



Michael Sinclair

ARCHBOLD SEPTEMBER 2017 NEWS for curious minds



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Florida Bear Truth



Carlton Ward

Florida Black Bear captured on [Carlton Ward's](#) motion triggered camera in the Florida scrub of south-central Florida.

The Florida Black Bear (*Ursus americanus floridanus*) once roamed throughout the southeastern USA as one large, contiguous population. Today, human development, especially roads, slices and dices remaining habitat for this solitary omnivore (80% of a bear's diet=plants). Florida's largest land animal survives in 7 subpopulations in the state. A [new paper presenting results of a 2010-2012 study of the Highlands-Glades Black Bear subpopulation of south-central Florida, an area that includes Archbold Biological Station, was just published in](#)



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[PLOS One](#). Lead author Sean Murphy, and two of six coauthors, Wade Ulrey and Joe Guthrie, are former University of Kentucky students of Dave Maehr who all completed their graduate fieldwork at Archbold. Using raspberry scented pastries to lure bears to cross barbed-wire fences, they collected small samples of bear hair for a genetic analyses. **The genetics results paint a portrait of a bear subpopulation hanging on in remnant forested areas and isolated by severe habitat fragmentation.** Further, this subpopulation has low genetic diversity, more females than males, and the lowest population density of all Florida Black Bears (estimate~98 individuals). Considering Florida's projected human population growth, their study recommends conservation of remaining natural habitat and more intensive monitoring of this small subpopulation in peril.

Avian Ecology in Argentina



l. to r. Dr. Reed Bowman, former Archbold intern Matt Furst, and Avian Ecology science staff Dr. Angela Tringali and Becky Windsor in front of the Ornithological Congress of the Americas logo, the Plush-Crested Jay.

This August, members of the [Archbold Avian Ecology Program](#) traveled to Argentina to attend the inaugural [Ornithological Congress of the Americas](#). Conceived of two years ago by the [Association of Field Ornithologists](#) under the leadership of then President, Dr. Reed Bowman (Avian Ecology Program Director), the meeting brought together ornithologists from North and South America, Europe, and Asia to foster collegial

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— Edward O. Wilson

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exchange about the science and conservation of birds throughout the hemisphere. The meeting attracted ~600 attendees from 14 countries. In total, **11 current members and alumni of the Avian Ecology Program attended: Five gave talks and two presented posters about their Archbold research reflecting diverse, but related questions from our long-term study of the Florida Scrub-Jay.** Dr. Bowman said, 'Over 300 graduate and undergraduate students attended. It was great to see students, especially Archbold's own, interacting with their peers and professionals on ecological questions that transcend national boundaries.' One attendee noted the meeting 'generated positive feedback among ornithologists of our countries to increase the quality and depth of their science.'

20 Years, Oh My!



Kevin Main lighting his first prescribed fire in 1991.

Kevin Main celebrated his 20th year working at Archbold on August 13th. He shared, 'One of my best memories was the summer of 1989. Eric Menges, Archbold's Plant Ecologist, hired me to help with some extensive summer field work. It was my first experience crashing through native vegetation in the elusive search for data. From dense, dry scrub to thick, wet bayheads, I was quickly exposed to much of what the Archbold landscape had to offer.' Main then worked for the Florida Forest Service as a lookout posted aloft in the Archbold fire tower. Today, Main is [Archbold's Land Manager](#). He said, '**Controlled burning at Archbold is the most visible activity I perform. Sending smoke**



Watch our [Archbold Facebook](#) video of a juvenile Florida Scrub Lizard (*Sceloporus woodi*) catching a ride on male Gopher Tortoise 1464 who was courting female tortoise 1680 at Archbold.

thousands of feet into the sky, and leaving behind a charred landscape soon to be replaced by lush, green regrowth. Fire is a natural, necessary cycle to maintain our piece of Florida as it has been for thousands of years.' Main loves his job and considers Archbold staff to be family. He added, 'It is great to be able to work with people fascinated by the intricacies of nature.'

The Moth that Recycles Turtles



Gopher Tortoise found flipped over revealing the Tineid Moth caterpillar tubes on top of the shell.

Archbold Plant Ecology Intern Michael Sinclair found a puzzling Gopher Tortoise shell in the Florida scrub recently. Soon, he learned this strange sight was the work of the amazing Tineid Moth caterpillar (*Ceratophaga vicinella*). **The Tineid Moth is a scavenger that feeds only on the keratin plates (the shiny shell) of dead Gopher Turtles (*Gopherus polyphemus*) and specifically turtles that died lying upside down** (maybe after a fight with another turtle). The larvae (i.e., caterpillar) makes a multilayered silk tube that extends over part of the shell and deep into the sandy soil beneath. The larvae move up and down the tube to feed on the shell. The *Ceratophaga* moths are the only insects that are able to subsist on a diet of solid, dry keratin. The genus *Ceratophaga* is primarily African. *C. vicinella* is the only New World relative. Read more about this fascinating insect-reptile tale in '[A Caterpillar That Eats Turtle Shells](#)' which was first published in 2005 by Mark



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Deyrup, Nancy Deyrup, Maria Eisner and Thomas Eisner [here](#).

The Indelible Archbold Legacy of Anne Reynolds



Anne Reynolds: Educator, Writer, Artist, Archaeologist, and Philanthropist. Anne was someone who always 'rolled up her sleeves' to explore her passion.

Anne Reynolds, storied citizen of Highlands County and staunch supporter of Archbold Biological Station, passed away on Saturday August 12, 2017. The entire Archbold community—board, scientists, educators, staff, students, volunteers—extends our sincerest condolences to her husband Charles and the Reynolds family. Anne was endlessly vibrant and insatiably curious. She was an instinctive lover of nature, insightful scholar of history, and talented artist and writer. In addition to her dazzling multitude of talents, Anne was always serene, supremely thoughtful, and full of kindness. **She epitomized the unending search for knowledge, the desire to share what she learned, and a spirit of generosity to help others do likewise.** Especially helpful to Archbold, she opened our eyes to the history of native peoples and early settlers of this area. Anne went far, far beyond everything that Archbold could ever have wished for in a neighbor, citizen-colleague, and supporter. Together with loving husband Charles, she was a benevolent supporter of many worthy causes.

Directions to Archbold Biological Station

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



Whenever Archbold needed help, Anne and Charles invariably responded generously. **We will miss her dearly, and we are so grateful to have been one of the many places she touched and changed.**

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