Change is Good: Old-Field Succession at NATL

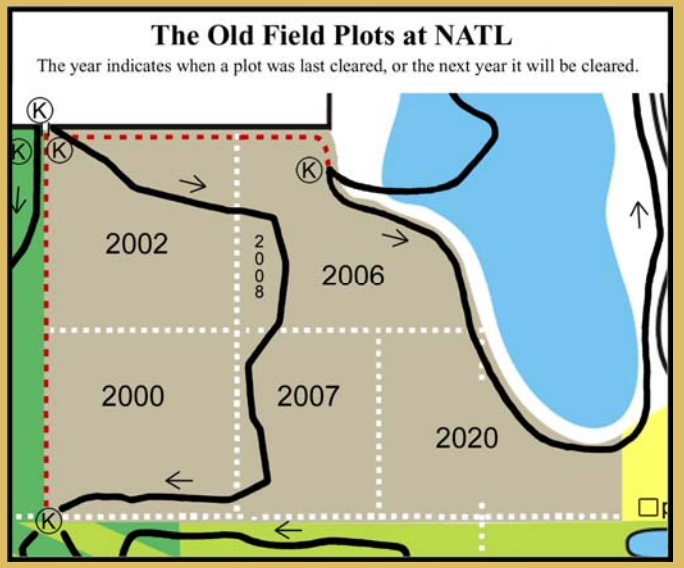
What is an "Old Field?"

Have you ever noticed weedy areas next to plowed farm fields? Fields that were once used in agriculture but have been abandoned because of poor soil or the closing of a farm are called "old fields." Even fields within a farm that are allowed to rest for a while or "lie fallow" can be considered old fields. When left alone, these fields can eventually become forests again through the natural process of *succession*. Succession is the sequence of plant communities that will grow in over time.

Succession changes a field to a forest over time

Why are old fields important?

It is estimated that world wide, 70% of undeveloped land is in agricultural use. If this land served agriculture alone, that wouldn't leave many places for wild plants and animals! Many wildlife species depend on old-field habitat, and each successional stage supports different wildlife species. Old-fields are habitat for wild plants, mammals, birds, reptiles, amphibians, and insects. Knowing something of the stages of old-field succession will help you interpret the landscape around you.



1. Starting from Scratch

A Newly Disked Field

After a field is cleared, a farmer may choose to let an area "rest" to replenish soil nutrients and reduce pest populations, This sets the stage for succession.

2. The Pioneers Arrive

Annual Weeds Begin to Invade

In the first two years annual and short-lived perennial plants called "pioneer species," begin to grow. Pioneer species can tolerate disturbed areas, are good at dispersing their seeds, grow fast, mature fast, and have short life spans.

3. The Competition is Fierce

Longer Lived Plants Take Over

Pioneer species are fierce competitors under pioneering conditions but they soon find that they are at a disadvantage to the longer-lived perennial plants that begin to replace them. These grasses and shrubs provide more cover than the pioneer species, and the increased cover and new food sources, in turn, attract more diverse wildlife.

4. Here Come the Trees

Pines Begin to Dominate

After 15 years, loblolly pines begin to dominate. They grow much slower, take longer to mature, and live longer than the plants before them. Their continued growth will eventually form a canopy, or a closed cover, and loblolly seedlings will no longer have enough sunlight to survive.

5. The Way Things Were

Understory of Hardwoods

By 40 years, an understory of fast-growing hardwoods appears beneath the pines. If fire is suppressed and succession not otherwise interrupted, the site will eventually become a hardwood hammock—one of Florida's most diverse ecosystems.

Ground-dwelling birds like this bobwhite quail rely on fallow fields for their nests.

Rested soils in old fields are rich in invertebrates, creating a good food source for reptiles like this five-lined skink.