabitants of an unknown world or a dream."

Eventually, Lindsley's wishes are to pass on the copyright of her creative works to GCSU, as both her parents were professors at the university. GCSU was also alma mater to Lindsley, her mother, aunts and sisters.

She hopes her poetry will make people cry, laugh or simply enjoy her work; her fiction will make readers look behind the story for the reality based on true events; and her wildlife books will teach others to enjoy and spend time with nature and support the habitat.

"Some of my writings deal with race and situations from my youth," Lindsley said. "Some deal with nature. Some deal with crime and punishment. And some are just fun. I want the times pictured to be remembered as they were."

Learn more about Lindsley's publications.



Alumnus' show on PBS NOVA builds awareness about invasive lionfish

English, Department of : Tuesday October 11, 2022

In 2018, Jeff Boedeker, '04, was underwater, filming a sunken aircraft carrier in the Gulf of Mexico when he spotted several lionfish inside the shipwreck.

"They're beautiful and I had no idea what lionfish were," he said. "After filming, I spoke to other divers on the shoot who told me how they are invasive and weren't there 20 or 30 years ago. And, it got me, thinking."



Jeff Boedeker (pictured third from left) and the underwater film crew rests after a dive.

Boedeker didn't do anything about it right then, because he was producing a film. But a few years later, he recalled the masses of lionfish—from Maine to Brazil and throughout the Caribbean—that are destroying ocean ecosystems with their massive appetite.

In some places, lionfish make up nearly 40% of the Atlantic Ocean's predators, killing off 80% of young fish.

He wondered how that happened and what mechanisms allowed them to flourish.

"It's remarkable when you open that door and wonder what's going on here," Boedeker said. "You have a fish that went from zero to a multi-continent population explosion within 30 years. How does that happen?"

"It's just such a magical world. Anytime I'm given the opportunity to produce any underwater related content, I don't take it for granted. We know so little about the ocean, and it's really difficult to know what's happening with every

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"Most of time when species enter a new habitat they don't necessarily belong in, they just die," he said. "But every once in a while, you get something like the lionfish, which has all the perfect characteristics and really get lucky."

He wondered why the lionfish are so successful. Without natural predators in the Atlantic Ocean, the species quickly became invasive. They aren't "bad" fish on their own. They're bad because of where they're now located.

"When you think deeply about that, it can be startling," Boedeker said, "because we're now able to do these unprecedented things with nature."

People caused this problem, when setting their exotic pets free into the wild. This transports species into ecosystems where they didn't evolve.

"Breaking down the science of what's happening is interesting," he said. "When we introduce species from halfway around the world into new environments, we're short-circuiting evolution."

Boedeker was so captivated by this idea, that he wanted to create a film that explored the enormity of the problem and deconstruct how a species becomes invasive. So, his team created a TV treatment and distributed it to different networks. NOVA picked up the story.



Boedeker captures a picture of lionfish in their natural habitat.

"It's a story that hasn't been told on TV," Boedeker said. "We thought the treatment was strong enough from a science standpoint where NOVA would be a great national platform for our film."

Boedeker uses his English and creative writing skills he developed from Georgia College & State University (GCSU) to create TV documentaries and series. His education helps him in most everything he does—from story concepts to running a production company. It also helped him in graduate school and afterward, when working as series producer at National Geographic.

Biology Professor Emerita Dr. Harriett Whipple made a remarkable impact on Boedeker, who started at GCSU as a biology major. She asked him to broaden his perspective and understand how different disciplines interconnect. Whipple's advice set him on the right career path.

"My experience at GCSU has had a direct influence on where I am right now with my career," Boedeker said. "Dr. Whipple told me there's so much storytelling that happens within the sciences, like how to communicate different processes. She was a proponent of creative thinking no matter the department. She influenced me so much."

When Boedeker shifted his major to <u>English and creative writing</u>, Professor Emeritus Dr. Eustace Palmer taught him the structure of writing and shared his deep, intellectual understanding of literature with students.

"He created a class environment where everybody felt comfortable and could speak freely," Boedeker said "I learned how to interpret stories in a completely new way."

He wants <u>English</u> majors to realize there are many different platforms to tell a story, and there are many stories to tell. Storytelling got him into filmmaking. It includes all kinds of aspects: visual, sound, narration and interviews. When producing a nonfiction film, Boedeker said that there's a lot of writing involved.

In "Ocean Invaders," Boedeker scripted the guide's narration, as well as directed the scenes to achieve the appropriate mixture of being authentic and getting the content necessary to piece the story together.

The lionfish episode took a year to complete, including pre-production, shooting in different locations in the U.S. and abroad, as well as post-production.

Boedeker directs both above and below water, diving down with the underwater film unit to depths of around 130 feet.



Jeff Boedeker maps where lionfish are located.

"We follow scientists to the bottom of the ocean, discovering new fish in deep reef environments," Boedeker said. "There's a great action sequence in a submarine, their work is intense."

He hopes biology, as well as English and creative writing students understand their area of study can take them into many interesting fields.

Boedeker is constantly amazed by the immensity of the ocean and the interconnectedness of sea life. He especially enjoys producing underwater films and embraces every opportunity to scuba dive and reveal more about the ocean's mysteries.

"I knew biodiversity in the ocean is important," Boedeker said. "But I didn't realize how much of an indicator it is for how healthy our ecosystems are."

"It's just such a magical world," he said. "Anytime I'm given the opportunity to produce any underwater related content, I don't take it for granted. We know so little about the ocean, and it's really difficult to know what's happening with every species down there and the impact that we're having on them."

Watch "Ocean invaders" on PBS' NOVA Oct. 26, 2022, at 9 p.m. Eastern time. <u>Catch</u> a <u>glimpse of Boedeker's show.</u>

News Stories Posted Wednesday October 12, 2022



Alumnus changed family's trajectory to serve as a role model for students

Psychological Science, Department of : Wednesday October 12, 2022

Dr. Cedric Howard, '94, who was Georgia College & State University's (GCSU) commencement speaker in 2017, has been named one of the "Top 10 Inspiring People in Education" by CIO Views Magazine. And all for good reason. As vice president for Student Affairs and Enrollment Services at the University of Northern Colorado, Howard impacts the lives of students every day.

"I like my role because I'm able to change the trajectory of not just the lives of students, but their families," Howard said. "I'm very fortunate that I've been a vice president for over 20 years. And now, I get to use the vehicle of higher education as a vessel for social mobility, and be transformative in my initial approach to support people who were like me."

Born and raised in the Macon, Georgia, housing projects, he was the first in his family to graduate from college. After his graduation ceremony, Howard's grandmother illustrated the importance of what he had accomplished.

