

# ARCHBOLD AUGUST 2015 NEWSLETTER

for curious minds

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# **Social Lives of Gopher Tortoises**



In this three-way interaction, male 217 attempts to court female 1680, interrupting a fight between her and female 798 (in burrow).

Archbold researchers once studied Gopher Tortoise behaviors by sitting patiently in scaffolding high above tortoise territories. Today, <u>University of Georgia</u> graduate student and Archbold intern **Nicole White** can study the social system of tortoises using motion-sensor cameras, which allow for continuous and simultaneous monitoring of many more tortoises than was previously possible. White said, 'The cameras record "who is visiting who" and what kinds of interactions are taking place. With these data, **I hope to better understand how age, size,** 



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<u>Archbold Biological</u> Station Website and relatedness influence the social network of the Gopher Tortoise.' White has been monitoring courtship and other interactions occurring at the burrows of 37 adult females since March. Her next step will be to compare the siring success of different males by analyzing DNA and testing the paternity of tortoise hatchlings. Watch for new 'Tortoise TV' videos on Archbold's Facebook page, each contributing to a fuller picture of this fascinating, long-lived reptile!

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#### Florida Scrub-Jay Early Years



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Check out our Youtube Videos!

Adult Florida Scrub-Jay feeds a begging fledgling.

Does the early environment of young Florida Scrub-Jays (nestling to fledgling) matter down the road? A recent publication in the journal Auk by Ronald Mumme, Reed Bowman, Shane Pruett, and John Fitzpatrick says YES! This comprehensive study analyzed 33-years of the unique dataset from Archbold featuring the breeding and survival of 15 generations of Florida Scrub-Jays. Early-life environmental conditions like nestling weight, family group size, and the % of oak vegetation in the home territory have significant consequences for early survival and the chance of acquiring a breeding territory. The amount of high quality oak scrub in territories was a great predictor of the future success of young jays and helps explain why Florida Scrub-Jays have much larger territories (~25 acres) than other similarly **sized jays.** 'Our analyses portray the Florida Scrub-Jay as a species that exists perilously near the edge of its available food supply'. Read full article here.

"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

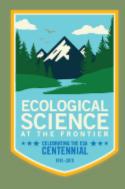
#### Six Years in the Scrub



Forsburg worked on an <u>Orianne Society</u> study of Indigo Snakes, a Federally Threatened species, at Archbold for two years looking at habitat use and movements using radio telemetry.

Zach Forsburg shipped south from **Shippensburg** University with a Masters degree in Biology for an Archbold internship studying Oak Toads, the tiniest toad in North America. That was Fall 2009 and he has been part of Archbold ever since making significant contributions as Herpetology Research Assistant, Interim Education Coordinator, and Acting Development Director, to name a few. 'Archbold truly is a family and I was welcomed into it immediately', Forsburg said. 'It has been a dream to be able to live at the Station and walk out my front door into one of the most imperiled ecosystems in the world. I learn something new every day making me a more well-rounded scientist. I am in awe of what Richard Archbold contributed to science, using his own fortune to explore the world, establish a field station, and fund it so that any scientist could come and study'. Good luck beginning your PhD studies in amphibian conservation at **Texas State University**, Zach. We know you will be back!

## **Anole Insights**



Archbold Reunion at Ecological Society of America Conference in Baltimore

**Aug 11**: 7 pm-10 pm

Pratt Street Ale House

Archbold Facebook Event Calendar





Scrub Blazing Star *Liatris* ohlingerae is blooming at Archbold now! Archbold Plant Ecology has studied this Federally Endangered and scrub endemic species since 2000!

Two Cuban Brown Anoles engage in a lock-jawed fight over a territory dispute.

Jordan Bush, a National Science Foundation Fellowship funded PhD student from University of Tennessee, spent June and July based at Archbold to study whether non-native Cuban Brown Anoles Anolis sagrei disrupt the social behaviors of native Green Anoles Anolis carolinensis. Bush commented, 'I am particularly interested in how the territorial behaviors and social interactions of a native species are affected by the presence of a closely related non-native species. We observed a lot of territory disputes between brown anoles in a study plot in nearby Highlands Hammock State Park including three lock-jawed fights and several ritualized displays in a two week time span! I was surprised to find that some brown anole territories extended over an entire stand of trees, while others were in a single palmetto. I am excited to return next summer to finish the brown anole baseline observations and to begin looking at behaviors of green anole populations at Archbold'.

# **Champions of Summer Camp**



More fun photos at Archbold K-12 Education Facebook and YouTube.

### Directions to Archbold Biological Station

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



Shout out to all those who helped with our six 2015 Archbold Summer Camps for 7-12 yearolds. Dustin Angell (Education Coordinator) and Lexi Siegle (Education Intern) lead a great team of counselors, volunteers, staff, and interns. Thank you all for helping lead the campers through swamps, lakes, deep sands, and cattle pastures to wonderful moments of discovery. Read the Highlands Today article featuring Lexi's inspiring story of how attending scrub camp during her childhood years helped propel her into a career in science! Kudos to the Lake Placid Art League for another excellent year organizing arts and crafts for the campers. Our deep gratitude to the donors who funded many campers, especially to Robert and Donna Lloyd George whose generosity allowed us to partner with local nursery business **Delray Plants to offer an extra camp for the children of their workforce**; stay tuned for our new video from that camp!

<u>Archbold Biological Station</u> | <u>MacArthur Agro-ecology Research Center</u> | <u>Archbold</u> Reserve

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