



ARCHBOLD AUGUST 2016 NEWS

for curious minds



In This Issue:

1. To Fruit or Not To Fruit
2. Drones Dazzle at Ridge Meeting
3. Osprey Ode
4. Saving the Scrub Video
5. Masked Pawpaw Eater

To Fruit or Not To Fruit



Sharon Hawkins, Archbold Human Resources, volunteers to plant Florida Ziziphus. Plants are enclosed in wire mesh cages to prevent herbivory and trampling.

Archbold Plant Ecology is hoping for a scientific hallelujah of viable yellow drupes from one of the rarest, most endangered Lake Wales Ridge endemic plants: [Florida Ziziphus \(Ziziphus celata\)](#).

2016 is the 17th continuous year of monitoring all known Florida Ziziphus populations (just 15). After almost two decades of introductions, only one seedling recruit has been recorded in the field. However, it is encouraging that many transplants have survived and are growing. [Archbold Plant Ecology](#) has studied Florida



[Donate Now](#)

[Archbold Biological
Station Website](#)

[Subscribe to our
Monthly News](#)

Ziziphus reproductive biology, genetics and natural history extensively. One of the biggest challenges for Ziziphus is limited genetic diversity and isolation of populations. Informed by this research, Archbold's Stacy Smith and Dr. Eric Menges, with support from interns and staff and funding from USFWS and Florida Forest Service, added 200 new plants to previously introduced populations during June. Collaborators include Bok Towers Garden, Missouri Botanical Garden and the Cincinnati Zoo and Botanical Garden. **This new thorny batch of Florida Ziziphus represents many of the known genotypes needed to create the most genetically diverse population to date. In all, they have planted more than 1,000 new Florida Ziziphus seedlings in the wild.** The long-term goal for Ziziphus introductions is flowering, cross pollination among genotypes, and of course, viable fruits!

Drones Dazzle at Ridge Meeting



"Drone-View" of skyward looking attendees during the drone demonstration, part of the the Lake Wales Ridge Ecosystem Working Group meeting at the Archbold Learning Center.

The Lake Wales Ridge Ecosystem Working Group, the network of land managers from state, federal, local and non-profit groups along the Ridge and beyond, converged at Archbold for their summer meeting on July 27th. There were 83 attendees for a spectacular program! The meeting kicked off with an update on Florida Ziziphus management from [Archbold Plant Ecologist](#) Stacy Smith who reported rays of hope for the isolated, endangered plant (see story above). Steve Morrison shared interesting observations on the 100-Year Water Cycle at [The Nature Conservancy's Tiger Creek Preserve](#) including marked changes after

"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

Florida Sandhill Diner



Watch [here!](#) A Gopher Tortoise, a White-tailed Deer and Florida Mouse forage in a shared, open patch of recently burned Florida sandhill on Archbold's Red Hill. A male Gopher Tortoise eats sun-loving plants like Wiregrass by day. Then, a White-tailed Deer eats palmetto berries at night. And finally, late into the night, a Florida Mouse wanders in to eat an unknown goody in the sand.

the 2004-05 hurricane season. Bob Bale introduced [Wildland Restoration International](#)'s three new Ecosystem Restoration Teams in Florida available for fire management on the ridge and beyond. A drone demonstration by Jennifer Brown ([Into Nature Films](#)) was followed by lightning talks on using drone technology for conservation applications by Cody Miller ([The Nature Conservancy](#)), Kevin Main and Vivienne Sclater ([Archbold](#)), and Alan Alshouse ([Inwood Consulting Engineers](#)). Hilary Swain then introduced everyone to the amazing specimen digitization world of [iDigBio](#) followed by a demonstration tour of Archbold's vast and varied [Biological Collection](#).

Osprey Ode



Mike McMillian has been monitoring the [Osprey breeding population](#) at Lake Istokpoga since 1989! He is now an Environmental Specialist with Highlands County Parks and Natural Resources.