"This speaks to the transformative properties of GCSU," he said. "That day at the Centennial Center, my grandmother said, 'Cedric, I would like to have your gown.""

"I earned this one," Howard said.

"We're going to try this one more time," she said. "I would like to have your gown."



Dr. Cedric Howard

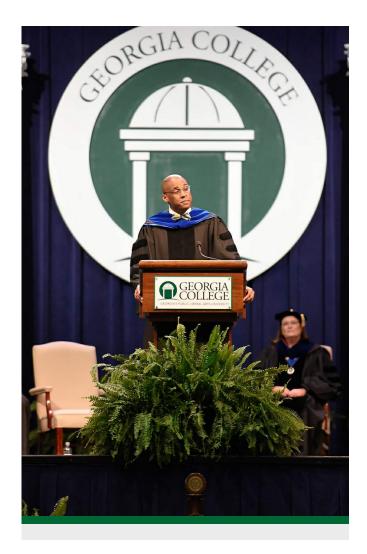
Howard handed her the gown. His grandmother turned to all 11 of Howard's cousins and said, "He is the first in our family to graduate from college. It is my expectation that each of you will bring me a college graduation gown."

"This is the key: The knowledge belongs to you," his grandmother said. "You went to school to get knowledge. The investment of the gown belongs to me."

Howard's grandmother passed away in 2011. Each time the family celebrates a new college graduate, they take the graduation gown to their grandmother's grave site and put it in a lockbox to pay respect to her and the tradition she began in June 1994.

Today, she would've had 18 grandchildren—16 of them have college degrees.

Howard started this tradition at Georgia College, which played a significant role in his development. He was a senior and student body officer in Student Government Association (SGA), a resident assistant (RA), Homecoming King, charter member of Psi Chi Honor Society for Psychology, Alpha Phi Alpha,



Mu Gamma Chapter president and Greek Man of the Year.

GCSU Alumni Association honored Howard in 2016 with the Ethel Rae Mozo-Stewart Award for distinguished alumni community service.

"I was fortunate that I was very active at Georgia College when I was an undergraduate. My life was on campus," Howard said. "I was also fortunate that former GCSU President Dr. Edwin Speir Jr. and Vice President of Student Life Dr. Kurt Hofmann identified me as a potential candidate for the field of student affairs."

"George College served as a springboard to change the trajectory of my family," he said. "It was the impetus and conduit that transformed the expectation that prior to me, we were hoping that everyone graduated high school. Now, it's the expectation that everyone graduates from college."

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When people understand and accept who they are—and are true and authentic to themselves—it's the greatest gift they can give to the world.

- Dr. Cedric Howard

Howard feels obligated to give back to his alma mater. He does so in recognition of the lessons he learned, the sense of belonging he felt and connection he continues to enjoy with Georgia College. So, Howard offers a scholarship dedicated to Georgia College students who are in financial need.

He feels fortunate that all his cousins will have college degrees, because the family made a conscious effort to fund them.

"I've tried to duplicate this effort at Georgia College," Howard said. "That really speaks to our commitment to social justice by using a social-equity lens to address the needs of our students."

Howard credits GCSU's psychology program with building his resiliency and teaching him how to have grit. This challenged him to be a good leader and the best version of himself. Resiliency and grit are traits he practices in his career day-in, day-out.

"I developed these concepts at Georgia College," he said. "I use obstacles in my life as the ability for me to see farther and higher. I learned this trait when dealing with Dr. Greg Jarvie, who taught abnormal psychology."

Howard earned an 89.40 in his abnormal psychology class, earning him a B. He pleaded his case to Jarvie to get an A.

"I'll give you an A, if you think you deserve it," Jarvie said. "Just remember, the grade doesn't define you, the knowledge is the same. If you want an A, I'll give it to you, but you earned a B."

"That experience transformed my way of thinking to value the things I've earned," Howard said. "It showed me I'm not just entitled to something, especially when I have fallen short of expectations. It was very clear that even if I had an 89.9, that does not necessarily mean that I met the expectations of receiving an A."

Dr. Jarvie helped develop Howard's moral integrity through this lesson.

"He showed me the importance of having a moral compass to set my course and having the guidepost to realize that expectation and entitlement shouldn't be something that's given to me just because I felt I deserved it, but to value the things I've earned," Howard said. "That conversation in abnormal psychology really changed me."

"When I think about GCSU's slogan—to think independently and lead creatively—it's embedded in everything I do," he said. "GCSU has helped me to think and live in a way where I serve as a conduit to transform other lives."

Through the years, he's felt that serving other students is the reward in his profession.

The most impactful student experience for him occurred in February 2000. He was the chief student affairs officer of a small liberal arts college and working on his doctoral degree.

The homecoming king and queen were in a longstanding relationship since high school. Shortly after the crowning on Saturday night, there was a conflict, and they separated. The following Tuesday, the queen invited the king to her car to get his things. When he began to retrieve them, she pulled a gun on him and shot him three times.

"He had enough energy to run into my office," Howard said. "And, she ran behind him with the gun. She saw me and threw the gun down. We were able to save his life. This is when I realized the importance of being relevant and active in each student's life."

The trial took place about a year later. When she was asked what her intent was?

She said she was going to end his life. Then, she was asked, why didn't it occur?

"I saw Dean Howard, and the disappointment in his eyes," she said. "So, I threw down the gun and realized I had made a significant mistake."

"That incident spoke to me of my ability and the privilege I have to affect the lives of our students in a positive manner," Howard said. "Fast forward to 2009. He forgave her. They got married, and the couple named their firstborn Cedric. I've kept in touch with them over the years, and they are happily married."

The traumatic experience helped Howard realize anyone can make a decision that affects their



Dr. Cedric Howard mixes with students in the classroom.

entire life. This, in part, is why he developed the restorative sanctioning process for student conduct where students are held to a level of accountability.

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We're in the business of developing individuals to represent us, not just as students, but as global citizens who are doing good.

- Dr. Cedric Howard

"We're in the business of developing individuals to represent us, not just as students, but as global citizens who are doing good," he said.

Howard feels honored to be named as one of the "Top 10 Inspiring People in Education" by CIO Views Magazine. He was one of hundreds of nominees for this award. He credits his mentors for shaping his trajectory. One, Dr. Paul Jahr, former housing director and assistant vice president for Student Affairs, taught him the greatest struggle you must overcome in life is the one within yourself. "This helped me realize that I could be successful," Howard said. "These conversations were very developmental and have had long-lasting effects within my life."

