ARCHBOLD FEBRUARY 2020 NEWS

for curious minds

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Drilling Deep in Lake Annie

The FIU-UF-Archbold team with one Lake Annie bottom core. Left to right: Dr. Jason Curtis, Dr. Mark Brenner, Meredith Emery, Gabriel Kamener, Dr. Hilary Swain, Dr. Evelyn Gaiser.

Last Fall, a team from Florida International University (FIU) and University of Florida (UF) rowed out into Lake Annie to extract cores from the deepest point of the lake to better understand life here over the last few hundred years. Meredith Emery (FIU Masters student), Dr. Evelyn Gaiser (FIU Aquatic Ecologist), Dr. Mark Brenner (UF Lake Paleobiologist), and Dr. Jason Curtis (UF Stable Isotope

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Archbold Biological Station Website

"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

Mass Spec Lab) are especially **interested in finding a climate signal called the Atlantic Multidecadal Oscillation (AMO).** The AMO was documented in Lake Annie's recent climate records and in features like tree rings in Florida. The team used a mud-water interface piston corer to recover three lake bottom cores ranging between 1.6 and 2.0 meters in length. Emery will analyze one of the cores for diatoms, nutrients (carbon, nitrogen and phosphorus), and biogenic silica using radioactive isotopes (210Pb and 14C) to determine the relationship between core depth and time. With support from a Visiting Graduate Student Program funded by the National Science Foundation, Emery took one core to the University of Minnesota LacCore facility for complex analysis including: Magnetic susceptibility (loop), gamma density, P-wave velocity and amplitude, natural gamma radiation, electrical resistivity, and a XRF Core scan to detect elemental and X-radiographic amounts. We are all eager for her results to learn what this means for the climate history of Lake Annie and Florida.

151 Acres More

An active Gopher Tortoise burrow in the restored scrub on the southern Hicoria tract.

Archbold acquired an additional 151 acres of scrub habitat in late January from a private US Fish and Wildlife Service permitted Scrub Mitigation Bank first established by MBR Ventures and concluded by TCP II Holding LLC. This land was acquired and restored to offset the loss of scrub habitat elsewhere for Florida Scrub-Jays and Sand Skinks, both federally listed species. Archbold was not part of the permitting process but we agreed to accept and to manage these lands into the future for scrub conservation. The 151 acres lie in 3 sites with a total of 8 parcels. One site is 30 acres of relatively intact scrub contiguous with Archbold's southern boundary. The second site consists of four 10-acre lots embedded within Archbold's Hicoria tract lying in the southeast of the Station. These critical lots were citrus before being restored with native plants for the mitigation

Public Events

Feb 8: 6–8 PM

'The Forgotten Coast'

Florida Wildlife Corridor Film

Archbold Staff

Feb 15: 6-9 PM

'Archbold Eco-Film Festival'

Journal Plaza in Lake Placid

Archbold Staff

Feb 26: 4:30–6 PM

bank by Nancy Bissett and The Natives. The third site is an 80-acre inholding in the Gould Road tract managed by the Florida Fish and Wildlife Conservation Commission as part of their Lake Wales Ridge Wildlife and Environmental Area. This site is less than a mile from Archbold's eastern boundary and also restored with native plants by The Natives. Archbold is excited to take care of these additional lands. The words of Frances Archbold Hufty and Dr. Mary Hufty (Chair of Archbold Board) sum it up best: "**There is no land more important than your neighbor's**".

2020 Visiting Scholars

A Gall Wasp species (*Disholcaspsis quercusomnivora*) found at Archbold.

