

Field Notes

News from the Alabama Ecological Services Field Office



2017: A Year of SMART Conservation

By Jeff Powell and Denise Rowell

In late 2007, the U.S. Fish and Wildlife Service's late Director, Sam Hamilton (who was Southeast Regional Director at the time), joined Southeast Regional Director Cindy Dohner (who was Sam's Deputy Director) to meet with the staff of the Alabama Field Office (AFO). They described a new vision for species conservation....one involving a much broader scale. Sam told staff biologists that it was time to look at recovery in a big picture way. This meant not only working closer with our state partners, but also industry leaders, landowners, and developers. Without them, it would be impossible to complete our conservation mission. The model to which Sam was referring has been coined Strategic Habitat Conservation (SHC).

*Ten years later,
the AFO is
still upholding
Sam's vision.*

In addition to the Alabama Strategic Habitat Unit (SHU) project, the AFO has embarked on a new and exciting partnership with Resource Management Service (RMS) that challenges old paradigms, and promises to change the way we look at on-the-ground conservation. RMS is a global timberland investment firm located in Birmingham, Alabama. Recently, the AFO worked with RMS on a Resource Conservation Partnership Program proposal, for its Coastal Headwaters Forest (CHF) project. The CHF project seeks to test a new conservation model where private,

working forests would be restored and managed as a working longleaf forest, protected from development through a conservation easement. Through our support of the CHF project AFO biologists and partnering scientists have access to RMS managed forests in Alabama to help inventory and develop management strategies for at-risk and other forest species found in managed longleaf and loblolly pine forests in the state.

"Conducting research on this land could bridge knowledge gaps and extend species' distributions for wide ranging species like the gopher tortoise, various bats, and aquatic species," said AFO Field Supervisor Bill Pearson.

RMS Senior Vice-President Jimmy Bullock recently met with Pearson to discuss their partnership. Both Pearson and Bullock hope their work can contribute to the recovery of both listed and at-risk species, and potentially, keep at-risk species off the Endangered Species List. "RMS believes actively managed forests can and do contribute to the conservation of at-risk and listed species", Bullock stated. "Working in cooperation is a much better path to conservation success and achieving our ownership objectives for the working forests we manage every day."

To assist in this effort, AFO biologists have developed a mapping tool that strategically identifies locations and prioritizes survey efforts. The Species Monitoring and Recovery Tool (SMART) is GIS-based spatial modeling tool that uses species richness and geologic maps



RMS Senior Vice-President Jimmy Bullock meets with AFO staff to discuss research of at-risk species on RMS property.

to assist AFO biologists in inventory, monitoring, and recovery activities on RMS property. The species richness map was developed using key spatial layers of federally-listed, State priority, and at-risk species in Alabama.

"By using the SMART tool and AFO's extensive Strategic Habitat Unit (SHU) partnership model, we aim to assist RMS to conserve the longleaf pine ecosystem and its associated habitat matrix on their properties. By doing so, more than 40 federally listed and at-risk species will benefit," said Pearson. "It is our hope that this partnership will serve as an example for other forest managers, as well as build mutual trust and understanding between our agency, and an influential natural resource management company."

AFO biologists aren't wasting any time getting to work. They have already begun conducting Alabama pearlshell surveys on RMS property.

"We value the relationship between RMS and the AFO and believe it represents an effective model of trust and cooperation that can be implemented and used by other forest industry leaders," said Pearson.

Biologist Eases Students' Bat Fears

On a fall day in Daphne, Alabama, U.S. Fish and Wildlife biologist Shannon Holbrook is in her happy place: in front of a classroom of students, teaching them about an often misunderstood species. Holbrook has dedicated several days to visiting local schools and teaching children about the world of bats. "When kids think about bats, they often think of the pop-culture definition..... sinister-looking and fanged, which incites fear," says Holbrook, who works in the Alabama Field Office (AFO). "They have no idea how important this species is to our ecosystem in Alabama."