Now, Howard has those discussions with students to give them hope for their success.

In September, he spoke at a fall banquet for the Ronald McNair Scholars Program. To qualify for that program, applicants must be first-generation college students and come from a low-income family. Several scholars were inspired by his remarks and spoke to Howard after the program.

"You own your truth," one student said. "You own that you came from a home in the housing projects in Macon, Georgia. You own that college was difficult for you. You own that you didn't feel you belonged in college, but you had mentors who got you through it."

"When I see this next generation owning their truth, that's inspiring to me," Howard said. "It gives me courage that what we're doing is beneficial."

"You can't use a national survey or focus group to really get that feeling," he said. "When people understand and accept who they are—and are true and authentic to themselves—it's the greatest gift they can give to the world."



Alumna gains worldly wisdom from prestigious fellowship in Germany

Communication, Department of : Wednesday October 12, 2022

Jenna Byrd, '22, was recently awarded a prestigious fellowship to Germany. The mass communication graduate is one of 75 Americans selected to study and work in Germany, August 2022 through June 2023, as part of the Congress-Bundestag Youth Exchange (CBYX) for Young Professionals program. Approximately 450 young professionals competed for the opportunity.

"I wanted to live in the country and experience things firsthand," Byrd said. "I've taken German language courses but never got to practice outside of class. So, my skills were falling short. I knew I wanted to catch up."

To compete for the fellowship, she participated in several mock and official interviews, had letters of recommendation written, completed a lengthy application and more.



Jenna Byrd

So far, Byrd and her U.S. cohort have traveled to many countries bordering Germany for pleasure and to look into their relationship with their temporary home.

She discovered an "understood boundary" that exists between people in Germany.

"This is not a thing in America," Byrd said. "Here, people keep to themselves, but they are so bright and kind that getting to know them is incredibly worthwhile."

She also learned that communication is key, especially with her host families.

"Like in all relationships, you have to talk about your differences, preferences and daily joys," Byrd said. "Living with hosts has encouraged me to do just that. Some days, it's nice to relax in my room and rest while listening to the rain. They understand that. Other days, I'm down to go out and have a ball. So far, this year has shown me I'm capable of being the communicator I know I can be."

Every day she's learning new things about herself and Germany, which have greatly impacted her.



Left to right: Jenna Byrd and her first host family: Greta, Hannes, Markus and Melanie Nimitz.

"When most of us leave college, we're stagnant; we're either in the process of finding a job, beginning a new routine or just figuring things out," Byrd said. "I knew I didn't want to find myself there. Instead, I took a massive leap, deciding to partake in all this. I'm happier than I imagine I'd be elsewhere."

Byrd and fellow students began their studies at a language school, known as a "sprachschule," in one of three cities. She's was placed in Köln (Cologne). Now that the two months at the sprachschule are over, students have moved to permanent placement cities. Byrd is placed in Berlin along with some fellowship recipients. Others are placed throughout the country and will remain in their permanent placement for the university and internship phases of their time abroad.

The biggest thing she's learned from this experience is adaptability—something she can apply in her career fields of advertising and public relations.

"I've always been a very schedule-oriented person, so learning to take each day as it comes has been difficult," Byrd said. "The 'real world' cannot be planned ahead of time. Some days will take turns that weren't expected, and they could be the best couple of experiences you've ever had."

She plans to bring this mindset with her into her next professional space, because it allows her to trust those around her. Having faith that things will work out is key.

Byrd learned how different countries advertise in various ways. This also reinforced how important it is to be flexible in her chosen profession.



Jenna Byrd and host mom, Christine Zwemke stand in front of Brandenburger Tor in Berlin.



The Berlin Cathedral was one of many sites Jenna Byrd visited.

"In the field of communication, everyone is always looking for the next popular thing," she said. "I've found out that Germans are still massive fans of postcards,

and they even use them for advertising. I was shocked. You never know what fad will come up next. It's important to be able to swim through the waves, both professionally and personally."

Byrd also learned that to lead a fulfilling life, one must branch out and work with people who are different than oneself.

"You must become worldly," Byrd said. "Stepping out of your comfort zone is where all of your growth will stem from."

She's educating herself and those around her to embrace others and not stand divided by skin color, religion, sexual identity, gender, class, etc.

"I've always stood for that," Byrd said. "This 11-month adventure has shown me far more about acceptance and the celebration of our differences."

For fun, she attended Oktoberfest in Munich, Bavaria, which she deemed "incredible."

She also toured the Cologne Chocolate Museum known as "Schokoladenmuseum Köln," where she had her favorite German food or Soufflé Noisette—a warm, chocolate tartlet with a soft center served with caramelized walnuts and white chocolate ice cream.

"This was easily the best dessert of my life," Byrd said. "It was perfect. Europe is known for its chocolatier history. The dish and visit were nothing short of amazing."

Byrd has especially enjoyed getting to know her cohort mates.

I want the type of relationships that last a lifetime, ones with people who I can continue creating memories with. The love I have for this country, its citizens and expatriates will not leave once I get on the plane home. A piece of me will always be here.

- Jenna Byrd

"We are all so spectacularly different and wonderful," she said. "Each day, we have new stories to share with each other about our adventures throughout the country. I'll miss them dearly as we continue onto to the next few phases." Byrd stayed with the Nimtz family in Köln. The family consists of a mother, Melanie; father, Markus; two sons—Hannes and Jasper; and daughter, Greta. Byrd's room was decorated with artwork and bookcases lining the wall.

Now, she has moved to Berlin to live with her new host mother, Christine Zwemke, who has two sons—Ilias and Niels. Both live in Berlin, as well. Byrd and Zwemke have since begun exploring the city and getting to know one another. Bryd feels incredibly welcomed and right at home.

Before she leaves Germany next summer, she wants to have a network of personal and professional connections established. Although this is expected of her as a diplomat for cultural exchange, she intends to push herself even further with it.

"I want the type of relationships that last a lifetime, ones with people who I can continue creating memories with," Byrd said. "The love I have for this country, its citizens and expatriates will not leave once I get on the plane home. A piece of me will always be here."

Learn more about this year's cohort in the CBYX for Young Professionals program.



'Choral Day' turns singers into believers—some attendees choose Georgia College

Music, Department of : Wednesday October 12, 2022

Paul McCartney once said: "I love to hear a choir. I love the humanity ... to see the faces of real people devoting themselves to a piece of music. I like the teamwork. It makes me feel optimistic about the human race when I see them cooperating like that."

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This performance was quite successful.

