



Reed Bowman

ARCHBOLD JANUARY

2017 NEWS

for curious minds



In This Issue:

1. 2016 Archbold Delights
2. Mapping the Burn
3. Lake Annie's Song
4. Abduction of Tortoise 1721
5. Gratefully Yours

2016 Archbold Delights



Jen Brown

Eric Menges and Archbold Plant Ecology staff collecting data on the endangered Wedgeleaf Button Snakeroot (*Eryngium cuneifolium*) (foreground) populations for the 28th consecutive year in a row!

Archbold staff and collaborators made a big splash in 2016 advancing our mission of conservation, science, education in the heartland of Florida and beyond. It began with our 75th anniversary celebration and only got better. Dr. Mark Deyrup published '[Ants of Florida: Identification and Natural History](#)'. A guide to Florida ants was first envisaged by Deyrup in 1987! Archbold Plant Ecology published no fewer than 10 papers including seminal research on [critically endangered Avon Park Harebells](#). Our NSF Natural History Collections Grant oversaw a leap in digitized Archbold specimens, especially invertebrates and plants. We learned a decline in isolated populations of Florida Scrub-Jays around Archbold has genetic consequences for Archbold



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"Archbold Biological Station is one of America's iconic

jays. The [MacArthur Agro-ecology Research Center](#) monitored water retention and nutrient removal services in the Headwaters of the Everglades while studying everything from greenhouse gases to Burrowing Owls and Feral Hogs at Archbold's Buck Island Ranch. Archbold Land Management burned almost 2,000 acres while [restoring precious Florida sandhill habitat](#). Along the way, we trained 23 interns and hosted 21 public events. Our very own award-winning 'Outstanding Educator', Dustin Angell, led hundreds of children into the scrub and ranch for enlightening forays. We could go on, but why not **watch our new lighthearted film**, '[We Are Archbold Biological Station](#)'.

Mapping the Burn



Map of two prescribed fires in Florida scrub at Archbold created with a drone, drone software and by Vivienne Sclater and Kevin Main.

Fire adapted species like Gopher Tortoises, Florida Scrub-Jays, and numerous plants cannot survive without fire. Archbold began lighting prescribed fires in 1977. We started mapping all fires beginning with a wildfire in 1967. Archbold GIS and Data Manager Vivienne Sclater said, 'In the past, Archbold staff took photos from an ultralight plane flying over the burned areas. These oblique images were hard to work with and time consuming to process. We had to wait for multiple fires before flying to reduce the cost. This time delay reduced map accuracy since fire adapted plants resprout quickly. **Now, Archbold is using drone imagery to map prescribed fires and other land management activities.** With drones, we fly over the burn within days to capture images with the camera level and pointed directly down. Drone software programs create an accurate image of the burned area.

centers of continuous research and education in field biology. It is a prototype of what we need all across America."

— Edward O. Wilson

Upcoming Events

Jan 21: 9:00 am-11:00 am

Fire in the Florida Ecosystem

Kevin Main, Archbold

Feb 26: Starts at 1:30 pm

Amphibious Adventure

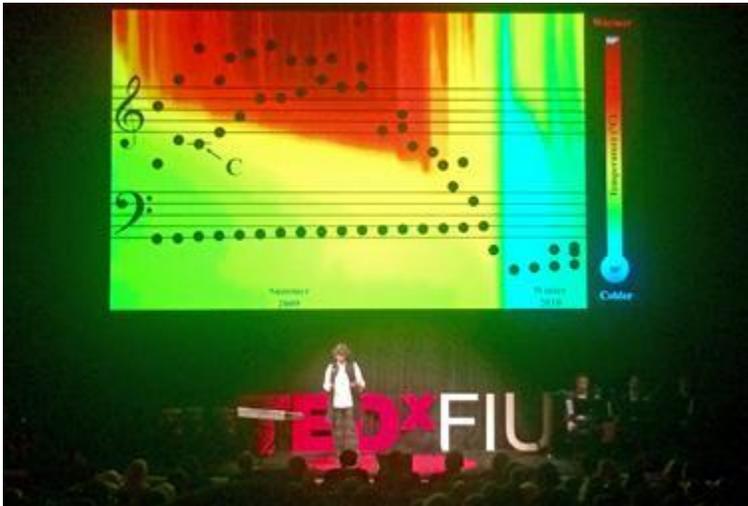
Betsie Rothermel, Archbold

Restoration Ecology Internship

Unique opportunity: An internship in restoration ecology at Archbold. Internship begins May 2017. Applications due March 6. Click [here](#) for full description.

