

The Lost Pines of Bastrop County

The loblolly pine (*Pinus taeda*) is one of Texas' most famous pine trees. Their range extends across the south, from Georgia to East Texas as loblollies favor coastal growing conditions. Nearly 100 miles west of Houston, however, another forest of pines can be found. The Lost Pines is an area where loblolly pines have adapted to life in Bastrop County.

Growing conditions in Bastrop differ from those in East Texas. The soil tends to be sandier, and there is less precipitation and less humidity than there is in the east. Therefore, these loblolly pines are slightly different than their East Texas relatives. They are special "drought-hardy" variety of loblolly that grows only in Bastrop County.



Before the September 2011 wildfire, Bastrop State Park was the largest stronghold of the Lost Pines.

Local legends tell the story of the Lost Pines in Bastrop. One claims that a lonely Native American princess sent runners back to East Texas to gather the seeds of her homeland's trees, and then planted those seeds in the Bastrop area. However, this population of pine trees has thrived in Bastrop for much longer than any settlement -- these loblolly pines have grown here since the last ice age.

About 21,000 years ago, much of North America was covered in ice. Loblolly pine trees can't tolerate cold temperatures, so they eventually began to appear farther south to escape the ice. In addition, the widening of narrowing of the Brazos River – over thousands of years – cut the Lost Pines off from their easterly cousins.

Since the pines have grown in Bastrop, they have suffered at least one huge reduction in size, thought to be down to 150-200 trees. To bound back from that low of a population shows the capability of these trees to establish themselves in even the most dense and impenetrable forests. In good conditions, loblolly pine trees can grow up to one foot per year.

Like most ecosystems, loblolly pine forests require low-intensity fire to maintain their health. These trees have thick bark to protect their core and because of the height of these pine trees, limbs are often far above ground and cannot act as a ladder for the fire. For the most part, fire will only scar the bark of a pine and be visible on the tree's ring record.

Other pines such as the Longleaf pine (*Pinus palustris*) are adapted to fires in a different way. Longleaf pines, found in East Texas and other areas across the South, are adapted to wildfires because as seedlings, they spend most of their energy below ground growing an extensive root system and grow very little above ground. During this stage, wildfires pass over them, leaving the root systems and terminal buds, protected by a thick bundle of needles, unscathed. Once the roots are well established, more energy is put into the trunk which can grow three to six feet per year.

Overall, a loblolly pine forest needs fire roughly every 10 to 35 years. Low-intensity fire, much unlike the wildfires of 2011, clears out the undergrowth and creates fertile soil for new pines to grow. In order to germinate, pine trees require sunlight and space. Without periodic fire to clear the forest floor, seeds will lay dormant in the soil for years. Some pine trees such as the Jack pine (*Pinus banksiana*) and the Lodgepole pine (*Pinus contorta*), trees that grow in places like Yellowstone National Park, require fire to actually seed the next generation of trees. These pine trees have cones that are sealed with a special resin that prevents the cones from drying out and releasing their seeds except under special conditions. The resin will melt at temperatures between 112 -120 degrees F, which is a temperature a forest fire can reach.