- Dr. Jennifer Flory

That about sums up what Georgia College & State University's annual "High School Choral Day" is all about: fellowship, collaboration, good music—and a little recruitment too.

"It started off as an effort to get high school singers on campus and, hopefully, recruit some music majors, minors and ensemble members. We continue it for that same reason," said Dr. Jennifer Flory, director of Choral Activities.

"This performance was quite successful," she said. "I felt super afterwards. I don't always feel this way if we haven't progressed much. This year was great."



Sophomore Riley Greer leads high school students in a game.

Georgia College has hosted Choral Day nearly every fall since 2006. In that time, about 93 high schools have joined in with nearly 1,200 high schoolers experiencing what it's like to be on campus and sing in a college choir.

High schoolers are exposed to songs in advance, then they practice alongside college students only a few times before performing.

The day begins with ice breakers. Several rehearsals are interspersed with games, college information sessions, lunch in the dining hall and a campus tour. There is also a "masterclass," allowing high school students a chance to sing solo and work with voice faculty. The performance was held at First Baptist Church.

"It gives high school students a chance to perform music that each high school might not be able to perform on their own," Flory said. "We've had several students attend High School Choral Day, apply to GCSU, be accepted and enroll—some as music majors, some not."

Of five high schools that attended, four choral directors were Georgia College alumni. They were Joel Singleton from Eastside High School in Covington, Georgia;

Greta Thomas of Jackson High School in Jackson, Georgia; Jeremy Rooks from Upson-Lee High School in Thomaston, Georgia; and Aston Bryant from Valdosta High School in Valdosta. Students from Northside High School in Houston County were also present.

Students of former students are like grandkids to Flory. She enjoys seeing alumni choral directors in their role as teachers.

Singleton graduated from Georgia College in 2000 with a music education degree. He's been the choral director at Eastside High School for 16 years. He brings students nearly every year to Georgia College's Choral Day to meet new people, experience "a different sort of freedom" on a college campus and be exposed to rehearsal techniques of a new director.



Students from Eastside High School with their choir director, Joel Singleton, top right.

His high school students were nervous going in but felt proficient by afternoon.

"The music was tough and the rehearsal full of quick and busy information," Singleton said, "so they felt accomplished, as a result."

"Students take away several things: The opportunity to do something new and the opportunity to rehearse with a college director and other college-aged singers," he said. "They get to experience music with other high school kids that share common interests and vocal abilities. And the voice master class offers them the chance to see music in a different arena from just choral singing. I like to come to provide students with something new."

For the 20 members of Georgia College's Max Noah Singers, High School Choral Day is also a chance to mentor younger students and tell them about college.

Senior music education major Allison Ryder of Jackson guided students from her old high school in Jackson. She recalled coming to Choral Day as a high school student in 2018—how nervous she was in the beginning but how welcomed she felt at Georgia College. It was the best musical experience she had that year.

It was nice to reciprocate that feeling for other Jackson students.

One song in the repertoire was especially difficult, "Cindy" by Mack Wilberg. It uses two choirs and includes hollering, whoops, stomping and clapping. It was Ryder's



Senior Allison Ryder sings during opera scenes.

favorite song that day, and she enjoyed sharing the experience with high schoolers.

... I had the time of my life and knew immediately that this was what I wanted to do in college and for my career.

- Riley Greer

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Sophomore music education major Riley Greer attended two Choral Days in 2018 and 2019 as a student from Upson-Lee High School. She was "embarrassingly nervous" during her first, because she felt it necessary to impress the college kids.

"As soon as I walked in, everyone was so welcoming and kind," Greer said. "The college students

were very active in helping us with sections that were tricky. It was very humbling, but I had the time of my life and knew immediately that this was what I wanted to do in college and for my career."

Greer led her former high school at Choral Day too. She had conversations with prospective students, encouraging them to attend Georgia College.

It was gratifying for both Ryder and Greer to switch roles and play mentor. Rehearsing and performance in one day is overwhelming—and they were happy to ensure the same positive experience for others.



Greer helps with the soprano-alto sectional.

"I really wanted to help give the

high schoolers a life-changing experience," Ryder said, "and singing this piece, 'Cindy,' was something that many of them may never have the chance to do again."

"Learning new songs on the day of performance is very tricky," she said, "but the high schoolers were prepared and focused. We accomplished a lot. They put in the effort, and they did their best."

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I really wanted to help give the high schoolers a life-changing experience. - Allison Ryder



A Night Under the Stars Gala and Alumni Awards Dinner are highlights of fun-filled Alumni Weekend

Alumni : Wednesday October 12, 2022

Georgia College & State University's (GCSU) Alumni Weekend is Friday, Nov. 4 and Saturday, Nov. 5. From the 4th annual "A Night Under the Stars" Gala, providing top-notch entertainment to the Alumni Awards Dinner, you'll enjoy catching up with fellow alumni.

Two GCSU alumni have their hearts set on Alumni Weekend. The experience is priceless.

"Most alumni, like myself, enjoy any opportunity to come back to campus, but doing so on Alumni Weekend gives us a unique opportunity to interact with a wider variety of alumni from across the decades, as well as to see favorite faculty and staff—all in a couple days," said Zach Mullins, '11, president, Alumni Association Board of Directors.

"Every year, I make a point to come stay with a former faculty member/dear friend and to take in the festivities together—for a weekend of reunion fun on many levels," said Patti Zimmermann, '78, chair of the Scholarship Committee of the Alumni Association Board of Directors, which distributes \$650,000 annually in scholarships. "Encourage others to create such Alumni Weekend traditions!" Check-in is Nov. 4 from 3 p.m. until 6 p.m. at the Depot, the new home of University Advancement, located at 610 W Greene St., Milledgeville, Georgia, or at noon, Saturday, Nov. 5, at the All Classes Picnic, held on the Russell Library patio.

Friday, Nov. 4 events:

- The Peabody Reunion Luncheon is from noon until 1:30 p.m. in the Peabody Auditorium. Have an enlightening time with fellow graduates from Peabody Lab School, Elementary and High School.
- The 4th annual "A Night Under the Stars: Bridging the Gap" Gala will be held from 6:30 p.m. until 9 p.m. in Magnolia Ballroom. You'll be entertained by the talents and performances of GCSU alumni and friends. In addition, GCSU will showcase scholarship recipients of three African-American Alumni Council (AAAC) scholarships and honor recipients of the Keepers of the Promise and Trailblazer Dove Awards.

