

ARCHBOLD APRIL 2016 NEWSLETTER for curious minds



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Flooded Spider Burrows



Burrowing Wolf Spider (Geolycosa xera) hunting in it's foxhole burrow.

Archbold is home to two species of rare Burrowing Wolf Spiders (Geolycosa xera and G. hubbelli) and the ecologist who has studied them, Dr. Jim Carrel, Archbold Research Associate and Professor at University of Missouri. Carrel likens the wolf spider burrow excavation to a 'GI in a fox hole quickly rising up just enough to lob a sand grenade toward the enemy, but keeping his head and body protected'. **Carrel completed his 30th annual spider census in February this year, finding just 10 occupied burrows in his Florida scrub study plots**, commenting, 'It is far below the 200-500 I would have found in the 1990's. This is the **lowest spider density**



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Subscribe to our Newsletter **in my long-term study**. In the past 15 years (2001-2016) spider numbers have dwindled drastically relative to the first 15 years (1987-2000). **All signs indicate that they have been drowning during unusually wet rainy seasons**. The opposite pattern prevailed in the first 15 years of m y study. Spiders thrived when the rainy season was unusually weak and drought prevailed. I project that populations will continue to be small in 2017 and 2018 even if it stays dry for many months. This gives me motivation to continue my censuses for several more years.'

Rooter Research



A group of feral hogs photographed by one of Boughton's remote cameras on October 20th, 2015 at 8:13AM.

Surprisingly little is known about Feral Hogs (Sus scrofa), also known as Piney Woods Rooters, in Florida. Dr. Raoul Boughton, University of Florida Assistant Professor with IFAS Range Cattle Research and Education Center in Ona, and his team are working to fill in the biological gaps and explore control methods for land managers. Introduced by Spanish explorers in the 1500's, hogs proliferated during open range livestock practices. Hogs are omnivores that do more grazi ng during the summer wet season, and then switch to rooting for more protein when water levels go down. Boughton's team has already trapped over 100 hogs to attach GPS collars and numbered tags at the MacArthur Agro-ecology Research Center (MAERC). They hope to better understand hog population sizes, reproduction, movements, and wildlife interactions. A large grid system of remote cameras at MAERC collects data daily

"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



Position Announcements

Archbold is seeking a new Executive Assistant to support the Executive Director. Click <u>here</u> for more information.

Research Assistant Position in Restoration Ecology and Land Management. See job description <u>here</u>.

Archbold Research Internships Available in Plant Ecology. Contact <u>Eric Menges</u> for more information. on marked individuals. Boughton said, 'In the near future we will have baseline density estimates of hogs in Florida, the first ever.'

The Scrub Heads



Syracuse University students examining a quadrant for associations of palmetto species.

Dr. Kari Segraves and Dr. David Althoff brought their Syracuse University "Intro to Field Biology" students to Archbold in March. The main goal was to expose students to biological diversity. Althoff said, **`The best part about Archbold is students can see** so much biological diversity across such a small **geographic scale**. They can tie that diversity together to better understand what an ecosystem is'. Students divided time between natural history projects like measuring antlion larvae pit building behavior with side trips to places like Highlands Hammock State Park and Corkscrew Swamp. Their most memorable moment was a night hike at Archbold. Althoff said, 'They turn on their headlamps and learn to spot eyesh ine from hundreds of spiders all around them. Instead of fear, the students are filled with wonder. It really cements in their minds that the scrub is a dynamic and vibrant place. And, they get super excited about discovering more.' Learn more in the student blog The Scrub Heads!

5 Burned Trees





<u>'5 Burned Trees'</u> by Randy Nutt, the first of a series from his 'raw data' of burned tree rubbings collected at Archbold.

Artists turn the ordinary into the extraordinary. **During** a walk through some burned scrub at Archbold several years ago, Randy Nutt noticed black markings on his clothing. To him, these were 'unintentional charcoal drawings'. He remembers, 'I thought, wow, I would like to run through here with a blank piece of paper, to see what happens.' Nutt returned to Archbold to do just that with a team of collaborators, scientists and artists including Dr. Eric Men ges. See them in action <u>here</u>! Nutt said, 'The charcoal impressions and folded textures on paper became the basis of rubbings, which were then traced with pastel pencil on paper and then mounted on canvas' to create '5 Burned Trees', a beautiful abstract drawing 'reminiscent of fresh vegetation regrowing after fire'. 'When I learned how important fire is for the native plants of Florida, I was amazed. Fire, in this case, is about renewal, rebirth, new life. That's a very beautiful thing. So, I thought, let's see what the plants and their markings have to say about it. As you can see, they think it's fine.'

April 2: 9:00am-11:00am

'Plants of Florida Scrub and Sandhill'

Walking Tour

Dr. Eric Menges, Archbold

April 8: 3:30pm-4:30pm

'Climate-driven Shifts in the Composition of Tropical Forests'

Distinguished Seminar Speaker

Dr. Kenneth Feeley, Florida International University

April 24: 1:00pm-2:15pm

'A Walk Through Time, History Trail'

Walking Tour

Fred Lohrer, Archbold

Archbold Facebook Event Calendar

Summer Camp Sponsor

Directions to Archbold Biological Station



Students from Ecology Summer Camp 2015 exploring a hammock at the MacArthur Agro-ecology Research Center.

Lifelong memories filled with science and adventure is what Ecology Summer Camp is all about. Thanks to donations from our friends and supporters, each year Archbold offers camp sponsorship opportunities to help families with economic need and give children the experience of a lifetime! Some of these campers have later become some of our best teen volunteers at camp. Some are inspired to study science in college, and later join Archbold as research or education interns. If you are interested in contributing to this life-changing opportunity, please make a donation to Archbold and make a note under the Designation Box to apply funds directly to 'Summer Camp' or 'Camp Sponsorship'. Follow the donation link here. Thank you! Eight miles south of Lake Placid. Entrance is 1.8 miles south of SR 70 on Old SR 8.



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