

ADVANCED Trail Guide to Old-Field Nature Trail

Cautions: If you wander from this trail, you may encounter unfriendly plants. Some of these have thorns (blackberry, catbrier), some have sticky seeds (Spanish needle, ticktrefoil). Many are poisonous, but only if eaten (rattlebox, Mexican tea). Fire-ant nests are frequent and occasionally encroach on the nature trail—so be careful where you stand!

Points of interest: Along the trail are 25 numbered points of interest that are explained below. Each is marked with a white plastic stake with a BEIGE band near the top. Crowning the stake is a short cylinder that bears a black NUMBER keyed to the numbered explanations of this guide. [All other stakes, white plastic or otherwise, are for other purposes! White stakes with RED bands topped with black LETTERS go with the BASIC guide for this trail.]

- OF 1.** *Entering Old-Field Plot A.* This plot is tilled every 10 years. It was last tilled in March 2002, which means that about six years ago, except for the longleaf pines, it was a bare, cultivated field. [The longleaf pines on this and other old-field plots were left standing to increase the genetic diversity of the pollen available to the pines in NATL's upland pine ecosystem.]
- OF 2.** *Black cherry sapling* (*Prunus serotina*). This species is one of the first trees to appear in abandoned farm land, because birds and other animals eat its small black fruits and disperse the seeds along with a dose of organic fertilizer. It grows fast and tall. The bark on the branches and trunks of young cherry trees is distinctive. It is thin and reddish brown and has horizontal markings made up of rows of small openings (lenticels). [The bark on the trunks of mature trees is very different as you will see if you take the Hammock Nature Trail.] Black cherry wood is handsome in color and grain and much sought after for fine furniture.
- OF 3.** *Winged sumac* (*Rhus copallinum*). This species is a small tree that is frequent in old fields. It can be recognized by the “wings” between the leaflets along the stem of its compound leaves. In fall it produces clusters of small reddish berries that are eaten by many kinds of birds--which is how it colonizes abandoned fields. Native Americans used the berries to make a dye.
- OF 4.** *Sassafras* (*Sassafras albidum*). This species is another small tree frequent in old fields. Its leaves (soon to be present) are of varying shapes, including leaves with no lobes, leaves that resemble right- and left-hand mittens and leaves with a lobe on either side. When crushed, the leaves are aromatic and both bark and roots have an oil that was once used to flavor root beer—until safrole, a principal constituent, was found to cause liver cancer in mice. [Sassafras trees are dioecious—that is, the flowers are unisexual with the staminate (male) and pistillate (female) flowers borne on separate plants.]
- OF 5.** *Briar patch.* Dense, thorny growths of blackberries such as this one are common features of fields that have been abandoned for a few years. This patch is of sand blackberry (*Rubus cuneifolius*), which bears small tasty fruit in early summer.
- OF 6.** *Persimmon* (*Diospyros virginiana*). This tree, when mature, bears large fruit that are mouth-puckering astringent when green but turn tasty and translucent orange when they ripen. Its leaves have reddish petioles and are dark green above and whitish below. [Persimmon trees, like sassafras trees, are dioecious: mature trees can either produce fertile pollen or bear fruit but not both.]
- OF 7.** *Yellow woodsorrel* (*Oxalis corniculata*) [around yellow flag at base of stake]. This species, with its small yellow flowers and small, clover-like leaves, is sometimes called sour clover because its leaves are astringent when chewed.
- OF 8.** *Cross into Plot B.* To enable NATL to always exhibit the earliest stages of succession, at least part of Plot B is tilled every year that no other plot is tilled. The area on the left side of the Old Field Trail through Plot B was mowed and disked twice in early November 2006. The area on the right side of the trail was last mowed and disked nearly two years earlier (January 2005). What differences do you notice between the two sides?

