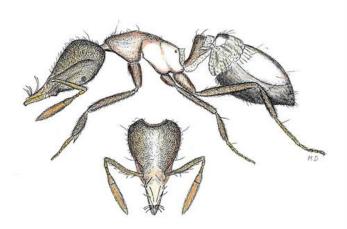
ARCHBOLD MAY 2023 NEWS for curious minds



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Florida Ant Winners & Losers



A tiny (2 mm long) native ant (Strumigenys dietrichi) now rare or absent in south Florida. Drawing by Dr. Mark Deyrup.

Florida suffers from an excess of invasive creatures, such as Burmese Pythons and Cuban Tree Frogs. A new study reveals another invasion, this one beneath our feet. The dead leaves carpeting the forest floor and the ground beneath a backyard oak host a zoo of small animals prowling the dark tunnels of the soil and fallen leaves. Many of the top predators of these little habitats are tiny ants. Research published in Current Biology used museum collections and surveys to show that over the last 50+ years, non-native ants from all over the tropics have been replacing some Florida natives, especially in south Florida. "We don't really understand the effects of this replacement," confesses coauthor Dr. Mark Deyrup, Archbold Biological Station Emeritus Entomologist, who contributed thousands of specimens and records for the study. "A lot of weird and wonderful native ants are being replaced by equally weird species from elsewhere, but little is known about the natural history of most of these. Then there is the invasive and unwelcome Little Fire Ant, about which we know plenty." The Little Fire Ant (Wasmannia auropunctata) is a pinhead-sized species whose sting is amazingly painful, considering the size of the ant. The authors of the Florida study, led by Dr. Douglas Booher, a Yale University Postdoctoral Associate, point out that the Little Fire Ant and some of the other invasive ants have unique advantages in that each colony can have several queens. And colonies do not fight with each other but come together as supercolonies. All of Florida's ants, including the soil-dwelling species, are discussed in Deyrup's book, Ants of Florida. Fifty years hence, if enough newly arrived ants win a place in Florida, and enough native species lose out, writing a new book on the ants of Florida may be necessary.



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"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

Ears of the Corridor



A Bobcat vocalizing at night captured by Archbold's Corridor Observatory Network.

The trumpet of Sandhill Cranes, a sniffing Black Bear, and the trill of the Southern Toad are a few of the sounds recorded 24/7 in Archbold's Corridor Observatory Network. Led by Archbold's Predator Prey Program Director, Joe Guthrie, the network includes autonomous sound recording units (ARUs) alongside motion-triggered camera traps. The ARUs record the sounds of birds, amphibians, mammals, insects, humans, and more. There are 48 ARUs deployed at DeLuca Preserve, 43 in and around Archbold Station, and 15 at Archbold's Buck Island Ranch. With Dr. Hance Ellington and collaborators at the University of Florida, the team is exploring using BirdNET, a machine-learning app in development that can detect and classify avian sounds. This app is only the beginning in addressing how to analyze the Corridor Observatory's big data approach to understanding wildlife ecology in the Florida Wildlife Corridor. Archbold Research Assistant Emily Angell says, "We captured great images with corresponding sounds, including a Bobcat vocalizing and a fight between three Raccoons and a Bobcat kitten. Other mammals easily detected are howling Coyotes and squealing Feral Hogs. Keeping the external microphones attached to the acoustic monitors in the field is challenging. Inquisitive animals, particularly bears and cows, like to pull them off." Thank you to Bellini Better World for its support of the Corridor Observatory and the National Science Foundation Cyverse for big data storage and access.

Job Announcements

FL Wildlife Corridor Applied Science Fellowship

Data Manager

Guest Services-Cook/Housekeeper

Plowing the Row



Portrait of Gene Lollis by Dustin Angell.

"The city could not exist without the country," according to Gene Lollis, Ranch Manager at Archbold's Buck Island Ranch, referring to agricultural food production. And, the open country could not exist without cowboys like Gene. When he was ten, Lollis began working on cattle ranches around his quiet hometown of St. Cloud before the Orlando Disney World development boom spread across the rural communities of central Florida. Dr. Whaley, his employer and mentor, encouraged Gene to broaden his horizons with a job at a University of Florida (UF) research station focusing on increasing cattle production, which he did. He earned his bachelor's in Animal Science at UF. Then, in 1993, Lollis moved south to begin his life's work at Buck Island Ranch. Gene describes his experience at Buck Island this way: "Archbold was the first to study environmental research on Florida cattle ranches.

