

ARCHBOLD MARCH 2023 NEWS for curious minds



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Sifting for Treasure



Iris Kennedy collecting data on *Eryngium cuneifolium* in a roadside habitat at Archbold.



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Archbold Biological Station Website When Iris Kennedy arrived in May 2022 for her Plant Ecology internship, she noticed the preponderance of rare plants growing along the sandy roads of Archbold. She wondered about the seed banks underground. Soon, Kennedy began sifting for treasure in the sugar-white sands for her independent research project. Her treasure is the seed of Wedgeleaf Button Snakeroot (*Eryngium cuneifolium*), an endangered scrub plant with fewer than 20 known populations on the southern Lake Wales Ridge. Archbold began collecting data in 1988 on 15 populations in Florida rosemary scrub and along sandy roads of the Station. Known for its persistent seed bank, this carrot family plant with wedge leaves and tiny greenish flowers sprouts best in bare sands after a disturbance, like fire or mowing. Populations decline over time as the surrounding scrub regenerates. Kennedy extracted 8 cm soil cores along transects in the road and rosemary habitats. After sifting almost 400 pounds of sand to remove all E. cuneifolium seeds, she discovered the road habitats contained significantly more seeds than the **rosemary ones.** While Florida Rosemary inhibits the surface growth of *E. cuneifolium* plants with <u>allelopathic</u> chemicals, there was no sign of rosemary inhibiting the presence of seeds. Kennedy found that an extinct population had no seeds remaining in the soil. Dr. Aaron David, Archbold Plant Ecology Director, said, "Iris's work links Archbold's long-term data with the hard-to-study, belowground seed ecology that allows us to appreciate the lifecycle of this rare, endangered plant more fully." Now, when Kennedy drives on Archbold's sandy roads, she understands the value of roadside open habitats as treasure troves for rare plant seeds. Watch her full seminar here.

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Archbold Press

"Archbold Biological Station is one of America's iconic centers of continuous research and education in field biology. It is a prototype of what we need all across America."

— Edward O. Wilson

Job Announcements

<u>Herpetology & Restoration</u> <u>Ecology Internship</u>

> Range Management Research Internship

Plant Ecology Research <u>Assistant</u>



Florida Black Bear image provided by the Archbold and UF/IFAS collaborative Corridor Observatory project.

In 2021, Archbold worked with our University of Florida (UF) colleagues to launch the Corridor Observatory project to bring new science to the

Florida Wildlife Corridor **campaign**. Funded by the Bellini Better World Foundation, this new project builds on earlier work by Dr. Raoul Boughton, a longtime collaborator in multiple Archbold programs. Archbold Predator-Prey Program Director Joe Guthrie says, "In the past year with our collaborators at UF, we deployed 135 camera traps and 107 autonomous sound recording units (ARU) at Archbold, Buck Island Ranch, and UF's DeLuca Preserve. We will analyze data from our multi-sensor network of remote cameras and ARUs with robust machine-learning processes. This big data approach to building multi-species datasets allows us to capture much more of the wildlife community than cameras alone could do. With those data, we can organize and understand interrelationships across our region of the Florida Wildlife Corridor. For example, how might an expanding Florida Panther population affect other carnivores and prey animals, like feral pigs? These questions matter to a wide swath of stakeholders in the Florida Wildlife Corridor. We can also use our media of animals living in the Corridor to engage public support for conserving private working lands." Follow Joe Guthrie's work with the Corridor **Observatory** here.

Postdoctoral Research Associate: Isotope Biogeochemistry

Public Events

April 6: 3:30 PM-4:00 PM

Stellar Human



Shefali Azad at photo left beside Alan Rivero and Lydia Landau during the Buck Island Ranch Fun Run. Photo by Mandy West.

Shefali Azad's decision to study Biotech Engineering as an undergraduate and Black Bears in South Carolina for a Wildlife Biology graduate degree project set her on a path destined for Archbold. After a series of short-term field jobs, she was ready to accept a longer-term position as Archbold's Assistant Data Manager in January 2018. She said, "My job is to organize all data from science staff to cattle operations into reports, long-term databases, online repositories, and real-time dashboards. Once we organize the data, they become available for anyone to access. Working at Archbold has taught me much about the agricultural industry, the non-profit sector, and the broader conservation community. I tend to be a growwhere-you're-planted type of person. **Even though I** resonate with Archbold's ecological values and commitments, the people keep me here. Archbold attracts stellar humans, and I've found a strong **community here.** Much of my growth over the past five years has been in my relationships with others. I've become more sociable and confident in working through challenges collaboratively. And I've developed new skills supporting prescribed burns and identifying plants." Azad initiated the Archbold Book Club and organizes the annual Buck Island Ranch Fun Run. She recently kickstarted Interest Groups for staff to stay connected. **We are** grateful for her contributions to bridging the worlds of biology, computing, and relationships across the Archbold community.

