

EVOLUTION OF FIRE MANAGEMENT IN FLORIDA'S STATE PARKS

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ABSTRACT

For the first 35 years of the Florida State Park System, fire was vigorously suppressed on state park lands. During that time, hardwoods encroached into pinelands and grasslands, and fuel loads reached dangerously high levels. During 1970, Tall Timbers Research Station Director, Ed Komarek, convinced the Florida State Park System that prescribed burning should be conducted. Today, 200,000 acres (94,000 hectares) are fire-managed in 72 parks. Fuels have been reduced to a level where wildfires rarely occur and restoration of fire-dependent plant communities has been completed in many parks. Most fires are scheduled during the lightning season, mid-April through August. Prescribed burning on most parks is conducted by the park staff and interagency teams conduct burning on other state lands.

To insure that prescribed fires will not be overly regulated or prohibited as rapid population growth and development alter Florida's landscape, Prescribed Fire Councils have been organized in north, central, and south Florida. All land managers that use prescribed fire are encouraged to participate. The councils educate members about new methods, equipment, research results, regulations, safety, liability, and public opinion. Councils are obtaining resolutions in support of prescribed fire from Florida's 67 county commissions.

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Florida is one of the fastest growing states in the U.S. This growth results in more roads, more traffic, and more residential areas being developed around state parks, state and national forests, wildlife refuges, and other public and private natural lands. The thousands of new residents moving to Florida have little or no knowledge about the natural role of fire in the environment.

Florida has the largest land acquisition program in the nation. Approximately 300 million dollars per year are being spent to acquire public lands. Most of these lands are composed of fire-dependent plant communities that must be managed with fire. Over 5 million acres (2.4 million hectares) are managed with prescribed fire in Florida and some traditional burners are not very knowledgeable about open burning regulations and the critical importance of smoke management. Federal, state, and local regulatory agencies are able to add restrictions on prescribed fires for air quality and smoke management purposes.

The above scenario briefly describes circumstances that are affecting the managers of natural lands today. During the first 35 years of the Florida State Park System, emphasis was placed on development and maintenance of recreational facilities for park visitors. Concepts like ecology, biological diversity, restoration, and fire-dependent plant communities were not yet part of the agency vocabulary. Although natural scenery was highly regarded, there was no understanding of the natural processes that were required to maintain scenic values and wildlife that park visitors enjoyed.

Fire was excluded from and vigorously suppressed on all state park lands. Fire was the enemy. Smokey Bear's propaganda had been so effective that when a

fire occurred in a state park, my fellow park rangers and I would risk life and limb to put it out. We looked on in dismay as adjacent ranchers and foresters burned their natural range and pinelands. We were the only land management agency in the state that did not use prescribed fire. As a result, hardwoods encroached into pinelands and grasslands. The 7-month growing season, over a period of 35 years, resulted in dangerous levels of highly flammable fuels.

My first visit to Tall Timbers Research Station was 26 years ago, soon after the Florida Park Service transferred me to Tallahassee to serve as Chief Biologist. The Director, Ed Komarek, took me on a tour of the Stoddard Fire Plots which serve as an excellent demonstration of hardwood encroachment in the absence of fire. On the issue of prescribed fire, Ed was a dedicated advocate and a most effective salesman. That afternoon, he convinced me that we should be burning in Florida's state parks. I began selling the concept to the Park Service senior management and within a couple of months, we conducted our first prescribed fire in a Florida State Park. Ed's wife, Betty, was the fire boss.

That was 1970. We had no training. Our equipment consisted of drip torches, flaps, rakes and some backpack pumps. We had little understanding of the effects of fire. We burned in the winter, the dormant season, because that was when everyone else burned. Tall Timbers was the only technical resource that was available at the time. Ed Komarek and his brother Roy were always ready to offer advice. The volumes of Tall Timbers Fire Ecology Conference Proceedings were invaluable as references.

A number of circumstances were in our favor and

contributed to our success: 1) there is a long prehistoric and historic tradition of burning in Florida (Romans 1775, Harper 1914), and Native Americans used fire extensively as did the early settlers and generations of cattlemen who managed the natural range for their livestock; 2) the relatively flat terrain and numerous creeks, rivers, and swamps provide natural firebreaks that increase control options; 3) close proximity to the Atlantic Ocean and the Gulf of Mexico enhances the dispersal of smoke; 4) all of the other state and federal agencies in Florida were prescribed burning when we began our program; and 5) there were respected environmental organizations that supported ecological management of public lands.

Furthermore, we did some things right. There were no big mistakes and the program caught on. We conducted our first fires on small areas because there was less chance of losing control. We educated park visitors before, during, and after the fires through interpretive leaflets, campfire programs, guided walks, and exhibits. Since the public had only seen state park rangers extinguishing fires, it was startling for them to see rangers spreading fires. Our educational efforts worked. We received very little criticism and prescribed burning in state parks was soon accepted.

Convincing the public was easy. The hard part was convincing the senior park managers. They had spent their careers putting fires out. Now we were asking them to set fires in their parks. We promoted the importance of fire at every training session and park service staff meeting. Our goal was to persuade park managers to support and to conduct prescribed fires. Every new park ranger participated on a prescribed fire during his or her training at the Ranger Academy. In time, the fire management program was fully institutionalized.

