

ARCHBOLD AUGUST 2023 NEWS

for curious minds



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Scrub-Jay Hiccup



Christopher Tarango with Florida Scrub-Jay at Archbold.

The Florida Scrub-Jay is not only intelligent and pretty but also very vocal. Typical calls include a scratchy scold while perching, a succession of 'weeps' in flight or rest, and a growl. Then, there is the hiccup, also known as the rattle call, delivered by females as they bob up and down. Christopher Tarango could not believe his ears for his first visit to Archbold in 2018. He said, "The incredible variety of Scrub-Jay hiccup calls blew me away." Tarango is a Ph.D. Candidate at Cornell University with [Dr. John Fitzpatrick](#), Cornell Lab of Ornithology Director Emeritus and Archbold Board Member, as his advisor. **Tarango is on a mission to document all variations of the female Florida Scrub-Jay hiccup call across their Florida range from Oscar Scherer State Park in the southwest through Archbold and up north in Ocala National Forest.** He has already recorded vocalizations from territorial females in most populations. Tarango said, "I am curious about what ecological conditions lead to new call types. How do new hiccup variants spread to new populations, and how are they maintained in a population over time? Are the calls learned, and if so, who from? Addressing these questions will reveal how the hiccup call varies in space and time." **This research is the first-ever species-wide study of Florida Scrub-Jay vocalizations.** Females travel longer distances than males to find suitable Florida scrub. Tarango hopes his study of female hiccup variation illuminates habitat connectivity for this Federally Threatened beloved Florida bird. Listen to the Florida Scrub-Jay's vocal repertoire [here](#), including the hiccup.



"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

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Your donation to Archbold today supports our mission to build and share the scientific knowledge necessary to protect the life, lands, and waters of Florida and beyond.

Helping Garrett's Mint



Garrett's Mint (*Dicerandra christmannii*). Photo by Christine Sit.

Garrett's Mint (*Dicerandra christmannii*) is an endangered gem of yellow sand oak-hickory scrub. In 1994, under the direction of previous Program Director Dr. Eric Menges, Archbold Plant Ecology began monitoring the protected population of Garrett's Mint on the Flamingo Villas Unit of the Lake Wales Ridge National Wildlife Refuge. With funding from the U.S. Fish & Wildlife Service, Archbold expanded the population of Garrett's Mint at the Flamingo Villas Unit and introduced a new population to the nearby Carter Creek Unit. **A new Plant Ecology study led by former Research Assistant Stephanie Koontz analyzes survival, growth, and reproduction rates of these protected Garrett's Mint populations to track recovery efforts.** Meticulous field data collection and analysis reveal that most introduced plants are doing quite well in their new home with similar or better survivability, growth, flowering, and new seedlings compared to the original population. All new populations responded well to fire, essential to maintaining open areas within the scrub. They write, "These analyses suggest a high potential for translocations to become established and contribute to species recovery." **A companion study led by University of Central Florida Ph.D. candidate Federico Lopez-Borghesi used population models to assess long-term trends of Garrett's Mint populations.** He found a higher risk for extinction in the introduced populations. "This research is critical to guiding future introductions and land management decisions as we try to rescue this species from the brink of extinction," says Archbold Plant Ecology Program Director Dr. Aaron David. Read more [here](#).

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Science Fellowship

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Internship

Fish Eco-evolutionary Research
Internship

Agroecology Postdoctoral
Research Associate

Avian Ecology Research
Assistant III

GIS Research Assistant/Drone
Pilot

Red Hill to Santa Fe



Dr. Jerry Johnston with a Suwannee Alligator Snapping Turtle along the Santa Fe River.