How important? For starters, bats keep the insect population in check. They can eat hundreds of bugs every hour, including mosquitos, moths and grasshoppers. Not only do some of these insects spread diseases, many of them can also destroy crops. "Bats are critically important to the U.S. economy because they consume between 600 to 1300 tons of insects per year," explains Holbrook. "Bats in other parts of the world are effective pollinators for plants that only bloom at night, such as the Agave. Some are also efficient at dispersing seeds."

Sixteen different bat species are found in the state of Alabama, and three of them are on the endangered species list: gray bats, Indiana bats, and northern long-eared bats. Their population is declining due to significant environmental threats, including wind turbines, habitat destruction, water pollution, pesticides, and a disease called White Nose Syndrome.

With so many potential threats, AFO biologists knew they couldn't do this research alone. That's why they're teaming up with conservationists throughout the state and beyond to protect these unique animals. Alabama Power, the Alabama Department of Transportation, and the Tennessee Valley

Authority have joined the AFO to help learn more about bats in the state, committing funds as well as people to the field work. Holbrook says partnerships are the only way to achieve the best available science.

"Understanding this species' habitat use in Alabama during the critical spring and summer months is essential for future protection and conservation of important resources needed for the survival of bats. These groups are providing funds and manpower to help with the study. Without them, the study would not be possible," says Holbrook.

The primary field work centers on radio-tagging and monitoring Indiana bats from Stanley-Carden cave. This requires aerial crews as well as ground support to document migration routes and roost stops. Scientists will also use mist-nets to capture the bats and replace the radio tags as necessary.

"We look forward to supporting this important research," said Jason Carlee, environmental affairs supervisor at Alabama Power. "The information gathered in these studies will help us better understand the movement of bats within our service territory. That, in turn, could help us reduce the potential impacts of our activities, such as right-of-way maintenance and forestry operations, on these species."



These students are all smiles after learning that bats are totally cool! (Submitted by Shannon Holbrook)



The northern long-eared bat, photo: Shannon Holbrook

Scientists will kick-off their research in the spring of 2017. In the meantime, Holbrook continues to travel to different classrooms, hoping to shed some necessary light on bats in Alabama. "The kids have been really receptive during my classroom visits. They are starting to understand that bats play a pivotal role in our ecosystem, and they really aren't that scary," laughs Holbrook. "Hopefully, future generations will continue the bat work that we've started here in the state."

Clean Beaches Increase Sea Turtle Nests

Thanks to the coordination efforts of Service biologist Dianne Ingram, Alabama experienced a record-breaking year for sea turtle nests. Dianne partnered with the cities of Gulf Shores and Orange Beach to promote the “Leave Only Footprints” program, encouraging beach-goers to pick up chairs, toys, and any other potential sea turtle obstacles. She also educated both cities on sea turtle friendly lighting, and worked closely with volunteers from Share the Beach to mark and protect sea turtle nests.



Photos by Share the Beach

The Benefits of Burning

In September, Partners for Fish and Wildlife Biologist Eric Spadgenske joined more than 120 conservationists for the annual Alabama Prescribed Fire Council (ALPFC) meeting in Auburn. Theme of the meeting was “As a burner, are you a good neighbor?” Several speakers gave presentations on the importance of prescribed burning for wildfire prevention, ecological benefits, and challenges to effective prescribed burning. Neighbors helping neighbors to increase prescribed fire capacity was also woven into the day’s discussions. Stay tuned to the ALPFC website or Facebook to learn about mentoring opportunities for developing prescribed fire practitioners to get some “hands-on” experience with prescribed fire experts. Live fire events are being planned for February and May 2017.

photo: Alabama Prescribed Fire Council

AFO Biologist Graduates from Leadership

Alabama Field Office biologist Matt Laschet graduated from the U.S. Army Corps of Engineers' Leadership Development Program. The program is a year-long multi-faceted leadership and management development program designed to help students reach their fullest potential. In addition, the program explains and demonstrates skills and competencies required at the managerial level. Colonel James A. DeLapp, Mobile District Commander, presented Matt with his diploma.



