



Becca Tucker

ARCHBOLD JUNE 2016 NEWS for curious minds



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Trapping Trap-Jaws



Kim Drager and Adrian Smith hold a partial cast of a Trap-Jaw *Odontomachus relictus* nest colony on Red Hill. See video [here](#).

Huge piles of red-tinted sand, shovels, flags, and a kiln oven filled with charcoal and zinc. The site looks like an archaeological dig. On Red Hill, here at Archbold Biological Station, University of Illinois PhD student [Kim Drager](#) emerges from an excavated hole like a Burrowing Owl. **Drager is studying how ants**



Allen McPherson

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interact with the soil environment. She came to Archbold to create zinc metal casts of the underground nest colony of *Odontomachus relictus*, a species of carnivorous trap-jaw ant found only on the Lake Wales Ridge. Never before done, Drager and colleague [Dr. Adrian Smith](#) (North Carolina Museum of Natural Sciences, studying chemical ecology of trap-jaw ants), poured 600 degree molten zinc into the trap-jaw ant nest cavity. Then, they dug. And, dug. **They found a super-long linear tunnel with periodic pancake-shaped chambers beyond their expectations.** The zinc ran out at 6.7 feet but the tunnel went deeper! How deep does it go? How does the nest colony structure and depth relate to sandy slopes at Red Hill, hydrology, temperature, and ant species competition? They do not know...yet. Watch a video of them in action [here](#).

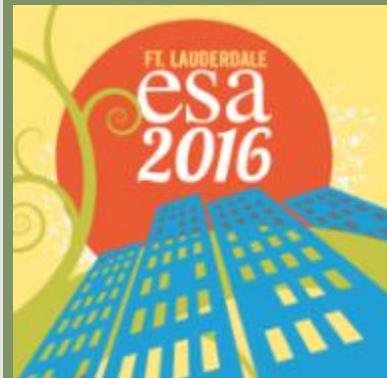
Media Guru



Jen Brown filming prescribed fire at FWC Carter Creek for '[At Home in the Florida Scrub](#)'.

Have you wondered why our monthly [Archbold Update](#), [Facebook page](#), and [videos](#) are so compelling? Over the last three years, Jen Brown, owner of [Into Nature Films](#), has designed, stewarded, and propelled Archbold's social media to an ever-widening and appreciative audience. Jen is a biologist with a Master of Fine Art in nature documentary filmmaking. **She used her Archbold May seminar 'Bringing 3D Nature to Life in Digital 2D' to help the audience appreciate the care and thought required to construct engaging social media.** Equally important, she explored the failures behind 'What were they thinking?' examples.

"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

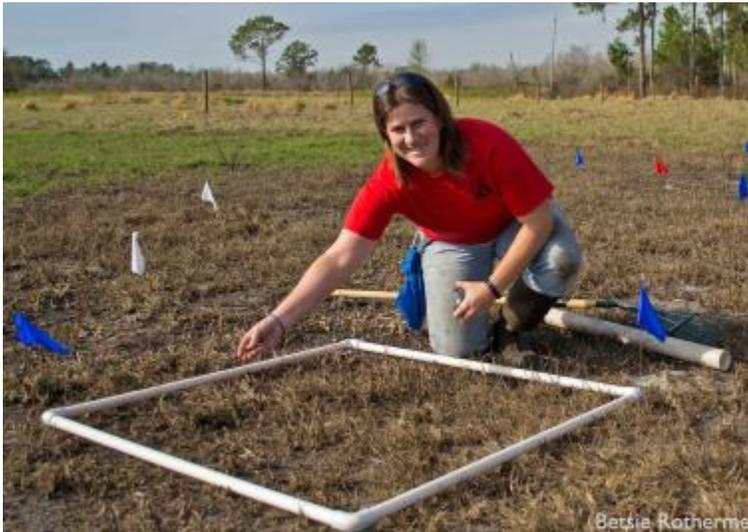


Calling All Archbold Alumni

Come to the Station to reconnect with old friends and the Florida scrub at the Archbold reunion just before the nearby ESA on August 6 & 7. Contact [Eric Menges](#) if interested in car pooling from Fort Lauderdale. The ESA Field Trip to Archbold is a separate event. Register for the Archbold reunion [here](#).