Archbold is pleased to announce two new Deyrup Visiting Scholars for 2020 chosen from a field of outstanding applicants. Dr. Yuanmeng Miles Zhang, a University of Florida Post Doctoral Fellow in Entomology & Nematology, will capitalize on Archbold's collection of gall wasps (the largest in Florida). Zhang will untangle the complex relationships among gall wasps and their parasitoids by combining morphological study (i.e., body forms) with state-of-the-art UCE phylogenomics (i.e., genetic sequencing fresh specimens and voucher specimens). **His work will expand our knowledge of North American gall wasps.** Federico Lopez Borghesi, a University of Central Florida PhD Candidate, will build on Archbold's extensive long-term plant monitoring and environmental data. **Borghesi will advance our understanding of rare scrub plants persisting in time and space.** His field experiments will track detailed environmental data at over 20 sites with dynamic scrub plant populations. Back in the Plant Ecology lab, he will study changes in seed germination in relation to different environmental factors with endangered plants like Scrub Blazing Star (*Liatris ohlingerae*), Wedgeleaf Button Snakeroot (*Eryngium*

Conservation Photography Workshop

Dustin Angell, Archbold

Mar 8: 1:30–3 PM

'Digging Deeper: The Secret Lives of Gopher Tortoises'

Betsie Rothermel, Archbold

Mar 14: 8–10 AM

'Restoration of Sandhill/Scrub'

Walking Tour

Eric Menges & Kevin Main, Archbold

Mar 18: 4–5 PM

'Hicoria: Brief History of a Florida Ghost Town'

Joe Gentili, Archbold

April 4: 8–10 AM

'Natural History of the Florida Scrub-Jay'

Walking Tour

Reed Bowman, Archbold

April 11: 9–11 AM

Family Nature Day

cuneifolium), and Highlands Scrub Hypericum (*Hypericum cumulicola*). Borghesi hopes Archbold plant ecologists and interns will use his new field sites to expand their research. Congratulations and welcome on-board Miles and Federico. Thank you Nancy and Mark Deyrup for your wonderful generosity and for inspiring many of you to also support this program.

A Scientist in Every Florida Classroom

Lake Country Elementary School children from an aerial perspective.

Inspired by the University of Florida's "Scientist in Every Florida School" initiative, Archbold visited Lake Country Elementary School in Lake Placid last month. **Archbold Educator Megan Selva and Research Assistant Paul Ruben met with the 3rd grade classes to teach them about local wildlife and how technology is helping researchers better understand and care for Florida's wildlands**. Archbold's drone mapping projects include prescribed fires, monthly productivity of pastures at Buck Island Ranch, and vegetation mapping. Students were treated to a drone demo with Ruben. Ruben shared, "Kids love snakes and drones. You can't really go wrong when you have the opportunity to present both on the same day! Miss Poser, Archbold's educational resident Florida Pine Snake, is a very effective learning tool to connect children with nature. The most memorable moment came when we had the drone just below 400 feet (the legal limit). With the drone camera facing down, we walked to each child and showed them what they looked like from that height. Some of them were speechless with a big smile on their face. Others thought it was really cool to see the size of their class compared to other objects. We think it's important to introduce children to technology responsibly and from a perspective of education, considering it has such a huge place in science today."

Archbold Education

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Preserve and Protect-Richard Archbold

Richard Archbold on his GUBA airplane in New Guinea.

As a young man, Richard Archbold lived a life of movement. During the 1920's and 1930's, he spent many years on expeditions to New Guinea, Madagascar, and other areas far from home. As a result, he wrote and received many personal correspondences. These letters, as well as personal items such as photographs and artifacts from his explorations, are a treasured part of the Archives located at the Station. Most items are decades old and the Richard Archbold Archive is in need of renovation. Ensuring that materials will be preserved for years to come is the most important challenge for any archive. Recognizing this need, **John "Jack" Hufty, Director on Archbold Expeditions' Board, and nephew of Richard Archbold, recently made a generous gift to help us preserve and protect the Richard Archbold Archive**. "This is very important, and it just has to be done," stated Mr. Hufty. "Preserving these items is important to me, it's important to the Board, and it's important to anyone who cares about Richard Archbold. He was a shy man, so these materials tell us a lot—they need to be saved." Archbold Librarian and special collections archivist Joe Gentili has set to work expanding upon the preservation work begun by Archbold Librarian Emeritus Fred Lohrer. Throughout 2020, a numbering system for documents, folders, and boxed items will be created making navigation simpler. Administrative protocols for the Collection will make materials available for visitors to enjoy. Gifts such as Mr. Hufty's are a wonderful way to support Archbold, and we are so grateful.

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.

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.