In the early 1990s, a University of Miami class trip pit stopped at Archbold, thanks to Dr. Jay Savage, a previous Advisory Board Member. That stop changed everything for Jerry Johnston, a first-year Ph.D. student. Johnston said, "The scientific environment blew me away. I locked onto the Gopher Tortoise for my Ph.D. study with Dr. Jim Layne (former Archbold Director). Jim was one of the most supportive and impactful of all my advisors. **I learned to be a scientist at Archbold and to think long-term.**" Johnston studied thermoregulation in tortoises on Red Hill by combining body temperature data with behavioral observations. He lived on campus from 1994-1995, recalling fondly his immersion into nature and an atmosphere of excellence. He met the legendary [Dr. Ernst Mayr](#) during lunchtime. They reminisced about living in New England and discovered they shared the same favorite turtle, the Wood Turtle. In 2003, Dr. Johnston accepted a professor position at Santa Fe College in Gainesville. He realized nobody was studying turtles in the amazing spring-fed Santa Fe River. Initially, his [Santa Fe River Turtle Project](#) had one student, [Travis Thomas](#). And they focused on assessing the status of the Suwannee Alligator Snapping Turtle population. But the project evolved quickly into a long-term ecological study of all 11 native turtle species in the river with enthusiastic engagement from students and the community. **Johnston's two-decades-long study of this globally unique freshwater turtle diversity hotspot revealed the importance of long-term ecological studies to understanding species specific responses to major changes in water and habitat quality.** He is grateful for his inspiring introduction to science with Dr. Jim Layne's long-term Gopher Tortoise research. "Jim had high standards but was extremely encouraging. As a mentor to my own students today, I think about him often and feel so fortunate to have had such a positive role model."

Public Events

Sept 14: 3:30 PM-4:30 PM

Archbold Intern Avian Ecology
Double Feature

Olivia Smith and Sarah Beres

Join in person or via Zoom

Passcode: 991280

Sept 21: 3:30 PM-4:30 PM

'Plant Population Responses to
Environmental Variation'

Dr. Tom Miller, Rice University

Join in person or via Zoom

Passcode: 031792

Watch all past virtual events
[here](#).

Corridor Resilience



Experts gather at Archbold to plan a new Corridor Science Report. Photo by Josh Daskin.

The Florida Wildlife Corridor Act became a state law in 2021, establishing an 18-million-acre network of undeveloped lands critical for conserving connected wildlife habitats in Florida. The law ignited enthusiasm for more studies to understand relationships between Corridor conservation, water quality, and climate change. **One new project commissioned by Archbold and the [Live Wildly Foundation](#) explores relationships between the Florida Wildlife Corridor and Florida's resilience to climate change.** A team of 15 experts led by Florida Atlantic University's Dr. Colin Polksy and Dr. John Baldwin will address this relationship in a new report due in 2024. Archbold hosted the kickoff meeting for all partners from July 24-26. Dr. Josh Daskin, Archbold Conservation Director, said, "**The report will include climate resilience assessments relevant to wildlife and people.** Examples include agriculture, wildfire risk, tourism, human health, and sea level rise." Authors come from universities throughout Florida and agencies including South Florida Water Management District. The meeting had one full day for authors to plan the report content. They spent a further half-day refining the plan with conservation stakeholders who will use the report to accomplish their conservation work (e.g., Live Wildly, Florida Wildlife Corridor Foundation, The Nature Conservancy, Florida Department of Agriculture and Consumer Services, and Florida Fish and Wildlife Conservation Commission).



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Legacy Gift



Portrait of Zach Forsburg by George McKenzie Jr.

Zach Forsburg first started at Archbold as a graduate research intern in the Herpetology Program in 2009, has held several positions within the organization, and is currently the Engagement Manager. Zach has also been a loyal [donor](#) to Archbold for the past fourteen years. **This year, Zach decided to take the next step and designate a legacy gift to Archbold.** "I get to see the impact of Archbold's work on a daily basis. Designating a percentage of my retirement investments for Archbold is a lasting way for me to continue supporting Archbold's mission into the future," Zach said. We are inspired by Zach's dedication and commitment to Archbold's mission. Planning a gift means planning a future, built on science, that protects the essential lands and resources sustaining us all. [Contact our philanthropy team to learn how you can designate a legacy gift for Archbold today](#), securing a future of science-driven conservation at Archbold for generations to come.

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.

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The Scrub Blog

Nature and Science from Florida's
Heartland

Explore The Scrub Blog by
Archbold creative staff.



Directions to Archbold Biological Station

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