'To me, it's the prettiest lake in the County'. That is how Mike McMillian describes Lake Istokpoga during an Osprey nest check this July. Ospreys nest in the age-old cypress along the Lake Istokpoga shoreline in the highest concentration of these birds in the world. **In 1989, when working for Archbold, McMillian decided to replicate historic Osprey surveys at Lake Istokpoga.** A 1910 survey recorded 75 occupied nests and then only 9 nests were found in 1973. In 2013, he [summarized the dramatic recovery](#) of this Osprey population (1989-2012) finding on average 190 nests annually in a comparable survey area. One explanation for the decline and subsequent increase in numbers of Ospreys is the use of organochloride pesticides (DDT and Aldrin) beginning in the 1950s until



Connect with us on
Facebook!



Check out our Youtube
Videos!

[Archbold Facebook Event
Calendar](#)

their ban in the mid 1970s. **Archbold is where it all began for McMillan where he first worked for the Avian Ecology Program with Dr. Glen Woolfenden.** Later, he was a Research Assistant at the MacArthur Agro-ecology Research Center for 12 years where he studied everything from birds to plants, fish, soils, and water quality. He also spearheaded the popular Ranch swamp buggy eco-tours. McMillan said, 'My fifteen years with Archbold were the most rewarding of my scientific career and have guided me in my decision making process ever since.'

Saving the Scrub Video



'Expeditions with Patrick McMillan' produced two excellent episodes featuring the Florida scrub that originally aired on PBS in 2014. Click here for [Episode 2: 'Can We Save the Florida Scrub'](#) featuring appearances by Archbold staff Hilary Swain, Mark Deyrup, Reed Bowman, Eric Menges, and Betsie Rothermel. **The 27-minute video invites viewers to 'Join Patrick as he explores whether a collaboration of science and will can save the scrub.** One of the most unique and fascinating places on the planet is also one of the most endangered.' **85% of the high and dry sandy habitats on the Lake Wales Ridge are gone.** Swain shares, 'When I am on the ridge, I always have this ancient feeling when you are surrounded by plants that you know are very old. It makes me think of ancient treasures. A little bit like your granny's attic. And now, here we are in the year 2000+, and we are able to go up into the attic. We are able to unpack these treasures that have been here for millennia. They are now threatened and even more precious.' Don't miss it!

Position Announcements

Archbold seeks energetic individual for Lead Cook position with some housekeeping responsibilities. Full-time, year-round position with excellent benefits. Click [here](#) for more information.

Tortoise Tales



University of Georgia Graduate Student Nicole White's work studying Gopher Tortoises at Archbold is featured in a wonderful Highlands Today article '[Tortoise Tales](#)' published July 25th!

Masked Pawpaw Eater



Screen capture from [video](#) of Raccoon eating entire Bigflower Pawpaw fruit.

Louise Barton has likely captured the first-ever evidence (and [video](#)) **of a Raccoon dispersing a Bigflower Pawpaw fruit *Asimina reticulata*!** [Watch video here](#). Barton is studying the reproductive biology and distribution of this endemic Florida shrub for her [Archbold Plant Ecology](#) Research Intern project. So far, **she has found greater flower and fruit production in more recently burned scrub.** The spring display of showy white flowers depends on pollinators, like scarab beetles, doing their job for a viable fruit set. But, mature pawpaw fruits are rarely seen which has long mystified biologists. A motion-detector camera trained on pawpaw fruits revealed a clue. Barton said, 'Unlike rodents that eat the fruit around the seeds and leave the seeds beneath the plant, **this Raccoon appears to devour the entire fruit. The seeds may then be excreted far from the plant, thus effectively dispersing the seed.**' Want to support interns like Louise Barton doing fascinating research in the Florida scrub and ranchlands at Archbold? Click [here](#) to contribute to the Archbold Research Intern Program.

Directions to Archbold Biological Station

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



[Archbold Biological Station](#) | [MacArthur Agro-ecology Research Center](#) | [Archbold Reserve](#)

[Contact Us](#) | [Directions](#) | [Newsroom](#) | [Donate](#)

We are a publicly supported organization exempt from income taxes under the Internal Revenue Code Section 501(c)(3).

[Privacy Policy](#) | [Unsubscribe](#)

Archbold

123 Main Drive, Venus, FL 33960