Today, the state park system manages 200,000 acres (about 80,000 hectares) in 72 parks with prescribed fire. The staff is well-trained and several of them serve as interagency instructors. They are well-equipped with protective clothing, pumper trucks and state-of-the-art methods. Prescribed burning is conducted at 3-year intervals to reduce the accumulation of fuels. Therefore, wildfires rarely occur. Restoration of the fire-dependent plant communities has been completed in many of the parks. The native ground cover of the pinelands and grasslands is flourishing since we switched from winter season fires to lightning season fires (i.e., mid-April through August).

The state park land management objective is to restore the natural biological diversity to the extent possible (Division of Recreation and Parks 1975). This requires the restoration of the hydrology to permit wetlands to flood during the rainy season and to become dry during droughts. It requires the restoration of fire to all fire-dependent plant communities during the natural fire season. It requires the elimination of invasive exotic plants and animals, such as the feral pig (*Sus scrofa*) and the Chinese tallow tree (*Sapium sebiferum*). This is a major undertaking for land managers in Florida. It requires the restoration of keystone species to disturbed lands. Longleaf pine (*Pinus palustris*) and

wiregrass (*Aristida* spp.) are notable examples. Both species provide highly flammable fuels needed to control invasive hardwoods.

Prescribed burning is now fully institutionalized in all of the state and federal land management agencies in Florida. Several million acres are burned on cattle ranches, commercial forests, quail hunting plantations, and government lands. Prescribed fire is a critically important land management tool. We must insure that our right to burn is not restricted by federal, state, or local regulations.

Two important steps have been taken in recent years to overcome the above problems. In 1990, the Florida legislature determined that prescribed fire is a land management tool that benefits the safety of the public, the environment, and the economy of Florida. They passed Florida's Prescribed Burning Act that outlines accepted prescribed burn practices in the state (Florida Statute 590.026). It also protects prescribed burners from civil liability as long as they are not found negligent. Prescribed fires conducted in accordance with the statute may no longer be terminated because of nuisance complaints. This law authorizes and promotes the continued use of prescribed fire for ecological, silvicultural, wildlife management, and range management purposes.

In addition, three regional prescribed fire councils have been formed which are composed of all of the federal and state land managing agencies, several military bases, The Nature Conservancy, and Tall Timbers Research Station. There are many commercial forests and quail hunting plantations in north Florida and extensive ranch lands in central Florida that are represented on the councils. All land managers and owners that use prescribed fire are encouraged to participate.

The primary objectives of the councils are to:

- a. Promote public education about the benefits of prescribed fire.
- b. Protect the ability to use prescribed fire as a land management tool.
- c. Develop expertise in prescribed burning by sharing technical and biological information.
- d. Promote safety, training, and research in the art and science of prescribed fire.
- e. Aid in developing policies and regulations at the national, state, and local levels as they relate to prescribed fire.
- f. Limit the negative effects of smoke from prescribed fire.
- g. Educate the media about prescribed fire (North Florida Prescribed Fire Council 1990).

Accomplishments of the councils include:

- Currently asking the Board of Commissioners of each of Florida's 67 counties to pass resolutions in support of prescribed fire. Forty-nine percent of the County Commissions have passed resolutions to date.

- Biannual meetings in each council region. Meeting topics have included: Burning in Wetlands, Smoke Management, Liability, Fire and Endangered Species, Local Ordinances, Lightning Season Burning,

Equipment Demonstrations, Cooperative Interagency Burn Teams, How to Conduct Growing Season Burns, and a Foam Workshop.

● Brochures and posters have been developed to educate the public. The video, "Fire in the Southland," produced by Tall Timbers, is being distributed to Public Education Television Stations and council members provide presentations to civic groups and other organizations. The fire councils are effective networks that have enhanced communication among burners and with the public.

For those who wish to implement a prescribed fire program, there likely will be opponents in your agency that must be overcome or bypassed. They will claim that society will object and will not allow prescribed burning. They will say that there is not enough research to support prescribed burning in your region. They will say that you don't know what to restore the land to or that it is too late to restore the forest.

Some of the most experienced fire control experts in the region, who have been fighting fires their entire careers, simply will not make the paradigm shift that is required to successfully administer a prescribed fire program. Their hearts are not in the program. It may be too much of a change for people who have always described fire with terms such as catastrophic, conflagration, devastating, and destructive. These are the same people who have spent their career combating, attacking, and suppressing fire. It hurts them to see fire kill a tree. They have only known fire as the enemy. It may be too great a step for them to accept fire as a friend.

One must be committed in order to successfully implement a prescribed fire program. You have got to believe in it for it to be successful. In the absence of a strong commitment, it will be easy to develop excuses for not burning, avoid the risk, and let the forest, the habitat, and the ecosystem deteriorate. After all, there is little public recognition or praise for the prescribed burner (Murphy and Cole, *this volume*). If fire escapes or if smoke becomes a nuisance the prescribed burner can expect criticism from the public and the press.

So why bother? It is easier not to burn. Why risk damaging your career? We prescribe burn to protect lives, homes, and natural resources. We prescribe burn because it costs the taxpayer considerably less than it does to fight a wildfire. We prescribe burn because we are responsible stewards of our forests and grasslands. We prescribe burn because it is the right thing to do.

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