



ARCHBOLD NOVEMBER 2015 NEWSLETTER

for curious minds

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Keeping Ranch Wetlands Wild



Wetland within improved pasture at MAERC.

New [research](#) led by Dr. Betsey Boughton at the MacArthur Agro-ecology Research Center (MAERC) with



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Archbold's Annual
Appeal: Coming Soon
to a Mailbox Near
You!

a team from University of Central Florida considers how Florida ranchland managers might maintain biodiversity and ecosystem services in subtropical wetlands (biodiversity hotspots) embedded in improved versus semi-native pasture. About one-third of the headwaters of the Everglades is ranchland, like MAERC. [Results](#) indicate wetlands within improved pastures had lower plant diversity and a common outer zone of rush *Juncus effusus* (lower in forage value and less flammable) while wetlands within semi-native pasture had greater plant diversity and very little *Juncus*.

Prescribed fire was essential to maintaining diversity in wetlands without grazing. Most significant is that land use, like improved pasture, continues to exert influences on wetland ecology through nutrient loading and alternative plant assemblages even when grazing is removed. Boughton said, 'Our [study](#) shows that wetland vegetation previously altered by increased pasture management intensity largely resisted common restoration management techniques like removal of grazing and prescribed fire, at least in the short-term. In contrast, wetlands within semi-native pastures were more responsive to restoration.'

Wetland Restoration Update



Wading birds are attracted to the Frances Creek Wetland Reserve Program site in the Archbold Reserve.

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Hilary Swain (Archbold Director) and Betsey Boughton (MAERC Research Director) recently attended a US Department of Agriculture (USDA) workshop on wetland restoration under the USDA Wetland Reserve Program (WRP), now known as the Wetland Reserve Easement (WRE) program. We were surprised to hear that **Archbold is engaged with more USDA WRP/WRE projects than any other landowner in Florida!** Our first projects, out of ten total, were on the MacArthur Agro-ecology Research Center where 3,746 acres of wetland restoration is underway on this 10,500-acre ranch leased by Archbold from the MacArthur Foundation. At the Archbold Reserve, there are five WRP/WRE projects in various stages of restoration under guidance of Archbold staff Dr. Betsie Rothermel and Becca Tucker. Challenges include hydrological restoration for ecosystems typified by sheetflow and groundwater seepage, limiting the spread of invasive plants during restoration, establishing native plantings in restored wetland communities, and grazing practices compatible with restoration. **Combining extensive practical experience with ecological know-how, Archbold is sharing lessons learned about wetland restoration with the USDA and other Florida landowners.**

Archbold to Gorongosa and Back



Josh Daskin standing near the Richard Archbold Research Center after sampling in seasonal ponds.

"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



Archbold Job Openings

[Development Assistant](#)

[Data Assistant](#)

[Assistant Collections Manager](#)

Josh Daskin is a Princeton University PhD candidate studying war-driven mammal declines in [Gorongosa National Park](#) in Mozambique and how these declines have affected the park's savanna habitats. Did his **previous experience as an Archbold Research Assistant influence his career? He says, 'Yes, absolutely! **Some of my interest in how large herbivores like elephant, zebra and wildebeest affect savanna vegetation comes from my time at the Archbold Reserve** where I assisted Betsie Rothermel, Archbold Restoration Ecology Director, studying how cattle affect pasture and wetland vegetation. I use mapping skills I learned from then GIS manager Roberta Pickert and land manager Kevin Main to map deforestation and wildfires for Gorongosa.'** Daskin still makes return trips to Archbold, continuing his collaboration with Rothermel to understand fire ecology of seasonal ponds saying, 'I enjoy working in a place that has the history Archbold does. It's energizing to know that top-rate ecologists, some that knew Richard Archbold, have been trudging through the same steamy scrub for 70 years. Gorongosa, too, has an impressive history.' Read Daskin's excellent blog entry [here](#) for E.O. Wilson Biodiversity Foundation.

More information [here!](#)

illuminating Fetterbush



John Benning

Fetterbush in bloom at Archbold.

