

Fire was once a common occurrence across southern Wisconsin. Mostly set by indigenous peoples, fire shaped the landscape and created the 'shifting mosaic' or 'kaleidoscope' of natural communities formerly common to the region. A once diverse ecological landscape existed with prairie, sedge meadow, oak savanna, oak openings, oak woodland, and mesic forest. This open and shifting landscape supported both native peoples and a diversity of plant and animal species for at least several thousand years following glacial retreat.

Management at the Pheasant Branch Conservancy aims to replicate historic landscape heterogeneity through use of prescribed fire and other management techniques. Prescribed fires are conducted at different times of year in order to achieve specific management goals, promote floristic diversity, and provide for the different habitat requirements of many animal species. Burning at different times of year promotes different effects and prevents continuously selecting for the same set of species. Fall burning provides a patchiness that retains cover for small animals, eliminates the potential impact to early emerging plant species, and facilitates the dispersal of reptiles and amphibians to upland breeding and nesting habitats without the risk of impact associated with a spring burn. Conditions for spring burning are generally more reliable and certain areas of the Conservancy lack the vegetative conditions that would allow for burning during other times of the year.

The timing and frequency of prescribed fire are important management considerations especially when considering species that are fire-dependent as a population, though individuals may be susceptible to harm during prescribed fire events. Precautions are taken to minimize harm to individuals of sensitive populations. For example, Blanding's turtles inhabit wetland areas of the Conservancy, though they nest in adjacent upland areas. Blanding's turtles must be able to disperse to upland areas in order to successfully nest and produce the next generation of turtles. Similarly, young hatchlings must be able to return to the wetland from upland nest sites. Fire is the most important management tool for maintaining both the open upland and wetland habitats that Blanding's turtles depend on. In order to mitigate impact to these and other herpetofauna, spring fires are conducted when temperatures are low and herpetofauna are not active. Specific ignition tactics are conducted in order to minimize harm; 'dot ignition' spaced along stream banks creates slow moving fire and allows frogs, turtles, and other animals to escape into the water. Additionally, unburned 'refugia' is maintained in order to provide areas

of cover and escape.

Whether to burn is an important management decision. Different plant and animal species respond differently to fire and other management techniques. While some birds will not nest in recently burned areas, other species will only nest in recently burned areas. Some bird species nest in areas of dense shrub cover while some ground nesting species will not nest if nearby shrubs are present. This creates an inherent problem for the land manager when various species with conflicting needs are present. Furthermore, as long as enough habitat of each type is maintained it is impossible to escape criticism for not managing for some specific species. What is lost in this perhaps sophistic view is the acknowledgement of how much time and effort is given to making informed and non-arbitrary management decisions.

In the relatively short period of euro-american dominance of the region the landscape of southern Wisconsin has become more simplified and a corresponding loss of biodiversity has occurred. Lack of fire is not the only reason for the loss of biodiversity though fire-dependent natural communities and the declining species that depend on those communities for habitat will not long survive without prescribed fire management. As management of the Pheasant Branch Conservancy continues to expand, prescribed fire will continue to be the most important and necessary management tool available.

Written by Rob Schubert (Land Manager for Pheasant Branch Conservancy)

\* For more information please find Brianna Randall's article, "Another Consequence of Suppressing Wildfire: Trees Are Invading the Prairie" (Audubon Magazine - 10/29/20).