Balancing our operations with the natural environment is what changed me the most. I really love the place and what we do. I am grateful for the opportunity to be here for thirty years now." During his years with Archbold, Lollis has become a leader and Florida ranching ambassador. He runs an innovative science-driven and systems-based cattle operation, including splitting the cow herd into two breeding seasons yearly, holding water back to reduce nutrient outflow, and rotating forage experiments. He was President of the Florida Cattlemen's Association and starred in the film Cowboys and Scientists. Gene and his wife, Terrie, raised their son, Laurent, and daughters Hannah and Megan, at Buck Island, where they learned important life lessons. His ultimate wish is the knowledge from Buck

His ultimate wish is the knowledge from Buck Island Ranch helps other agricultural operations continue to prosper in the future. Gene and Buck Island Ranch operations ensure the country and the city coexist in a way that benefits the ecosystems upon which we all depend. He says, "As a society, we must maintain open space for our water, wildlife, and us. We gotta keep plowing the row." Thank you Gene Lollis for an incredible thirty years of service to Archbold and to Florida.

Public Events

June 8: 3:30 PM-4:30 PM

'History of Avon Park Air Force Range'

Kathy Couturier, U.S. Air Force

Learning Center or via Zoom

(Passcode: 011227)

June 22: 3:30 PM-4:30 PM

'Sandy Roadsides: A Habitat for Endemics and Exotics'

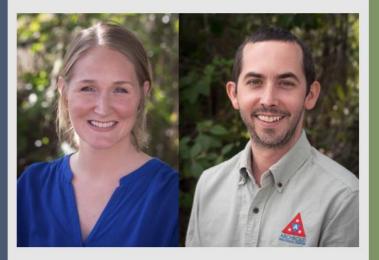
Leyla Wilson, Archbold Intern

Learning Center or via Zoom

(Passcode: 516437)

Watch all past virtual events here.

Change in Leadership



Tahlia Warrick and Dr. Zach Forsburg.

Archbold's Philanthropy program is entering a new era with a change in leadership and expanded opportunities for engagement. In September 2022, Tahlia Warrick stepped into the new Annual Giving Manager position. Following a period of overlap, after Deborah Pollard's departure in December, Warrick was appointed the Director of Philanthropy. A native of Gainesville, she holds bachelor's and master's degrees in Agricultural Education and Communication from the University of Florida with experience in higher education development and corporate communications. Warrick first came to Archbold as a cattle operations intern at Buck Island Ranch in 2013. She then returned to the Lake Placid area in 2019 with her family. Dr. Zach Forsburg, previously the Archbold Communications Coordinator, moved into the newly created position of Engagement Manager. Forsburg will work closely with Archbold scientists, conservationists, and educators to steward relationships with donors and stakeholders. He first joined the Archbold community as a herpetology graduate research intern in 2009. After earning a Ph.D. from Texas State University in 2020 in herpetology and conservation ecology, he returned to Archbold. Forsburg brings a valuable science-centered perspective. The Archbold philanthropy team recently launched the Richard Archbold Founder's Circle. Inspired by Richard Archbold's generosity and dedication to science, the Founder's Circle is an annual giving opportunity for donors to engage with Archbold more personally.



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Beloved Florida Icon



Florida Scrub-Jay photo by Tori Bakley.

The charismatic Florida Scrub-Jay, with its showy movements, brilliant flashy blue color, and distinctive call, is the only species of bird found exclusively in Florida. This fascinating bird is a beloved state icon. Yet, with fewer than 5,000 individuals remaining, this federally threatened species needs your help! Your generous support helps Archbold continue to study and protect them. Archbold scientists began studying the Florida Scrub-Jay more than 50 years ago. Archbold implements leading-edge conservation practices on our lands and guides land management through the state in areas scrub-jays call home. Your gift will continue Archbold's mission to build and share the scientific knowledge needed to protect Florida's life, lands, and waters and beyond. Thank you for your generous support.

The Scrub Blog

Nature and Science from Florida's Heartland

Explore The Scrub Blog 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. Donate now. Your gift really makes a difference.

Archbold Biological Station | <u>Buck Island Ranch</u> | Archbold Reserve

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