- OF 9.** *Ragweed* (*Ambrosia artemisiifolia*) [plants with finely divided leaves at base of stake]. Ragweed is a common agricultural weed, so it is not surprising that it is one of the first plants to become conspicuous when cultivation ceases. Ragweed is an annual--that is, plants do not survive from one year to the next but grow from seeds each year. By fall some of these small plants will have grown to be more than 6ft high and will be producing copious pollen--to which some persons are allergic.
- OF 10.** *Dogfennel* (*Eupatorium capillifolium*) [last year's dead stalks marked with yellow ribbon]. Like ragweed, dogfennel is a native plant characteristic of the early stages of old field succession. Unlike ragweed, it is a perennial—that is, a plant that survives year after year rather than having to start from seeds each year. The thick stemmed shoots with finely divided leaves at the bases of the dead stalks come from the same plant that produced the stalks last summer. Dogfennel leaves have a distinctive odor when crushed. Dogfennel commonly occurs in pastures, especially unimproved and overgrazed ones.
- OF 11.** *Red-top dock* (*Rumex hastatulus*) [yellow flagging]. This species is often abundant enough in spring in early stage old fields to color the field pink to purple red with its multiple small flowers near the tops of the plants. Here you can see that effect in several small to medium patches.
- OF 12.** *View Plot D* [straight ahead]. Plot D is a 10-year-rotation plot that was first started in 1997. To re-start it in 2007, the plot was cleared of trees, mowed, and tilled three times—the last time in late December. The plot will now display consecutively later stages of old-field succession until it is once more re-started in 2017.
- OF 13.** *Two pioneer plants* [*weeds*, in an agricultural context]. As seen by inspecting the plants near the stake, among the abundant plants in this field, at this early stage of succession, are ragweed [finely divided leaves] and white sweet clover (*Melilotus albus*) [tall, sweet smelling, clover-leaved].
- OF 14.** *Wild radish* (*Rhaphanus raphanistrum*). These yellow-flowered plants are wild radish, a common annual weed of small grains and other agricultural and horticultural crops. It is native to Asia or the Mediterranean. Its taproot is more slender than that of the edible radish but has a distinctive radish odor and taste. Its seeds survive for extended periods in the soil and germinate in response to tillage..
- OF 15.** *Volunteer peach tree* (*Prunus persica*). How this tree came to grow here is unknown. Someone probably discarded the seed from a juicy snack where soil and moisture conditions would eventually be favorable for the seed to germinate and grow. What is known is that in 2006 and 2007 this tree produced unusually large and tasty fruit—and thereby earned a pardon from being sacrificed in the re-start of Plot D.
[In spite of the specific name (*persica*) peaches are native to China, not Persia.]
- OF 16.** *Carolina cranesbill* (*Geranium carolinianum*). This annual can be recognized by its round, deeply divided leaves and its small purple flowers. It is a common weed in lawns..
- OF 17.** *View Plot C* (the approximate center of the nearest border of Plot C is at the bluebird house). Plot C was started on its first 40-year-rotation in 2000. Its closer parts lack tall trees, perhaps because of the thick topping of clay dumped here during construction of UF's dental building. No clay was dumped in the western extreme of the plot, and trees are more evident there. The southern third of the plot has a dense stand of saltbush, which is the subject of **OF 22**.
- OF 18.** *Dumping ground*. The natural soil of Plot D is buried beneath several feet of clay that was excavated during the construction of UF's Health Center and brought here for disposal. Construction debris was later deposited atop the clay. In January 1995, shortly after the establishment of NATL, most of the debris was hauled away and the area somewhat leveled with a bulldozer. Masonry and asphalt rubble, made visible by the tilling of last December, attests that some debris was left behind

- OF 19.** *Fire ant nest.* [Do NOT disturb.] Since its accidental introduction from South America to Mobile, Alabama, in the 1930's, the imported fire ant (*Solenopsis invicta*) has spread throughout the Southeast and become the dominant ant in disturbed areas, including old fields. In the process, it displaces native insect species. Most Floridians know how fire ants defend their nests—by mass stinging attacks on whoever disturbs a nest and then stands on or near it. You may notice that few ants are seen on or near undisturbed nests even on days when workers are actively foraging. This is because fire ants establish subterranean foraging tunnels that radiate from the nest and along which there are openings at intervals from which scouts issue to find food and then recruit workers to gather it and return it (via subway) to the nest.
- OF 20.** *Ephemeral pond.* This depression was dug to provide a convenient breeding place for the frogs that occur in the old-field ecosystem. It was designed to fill during heavy rains and to retain water long enough for frog eggs to hatch and the tadpoles mature.

Entering Plot C.

- OF 21.** *Loblolly pines* (*Pinus taeda*) (yellow flagging). Loblolly pines are usually the earliest trees to dominate upland old fields. Once established, they grow fast and soon begin to shade the early old-field colonizers, most of which require full sun. Indeed the loblollies eventually produce a shade so dense that loblolly seedlings cannot survive. This sets the stage for colonization by the tree species that dominate mature hammocks—that is, those that have seedlings that can grow in the shade.
[The Hammock Nature Trail will help you learn more about the final stages of old-field succession.]
- OF 22.** *Saltbush* (*Baccharis halimifolia*). Saltbush, also known as sea myrtle, gets its names from its salt tolerance and is a common tree of both coastal and interior wetlands. The dense stand of saltbush in the southern third of Plot C may be a result of poor drainage and lots of saltbush seeds in the muck from the excavation of SEEP that was spread on portions of Plot C to ameliorate the effects of the clay dumped there in the 1970's. Whatever the causation, saltbush is not the usual tree to first dominate succession in upland old fields in north central Florida.

The yellow flags from here to the end of the Old Field Trail mark young loblolly pines.

The fire-orange flags mark young longleaf pines.

To learn more about longleaf pines, take the Upland Pine Trail.

- OF 23.** *Field clover* (*Trifolium canpestre*) and *white clover* (*Trifolium repens*). The yellow flowers of field clover grow in tightly packed globular heads, many of which you can see, near the ground, before you. White clover (*Trifolium repens*), along the trail edge, has loosely arranged heads of white flowers. Both species are native to Europe and western Asia, improve the soil by fixing nitrogen, and are used for forage. Neither is welcomed in lawns by those who strive for solid-green turf. [The tall clover with spikes of white flowers is white sweet clover, which was abundant in the most recently re-started plot.]
- OF 24.** *Pink wood sorrel* (*Oxalis debilis*) (marked with blue flag). This species is an escaped exotic ornamental plant that now occurs throughout Florida. Native to tropical American, it can be recognized by its attractive pink flowers and its super-sized “clover” leaves.
- OF 25.** *End of Old Field Nature Trail.* The start of the Old Field Nature Trail is at the kiosk across the road. To return to the start of the Old Field Trail, take the trail that goes due north from the kiosk toward the Cultural Plaza.