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# The Palmetto

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## Natural Communities of Florida's Flatwoods

by Linda Conway Duever



Flatwoods are the most familiar Florida habitat. The flat expanses of grasses and shrubs scattered with pines seem to stretch forever along the highways. Unfortunately, very little of this is truly natural forest. All but a few remnant stands have been logged, so the trees we see are much smaller than those that grew there originally. And much of the present flatwoods is really pine plantation where the soil has been plowed up and carefully spaced seedlings of a commercial "improved" slash pine have been planted to produce pulpwood. Other sites are heavily grazed or protected from fire so that the understory vegetation composition is no longer natural. And many trees have been damaged by turpentine and subsequent fire injury due to flammable exposed resins.

Fire is the dominant environmental factor maintaining the flatwoods ecosystem. Very wet pocosins or sparse, scrubby flatwoods may go ten years between fires, but most sites normally experience a light surface fire about every two to four years. This scorches the tree trunks and kills shrubs, grasses, and palmettos back to the roots, but does little lasting damage. The ash acts as fertilizer, seeds germinate on newly exposed patches of ground, shrubs sprout from their bases, and the community is soon more vigorous than it was before. If, however, the site has gone unburned for many years and a heavy fuel load of dry shrubs and waxy-leaved palmettos has accumulated, a hot fire can throw flames up into the canopy and kill the trees.

Summer lightning fires were the burning mechanism the community evolved with, but now roads, canals, and developed areas interfere with spreading fires, and land managers must compensate with prescribed burns. These fires are usually set in the winter when the vegetation is drier and working around a hot fire is more comfortable. This means that the woods burn at a different point in their annual life cycle than the animals and plants have adapted to. Observers feel this is causing palmetto to become more abundant and wiregrass and legumes less so.

Most pine flatwoods are on acid sands with an organic hardpan or clay layer one-to-four feet below the surface. Cabbage palm is prominent on more alkaline sites underlain by marl or shell.

#### WET FLATWOODS

Sites where water stands for a month or two of the year are classified as Wet Flatwoods. These may be either open grassy savannas or scrubby pocosins. The canopy trees are usually slash pine, *Pinus elliottii*, or pond pine, *Pinus serotina*; but sometimes longleaf pine, *Pinus palustris*, pond cypress, *Taxodium ascendens*, or cabbage palm, *Sabal palmetto*, dominates.

Wiregrass, *Aristida stricta* and/or *A. spiciformis*, is usually the most abundant species on sites with an open understory, but some savannas are carpeted with toothache grass, *Ctenium aromaticum*. Other common herbaceous species include red root, *Lachnanthes caroliniana*; candyweed, *Polygala lutea*; St. John's wort, *Hypericum galiodes*, *H. tetrapetalum*, and other spp.; Vir-

ginia chain fern, *Woodwardia virginica*; smooth seymeria, *Seymeria cassiodes*; buchnera, *Buchnera americana*; pink sabatia, *Sabatia grandiflora*; bigelowia, *Bigelowia nudata*; Florida tickseed, *Coreopsis leavenworthii*; yellow-eyed grass, *Xyris elliottii* and other spp.; pink sundew, *Drosera capillaris*. Pitcher plants, terrestrial orchids, and other plants typical of wet prairies and open seepage slopes are often prominent.

Shrubby Wet Flatwoods are analogous to the pocosins of the Carolinas. They may have a groundcover of sphagnum moss and a few herbaceous species, but the understory is characterized by a dense shrub thicket. Wax myrtle, *Myrica cerifera*; shiny lyonia, *Lyonia lucida*; gordonia, *Gordonia lasianthus*; dahoon holly, *Ilex cassine*; dwarf huckleberry, *Gaylussacia dumosa*; and Walter viburnum, *Viburnum obovatum*, are among the common shrubs.

#### MESIC FLATWOODS

Mesic Flatwoods are moist pinelands that rarely flood. They may be composed of slash and/or longleaf pines, but saw palmetto, *Serenoa repens*, is almost always the dominant understory plant. Gallberry, *Ilex glabra*; yaupon, *I. vomitoria*; tarflower, *Befaria racemosa*; shining sumac, *Rhus copallina*; wax myrtle, fetterbush, *Lyonia ferruginea*; dangleberry, *Gaylussacia frondosa*; and pawpaw, *Asimina reticulata*, are other common woody species. Wiregrass is typically the most abundant herbaceous species. Others include broomsedge, *Andropogon virginicus*; bracken, *Pteridium aquilinum*; rayless sun-

flower, *Helianthus radula*; white sabatia, *Sabatia brevifolia*; blazing star, *Liatris gracilis* and other spp.; elephantopus, *Elephantopus tomentosus*; and many Dry Prairie plants.

Although Mesic Flatwoods are extremely abundant, there are a few rare variations of the community. Dade Sandy Pineland, with a mixture of flatwoods and Pine Rockland understory species, including several rare South Florida endemics, has been almost eliminated. Tamiami Pines is the only site which has survived the urbanization of south-east Florida. Coastal types, such as the Insular Slash Pine Flatwoods of the Panhandle, have been much reduced by resort development.

## SCRUBBY FLATWOODS

Scrubby Flatwoods are the driest flatwoods. They typically have a scattered canopy of longleaf pine, though in south Florida it is sometimes slash pine. The sparse, shrubby understory is composed of a mixture of Mesic Flatwoods and Scrub species. Sand live oak, *Quercus geminata*; Chapman's oak, *Q. chapmanii*; myrtle oak, *Q. myrtifolia*; creeping live oak, *Q. minima*; runner oak, *Q. pumila*; saw palmetto, fetterbush, staggerbush, *Lyonia frucosa*; garberia, *Garberia fruticosa*; scrub blueberry, *Vaccinium myrsinites*; wiregrass, Chapman's golden rod, *Solidago chapmanii*; and grass-leaf goldenaster, *Heterotheca graminifolia*, are among the common species.

*This is the sixth in a series of articles describing the Natural Communities defined by the Florida Natural Areas Inventory (FNAI). This classification system must be viewed as a system of mental constructs imposed upon an infinite variety of growing, changing, intergrading, natural environments. Hence, more often than not, a given site will not precisely fit the classic description of the appropriate natural community.*

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