"We come together to celebrate and honor the many pioneers who have paved the way for countless students who have pursued a lifetime dream of educational attainment at Georgia College," said Debra Minor, president, AAAC. "A Night Under



Zach Mullins



Patti Zimmermann

the Stars" is also a time for our alumni—both old and new: Colonials and Bobcats to come together in fellowship, learn more about each other and celebrate the talents of fellow alumni and undergraduates with live performances."



Peabody alumnae share past stories.

Saturday, Nov. 5 events:

- The Honors College will host an Honors Alumni Drop-in at the Humber-White House from 10 a.m. until noon.
- The All Classes Picnic will be held from noon to 1:30 p.m. on the Russell Library patio. Connect with fellow alums while you eat BBQ, play games, do crafts and more! This family-friendly event is a great way for alums and their families to participate in Alumni Weekend.
- The Creative Writing Program will hold its 20th Anniversary Reunion from 1:30 p.m. to 3:30 p.m. in the Ina Dillard Russell Library.

Come, celebrate the 20th Anniversary of GCSU's Creative Writing (MFA) Program. You'll visit with fellow creative writing alumni, current and former faculty and enjoy readings by Martin "Marty" Lammon and other special guests.

 The Alumni Awards Dinner is the pinnacle event of the weekend. Join GCSU's Alumni Association in the Magnolia Ballroom from 6:30 p.m. until 9 p.m.to honor the exceptional achievements of fellow alumni Major General Thomas F. Grabowski, '90, Dr. Marcia Perry, '61, Pamela Booker, '97, Amy Tanner Raburn, '96, Javier Becerra, '12, as well as Glenn Waddell and Max Crook who will receive the William Bone Golden Key Award and the Honorary Alumnus Award, respectively.

Plan ahead for these fun-filled activities to make new friends.<u>Register</u>by Oct. 26 for Alumni Weekend!

News Stories Posted Tuesday October 18, 2022



Conference performances offer opportunity to collaborate, build confidence and grow

Music, Department of : Tuesday October 18, 2022

Georgia College & State University students are creating unique music and sharing it with the world.

Student chamber ensemble, the Imposter Trio, and saxophonist Savannah McDowell represented Georgia College in performances at <u>the American Single</u> <u>Reed Summit (ASRS)</u> this month in Columbia, South Carolina.

The American Single Reed Summit is a national conference focusing on clarinet and saxophone. The summit brings professional and student musicians together to develop connections between performers that result in meaningful musical experiences for current and future generations.

The summit also focuses, in part, on pedagogy and scholarship. McDowell is a first-year student working simultaneously toward bachelor's and master's degrees

in music education. She performed in a saxophone masterclass during the conference.

Georgia College Saxophone Professor Andrew J. Allen said it's unique to have a freshman performer presenting at a national conference. The chance to collaborate with and learn from fellow musicians can have a lasting impact.



Saxophonist Savannah McDowell rehearses in Porter Hall.

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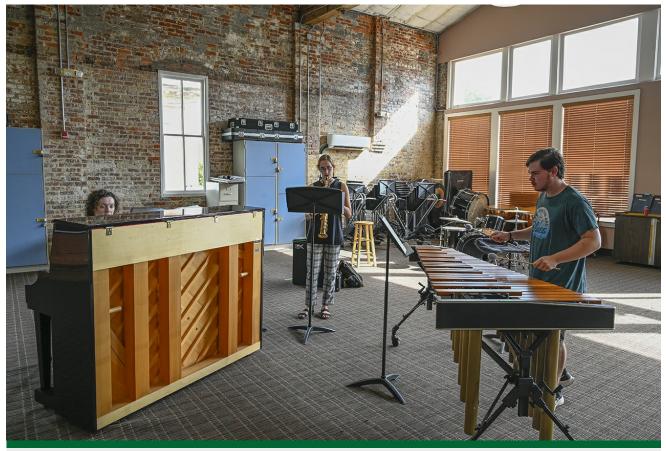
We have the opportunity to go out and show composers and educators that this instrumentation works, this ensemble works, these colors work together and we should write for it more.

- Mary Mead

Senior music major Mary Mead is the reed player in the Imposter Trio, a chamber ensemble featuring saxophone, piano and percussion. The Imposter Trio's instrumentation offers audiences a new sound palette. But that novelty results in the challenge of finding appropriate music to feature that tonal blend.

"An ensemble with unique instrumentation like ours doesn't have the benefit of hundreds of years of repertoire already written for it," she said. "We have the opportunity to go out and show composers and educators that this instrumentation works, this ensemble works, these colors work together and we should write for it more. That's really exciting for me."

The trio selected composer Jason Rebello's "Integration" as one of the pieces for their conference performance. Mead said it showcases the ensemble's dynamisms, offering each performer feature opportunities and the chance to slide back and support the others. But the real deciding factor was that it's one of the few pieces arranged expressly for their instrumentation.



The Imposter Trio--pianist Ellie Deener, saxophonist Mary Mead and percussionist Jacob Hammock rehearses Jason Rebello's "Integration" before traveling to Columbia, South Carolina for the American Single Reed Summit.

Senior percussionist Jacob Hammock said he hopes the ASRS performance opens doors for the Imposter Trio, helping members meet like-minded musicians who can help them achieve their vision for the ensemble.

"Going to these conferences and performing gives us the opportunity to network with other performers who may like what we're doing and would want to work with us and give us support," Hammock said. "So, I think it's a great opportunity, not only just for us and other performers who seek this instrumentation, but for composers as well, to seek a new field—a new area that hasn't been discovered yet."

Senior pianist Ellie Deener said she hoped the chance to perform for, and receive feedback from, peers and potential collaborators helps address the imposter syndrome implied in the ensemble's name.

"Once we get past the challenge of finding what we want to play, it is very, very exciting to just get to play and hear how these sounds mesh together, how we can build off of each other and make really beautiful music," Deener said.

Organizers of the American Single Reed Summit selected the Imposter Trio to perform during their 2022 conference in Columbia, South Carolina. You can hear

the trio perform during the Department of Music's Chamber Ensembles Fall Concert at 7:30 p.m., Nov. 7 in Max Noah Recital Hall.

For information about majoring in music at Georgia College & State University, visit the Department of Music's website.

News Stories Posted Monday October 24, 2022



Students' original mRNA research could help stop cancer

Biology & Environmental Sciences, Department of: Monday October 24, 2022

Imagine a complex system of gears—each wheel turning with interlocking teeth. Throw in a wrench, and everything stops.

Dr. Arnab Sengupta, an assistant professor of cell and molecular<u>biology</u>, mulls over that scenario every day.

Only, in his case, the wheels are cells and the wrench, stress.

If Sengupta and his team of undergraduate researchers can learn enough about cells and what causes them to shut down or keep producing, they could someday help stop cancer.

