

Editor's note: The following is the text from a program on KEDM 90.3 Public Radio, Monroe, called "Bayou Diversity." It is written and presented each Friday at 12:10 & 7:05 pm by Kelby Ouchley. Kelby is employed with the La. Wetland Management District by the USFWS, Darbonne NWR, at Farmerville.

Succession can be defined as the changes in an environment over a period of time. The environment can be large or small—your backyard, a marsh, or a fifty thousand-acre forest.

Strictly speaking, succession begins with bare ground and progresses through a variety of plant and animal communities until what is referred to as a climax community is reached. Seral or early succession plants are the first to colonize bare ground. They are usually short-lived annuals that thrive in bright sunlight and disperse their seeds far and wide. These first plants change the environment by adding nutrients to the soil from decaying leaves and roots. They alter the amount of sunlight reaching the ground and modify the moisture content of the soil. Eventually the changes allow other types of plants and their associated animals to become established. Newcomers often replace the colonizing species because they are better adapted to the changed site. If succession is not interrupted, a climax community eventually develops in which the types of plants and animals become relatively stable.

The climax community may be a certain type of forest, savannah or prairie depending on the kind of soil in the area, the annual rainfall and other conditions. In Northeast Louisiana, east of the Ouachita River, the climax community was a bottomland hardwood forest dominated by certain oaks and sweetgum. In the hills west of the river different oaks, hickories and pines composed the climax forest. Climax forests exhibited "old growth" characteristics in that a high percentage of the trees were very old and large. Some would be considered giants by today's standards. Gaps were common in the forest where the huge trees crashed to the forest floor during wind storms, often uprooting several of their neighbors in the process. Climax forests with old-growth characteristics are extremely rare in our area and exist at best only on very small isolated tracts.

As an example, the following scenario depicts the likely stages of succession in an abandoned soybean field in Richland Parish: The first colonizers to follow the plow are the annual weeds and grasses that plagued the farmer. Cocklebur, morning-glory and barnyard grass are common. Harvest mice and voles are hunted by barn owls and red-tailed hawks. In just a few years the first woody plants begin their invasion. Those whose seeds are light enough to be carried by the wind or transported by animals are in the vanguard. Saltbush, cottonwood, ash, willow in the wet spots arrive on spring thermals. In their droppings, raccoons plant hawthorns and persimmons. The vegetation is now thick enough to provide food and escape cover for deer and coyotes. Dickcissels and red-winged blackbirds nest in the low shrubs. Over a period of time hackberry and elms become established and with ash, begin to shade out the sun-loving grasses and weeds. Fox squirrels set up shop; wood rats replace the field mice and voles. Red-shouldered hawks now out-compete red-tailed hawks. Ever so slowly oaks begin to appear. Their acorns are heavy and must be carried from distant seed trees and planted by squirrels. Most acorns that germinate never grow into a tree. Their seedlings are shade intolerant and only those planted in a gap will make it. Through time though, oak and sweetgum become dominant and replace many of the other species. The forest is now mature. Acorn loving red-headed woodpeckers abound. If the forest is large enough, Louisiana black bears and turkeys can survive. Barred owls supplant the open field barn owls and many species of songbirds thrive in the different layers of the canopy. Years continue to pass and the forest begins to exhibit old-growth traits. Some

trees are huge, with gnarled and twisted trunks. Dead snags are common and once would have supported the now extinct ivory-billed woodpecker. Acorn production declines and the size of the deer herd that the forest can support is reduced. A relative degree of stability is reached.

How long does all of this take? Well, it's hard to say. Succession rarely occurs in a neat, uninterrupted fashion as depicted in this example. Fires and windstorms, floods and droughts can set back succession several times before the climax forest is established. At best we're talking hundreds of years. So—what's the hurry to mow that front lawn anyway?