

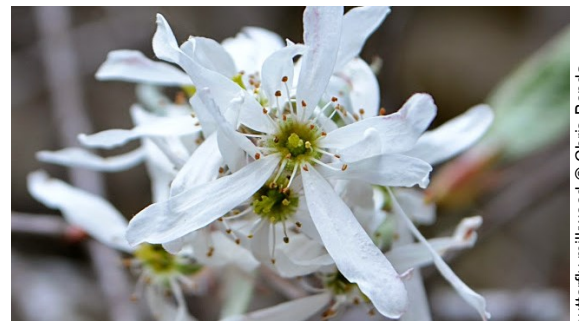
# Let the Sun Shine In *with the sun comes life*



Example of a more open forest in Southern Illinois © Tracy Fidler

## *Trail of Tears State Forest*

Dramatic changes are sweeping Trail of Tears State Forest and the Illinois Ozarks more broadly. A recent inventory of Trail of Tears State Forest reveals that the number of oak trees in the forest overstory decreased about 50 percent between 1980 and 2014. At the same time, there was a steady increase in American beech and maple. Unfortunately, neither tree provides a wildlife food source comparable to the species being lost. The shadier understory beneath their canopies reduces the diversity of native plants, thereby decreasing the quality of habitat. This change represents an unprecedented shift in the forest's community.



Examples of native plants that need a more open forest: serviceberry, bee balm and butterfly milkweed © Chris Benda

## Quick Facts

### **Fewer oaks**

In 1980, one out of every three trees in the forest overstory was an oak. Today, that number has been reduced to one out of five.

### **Illinois forests depend on oak**

Oaks have dominated Illinois' forests for thousands of years, and our wildlife depends on these trees for habitat. Loss of oak will not only change how the forest looks, but it also will decrease the number of species capable of living there.

### **A Call to Action**

Given the loss of oak in the forest's overstory and the lack of oak saplings, it is unlikely that this keystone species group will maintain its historic numbers without active management.



open forest canopy © Chris Benda

Oaks are intolerant — or at best moderately tolerant — of shade. These trees need sunlight. Right now, trees at Trail of Tears State Forest block 95 percent of the sunlight, meaning only about 5 percent reaches the forest floor. Oaks need a lot more light than that. Oaks prefer a forest where 30 to 50 percent of sunlight is able to reach the forest floor (as pictured above).

Prescribed fire may allow up to 20 percent of sunlight to reach the forest floor. If we want to increase that to 30 or 50 percent, then tree removal is required. Selective tree removal is a technique used throughout the eastern United States to affect positive forest management. This winter, Illinois Department of Natural Resources will selectively remove trees about seven trees per acre on 142 acres.

