

# **ARCHBOLD APRIL 2023 NEWS** for curious minds



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## **Case of Mistaken Plant Identity**



Water Lettuce in Fisheating Creek, Florida.



**Donate Now** 

Identified as a Category 1 invasive plant by Florida, Water Lettuce (*Pistia stratiotes*) is a floating aquatic plant thriving worldwide in tropical and subtropical nutrient-rich freshwater habitats. For decades, managers applied chemical herbicides and biological controls to remove vast quantities clogging Florida waterways. According to <u>Dr. Jason Evans</u>, Water Lettuce can form impressive meadows, which makes boat navigation a challenge. Evans is an Interdisciplinary Systems and Landscape Ecologist at the Stetson University Institute for Water and Environmental Resilience. Evans worked on a Water Lettuce eradication project for Ichetucknee Springs State Park between 2000-2001. After hand-removing the Water Lettuce from the high nitrate spring, the spring ecology worsened. Eelgrass plummeted. Algae moved in. Then came reports of population declines in spring crayfish and Loggerhead Musk Turtles. Water Lettuce contains algicides (kills algae) and is a big consumer of nitrogen and phosphorus. Famed springs ecologist Dr. H.T. Odum introduced a new idea to Evans. Odum said Water **Lettuce is native to Florida.** Evans later discovered publications and fossil data to back up this claim. For starters, William Bartram, explorer and botanist, found Water Lettuce in two spring-fed Florida rivers in 1765 and 1774. Edward Berry documented Water Lettuce fossils at an archaeological site near Vero Beach, Florida dating between 12,000 and 3,550 years old. Dr. Eric Grimm, a colleague to Dr. Bill Watts, shared data with Evans revealing a 13,200-year-old Water Lettuce seed from Archbold's Lake Annie. Water Lettuce disappeared from Lake Annie over the centuries as sea levels rose, transforming the shallow eutrophic (high nutrient) pond into a shallow oligotrophic (low nutrient) lake. Today, the USGS & USDA accept Water Lettuce as native to Florida because of a 2013 publication by Evans and recent genetics work by the USDA led by Dr. Paul Madeira, who confirmed four distinct clades in Florida with two native, one from Asia, and one from South America. Thanks to Dr. Evans' persistent inquiry over two decades, a new Water Lettuce story is emerging based on science instead of conjecture. Watch his March 2023 seminar at Archbold here.

## <u>Archbold Biological</u> <u>Station Website</u>

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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** 

FL Wildlife Corridor Applied Science Fellowship

## **Triangle Ranch Science Blitz**



Agro-ecology Seasonal Research Assistant

Archbold staff and New College students are welcomed by owner Elizabeth Moore (white shirt in center), and prepare for a day of exploring Triangle Ranch. Photo by Bill Parken.

Over three miles of the Myakka River meanders through the recently conserved Triangle Ranch featuring hammocks, forests, wetlands, and pastures. On a foggy late March morning, Archbold's army of experienced biologists converged on Triangle Ranch to identify every plant and animal they could find. They were joined by students from New College. The gracious owner of the ranch, Elizabeth Moore, hosted Archbold for this special event. Dr. Amartya Saha and others spent the day on the river appreciating the deeper pools at the scoured outer bends, beaches on the opposite banks, and riparian forests. Saha said, "This diversity of habitats enables the diversity of aquatic creatures within the river, and the floodplain, which maintains water quality for people and nature." The Herpetology/Fish team led by Dr. Betsie Rothermel found 30 species. Rothermel said, "A night walk rewarded us with a chorus of Green Treefrogs, an up-close-and-personal encounter with a juvenile American Alligator, and a Dekay's Brownsnake." Dr. Sahas Barve and his bird team found 70 species over one day, including eight Cedar Waxwings, four Bald Eagles, one Merlin, two Crested Caracaras, and seven Wild Turkeys. Barve said, "A whole day of relaxed birding with the Avian Ecology staff and New College students was the highlight for me." The plant team found 170 species while exploring the ranch from Lake Elizabeth to the river floodplain. Dr. Betsey Boughton said, "Irises (Iris savannarum) were in bloom as well as American Snowbell (Styrax americanus) and Water Locust (Gleditsia aquatica)." We are grateful for the opportunity to explore Triangle Ranch, now protected by a South Florida Water Management District conservation easement. Thank you

to Jason McKendree, Triangle Ranch Land Manager, and LeAnne McKendree, Triangle Ranch Director, for preparing a fantastic lunch and breaks.

## **Mission Accomplished**



Portrait of Deborah Pollard.