Kevin Main, Archbold Land Manager, then maps the severity of the fire. **Our burn maps illuminate scrub dynamics over time showing how species are responding to a changing environment.** Fire severity data is easily accessed by researchers and critical for land management decisions. We are also exploring exciting 3D scrub mapping possibilities using drones to measure tree density, canopy, elevation, and relationships to hydrology. Drones are the way of the future for research and conservation.'

Lake Annie's Song



Evelyn Gaiser [TEDxFIU talk](#). Photo by Luca Marazzi.

How often do we just *look* at the data? But what if you could perceive scientific data with other senses, like your hearing? In her [recent TEDxFIU talk](#), **Evelyn Gaiser takes us on an aural (sound) exploration of data from Archbold's Lake Annie.** Gaiser is an Archbold Research Associate, Associate Dean at Florida International University (FIU), and musician. She said, 'I was looking at a heat map graph of lake temperatures. Surface waters got warmer in the summer shown by darker red colors, and then cooler in winter shown by yellows, greens and blues. **As a scientist, I saw the graphed temperatures from the top, middle, and bottom of the lake as a typical series of data points. But as a musician, I saw something else. I saw music.**' Setting the average temperature to middle C, and scoring every degree above or below this as a higher or lower musical note ♪, Gaiser translated the seasonal shifts in lake temperature into an eerily beautiful tune. Partnering with student Marcus Norris from the Music School at FIU, her "data notes" were conveyed into a new musical composition premiered by the FIU student string trio



Our [Archbold Facebook page](#) passed 7000 likes in December. [Click here](#) to watch our popular Facebook video 'Sandhill Bobkitty' and like our page. This playful and curious 'Lynx rufus' lives on some of the highest Florida scrub left on the Lake Wales Ridge of central Florida: A rare Florida sandhill protected at Archbold since 1941.

during her TED talk. Listen to Evelyn's TED talk and the moving performance of Lake Annie's Song [here](#).

Abduction of Tortoise 1721



#1721 in the safe hands of FWC staff after being rescued. You can see the damage to her transmitter. Photo credit: Florida Fish and Wildlife Conservation Commission (FWC).

On November 8, 2016 while our country was holding national elections, Gopher Tortoise #1721 was grazing along the entrance drive to Archbold. #1721 is one of the longest surviving individuals in Archbold's 50-year Gopher Tortoise study. She is at least 45 years old. **Around midday, a Mr. Butcher drove into Archbold with his partner and grabbed #1721 to 'eat her for dinner'.** Archbold staff did not know that #1721 was speeding away to a terrible end. A few hours later, fate and fortune intervened. One hundred miles from Archbold, a Florida Highway Patrol trooper responded to a 911 call from a woman in a vehicle being threatened by her partner, a Mr. Butcher. The woman told the trooper there was a tortoise in the back of the vehicle. **When the Florida Fish and Wildlife Conservation Commission Investigator (FWC) arrived, he found Tortoise #1721 scabbling around in the back of the vehicle.** Other than damage to the radio transmitter glued to her shell, #1721 appeared OK. She was returned safely to Archbold a couple of days later. **Now back in her burrow, she is foraging as per usual.** Archbold salutes the work of all law enforcement officers engaged in preventing crimes against wildlife. Read full story [here](#).



Check out our Youtube Videos!



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[Archbold Facebook Event Calendar](#)

Gratefully Yours



2016 Archbold Scrub Camper holding an Earth Star mushroom.

Nearly all not-for-profit organizations [fundraise to survive](#). Archbold is no different. Grants fund specific program-related research. And to grow and flourish beyond the "box", we have donors. Donors are the true heroes of Archbold. Donors make it possible to follow the science, expand innovative programming, and unleash our true potential. Donors truly believe in Archbold, and help us strive for more. And donors help us to achieve our mission not just for Archbold, but for those who benefit from our work. **Thank you to those who gave to Archbold in 2016, and year after year. You are our heroes. Archbold is grateful to all who gave both time and money.** And to those of you just beginning to feel the joy of philanthropy, [we welcome you](#). We are delighted you want to be part of something meaningful—maybe something bigger than yourself. Isn't that why we give?

Directions to Archbold Biological Station

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



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