Toni Jordan-Millet, Archbold Intern Register soon here May 10: 3:30 PM-4:00 PM Theresa Fonseca, Archbold Intern Register soon here May 11: 3:30 PM-4:00 PM Dr. Rada Petric, University of North Carolina Institute for the Environment Register soon here Mar 25 & April 22: 9:00 AM-11:00 AM Guided Ecology Hike Dustin Angell, Archbold Watch all past virtual events <u>here</u>.

Archbold on ABC News



ABC Action News photographer Allison Shaw filming Gene Lollis during a buggy ride at Archbold's Buck Island Ranch. Photo by Zach Forsburg.

ABC Action News of Tampa Bay Anchor Lauren St. Germain visited Archbold last month to explore our vital linkage in the Florida Wildlife Corridor. The tour began with a swamp buggy ride at Archbold's Buck Island Ranch with Gene Lollis, Ranch Manager, behind the wheel. Lollis introduces himself as "Just a cowboy. My favorite thing out here is open space. No cars, no horns, no sirens, just peaceful." St. Germain notes all the cows, wetlands, and field experiments. She says, "Scientists from Archbold partner with cowboys at the Ranch to study agriculture, sustainability, and conservation." Then, Dr. Hilary Swain, Archbold Executive Director, describes how adding risers to our culverts holds water back. Holding up water reduces the pulse of nutrients, like phosphorus, impacting the watershed downstream. Next, St. Germain visited the Station to learn about research in the Florida scrub. Swain says, "Archbold has been here in Florida since 1941. And we're driving through some of the most precious places in North America right here." While discussing the importance of Corridor lands for wildlife, watersheds, and ecosystem resilience, they stop to appreciate a Gopher Tortoise crossing the road. Swain says, "A little connectivity goes a long way for some species. Many species, like tortoises and Florida Scrub-Jays, need connectivity from one patch to the next. That's the long game of filling in the jigsaw of the Florida Wildlife Corridor." The Florida Wildlife Corridor Act passed in 2021, securing hundreds of millions of dollars in funding to interconnect lands. Watch the five-minute news report here.



Jill Abrahamson Memorial Internship



Chris Abrahamson, Dustin Angell, Michaela Herron, and Dr. Warren Abrahamson at the Frances Archbold Hufty Learning Center.

Thank you Warren 'Abe' and Chris Abrahamson for your continued support of Archbold's Education Program. Their generosity made possible the Jill Abrahamson Memorial Environmental Education Internship for a fifth year. Michaela Herron is the current Jill Abrahamson Memorial Environmental Education Intern at **Archbold.** Michaela met with Abe and Chris last month while they were continuing Abe's long-term study on palmettos. She said, "I've been searching for what I want to do for years and, finally, I've found it. I love watching children's eyes light up when I teach them about the scrub. It's very fulfilling. And, I'm hopeful for my career journey ahead." The internship honors their daughter, Jill Raye Abrahamson (1973-2017), who first visited Archbold and the Florida scrub in 1974 at six months of age. The nine-month internship allows early-career environmental educators to gain experience promoting science and conservation through designing and leading elementary school field trips, working outreach booths at community events, and participating in environmental education conferences. We are deeply grateful to Abe and Chris for investing in Archbold and the environmental educators of the future.

The Scrub Blog

Nature and Science from Florida's Heartland

Explore <u>The Scrub Blog</u> by Archbold creative staff.

Archbold Facebook Event Calendar



Directions to Archbold Biological Station

Eight miles south of Lake Placid. Entrance is 1.8 miles south of SR 70 on Old SR 8.

If you enjoy these stories from Archbold, please consider a gift to support our research and education programs. <u>Donate now</u>. Your gift really makes a difference.

Archbold Biological Station | Buck Island Ranch | Archbold Reserve

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