

# Ecological History

## *Trail of Tears State Forest*

People have been shaping Trail of Tears State Forest for thousands of years. Native Americans lit it, European settlers cleared its trees and grazed animals on it, others reforested it and sought to suppress its wildfires. (See table below for a timeline of key events.) Natural resource professionals refer to these points in time as disturbance regimes, in that each era indicated a different connection between people and the forest. Understanding how people have shaped — and continue to shape — the forest helps us better understand today’s forest and how our actions may impact it. Our role as the shaper of natural communities is so profound that scientists consider us a “keystone species.”

Generally, scientists recognize three distinct periods of time when talking about disturbance regimes: prior to European settlement, during early European settlement and the modern era. The first disturbance regime, prior to European settlement, is when Native Americans lived on the land. Many believe that Native Americans lived in harmony with nature, having only a benign influence on it. William M. Denevan, however, was among the first scientists to debunk this idea, which he calls the Pristine Myth. “Where

Date	Land use practice	Forest impact
Before 1800	Native American hunting grounds	Hunting pressure and understory burning
After 1803	European-American settlement	Timber cut to build homes, roads, and towns
1811-1812	New Madrid earthquakes	Downed timber and oak regeneration
1830-1930	Grazing of domestic livestock	Soil compaction and understory damage
1838-1839	Trail of Tears-exiled Cherokee Indians	Cherokee hunted and made make-shift camps
1840-1930	Sawmill towns	Timber cut for barrels and lumber industry
1850-1880	Railroads	Timber cut for railroad ties and routes
1913	Ice storm	Trees damaged
1929	Purchased by the Department of Conservation	Much of TTTSF has been selectively logged
1934-1937	Civilian Conservation Corps	Fire trails on ridgetops, pine planted, and tree nursery
1938	State inaugurated fire protection program	Suppression of forest fires that were historically common on the landscape

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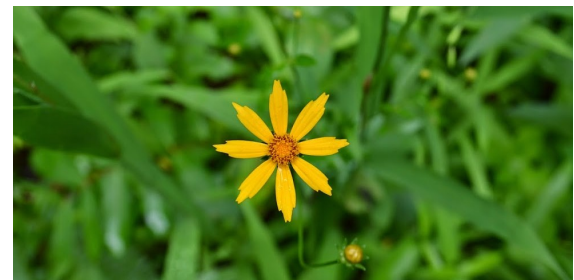
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people occur, they change their environment by necessity in order to live on and from the land,” he writes. Since his initial publication on this subject in 1992, new research has helped us better understand precisely how Native Americans used the landscape, specifically their use of fire as a game and land management tool. At Trail of Tears, we know they hunted, collected firewood and burned the forest to drive game.

The second disturbance regime is when European settlers arrived. Illinois forests spanned 13.8 million acres on their arrival. By the 1920s, however, the forest had declined to a mere 3 million acres. Telford, in a 1926 forest survey, says the forests of the Illinois Ozarks spanned a mere 23.8 percent of its original lands. At Trail of Tears State Forest, early settlers grazed its lands and harvested some trees. Between 1850 and 1880, the Illinois Central Railroad extensively cleared the forest for road ties and locomotive fuel.

Beginning the 1930s, people started talking about conserving America’s great forests. We invested in protecting these lands. During this era – our third disturbance regime – we reforested lands and instituted fire protection measures. In comparison to the previous regimes, it “serves as a reference to demonstrate the effect of absence of disturbance” (Fralish and McArdle, 2009). Nowacki and Abrams (2008) describe how the lack of disturbance affected the forest: “A cascade of compositional and structural changes took place whereby open lands (grasslands, savannas, and woodlands) succeeded to closed-canopy forests, followed by the eventual replacement of fire-dependent plants by shade-tolerant, fire-sensitive vegetation. This trend continues today with on-going fire suppression.” Efforts to suppress fire got underway at Trail of Tears in 1938, when the state of Illinois launched a new program. From 1938 to 2013, fire was suppressed, though a few small wildfires occurred. Also, from 1950 to 1989, there was some small-scale harvesting of mature trees in an attempt to encourage oak regeneration.

Looking ahead, one might consider Trail of Tears State Forest management as constituting a new disturbance regime, where a diverse, resilient and productive forest is restored and maintained.



blue racer, blue-stemmed goldenrod, pipevine swallowtail, star tickseed © Chris Banda