Originally from Chicago but a Venus resident since 2009, Deborah Pollard joined Archbold to head up our Philanthropy program in 2015. She was searching for a career with a more significant impact than her previous work creating events. Pollard said, "Beyond the science community, people weren't sure what Archbold is, does, or why our work makes a difference. I knew we were a secret gem in Florida." Pollard spent the last eight years promoting Archbold's wonderful people and work while building relationships with philanthropists to advance our mission to build and share the knowledge necessary to protect the life, lands, and waters of Florida and beyond. Under her leadership, the philanthropy program thrived. She said, "The people who give to Archbold, whether that's ten dollars or one million dollars, know they are investing in excellence. I learned more in one year working at Archbold than during four years at University. I see how science and data matter, inform, and help us make better decisions for people and nature." One of her many achievements was expanding the philanthropy team to employ an annual giving manager to give donors a more personal experience. Pollard recently left her position as Archbold's Director of Philanthropy to work with our partner, Live Wildly, as the Director of Field Marketing + Brand Integration. She said, "I will be

#### **Public Events**

**May 4**: 3:30 PM-4:30 PM

'Using Genotyped Hair to Estimate Abundance in the Highlands/Glades Bear Subpopulation'

Dr. Brian Scheick, FL Fish & Wildlife Conservation Commission

Learning Center or via <u>Zoom</u> (Passcode: 028919)

**May 10**: 3:30 PM-4:30 PM

'Archbold Intern Triple Feature'

Theresa Fonseca (Herpetology & Restoration Ecology), Alana Strauss (Agro-ecology), Jeffrey Dosdall (Plant Ecology)

Learning Center or via Zoom (Passcode: 141089)

**May 11:** 3:30 PM-4:30 PM

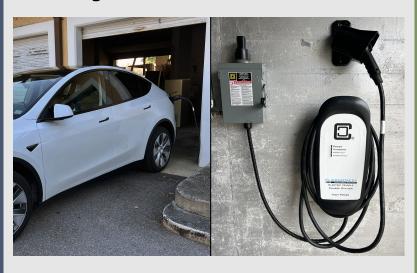
'The effects of urbanization and anthropogenic disturbances on bat and small mammal activity'

Dr. Radmila Petric, University of North Carolina helping people in Florida see themselves in nature to understand the vital importance of connected landscapes, particularly the Florida Wildlife Corridor. Live Wildly helps organizations working to protect and connect Florida, and none are more important to me than Archbold."

Learning Center or via <u>Zoom</u> (Passcode: 398902)

Watch all past virtual events here.

## **Get Charged at Archbold**



Archbold's new Electric Vehicle Charger. Photo left by Evelyn Gaiser of a Tesla charging. Photo right by Bert Crawford of the charger he installed.

Archbold seems to be two hours from everywhere in Florida, with most visitors arriving from the east and west coast. An increasing number of our visitors come in electric vehicles for the 200-350 mile trip. They are on the edge of their charging capacity to make the round trip on a single charge from their home. For many, that was an uncomfortable risk to take. Archbold installed a Level 2 EV Clipper Creek charging station in March. This 220 Volt charger with 30 Amps of power takes about 12+ hours for a complete charge or 2-6 hours for a fast electrical top-up so visitors can get home without worrying. Our EV charger can accommodate all electric vehicles, including a Tesla. Charging will be available for emergency use to Archbold staff personal vehicles. Bert Crawford, Archbold Operations Manager, researched, ordered, and installed our new EV charge station. Well done, Bert!



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#### **Richard Archbold Founder Circle**



Richard Archbold on his plane during an expedition to New Guinea.

Richard Archbold, a famous aviator and biological explorer, acquired the Red Hill Estate as a gift from John A. Roebling II in 1941 and established Archbold Biological Station. Mr. Archbold lived on-site and was a very active leader for the next 35 years. Throughout the years, he built a tradition of scientific excellence by inviting scientists worldwide to visit and conduct their scientific research. Richard Archbold passed away in 1976. He dedicated the land, buildings, and his estate to the Station. His sister, Frances Archbold Hufty, agreed to serve as Chair of the Board of Archbold Expeditions. Guided by the Archbold family and our Board of Directors, we continue Richard Archbold's legacy. Since our founding, Archbold has achieved formidable growth, thanks in part to the loyalty and generosity of friends like you—and with your continued support, we will expand our reach and share what we've learned, helping to build and share the scientific knowledge needed to protect Florida and beyond. Richard Archbold would have turned 116 on April 9, 2023. This year, in Richard's honor, we are pleased to introduce the Richard Archbold Founder's Circle. The Founder's Circle represents a tradition of generosity and dedication to science, beginning with Richard Archbold in 1941. This group of donors will have unique opportunities for engagement with Archbold's science. Their generosity will ensure that Archbold's work continues to protect the vulnerable species and ecosystems of Florida and beyond. Please click here to make a special gift to Archbold today and help us continue Mr. Archbold's legacy of supporting science. To engage with the

# 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. Founder's Circle, <u>contact</u> our new Director of Philanthropy Tahlia Warrick.

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.

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