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Think of a tumor, an unregulated growth of cells. Your normal genes are not functioning, but your cancer genes are in overdrive. They're thriving in those conditions and, despite the stress, they're just blocking all the signals to stop growing, until a tumor forms and spreads.

- Dr. Arnab Sengupta

"From a cell's perspective, stress is lack of food, lack of oxygen, acidity, lack of water molecules," Sengupta said. "Food—small bits of what we eat—enter the cell. Cells need all kinds of nutrients and proteins to function."

"Stress for a cell is basically anything that signals its resources are now going to be limited. It can no longer do everything it's doing. In this condition, most cells shut down nonessential functions. Not cancer," he said. "Under those conditions, cancer genes still function. Think of a tumor, an unregulated growth of cells. Your normal genes are not functioning, but your cancer genes are in overdrive. They're thriving in those conditions and, despite the stress, they're just blocking all the signals to stop growing, until a tumor forms and spreads."

Cancer is a complex disease, not something any one scientist or lab can conquer. But Sengupta leans on his expertise in ribosome function to lead students in answering one particular aspect of the puzzle: how cells switch on or off.

When Sengupta started at Georgia College & State University in January 2022, it was his first faculty position. He interned at biotech companies after earning a

biotechnology degree from Amity University in New Delhi, India. Then, Sengupta moved towards science, getting a Ph.D. in biotechnology at the University of Alabama in Huntsville and postdoctoral training at the University of North Carolina at Chapel Hill and North Carolina State University in research and teaching.



Dr. Arnab Sengupta instructs Alexandra Furney in the mRNA lab at the Integrated Science Complex.

Sengupta was drawn to Georgia College because of its new

<u>Integrated Science Complex</u> and the beauty of a public liberal arts education where undergraduate research is valued, and he could continue to explore topics that interest him, like mRNA (messenger ribonucleic acid).

Some cancer genes are switched on or off at the stage when genetic information in mRNA is read to make proteins. In stressful conditions, cancer genes defy orders to stop functioning. They act as rebels—ignoring environmental triggers.

This is something we know little about.

This research could have a big impact. That is what drives me.

- Dr. Sengupta

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If researchers understood how some mRNAs are controlled under stress, they could someday turn off cancer-causing genes and turn on cancer-fighting genes.

"I'm interested in a couple of these mRNAs that, under stressful conditions, still want to translate into proteins. They are the ones that tend to enable cancers," Sengupta said. "My fascination centers on how the mRNA is doing it, not cancer genes in particular. This research could have a big impact. That is what drives me."

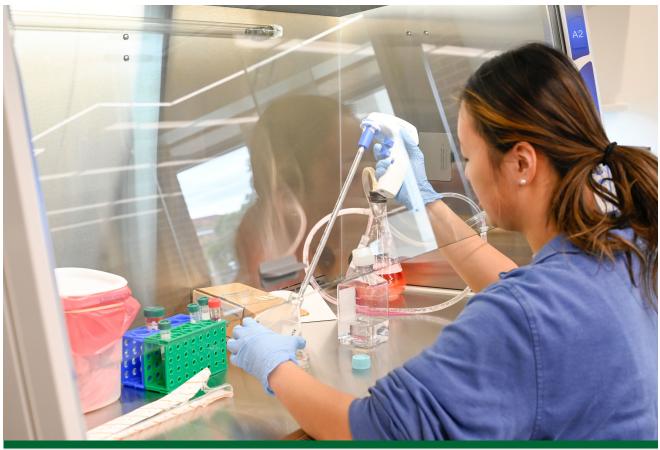
He thinks the answer may lie in the way mRNA folds upon itself.

DNA (deoxyribonucleic acid) has two long strands, arranged like a twisted ladder, which support its structure. RNA has one strand and folds upon itself. Because of this, it can adopt a variety of shapes.

"At this point, I just want to know how they're doing it!" he said, excitedly. "How are you defying these orders when you're being told not to make proteins? How are you still going on and figuring out a way to do that? How are you defying the instructions? That is fascinating to me."

Sengupta recruited four students in his lab to help unravel the mystery.

Their goal is to map folding patterns of certain mRNAs and build a structural model. To do this, they first extract RNA in test tubes. They'll compare those results to live-functioning cellular RNA and, finally, to cellular RNA under stress.



Senior Jin Yeong Kim uses a biosafety cabinet to work on cell cultures.

Each student in Sengupta's lab is tasked with researching a different gene related to cancer.

Jin Yeong Kim of Milledgeville is a senior biology major with a<u>pre-med</u> concentration and minor in philosophy. It's her job to study p53, a tumor-suppressor gene. She's trying to understand how mRNA is read to make the p53 protein.

Helping p53 work more efficiently could be one way to combat cancer.

There's a lot of troubleshooting involved. All research is important because it gives you one less possibility. Sometimes the results are not what we're expecting, but Dr. Sengupta's great. This research is so above my level as an undergraduate student. It's Ph.D. level, but he's able to explain it in a way I truly understand, which makes the work more engaging and interesting. - Senior Jin Yeong Kim

It's important work.

"There's a lot of troubleshooting involved. All research is important because it gives you one less possibility," Kim said. "Sometimes the results are not what we're expecting, but Dr. Sengupta's great. This research is so above my level as an undergraduate student. It's Ph.D. level, but he's able to explain it in a way I truly understand, which makes the work more engaging and interesting."

Kim also maintains cell cultures in a biosafety cabinet for Sengupta's lab. She grows human lung carcinoma cells for this research. To be put in charge of cell cultures was a little "nerve wracking" at first, she said. But her confidence grew as she daily washed and suspended, then cleaned cells again. To an outsider, it looks like a lot of sudsy-looking pink liquid swooshing through tubes.

Other students work with mRNAs that continue making proteins under stress.

Junior biology major Alexandra Furney of Johns Creek, Georgia, is getting a minor in Spanish. Last summer, she earned a Mentored Undergraduate **Research and Creative** Endeavors (MURACE) grant to work on a gene called Hypoxia-Inducible Factor (HIF)-1a.

Junior Alexandra Furney works with the HIF-1a gene.

Under stressful low-oxygen levels, HIF-1a doesn't shut down. It's triggered to make more protein.

Furney had never done scientific research before, but Sengupta's easy explanations in genetics class helped her catch on guickly. Originally a political science major, Furney switched to biology to pursue veterinarian school. Working



with cells and molecules was a complete turnaround.

Now, Furney wants to stay in research.

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It definitely shaped the direction I'm going in. I really like the lab setting and contributing to something bigger.

