



UNIVERSITY OF
FLORIDA

WEC 151

EXTENSION

Institute of Food and Agricultural Sciences

Habitat Loss, Florida's Changing Landscapes: Upland Forests¹

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Introduction

The wind whispers from the canopy overhead; the fragrance of pine needles wafts from underfoot; a woodpecker drums in the distance; a deer bolts through the underbrush. Florida's uplands once covered nearly half of the state with pine flatwoods and dry prairies, scrub and high pine, temperate hardwood forests, and South Florida rocklands. These uplands once provided habitat for an immense variety of wildlife. In recent years however, residential and agricultural development has caused the loss of most of the natural forests, while drainage (which alters the water table and hydro-period) and non-native species (which crowd out the natives) have decreased the value of much of the remaining wildlife habitat. The U.S. Forest Service, for example, has recorded an 88 percent decline in longleaf pine forests in just over 50 years. This forest type once covered 7.6 million acres—more than one-fifth of Florida's total area. Today these ecologically important pinelands cover less than one million acres. Without increased awareness and conservation efforts, we could witness the demise of Florida's upland forests in the very near future.



Figure 1. Florida Upland Coverage Map Credits: Florida Gap Analysis Project, USGS-BRD, Florida Cooperative Fish and Wildlife Research Unit, University of Florida

Unrivaled Diversity

As a peninsula extending from temperate continental zones to tropical seas, Florida's forest lands once offered diversity of wildlife habitats unrivaled east of the Mississippi. Longleaf pines in the north, oak scrub along the central ridge, and flatwoods, rocklands and tropical hardwood

1. This document is WEC 151, formerly Wildlife Special Series number SS-WIS-63, a series of the Department of Wildlife and Ecology Conservation, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Date first published: February, 1995; revised: August, 2001. Please visit the EDIS website at <http://www.edis.ifas.ufl.edu>.
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hammocks in the southern-most portions historically supported red-cockaded and ivory-billed woodpeckers, gopher tortoises, fox squirrels, black bears, Florida panthers, red wolves, indigo snakes, and other species. Many of these species are now considered threatened or endangered (some even extirpated), largely as a result of habitat loss and degradation.

Unchallenged Destruction

For the past 150 years, the destruction of Florida's upland forests progressed unchallenged. Extensive clearing began during the Civil War, when timber was used for the shipping industry. Continued settlement and population growth meant conversion of wooded uplands to other landuses, including commercial forestry, residential and agricultural development. Non-native species have since extensively invaded some areas, crowding out native species and presenting little value to native wildlife. Now, only a few stands resemble historic habitats and only a fraction of the original forested land and diversity survives.

Pending Implications

To some, this may seem to be a case of environmentalists lamenting the loss of a few trees and critters to the demands of progress. After all, we see plenty of pigeons, mockingbirds and lizards, and even a few snakes, and we are all tired of chasing raccoons, armadillos, and opossums out of our yards. But the implications are much greater. Loss of habitat means loss of biodiversity-fewer species or types of plants and animals. If we have only a few species of plants and animals, and something happens to one or two, the results can be catastrophic. All plants and animals are connected through the food web, so that when one plant or animal is removed, the loss affects those that eat it as well as those it preyed upon. Also, forests are intrinsic to life on the planet as we know it. Tree canopies reduce dust, smoke, noise, and carbon dioxide (a "greenhouse gas") from the atmosphere while, along with other green plants, produce oxygen and cooling effects. Tree roots help secure soil and prevent erosion. Forests are an integral part of the hydrological cycle; they regulate local weather patterns and provide the groundwork for a complex web of species associations.

The gopher tortoise, which prefers longleaf pine forests, sandhills, and scrub habitats for burrowing, creates a niche for nearly 300 other species of vertebrate and invertebrate fauna, including the endangered eastern indigo snake. The loss of a single plot of upland habitat can destroy the home of one gopher tortoise, and have a rippling effect on the other animals that depend on a burrow for their home. The resultant loss of biodiversity de-stabilizes the environment, both for the critters and for ourselves.

Although there are more than 16 million acres of forested lands remaining in Florida, much of it is highly fragmented or has been converted to commercial plantations. Many species of wildlife disappear from fragmented forests because the remaining patches are too small to support an animal (especially larger carnivores, but even some songbirds have large ranges). Fragmentation can also create small parcels of forest that are simply too far apart for wildlife to utilize as a whole.

Slowing the Trend

Although most of our upland forests are gone and some continued development of forested land is inevitable, the current trend can be slowed. Statewide conservation efforts currently underway include land acquisition and on-site protection, growth management legislation and restoration ecology. Equally important however is the effort that can be made by Florida residents. Become informed on development issues and vote accordingly. Get involved in environmental causes and make conscious consumer decisions. Visit Florida's county, state, and national parks - continued use sends a message about their importance. Most importantly, spread the word!

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