



Haoyu Li

ARCHBOLD NOVEMBER 2019 NEWS

for curious minds



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Fire Loving Herb Predictions



Highlands Scrub Hypericum (*Hypericum cumulicola*) in the Florida scrub at Archbold.

To better understand, protect, and manage the endangered Highlands Scrub Hypericum (*Hypericum cumulicola*), researchers looked to an ignored but obvious place: Underground...where life for this Florida scrub specialist begins as a tiny seed. Taking advantage of Archbold's wealth of data including 22 years studying 15 populations (11,000 individuals), over 50 years of fire history, and Florida rosemary scrub biogeography, researchers Dr. Eric Menges (Archbold Plant Ecology Director), Dr. Pedro Quintana-Ascencio (University of Central Florida, Archbold Research Associate), Stephanie Koontz (Archbold Research Assistant), Haoyu Li (Archbold Research Assistant), Vivienne Sclater (Archbold GIS



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"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

Specialist) and collaborators applied sophisticated computer models to evaluate the persistence of this dainty yellow-flowering herb. They write, "Our findings demonstrate the pivotal role of seed dormancy, dispersal and fire history on population dynamics, distribution and abundance". The high seed dormancy and limited seed dispersal of *H. cumulicola* will inform how fire is managed aboveground for this species. Nature is more complex than we can imagine. But, because the researcher's models incorporated multiple scales (i.e., local to greater landscapes, seed banks, seed dispersal, fire history), they were able to "substantially improve the ability of our models to correctly project observed occurrence and presence of *H. cumulicola*".

Ranch to Ridge Expedition



Dr. Reed Bowman, Archbold Avian Ecology Program Director, holding a freshly banded Florida Scrub-Jay with Carlton Ward Jr. and Grant Bemis (Florida Wildlife Corridor), and Danny Schmidt (Grizzly Creek Films).

Florida Wildlife Corridor explorers, Carlton Ward Jr., Mallory Dimmitt, and Joe Guthrie completed a 7-day Ranch to Ridge expedition south to north through Highlands, Hardee, and Polk County in late October. Mallory Dimmitt shared, "This year we focused on the Lake Wales Ridge to emphasize that conserving wildlife corridors doesn't just protect Florida's large wide-ranging animals but also conserves the many 'little but precious' plants and animals of Florida". The Florida Wildlife Corridor has roots along the ridges and ranches spanning the Lake Wales Ridge. It was at Archbold Biological Station where Carlton Ward first envisaged launching cross-Florida expeditions, grounded in scientific knowledge, that could highlight the opportunities and solutions to protect the remaining conservation corridors across the state. Joe Guthrie, who previously conducted his Masters' thesis fieldwork on Black Bears at Archbold noted,

The Scrub Blog
Nature and Science from Florida's
Heartland

Grants-In-Aid of Research

**Deadline to Apply:
November 15**

\$2,000 award to be given to two visiting scholars for work involving field research at Archbold. Learn more [here](#).

"We met with two Archbold scientists, Stephanie Koontz and Reed Bowman, enroute to learn about their work and to discover how wildlife corridors play a role in the conservation of species associated with the sandy Florida scrub habitats of the Ridge". The Executive Director of the Florida Wildlife Corridor, Jason Lauritsen, shared, "We are grateful to the scientists at Archbold who helped us plan a route via valuable conservation stops and for sharing their science during the expedition". Archbold's Director Hilary Swain commented, "I never fail to be motivated by the Florida Wildlife Corridor. Their 'end of expedition' celebration held at Bok Tower Gardens brought home how 'people connectivity' is fundamental to wildlife connectivity".

Wilderness at my Doorway



Haoyu Li inspecting a water monitoring station at Buck Island Ranch.

Haoyu Li remembers thinking, "Wow, there is a lot of space out here" when he first visited Archbold's Buck Island Ranch in September 2016 with his University of Central Florida graduate advisor Dr. Pedro Quintana-Ascencio. He shared, "I was impressed with the diverse ecosystems on the ranch and all the support offered by Archbold's Agro-ecology program". Eight months later, Li moved into the ranch to begin his Master's project exploring competition between the native Carpet grass and non-native Bahia grass. After his graduate project completed, Li accepted a Research Assistant position at the ranch collecting long-term monitoring field data on water quality, plants, and greenhouse gases. **After three years, Li now regards the ranch as his home. He shared, "The peaceful, slower pace of life here changed my character. With the wilderness at my doorway, I am drenched in nature and wildlife photography.** I stay in the field for hours waiting to capture a moment on camera. I am most inspired by the changing patterns of animals and plants throughout the year". Li's photography of Buck Island Ranch is getting noticed and recently won a state level contest

Nov 14: 3:30-4:30 PM

'Community Dynamics and Restoration in a Warmer and More Invaded World'

Katie Stuble, Holden Arboretum

Nov 21: 3:30-4:30 PM

'Environmental Impact Assessment of U.S. Beef Systems'

Jasmine Dillon, Colorado State University

Dec 12: 1:00-5:00 PM

Archbold Research Symposium

Archbold staff will deliver presentations & posters from 2019.

Free & open to the public. Refreshments provided.

Scrub Resilience



Garret's Mint in bloom.

This fall, Archbold Research Assistant, Stephanie Koontz, attended the Society for Ecological Restoration in Cape Town, South Africa, focusing on restoration in the Archbold Plant Ecology Program.

She shared, "My goal was to highlight the value of Archbold's long-term data collection for restoration activities". Using 30 years of population data collected by Program Director, Dr. Eric Menges, Koontz and collaborators from the University of Central Florida, Dr. Pedro Quintana-Ascencio and Dr. Federico Bourghesi, compared trends of wild and recently restored populations of the federally endangered and locally endemic Garret's Mint (*Dicerandra christmanii*). In a session on Biodiversity and Climate Change, Koontz presented their results showing that not only were translocated populations successful but "in many cases they were actually out-performing wild populations". This excellent research echoed this year's conference theme, 'Restoring Land, Water and Community Resilience', by demonstrating restoration activities are feasible and are being done around the globe. Conference attendees were treated on opening day to a [short film](#) highlighting the importance to protect, restore, and fund restoration activities. "The takeaway is ecosystems will survive, when given a chance," said Koontz.



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Like No Other Place on Earth



Florida Burrowing Owls at Buck Island Ranch.

Archbold is able to persevere in our mission because of the philanthropy and dedication of others. Our founder, Richard Archbold, understood this special place is Like No Other Place on Earth and should be treasured. We have built on his commitment over the years to include generations of researchers, as well as supporters like you who joined us in our mission to protect the wildlife, lands, and waters of Florida and across the globe. **We are grateful to announce a generous donor has issued a \$75,000 end-of year challenge, providing you the opportunity to double the impact of your gift to Archbold** and support our unique studies. This is your chance to make a real difference for not only our organization, but for countless species that we strive to protect. Thank you for helping preserve our world's natural heritage—and continuing the legacy of our mission. Thank you for all you do!

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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