



Jennifer Brown

ARCHBOLD JULY 2021 NEWS for curious minds



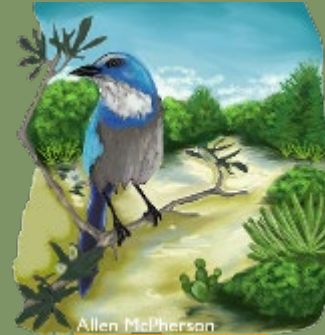
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Conservation History is Made



Map by Archbold Biological Station, A. Meeks. The Florida Wildlife Corridor map vision is the Florida Ecological Greenways Network Priorities 1-3 (2021) developed and maintained by the University of Florida Center for Landscape Conservation Planning. Conservation Lands from Florida Natural Areas Inventory (May 2021).



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Conservation history was made for Florida when [The Florida Wildlife Corridor Act](#) was signed into law last week.

The Act, which creates incentives for conservation and sustainable development while sustaining and conserving the green infrastructure that is the foundation of Florida's economy and quality of life, passed unanimously by both the Florida House and Senate, and signed into law by Florida Governor Ron DeSantis effective July 1, 2021. Archbold played a key role in supporting the passage of this Act by providing conservation science, data, and cartography. The Corridor represents the sort of initiative which draws on decades of scientific research and conservation experience from across the Station and the Ranch, [bringing our science into conservation action](#). The Corridor legislation will secure access and funding for habitats of wide-ranging wildlife, including the Florida Panther, prevent fragmentation of critical ecosystems, protect the headwaters of major watersheds such as the Everglades, help to sustain working farms, ranches, and forests, and preserve inland lands and waters to protect coastal estuaries. All are factors that draw from our science. The [Florida Wildlife Corridor is a tangible result of Archbold's devotion to our mission](#) to build and share the knowledge needed to protect the life, lands, and waters of Florida and beyond. We are honored to have collaborated with those dedicated to this endeavor, and we remain forever grateful to the scientists, agency partners, nonprofits, ranchers, private landowners, donors, and the many stakeholders who helped make this happen. **Next week, please look for a separate email from Archbold with more information on the history of the Corridor, those who played a vital role, and what happens next.**

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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

Lake Annie Joins Global Chorus





Lake Annie at sunrise. Photo by Kevin Main.

Archbold's Lake Annie is well-known by paleoecologists for the 11-meter sediment core extracted from her underbelly revealing a 50,000 year history of vegetation and climate in the area. Less known is the trove of water temperature data collected over the decades in collaboration with Dr. Evelyn Gaiser, Florida International University Institute of Environment Ecology Professor, now part of a [new study published in Nature Climate Change](#). **The study analyzed long-term thermal changes (32 million total temperature observations) in 139 lakes across six continents representing nearly 70% of Earth's freshwater habitat.** The authors write, "With climate change, lakes are generally assumed to gain warm and lose cold thermal habitats. However, **thermal habitat change in lakes is complex, as temperatures and temperature trends can vary vertically, horizontally and seasonally within lakes.**" Global warming increases lake surface temperatures leading to cascading ecosystem effects that are variable and complicated. For example, some freshwater fish species can adjust their life history timing or depth in the water column to survive. For others, especially in tropical shallow lakes, there may not be any place left to go. Like an island, lake habitats are hemmed in by terrestrial boundaries. Another dynamic of lake warming is a potential increase of phytoplankton on the surface which can increase deep-water cooling in lakes. Dr. Gaiser shared, "The results for Lake Annie

Watch Archbold's Buck Island Ranch Manager Gene Lollis and conservation photographer Carlton Ward Jr. on [NBC Nightly World News Tonight With Lester Holt: Kids Edition broadcast on June 26th](#). Photo by Deborah Pollard.

show a very large difference in thermal habitat availability for aquatic organisms throughout the water column year-round when comparing data from 1984-1999 with data from 2000-2014. This striking thermal habitat change driven by climate cycles and rainfall is similar to other low latitude lakes like Lake Tanganyika in Africa. Whether this significant thermal habitat change altered the organisms in Lake Annie is not known and a good subject for further study." The authors conclude that predicting how species will interact with changing lake thermal habitats is a challenge. One thing is certain. They write, "These thermal shifts will inevitably have consequences for the species that lakes currently support."

For the Love of Plants



Dr. Eric Menges in Florida rosemary scrub regenerating after a prescribed fire. Photo by Jennifer Brown.

When Eric Menges was young, he became fascinated by plants. His grandfather, who was a biologist, professor, and writer, took him for walks through the woods and fields in Maine. Five years after earning his PhD in Botany at the University of Wisconsin-Madison, Dr. Eric Menges left his temperate home for subtropical central Florida. **For 33 years, Menges worked as the Director of [Archbold's Plant Ecology program](#) studying the incredible rare plants on the ancient sandy dunes of the Lake Wales Ridge**, plants that occur nowhere else. He recalls, "I was struck by the patterns in the Florida

Online Events

July 29: 3:30 PM

Archbold Intern Seminar Triple Feature!!!

