



10 Minutes with the Southern Fire Exchange: Justin Ellenberger

10 Minutes is an interview series where the Southern Fire Exchange talks with experts, leaders, and sages in southern wildland fire management and research. In this interview, the SFE speaks with state wildlife management area manager Justin Ellenberger, Wildlife Biologist for the Florida Fish and Wildlife Conservation Commission.

What key factors should be considered when using fire to meet wildlife habitat management objectives?

“Have clearly defined, achievable, and preferably measurable objectives. Years of fire exclusion cannot be undone with a couple of prescribed burns.”

“Ask yourself the following questions: What natural community is your site supposed to be? Has fire been excluded from your site so long that the vegetation and structure no longer represent what should be there? Have your ephemeral wetlands succeeded to forested wetlands or does your scrub look more like xeric hammock? What is the fire history on your site? Also ask yourself: Will applying fire (alone) get me to where I want to be? How patient are you? Can you wait 25-years and ten burn rotations to see the results you want? Or do you need to apply another treatment along with fire, such as herbicide, timber thinning, mowing, or roller-chopping to meet your long-term objectives?”

What advice do you have for managers who are commonly asked by the media or the public about how wildfire or prescribed fire impacts wildlife?

“Be honest, because wildlife will die during a prescribed burn. You might not burn up charismatic megavertebrates, but some animal, somewhere in your burn,

will die. That’s okay because we are managing populations and not individuals. Wildlife populations that evolved with fire often depend on fire disturbance either directly or indirectly and populations will often be better with fire in their environment. Bobwhite and red-cockaded woodpeckers are great examples of species that need fire. For some fire-dependent species, within three to four years post-burn, the habitat is either unsuitable or becoming unsuitable.”

“The impact to wildlife from a wildfire greatly depends on the condition of the forest prior to the fire. If the forest was under a 2-3 year burn rotation, the impact will be minimal. If the forest was unmanaged, the impact to the species that were occupying the forest can be severe. However, in the southeast, a few months post wildfire, the forest will begin to provide habitat for a completely new suite of species, often with greater species richness and diversity than the before the wildfire. We should remember that following a wildfire, the forest isn’t destroyed, it’s successional clock is merely reset. Because unburned, unmanaged pine stands are usually pretty poor wildlife habitat, it could be argued that several months post wildfire, the forest is actually providing better wildlife habitat.”

“Some may argue that an unburned and fire-suppressed forest provides higher quality wildlife habitat than a forest that has recently burned. For some species this may be true; however for the majority of species that we manage, this is not the case. In addition, fire exclusion often leads



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to increased wildfire hazard and with many wildfires we see much greater mortality of wildlife species. Finally, we also often see that wildfires tend to drive changes in community composition towards suites of undesirable vegetative species.”

What are some of the resources that you use to find science-based information related to wildlife and fire to incorporate into your management program?

“The first place I usually begin to look for information is the US Forest Service [Treesearch](#) search engine. There is so much information contained on Treesearch, usually in the form of US Forest Service General Technical Reports (GTR), that it has never come up empty for me. My search often doesn’t stop there and I’ll frequently call the author to get more information. With more information available online than you could read in a career, don’t overlook the wealth of knowledge under the hard hat of your coworkers. Preferably the guy or gal with some gray hair and wrinkles. I don’t think anything helps you to better understand fire than years of sucking smoke.”

“Finally, I read as many incident reviews, lessons learned, and after action reports as I can and I send them to my employees and volunteers to review as well. I make enough of my own mistakes that I don’t need to repeat the mistakes made by others.”

What is one example of fire science being successfully applied by managers to address wildlife issues or problems?

“It’s old science, but Herbert Stoddard’s work on the effects of fire return intervals has yielded so much additional research into the benefits of a two-three year fire return interval in southern pine forests. With few exceptions, most studies have demonstrated declines in habitat suitability three years post-burn. I try to apply fire to pine flatwoods every 24-months including dormant and growing-season burns, although sometimes it’s 18-months and sometimes it’s 36-months. In the past, I would postpone burning some units so that I could burn them during the growing season. But far too often, the weather, personnel, or equipment wouldn’t come together and burning the unit would be pushed back an additional year. I’ve ultimately learned to burn while you can and that incorporating growing-season burns into a unit will come with time.

What are some of the wildlife management and

ecological questions that you would like to see addressed by researchers?

“Currently there exist disconnects between land managers and policy writers, specifically writers that develop species recovery and management plans. For many species in the South, loss of suitable habitat is one of the leading contributing factors for listing a species as threatened, endangered, or special concern. Species recovery and habitat management plans typically list the habitat needed for the species to thrive and how prescribed fire plays a role in creating that habitat. Often, in the same management and recovery document, policy writers will also require that buffers be used during breeding season to exclude prescribed fire from the target species habitat. While many of these target species evolved with fire during the breeding season, these plan requirements present serious management challenges. In many cases, the habitat will simply not burn outside of the breeding season. In addition, we have seen that burning only during the dormant season (non-breeding season) will not provide the desired ecological benefits. While there can be exceptions, excluding large areas from prescribed fire due to these species recovery and management plans is at the cost of all other fire dependent wildlife, including other listed species. More research into the effects of fire exclusion buffers around nest trees and breeding locations may help land managers and policy writers come to more beneficial habitat management and species recovery recommendations.”

Finally, what is one ‘must-hear’ message that you would like to share with fire and wildlife managers in the South?

“If you are going to have a successful prescribed fire program, you need to make fire one of your top priorities. All too often I hear burn managers say ‘we are burning next Thursday.’ Sometimes this works out, but rarely. Almost every morning I check the fire weather forecast and let the forecast dictate if and what we are able to burn that day. This mentality really needs to come down through the chain of command and be instilled in your employees. To have a successful program, supervisors must understand that timesheets and vehicle reports can wait a day and that burning cannot wait a day. Even with this mindset, I am only able to apply fire on average 20-days from November to September. Realistically, there are times when non-fire duties will take priority. However, I loathe the feeling of being in the woods accomplishing another duty when the weather is perfect for burning. While not every day is a burn day, or it might not be the right day to burn 2,000-acres, it might be the right day to burn 50-acres.”