ARCHBOLD APRIL 2015 NEWSLETTER

for curious minds

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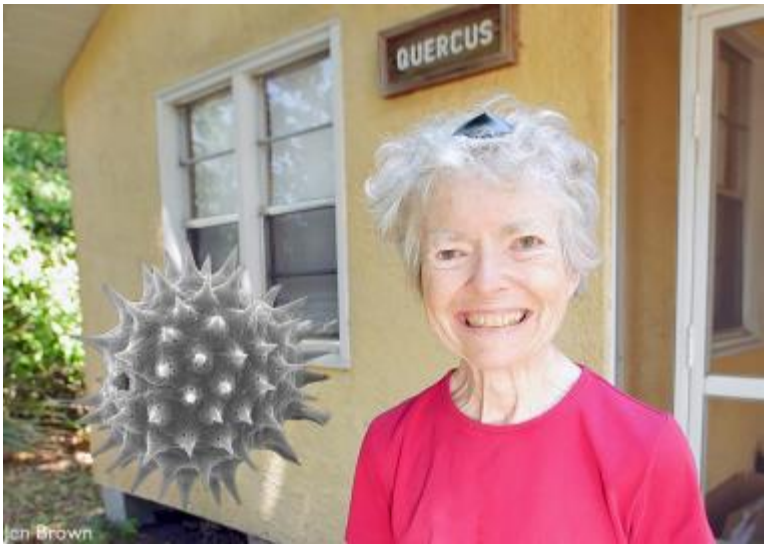
Pollen Paintbrush



Barbara Hansen and the pollen grain of an Asteraceae plant.

Barbara Hansen checked into Quercus Cottage in March to work on her present-day reference pollen slide collection for Archbold. Hansen is an internationally recognized fossil pollen analyst, or palynologist. She first came to Archbold in the 1980's. On a return trip in 1994 with colleagues Bill Watts and Eric Grimm, **Hansen helped extract an 11-meter sediment core from the depths of** Lake Annie **to reconstruct the past vegetation and climate**. A previous core of Lake Annie dated back to the Pleistocene, 37,000 years ago, when Watts suggests that the predominant surrounding

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vegetation was Rosemary Scrub and the climate was cooler and drier. Hansen also helped core Lake Tulane at Avon Park and analyzed the fossil pollen from the 50,000 year old core! This pioneering work **informed a paradigm shift in understanding global climate change**. Hansen said, 'Every single plant has a different looking pollen grain. My work ranges from tedious to great fun. When you put it all together into a pollen diagram, it is like doing your dot-to-dot pictures and you suddenly see these vacillations which mean different things to different researchers'. Hansen also broke boundaries as a woman scientist; in 1961 she was one of three women students among 60 men in her Glacial Geology course!

The Student Becomes the Teacher

Dr. Stephen Deyrup (center) with students from Siena College.

Dr. Stephen Deyrup **brought his Chemical Ecology class from Siena College to Archbold** in March for a week of experiential learning. **Much of the pioneering work in chemical ecology was done at Archbold** by Dr. Tom Eisner and Dr. Jerry Meinwald. Deyrup said, '**This allows us to walk in their footsteps, finding organisms they studied and experiencing the chemistry first-hand** such as whirligig beetle defensive secretions'. Stephen grew up at Archbold being the son of Nancy Deyrup, former Archbold Education Coordinator, and Dr. Mark Deyrup, Archbold Entomology Director. 'Early on, I developed an appreciation for the wonders of nature and the need for conservation. During college, I decided to become a professor to study biology questions via chemistry. This decision was heavily influenced by chats with Dr. Tom Eisner who collaborated with my father. My career goals are within reach thanks in part to the education I received from my parents and from visiting scientists while growing up at the Archbold Biological Station'.

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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

Ziziphus: On the Road to Recovery

Fruits of *Ziziphus celata*.

Stacy Smith, Archbold Plant Ecology Program**, was recently awarded a 3-year grant from the** Florida Forest Service **for new research on** Florida Ziziphus *Ziziphus celata*, one of the most endangered plants in the US. A thorny, clonal shrub with prolific flowers, it is found at just a few sites in yellow sand xeric uplands along the Lake Wales Ridge. Most remaining populations are from a single clone and self-sterile, severely depressing reproduction in the wild. Smith said, 'The Plant Ecology program has studied Florida Ziziphus for more than a decade, implementing 10 genetically diverse experimental introductions on protected property. With this new grant, **we are excited to learn more about Ziziphus microhabitat preferences to aid in its recovery**. In some of our previous experimental introductions, we recorded basic information on microhabitat such as shade and soil nutrients, but now we will be able to collect microhabitat data systematically across all known wild and translocated populations'. Good luck Stacy and Dr. Eric Menges, Plant Ecology Program Director, in unlocking the secrets of Ziziphus to help save this species!

Conservation Jigsaw Puzzle

Upcoming Public Events

April 16: 3:30 pm-4:30 pm
Playing with Fire: Pyroecology in Florida and Around the World
Dr. Eric Menges, Archbold

April 26: 1:30 pm-3:00 pm
Plants of the Scrub Nature Walk & Discussion
Dr. Eric Menges, Archbold

May 16: 8:45 am-12:00pm
May 17: 1:15 pm-4:30 pm
Tortoise Tracker Family Event
Hands On Activities & Field Demonstrations
Must pre-register here
Dr. Betsie Rothermel, Archbold

Archbold Facebook Event Calendar

Check out the Archbold Education Scrub Blog

Bobcat captured by a wildlife camera located near the border between Archbold and the XL Ranch. Photo by Carlton Ward.

The State of Florida approved a conservation easement **for 405-acres on the Lightsey Cattle Company XL Ranch immediately to the west of Archbold** on March 10th. Cary and Layne Lightsey are our grazing partners on the Archbold Reserve and colleagues for many conservation initiatives with Florida ranchers. The entire 3,200-acre XL Ranch is now protected by easements, expanding contiguous conservation lands around Archbold to 51,467 acres! The XL Ranch supports high-quality habitats including cutthroat seeps and bayheads that are important for Florida Panther, Bobcat, Black Bear, many other rare plants and animals, as well as traditional ranching. **Layne Lightsey said, 'We're really just landlords of this land if you think about it**. I feel like that we have the opportunity to protect this land and leave it as God intended it. **It's our job to protect it for the people of Florida**.' Hilary Swain said, 'They have struck a balance between the need to make a living from the land and protecting the environment. We couldn't ask for better neighbors'.

Shout Out to UCF Alternative Breakers!

Directions to Archbold Biological Station

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

UCF Alternative Breakers finished strong with some Nature Trail maintenance.

A group of University of Central Florida (UCF) students didn't seek the typical Spring Break this March. Although the landlocked ancient sand dunes of Archbold used to be beachfront, **these students, accompanied by Michael Arthur, came here for an extraordinary** volunteerism-research break. They spent the first day learning about non-native plants and helping Kevin Main, Archbold Land Manager, remove invasive Torpedograss and Rattlebox. Next, after a tour of the Plant Ecology program, **students joined the team to search the nearby Lake Placid Scrub for rare plant species** including Britton's Beargrass and Edison's Hypericum. Archbold Plant Intern Emma Sass said, 'The students were great sports about trekking through thick vegetation while keeping an eye out for rare species. This also helped them appreciate plant distributions and learn more about management'. Don't worry, they interspersed lots of fun into all that learning and hard work, and took one day to enjoy themselves at Lake Annie. Thank you so much UCF!

Archbold
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