Her overlapping bylines for compelling conservation media include: 1) Authentic Stories; 2) Show People in Nature; 3) Riveting Patterns and Puzzles; 4) Engage Universal Emotions; 5) Present Nonhuman Perspectives; and 6) Be Respectful! Jen said, 'I'm grateful for the opportunity to share my ideas and collaborate with the amazing group of people at Archbold'. We in turn are indebted to Jen. She is key to our social media success and her work is an everyday inspiration to be thoughtful communicators ourselves.

Inside and Out



Becca Tucker at a pasture restoration site on the [Archbold Reserve](#).

Becca Tucker joined Archbold Restoration Ecology and Land Management as a Research Assistant in early 2013. Tucker recalls, 'It was a perfect way to apply my Masters degree from Purdue University in a novel setting. I was not disappointed. **Archbold showed me a whole new suite of habitats that I came to love.** The scrub, rosemary balds, flatwoods, bayheads, ponds, wetlands, and cattle pastures reaffirmed how much I love the intricacies of nature. Each place held hidden gems that I reveled in finding, such as blooming Pine Lilies, bobbing Burrowing Owls, or stretches of untouched trees that filtered the light just so. I was able to capture that unique beauty through my increasing love of photography and art, skills that will follow me to my next adventure closer to home in Wisconsin.' **As Tucker left Archbold in May 2016, she added, 'The desire to know a place inside and out is what will drive me the rest of my career.'**



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Biodiversity Hourglass



Mike Kinsella with Florida Scrub-Jay at Archbold in 1972.

Discovering a species new to science is exciting, but the process takes time to assemble facts, compare similar specimens, or revise a genus.

Hard working scientists sometimes have to put a new species description aside for a few years. Parasitologist Dr. Mike Kinsella, now retired, knows this all too well. He just published a paper in [Zootaxa](#) describing a new species of nematode *Gongylonema archboldi*. It took 43 years! 'When I was an Archbold Fellow from 1972-1973', **Kinsella said, 'I collected a species of nematode from the stomach of the cotton rat and other rodents which I was quite sure was a new species. I always intended to describe it and name it after Mr. Archbold (he was never Richard to me).'** Kinsella brought his family to Archbold for their memorable 'Archbold Year' living and working alongside Dr. Jim Layne (former Research Director), Richard Archbold, and Fred Lohrer (still our Librarian). He said, 'It was an unforgettable experience for the whole family

Upcoming Public Events

2016 Archbold Ecology Summer Camp!



Rosemary Scrub Morning Video

Go for a morning walk in Rosemary scrub at Archbold [here](#) to explore a flowering pear, a berry found only in the southeastern US, a bird rarely seen by day, and a rare Florida scrub endemic.

filled with animal encounters, fictional Spanish Moss monsters, and a warm community of Station residents'. Kinsella has now published eight papers spanning 1974-2016 from his one year of data collection at Archbold.

All Hail the Queen



Female tortoise #21 at her burrow on Red Hill. She is at least 58 years old, and could be much older.

The [Archbold Herpetology Program](#) and [Into Nature Films](#) are currently in film production to tell a story about time, conservation, fire, and Gopher Tortoises entitled '**Queen of Red Hill: A Remarkable Tale of Tortoises and Conservation in Florida**'. Set on Red Hill, the story begins with John Roebing, II who purchased this land in 1929. It continues with Richard Archbold who was gifted the Red Hill estate to create Archbold Biological Station in 1941. Then, in 1967, Archbold Research Director Dr. Jim Layne initiated the first long-term study of Gopher Tortoises. He measured tortoise #21 for the first time in 1968 as a fully mature female. Today, tortoise #21 is still living on Red Hill in a burrow recently restored with fire. '**Queen of Red Hill**', the story of her tortoise life intertwined with the history of the Station has been made possible by support from the [Disney Conservation Fund](#). The fund 'is a key pillar in Disney's efforts to protect the planet and help kids develop lifelong conservation values'. Thank you Disney Conservation Fund! Click [here](#) if you would like to make a donation to the Gopher Tortoise project.

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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