- Junior Alexandra Furney

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She follows daily protocols, squirting cells into test tubes, running experiments through a machine to get data and, depending on results, deciding what to do next. Furney is preparing to do the same experiments with actual cancer cells.

Like p53, HIF-1a is activated in cancer cells. Understanding how low-oxygen stress triggers HIF-1a to activate could help the team better understand how cancer develops.

"It's a little technical," Furney said, "but the general gist is we're trying to build a model of the structure and, if we have the model, then we can see how it works, and that can be applied to the bigger picture."

"The first big step in what we do is figuring out conditions that are going to work for the rest of our experiment," she said. "It takes a lot-depending on temperature, how many cycles it runs, the amounts we add to the test tubes-then we go back and try to find a process that gives the best results."



Junior Brittany Benner examines DNA, using a gel.

HIF-1a gene is involved with important, everyday body processes, like creating new blood vessels. It provides tumors with an adequate supply of blood. Figuring out a way to cut off that supply could help combat cancer.

"It feels good working on a project like this," Furney said. "Even a little progress is a big victory. Science is about building knowledge. So, even though it

might seem insignificant, our work may help another scientist somewhere else to

build upon their work. It feels good contributing to all of that."

Another student in Sengupta's lab, junior Brittany Benner of Albany, Georgia, is a biology major with a pre-med concentration. Her piece of the research is studying an mRNA gene called FGF2 (fibroblast growth factor 2)—which is essential for all cells to grow.

Cancer cells use this gene to stimulate tumor formation and reproduce.

To understand how FGF2 works, Benner first looks at DNA, using a gel. Later, she'll see how it works in different stress conditions.

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If my gene were to get out of whack at some point in the body, it could continue to grow and cause a tumor and also provide blood vessels. It grows blood vessels. Hopefully, if we can figure out more, we can better describe that type of cancer.

- Junior Brittany Brenner

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"If my gene were to get out of whack at some point in the body," Benner said, "it could continue to grow and cause a tumor and also provide blood vessels. It grows blood vessels. Hopefully, if we can figure out more, we can better describe that type of cancer."

"It's very interesting to work in this lab and do such high-level stuff," she said. "It's really neat to be trusted with this type of work."

Benner's confidence has grown enormously since joining Sengupta's lab. At first, she didn't know where things were kept or what to do. Now, she comes in during free time and works on her own.

The experience will help when Benner applies to medical school. It'll show she can work independently and be trusted with important tasks.

Sengupta enjoys this aspect of teaching—sharing his research and giving students what they need to succeed.

Since arriving at Georgia College, he's been amazed at the level of assistance from multiple department colleagues and university officials. Dr. Jordan Cofer, associate provost of Transformative Learning Experiences, used MURACE funds to support Furney's summer research. Support from <u>GC Journeys</u> helped secure basic and cutting-edge lab equipment.

Currently, the team sends gene samples to the University of Georgia for "nextgeneration sequencing," which determines the building blocks of DNA and RNA. To ensure high-quality samples are sent from Georgia College, the university secured funding for Sengupta to purchase an Agilent TapeStation which tests purity through the movement of charged particles. Students in Sengupta's lab courses for Genetics and Molecular BioTechniques are also trained to operate the TapeStation.



Furney works at the newly-purchased Agilent TapeStation.

Few universities have a TapeStation. It's something mostly seen at large research schools.

When Sengupta tells associates at research-intensive universities what his students are doing—and the kind of equipment they're working with—his friends are "flabbergasted."

Someday, Sengupta would like Georgia College students to do their own next-generation sequencing.

He applied for a \$500,000, three-year research grant from the National Science Foundation (NSF) that includes funding for a sequencer.

If you can spark a curiosity in their minds about pursuing research, then that changes their direction. You've opened a door for them. That's what I like to do. - Dr. Sengupta

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He doesn't believe in dreaming small.

"To be able to analyze molecules and prepare samples all the way through inhouse next-generation sequencing—would speak volumes to their ability and open doors for students in higher studies and biotech industry careers," he said.

As undergraduates, Sengupta's students are at levels of research seen in graduate school.

It's complex work and takes a lot of self-motivation. Undergraduates might go a little slower at first, but they're moving quickly now and doing as well as any student earning a master's degree.

"What's motivating them to come? They have a choice," Sengupta said. "They keep doing this because, they are driven by curiosity. That's only possible if you're pursuing a meaningful project." "If you can spark a curiosity in their minds about pursuing research, then that changes their direction. You've opened a door for them" he said. "That's what I like to do."

News Stories Posted Tuesday October 25, 2022



International graduate student betters his English skills around campus

International Education Center : Tuesday October 25, 2022

Graduate student Abbas Fares of Lübbecke, Germany, who's originally from Lebanon, is pursuing his dream to teach English and physical education at a vocational college. While here, he's making connections and working on his vocabulary.

Before coming to Georgia College & State University (GCSU), Fares got a taste of America on a visit with his aunt in New York City. Because of the pandemic and online courses, he felt that his English skills had been floundering. So, that's when he decided to perfect his English language skills by studying in the U.S.

"I was like, 'Okay, I've got to sign up for an exchange program in the United States," he said.

Fares found Georgia College through a German exchange program.

After this fall semester, he'll go back to Germany next semester to continue studying teaching and will graduate in summer 2023. For now, though, he's enjoying the diversity of people and activities in America. He especially enjoys being a member of Georgia College's International Club.

"It's all about diversity, inclusivity and getting everyone together that feeling of being one even though we are different," Fares said.

He's adjusting to his newer surroundings, thanks to support from the International Education Center staff. He also found mentors in Omar Odeh, associate vice president for Strategic



Abbas Fares

Communications and James Goforth, his Connection program father in Milledgeville. Goforth made Fares feel at home and opened many doors for him.

"I'm thankful for Jason Wynn, who was responsible since day one for my Visa and everything I needed to come to the U.S.," Fares said. "I'm also grateful to Susie Ramage who connected me with people, like Omar Odeh."

"I felt that connection of home, because of Omar and his Arabic family," he said. "They had me over to their house twice. It was nice getting to know his family. Omar's a very authentic man. We have so many similarities."

I want to be a role model for students of the English language. So, my competence has to be at the top level. I'm excited about preparing students for their future.

- Abbas Fares

who speaks German and worked in Germany for two years.

"He knows most of the professors at my university in Germany," Fares said. "Dr. Callender is easy to talk to. He's the whole package—an intellectual, sophisticated and authentic person."

Fares' favorite subject is his education class.



Abbas Fares with the German flag (left) and the Lebanon flag.

