

HEALTHY FORESTS NEED FIRE AND BLUE SKY

By Gene Twaronite

Yavapai County is covered by a broad range of vegetation types: ponderosa pine; pinyon-juniper; chaparral; and grassland/desert shrub. This diversity is one of the reasons many of us choose to live here. The complexity of this landscape, however, presents many challenges for homeowners and firefighters.

All of these vegetation types are adapted to fire. They evolved with fire, and continue to need fire to remain healthy.

By analyzing tree ring data, we know that fires occurred here as a natural and recurring process prior to European settlement. We also know that each kind of vegetation had a certain pattern of fires known as the natural fire regime. This describes the historic frequency and intensity of fires and their effects on vegetation.

In ponderosa pine forests, fires were typically light to moderate surface fires occurring every 1-25 years. These fires tended to keep forests more open and park-like than those many of us are familiar with today. The forest floor was covered with native grasses and forbs. Since there were few shrubs under the trees to carry fire into the canopy, severe crown fires were less frequent. And the nutrients from accumulated cones, needles, and branches were released by burning and returned to the forest. A policy of rigorous wildfire suppression and exclusion, however, has altered this regime, resulting in overly dense stands more prone to cataclysmic wildfire, drought, and bark beetle outbreaks.

In pinyon-juniper woodlands, the regime was characterized by infrequent and severe surface and crown fires occurring at intervals greater than 25 years. Historically, pinyon-juniper stands were probably far less extensive than they are today. Much of this woodland now occurs in areas once occupied by grassland.

The chaparral vegetation type is dominated by extensive, continuous stands of shrubs. Fires were typically severe surface and crown fires, with a return interval of about 35-40 years. These fires tended to replace mature stands with younger shrubs, probably creating a mosaic of different aged stands.

The grassland vegetation type, intermixed with desert shrubs, typically had a regime of light to moderate surface fires occurring every 1-25 years. These fires tended to maintain the grassland and prevent the growth of competing woody vegetation. Fire suppression has allowed much of the grassland to evolve into woodland.

So what does all mean for you as a homeowner? First, if your property adjoins any of these wildland vegetation types, it is part of a natural system dependent upon wildfire. In the moister state where I grew up, if I threw a stick on the ground, in a short time it would decompose and return its nutrients to the soil. But if I throw a stick on the dry ground surrounding my Arizona home today, I know that unless a packrat comes to whisk it away it will likely sit there many

years before finally decomposing. In a land of limited water, wildfire plays an important role in recycling nutrients.

Second, while land managers try to restore historic natural fire regimes through prescribed burning, there are many areas too densely developed to safely reintroduce wildfire. So you the homeowner must act as fire in your landscape. Near your house you can rake up the twigs, needles and other fine surface fuels that wildfire once burned and returned to the forest. You can thin out overly dense stands of trees and shrubs that frequent low-intensity fires once prevented. You can chip or compost the materials you have raked or thinned and recycle their nutrients. You can return the blue sky between the trees and make our forests and woodlands healthy again.

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