1. 'Melodies of Meadowlarks: Does Eastern Meadowlark Abundance Impact Rates of Song Switching?'

Brittany Welch,
Archbold Agro-Ecology

2. 'The Effect of Pair Bond Duration on Florida Scrub-Jay Sentinel Coordination'

Grace Trankina,
Archbold Avian Ecology

scrub. With an elevation change of a few feet, I could walk from the open, dry sand of Florida rosemary scrub downward through oaks and palmettos, and into the mucky, grassy seasonal ponds. From the beginning, I was intrigued by the complexity of fire and plant responses in the Florida scrub. My research over three decades found plants in the Florida scrub respond to fire in all kinds of unexpected ways." Watch [Surviving Fire: In the Florida Scrub](#) featuring Eric's work. Since June 1988, Dr. Eric Menges served as an outstanding scientist and leader of scientific research, conservation, and education activities in Archbold's Plant Ecology Program. He published 183 scientific papers and nearly 200 Technical Reports. Under his leadership, the Plant Lab trained and supervised 33 Research Assistants and 127 Archbold Interns, nearly all of whom have gone on to great careers. **On June 30, 2021, Dr. Menges retired. He will continue his work at Archbold as Emeritus Research Biologist. He shared, "I persist in my work out of a deep appreciation for plants.** It's fun and rewarding to figure out what scrub plants need, how they survive, and how we can translate that knowledge to effective land management and conservation. I am proud to make small contributions to keep scrub plants on the landscape long after I'm gone." On behalf of all the rare scrub plants, scores of interns/assistants, and Archbold Biological Station, "Thank you, Dr. Eric Menges. Best wishes for a wonderful retirement and new contributions as Emeritus Research Biologist."

3. 'Testing the social complexity hypothesis with Florida Scrub-Jay vocal communication'

James Longo, Archbold Avian Ecology

[Register here for the Seminar Triple Feature](#)

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

Railroad Fire



Looking west over Archbold property after the wildfire. The resilient plants of the Florida scrub began resprouting within days. Photo by Jennifer Brown

[Archbold Facebook Event Calendar](#)

"Are they burning on the Reserve or Station?", said the text from Mandy West, Archbold Research Assistant, to Kevin Main, Archbold Land Manager, just before 2PM on April 8. Main shared, "I was in Sebring when Mandy sent me a photo of the smoke columns. Just a few minutes later, **I got confirmation about a wildfire on our property.** I informed the Florida Forest Service (FFS) of the fire location as our fire crew assembled to respond. By Florida state law, Florida Forest Service has full jurisdiction over wildfires and how best to control them. When I arrived alongside FFS, two Archbold crews (one led by Bert Crawford, Archbold Operations Manager) were already putting out the fire with water from our two 6x6 military fire trucks. By 3PM, the fire was more than 50 acres. **I noted that the fire had started along the railroad right-of-way. There were spot fires on both sides of the tracks.** Prevailing easterly winds kept the fire on the east side of the tracks confined to the right-of-way. Fires in the right-of-way on the west side of the tracks jumped the Archbold firebreak and spread quickly across several burn units. Florida Forest Service suggested a plan to burn out contiguous units to contain the fire within existing sandy road fire breaks. We worked together to burn out three units, limiting the fire to about 240 acres. We spent the following day patrolling the fire boundary. Late in the afternoon, a small spot rekindled the fire in some unburned scrub. Fortunately, we were able to contain this fire to a couple acres. Rain fell the following day which put an end to the incident." While hardy scrub plants will

survive this fire, some of Dr. Reed Bowman's new research equipment tracking Florida Scrub-Jays did not survive and required replacement.

Amplifying Our Impact



Facebook screenshot from Zach Forsburg's peer-to-peer fundraising on his birthday for Archbold.

Every year for his birthday, Zach Forsburg creates an online fundraiser to inspire his friends and colleagues to donate thousands of dollars to Archbold Biological Station. This year was his most successful fundraiser to date, thanks in part to peer-to-peer fundraising via Facebook. "It's become a yearly tradition and a way for me to amplify my impact on Archbold," Zach stated. Zach first started at Archbold as a graduate research intern in the Herpetology Program in 2009, and held several positions within the organization before moving to Texas in 2015 to start a PhD program. He recently returned to Archbold and is now our Communications and Philanthropy Coordinator. Discussing his motivation to continue to give back to Archbold, Zach stated, "Archbold holds a special place in my heart and is where my career in conservation got started. I am passionate about Archbold's programs and mission and because many of my friends and colleagues share my passion for Archbold, they are always eager to [donate](#) to my fundraiser every year." We are grateful for Zach's dedication to Archbold and to all his family, friends, and colleagues that continue to [support Archbold](#) every year. **If you are interested in amplifying your impact and would like to learn**

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.

more about starting a peer-to-peer fundraiser for Archbold, please [reach out to Zach in the Philanthropy Department](#).

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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