

# wildlife

R E V I E W

UTAH DIVISION OF WILDLIFE RESOURCES

## Cheatgrass

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stealing rangelands*

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*Threatening homes, stealing rangelands*

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**Y**ou've probably seen the following on more than one news broadcast in Utah this summer. With flames burning within sight of homes in the background and

air tankers dropping fire retardant out of the sky, the reporter who's reporting the story stoops down and points to the culprit that's causing the wildfire you're witnessing: a highly flammable, non-native grass called cheatgrass.

## **Cheatgrass**

Also known as "junegrass" and "downy brome," cheatgrass escaped from its native Mediterranean rangelands in contaminated grain seed in the late 1800s



and found its way to the Columbia River Basin. By 1920, it was well established. It's been increasing throughout Utah and the Intermountain Region ever since.

Cheatgrass deserves the "culprit" status reporters often give it, but because of time constraints, reporters often can't tell you the whole story on the six o'clock news.

It's a story worth telling, though, because its effect on Utah is alarming.

## **Fueling the fires**

Few invasive weeds have affected semi-desert plant communities in the Intermountain West more than cheatgrass.

In these areas, moisture in the soil is at a premium. Cheatgrass has a long history of adapting to similar sites in the Mediterranean Region, and it easily out-competes native plants for moisture and nutrients. The seeds of cheatgrass germinate quickly, which allows the plant to establish itself in the fall and winter. Because it's a winter annual, it robs moisture and nutrients from the soil when native grasses and forbs are still dormant.

**This early activity by cheatgrass has a two-fold effect: it limits the growth of the native perennials and prevents the establishment of their seedlings. Cheatgrass reaches maturity and sets seed four to six weeks before the native perennial grasses do. By June, the cheatgrass has cured, and it's ready to burn when the first lightning strike of the year hits.**

**And the presence of dried fuel early in the year is only part of the problem. The change that a cheatgrass invasion brings to a plant community is what distinguishes the type of fires we're seeing today from those as recent as only 20 years ago.**

**Historically, Utah's rangelands were dominated by perennial bunchgrasses. As the name implies, bunchgrasses are individual plants that grow in "bunches."**

**In sites dominated by bunchgrasses, there's more open space between the plants. The plants also stay green longer into the growing season. When a fire starts in an area that's dominated by bunchgrasses, there's a greater chance that it will die out because the vegetation in these**



**Unlike the bunch grasses native to Utah, cheatgrass grows as a continuous and highly flammable ground cover.**

areas is sparse. When a fire starts in a bunchgrass area, fewer acres are typically burned, and the landscape after the fire is typically a mosaic of burned and unburned areas.

Fires are very different in areas invaded by cheatgrass. Cheatgrass fills the spaces between the bunchgrasses. That creates a continuous cover of highly flammable fuels. What was once a sparsely vegetated, fire-resistant area, is now a dense, dry tinderbox. When cheatgrass areas ignite, wildfires spread through them quickly and completely. The fires also consume a much larger area.

## **More fires**

The cheatgrass invasion has done more than just increase the number of acres that burn annually in the West. It has also dramatically changed how often those fires burn.

In native shrub-bunchgrass ranges, fires occurred every 30 to 75 years. In cheatgrass ranges, fires occur about every 10 years or less. In fact, cycles as short

as every 4 years are common in areas infested with cheatgrass.

This increase in how often fires burn has eliminated most of the shrubs in Utah and has reduced the density of native bunchgrasses and forbs. The native plant communities that support Utah's wildlife are being wiped out at an alarming rate.

As damaging as the cheatgrass invasion is, though, it's not the only "culprit" cheating us out of healthy rangelands.

## **Pinyon-juniper trees**

As damaging as frequent fires can be to native plant communities, the complete absence of fire can have similar consequences. Without periodic fires, sagebrush and pinyon-juniper trees can completely dominate a landscape.

The combination of more and more pinyon-juniper trees; the overgrazing of Western ranges by livestock in the late 1800s and early 1900s; and well-intentioned fire suppression efforts by state and federal land



**In some areas, periodic fires are necessary to prevent pinyon-juniper forests from dominating the landscape.**

management agencies over the past 50 years; have combined to produce conditions for a “perfect storm” in terms of wildfires on many of our Western ranges.

These stands no longer sustain a diverse understory of native grasses and forbs. And they don’t have the seed reserves in the soil to get them reestablished after

a wildfire. Utah's sagebrush stands have become dense, old and decadent, and closed-canopy pinyon-juniper woodlands are common now in the state.

Pinyon and juniper trees have also spread into adjacent sagebrush ranges and have depleted the understory in these areas. Referred to as "asbestos forests," the pinyon-juniper woodlands lack the fine fuels needed to keep a fire contained under moderate conditions. When a fire gets started, weather conditions are often so severe that the results are catastrophic.

After fires burn in pinyon/juniper areas, huge areas are exposed to invasion by cheatgrass and other noxious weeds. Once these areas have been invaded by cheatgrass, the natural process to reestablish the former native plant communities can take decades, if it takes place at all.

Areas filled with cheatgrass and other noxious weeds provide limited value to the wildlife that remain in the area, and they're guaranteed to burn more often.

## **High-risk homes**

If catastrophic wildfires burning up livestock grazing land and wildlife habitat can't get our attention, then perhaps the possibility of entire subdivisions going up in smoke will.

Western range fires have been increasing in intensity for years, but because more homes are bordering our rangelands now, people are starting to take notice. When homes are in the path of a major wildfire, the response to put those fires out is more aggressive, more costly and more hazardous than it was before.

Although it's a problem that's been growing for years, wildlife managers, landowners, homeowners and others are just beginning to understand the costs and the complex changes that are taking place on Utah's rangelands. And with every fire season, those costs escalate. That's why you'll probably see plenty of cheatgrass on the evening news the rest of this summer and for years to come. 🐾