

History of Fire

Before settlers arrived, if nature didn't ignite grasslands on fire, indigenous people would start the flame. They found value in burning the land to clear the thatch of the previous year which made it difficult for traversing the terrain; fire improved the landscape and habitat; and attracted game, making it easier for hunting prey. Indigenous people also understood the relationship of increased fruit and nut production of various native species that resulted in higher harvest yield always following a burn.

When early European settlers arrived, they were threatened by fire. Settlers as the name implies, settled on the land in one place. They established permanent structures and infrastructure that were flammable. As a result, they took measures to eliminate fire from occurring—they plowed prairies that had ideal fertile soil for agriculture and to create settlements and they logged open woodlands for building material. In general, suppressing fire from the land.

Prescribed (Rx) Fire as Tool

Now land managers conduct prescribed fires as a tool and methodology to restore balance and create mosaics of diverse habitats in our natural areas with many benefits to the ecosystem. Prairies, wetlands, savannas and occasionally oak openings/woodlands are fire dependent habitats. In grassland communities, fire helps to maintain the structure and composition needed by the plants and grassland wildlife, which would be eliminated if natural succession was set in motion transitioning the grassland to a forest over time. In woodlands, dominated by oaks and shagbark hickory in the canopy layer, the presence of fire can remove the thatch within the understory to create sunny pockets for regeneration of saplings in the ground layer struggling under the shade of the parent tree. Oaks and shagbark hickory are noticeably fire tolerant with their thick and rigid bark and furrowed acorns. With the absence of fire, the integrity of these habitats are at risk which is critical for maintaining their associated wildlife populations.

Fire can provide suppression of (nonnative) woody species, top killing them and slowing down their growth rate by forcing them to re-sprout from roots vs buds. Fire can kill invading weeds and/or non-native species not adapted to be fire tolerant while stimulating the prairie plants growth to form thick impenetrable sod layer. Deep-rooted prairie plants can regenerate and thrive using their belowground energy reserves. Some native prairie seeds even require fire to break dormancy scarifying the seeds to promote germination. Fire can level the playing field too, enabling slow growing conservative native species to have more opportunity instead of being shaded out. Fire can also provide needed nutrients to the soil (e.g. nitrogen, pH, carbon) which are significant for plant growth. Prescribed burns can extend the growing season, by incinerating the thatch and duff accumulated over the last growing season, warming the soil by allowing the sun to penetrate the soil sooner. The longer opportunity to grow offers more robust increases in seed, fruit and nut production. Increased abundance of wildflower seed and diversity offers more food sources to birds and small mammals, in addition to vital nesting and resting habitat structure. More diverse wildflowers will also attract more invertebrates that birds and bats feed on too. Utilizing fire as a management tool is more cost-effective and more environmentally friendly in comparison to chemical applications that are expensive and not organic, and to mowing which is timely and expensive for equipment, maintenance, and operation.