John Benning shakes up our understanding of pollination ecology by illuminating the true

Upcoming Public Events

Nov 12: 3:30pm-4:30pm

'Hydrological Disturbance Diminishes Predator Control in Wetlands'

[Dr. Nathan Dorn](#), Florida Atlantic University

Nov 21: 9:30am-11:00am

Family Nature Day: Nature Walks and Games

pollinator of Fetterbush *Lyonia lucida* is not in accordance with evolutionary expectations based on flower design. Fetterbush is one of three *Lyonia* heath shrubs (Ericaceae) that coexist in scrubby flatwoods at Archbold. While bumble bees are busy pollinating the urn-shaped spring flowers of *Lyonia ferruginea* and *Lyonia fruticosa*, Fetterbush was 'noted to rarely receive floral visits despite having large floral displays and floral characteristics classically associated with pollination by bumble bees or other bees' reported Dr. Mark Deyrup. Benning's results in '[Odd for an Ericad](#)' show Fetterbush is mainly visited by a diverse assemblage of long-tongued nocturnal moths 'who are capable of carrying large pollen loads'. And, 'nocturnal pollination is the primary driver of fruit set'. Benning, a previous Archbold Plant Ecology Intern and now PhD Candidate at the University of Minnesota, writes, '**We should be careful not to dismiss potential floral visitors too quickly—there could be many surprises awaiting pollination biologists after dark**'. See moth pollinating Fetterbush [here](#).

Dustin Angell, Archbold

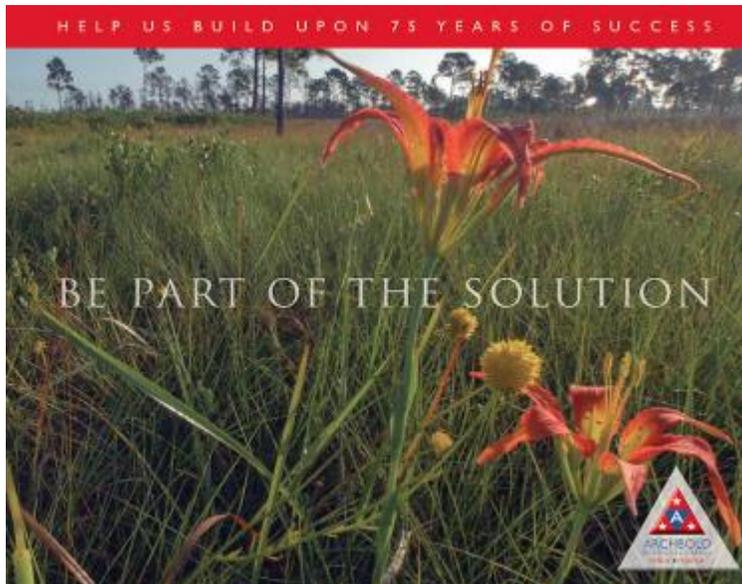
Dec 10: 3:30pm-4:30pm

'Examining the Causes and Consequences of Variation in Offspring Growth and Survival in an Altricial Bird'

Dr. Rob Aldredge,
Archbold

[Archbold Facebook Event Calendar](#)

Be Part of the Solution



A Pine Lily *Lilium catesbaei* blooms in between a seasonal wetland and Scrubby Flatwoods at Archbold.

Everyone wants their gift to matter....to make a difference...to have an impact. Please look out



Directions to Archbold Biological Station

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

this November for Archbold's 2015 Appeal letter and electronic request. A gift to Archbold will help to...

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- Save Florida's remaining precious ecosystems.
- Balance conservation and sustainable agriculture.
- Promote effective management for invasive species.
- Enhance survival for many of Florida's rarest plants and animals.
- Improve management recommendations for mitigating climate change.
- Contribute towards international networks addressing global environmental challenges.

Extend Learning Opportunities:

- Support our students and research interns.
- Extend learning opportunities for schoolchildren.
- Broaden the array of public activities at Archbold.

Donate online at www.archbold-station.org.

THANK YOU FOR YOUR SUPPORT.

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