"I enjoy learning about the American education system," Fares said. "I can compare the American education system to see if I can take that knowledge and transfer to the German way of teaching," Fares said. "This should help me reach my goals that I want to achieve in my future classroom."

Fares likes to travel. He recalls driving with his family through many countries, visiting family in Lebanon, including Austria, Hungary, Slovenia, Italy, Greece, Turkey, Syria, Lebanon, Serbia, Croatia, Spain, the Netherlands and Belgium.

Soon, he'll venture to Colorado and Texas with German friends he met through GCSU's Connection program.

After the semester ends, he'll head back to New York City to see his aunt again and experience American culture during the holiday season. Fares returns to Germany in late December to continue working towards his dream of becoming an English teacher.

"I want to be a role model for students of the English language," he said. "So, my competence has to be at the top level. "I'm excited about preparing students for their future."

News Stories Posted Thursday October 27, 2022



Fight against blight: GCSU continues effort to make county homes safe

Center for Health & Social Issues: Thursday October 27, 2022

Story and photos developed by University Communications.

At a meeting on what concerns residents—a gentleman from Oconee Heights, Milledgeville, once asked Dr. Damian Francis if he'd be like all the others—doing one thing to help the community, then disappearing.

"I said, 'No, we're here for the long haul.' That was 2½ years ago, and we're still here. We're showing some benefit now, and residents are really appreciative," said Francis, an epidemiologist and director of Georgia College & State University's <u>Center for Health & Social Issues</u>(CHSI).

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health, and people take us seriously. The county takes us seriously. The county knows we're not just here to cast blame and say the government is not doing enough. When it really matters, we'll put our money where our mouth is. We'll put our hands and our feet on the ground to make this work.

- Dr. Damian Francis



Dr. Damian Francis.

Francis moved to Georgia from Jamaica in 2018, when his wife got a nursing job in Dublin. Previously, he taught at the University of West Indies in Jamaica and did sickle cell research at the <u>Caribbean Institute for Health Research</u>. In between jobs in the United States, he consulted for the World Health Organization.

When a job opened in public health at Georgia College, Francis applied. He didn't want to be a "cookie-cutter" professor. So, he took a <u>Center for Teaching &</u> <u>Learning</u> workshop with Dr. Cynthia Alby to become transformative when teaching.

One way to engage students, he learned, is to involve them in research. Francis' interest is helping people live healthier lives—especially those in low income areas who are known to have higher rates of heart disease, hypertension and diabetes. He wanted to get students involved in health outreach.

To do that, he had them conduct a survey to learn what quality-of-life issues concern Baldwin County residents most.



Alternate Text

It wasn't health.

It was blight-dysfunctional housing and property.

"During our assessment," Francis said, "we found the needs that residents wanted addressed were things like housing, crime and physical infrastructure in their community."

"It goes back to Maslow's hierarchy of needs," he said. "If your house is leaking and you can't sleep comfortably during the rainy period, that's going to be more important to you than managing your blood pressure, which you cannot see. People prioritize these needs, because if I can't sleep well at night,

that's going to affect my blood pressure. If my house is falling apart, that's going to affect my blood pressure. Without money to fix it, that's real stress."

Residents in the Coopers neighborhood in southwest Baldwin County, the Hardwick neighborhood around Central State Hospital and Oconee Heights neighborhood just south of downtown Milledgeville all identified damaged housing as a top concern.

In 2020—prior to the COVID-19 lockdowns—a public health student started assessing the problem in Oconee Heights. Kaitlin Gauthier was a senior at the time. She went door-to-door to map and assess more than 100 houses, checking for things like fire damage, sunken roofs, foundational cracks and fallen trees.



Kaitlin Gauthier with Dr. Francis in front of a blighted property in 2020.

Gauthier helped Francis write a grant application to fund the housing infrastructure assessment. She collaborated with <u>Geography</u> Professor Dr. Doug Oetter to use Geographic Information System (GIS) to create, analyze and map data. Later, another public health student, Kristina Taylor, helped present those findings to county officials in 2021.

Results showed nearly two-thirds

some level of blight.

At least one-third were deemed uninhabitable.

"One of the amazing things was—quite a bit of houses deemed unlivable by the survey were still occupied," Francis said. "That represents a public health hazard."

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This was a really big success story for the university, the county and residents. - Dr. Francis

Once county officials were onboard, the data students collected provided support for Baldwin County's designation as a Georgia Initiative for Community Housing community. Then, with letters of support from the university and organizations like Overview Inc. and Habitat for Humanity, the county applied for and was awarded a \$400,000 federal Community HOME Investment Program (CHIP) grant this summer.

The money will pay to rehabilitate up to eight blighted homes.

Francis is helping county officials select the first round of houses to fix. The elderly and disabled are being given priority. Work will begin at the end of the semester. Progress from this round of improvement can be cited when applying for more CHIP grants in the future.

It's Francis' hope that as many as 66 houses can be saved.

"This was a really big success story for the university, the county and residents," Francis said. "Some people live in houses where, every time it rains, they might as well be living outside. Clearly, some residents were ecstatic to hear the news."



Dr. Francis hands out surveys in 2020.

Still, there were setbacks.

Some dilapidated homes needed to be torn down. Demolition, excavation and removal costs anywhere from \$5,000 to \$10,000. When residents are experiencing

poverty or a catastrophe like a house fire that kind of money is hard to obtain.

The county provides funding for trucks to collect and remove debris. So, Francis used CHSI donations to help some residents "push down" houses that were beyond repair. Many only had to pay \$10 for the application to demolish.

Another "bottleneck" occurred when Francis realized many residents don't legally own their homes. Some families pass homes down through generations without updating title deeds. To help those residents, CHSI held a recent property title seminar in conjunction with Dr. Veronica Womack at Georgia College's <u>Rural</u> <u>Studies Institute</u> and Habitat for Humanity of Milledgeville Baldwin County.

An attorney and financial advisor were on hand to give free legal advice and answer residents' questions about deeds and inheriting property. Francis is looking into ways to help residents pay for title updates. With that done, they'll qualify for CHIP money to rehabilitate their homes.

"This was the entry point for getting deeds updated," Francis said. "To be helping people in such a concrete way-it just gives you this feeling of joy. It's one of our strategic goals to remove or mitigate some of the obstacles that keep people from living healthy lives, and housing is definitely part of that."

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If you asked me five years ago if this was something I saw myself doing, I would've said no. I was more focused on cardiovascular epidemiology. But I've found that addressing concerns raised by the community and the social determinants of health is how you get there.

- Dr. Francis

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