Meet the Biologist Lee Holt

I grew up in Cookeville, TN, where I obtained my B.S. in Wildlife and Fisheries Science from Tennessee Tech University. I eventually decided to pursue a graduate degree and finally obtained my M.S. in Fisheries and Wildlife Science from Arkansas Tech University in Russellville, AR. After graduate school, I worked nine years as a fisheries

management biologist with the Arkansas Game and Fish Commission. In 2013, I was fortunate to have the opportunity to join the U.S. Fish and Wildlife Service as an aquatic ecologist with the Inventory and Monitoring Branch within the Refuges division. In May of 2016, I was granted the opportunity to join the Alabama Ecological Services Field Office as a *Partners for Fish and Wildlife* biologist. I am currently stationed at Wheeler National Wildlife Refuge and look forward to working with private landowners, municipalities, non-governmental organizations and other federal and state partners to promote conservation efforts within the state of Alabama. Go VOLS!



Meet the Biologist Evan Collins

I am a biologist primarily focused on the conservation of aquatic species. My interests in conservation and wildlife were cultivated early through fishing, camping, and kayaking in eastern Tennessee. Because I particularly enjoyed spending time on rivers and streams, I gravitated toward freshwater ecology in my coursework and hobbies. In 2011 I graduated with a B.S. in Biology from the University of Tennessee at Chattanooga. After graduation, I was able to work for the Tennessee Aquarium Conservation Institute. This was an incredible experience that allowed me to further develop ideas concepts from my undergraduate education. With support from my supervisors at TNACI, I applied for and was accepted a graduate position at the University of Georgia in 2013.

I began my career with the USFWS as a Pathways student with the Georgia Ecological Services Field Office in Athens in 2014. My time with the Georgia Field Office exposed me to the diverse array of work field offices are presented with and gave me a better understanding of the Endangered Species Act and how conservation is implemented. I am truly grateful for the mentorship and friendship I gained in Georgia. I'm happy to be in Alabama and have the ability to

continue working with Georgia ES through interstate collaborations.

I was accepted into the Directorate Fellowship Program in the summer of 2015. The DFP provided an incredible opportunity to connect with other conservation students from around the country and develop a deeper understanding of the history and scope of work the entire FWS is presented with to conserve fish, wildlife, and their habitats. During my fellowship, I worked on an instream flow study in the middle Chattahoochee River. This was a great opportunity to pursue a different avenue of research from my master's work and helped me build many new skills including use of Acoustic Doppler Current Profilers, Real Time Kinematic GPS, and 2D River modeling.

In 2016 I graduated with a Master of Science degree from the Warnell School of Forestry and Natural Resources at the University of Georgia. My thesis broadly addressed connectivity in rivers and streams. Specifically, I used spatial analysis techniques and machine learning to try and predict where small barriers to fish movement were likely to occur



within a watershed. I took this work a step further by evaluating the cumulative effect small barriers have on overall connectivity within large watersheds. It is my hope the methods applied in this research will help guide managers and interested parties to best prioritize efforts for broad scale stream restoration activities.

I'm excited to begin my work in Alabama for the diverse array of aquatic species present within its borders and the opportunities to learn and grow as a conservationist.

Property to Benefit the Alabama Beach Mouse

With the guidance of Alabama Field Office biologist Bill Lynn, the Alabama Coastal Heritage Trust (ACHT) has purchased an inholding parcel within Bon Secour National Wildlife Refuge. Through an innovative combination of cash, and tax deductible donation by the property owner, the ACHT was able to purchase the 1.4-acre coastal property. A portion of the cash offer came from the Alabama beach mouse General Conservation Plan “in-lieu” fee program. The ACHT will hold the property for eventual sale to the Refuge system...a win-win for everyone!



The Alabama Beach Mouse, photo: Tim Mullet

Random Pics



Students at Dodge Elementary School learn about Endangered Species in Alabama



A student at Dodge Elementary School holds the shell of an alligator snapping turtle



Biologist Jennifer Grunewald displays mussels for students at WJ Carroll Elementary School

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