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Cheating the Sage, and the Fight Ahead for Mule Deer and Hunters

Cheatgrass and other invasive grasses loom as a major threat to mule deer sagebrush habitat. Now is the time for hunters and land managers to act!

By Hannah Nikonow, Intermountain West Joint Venture

Many experts are now citing the number one threat to mule deer in many parts of the West isn't carnivores, development, or disease. Rather, it's a tiny little plant, thinner than a toothpick and much more delicate, but very tenacious. You probably have heard of cheatgrass by now, maybe even felt its seeds dig into your ankles while hunting in sagebrush country. This wimpy-looking exotic grass from Eurasia doesn't look like much of a threat, at least at first glance, to the mule deer we pursue each autumn. But make no mistake, this invasive grass packs a nasty punch to sagebrush habitat.

The Fire & Invasives Cycle: It's Vicious
Mule deer rely on sagebrush landscapes

for much of their lives, and especially in the winter. The problem is that vast swaths of this habitat are going up in smoke every year with wildfires that are increasingly devastating in their size, frequency, and intensity. This is due in large part to a vicious cycle of fires burning slow-growing sagebrush, followed by quick-growing invasive grasses filling in the void. This can then result in the landscape reburning on those tinder-dry fine fuels, making an area much more susceptible to more fire and facilitating the spread of more cheatgrass and, over time, the elimination of the sagebrush.

"All of our mule deer herds have been impacted by fire and invasives," said Cody Schroeder, Mule Deer Staff Biologist for the Nevada Department

of Wildlife. "Cheatgrass literally cheats native plants out of water and space to grow. It is an invasive grass that is so well-adapted to fill in post-fire and has very little nutritional value."

Often after a fire in their winter range, mule deer show up in that fire scar and stay there until they starve, competing with each other for the small islands of remaining unburned vegetation, said Schroeder.

"That's why we will sometimes allocate doe tags to decrease a herd size in an area that experienced large wildfires so there's enough forage for them to find and not have to compete over," Schroeder said. "The idea is that by decreasing the population, there will be enough

food out there for them to eat over the winter so that healthy deer survive and continue reproducing and have strong recruitment into the next season.”

The long-term average of Nevada’s mule deer population is between 100,000 and 150,000 animals. However, beginning in the year 2000, a significant uptick started in large-scale wildfires. Now, the 2019 population estimate across the state is 93,000. Despite the big habitat impacts from fire and invasives, the management strategies employed by Schroeder and the Nevada Department of Wildlife are aiming to keep the deer population relatively stable from year to year.

In addition to the wildlife that depend on the sagebrush sea, public safety and economic viability are issues within these vastly altered landscapes that are being taken over by cheatgrass. The economic hit that comes when

huge swaths of grazing land and rural infrastructure burn, such as equipment, fences, roads, and power transmission systems, is devastating to communities. When hunting is negatively impacted by these invasive plants due to declining deer populations, the loss of revenue that hunting season brings can make or break rural community businesses. In Nevada alone, the collective economic loss is conservatively estimated at \$44-\$60 million annually.

The Time to Act is Now

Of total acres burned over the past 19 years in the United States, 56% was rangelands. The Bureau of Land Management oversees the vast majority of sagebrush rangelands and their fuels budget is \$85 million annually, which pales in comparison to the U.S. Forest Service’s fuels budget to address wildfire resiliency and community wildfire adaptation which is over \$400 million.

“Fires in sagebrush country are becoming increasingly more difficult, dangerous, and expensive to fight and then restore,” said Jolie Pollet, BLM Division Chief for Fire Planning and Fuels Management. “They are occurring at a scale and intensity that is outpacing current funding investments and the expected future costs are only increasing.”

To address escalating rangeland wildfire costs and impacts, conservation organizations are sounding the alarm about the need for new and increased funding. These dollars are desperately needed by state and federal agencies and the communities that are on the frontlines of rangeland and fire management.

The Western Association of Fish and Wildlife Agencies, representing 24 states and Canadian provinces, is leading an extensive sagebrush conservation planning effort. The plan involves over 150 experts to conduct an assessment

QUICK FACTS ON CHEATGRASS AND THE FIRE AND INVASIVES CYCLE:

- Primary threats to sagebrush rangelands include invasion by exotic grasses and the destructive large-scale wildfires fueled by these grasses.
- As little as 1% of cheatgrass cover can double the risk of fire in sagebrush country.
- Historically in sagebrush rangelands, fires occurred every 30 to 100 years.
- In areas where invasive grasses are established, fires have greatly increased in frequency in those areas now burning every 5 to 15 years. This repetitive burning eliminates sagebrush that is crucial to mule deer survival.
- Invasive grasses can dramatically alter and degrade wildlife habitat, including important wintering habitat and migration corridors for mule deer.





Burned sagebrush stubs remain after the 2018 Martin Fire, which was a human-caused fire that burned 435,000 acres north of Elko, Nevada, the state's record fire. This region suffers fires every year. Long-term, the biggest impact to mule deer is that the fire and cheatgrass cycle results in some areas reburning again-and-again preventing any favorable forage from getting established, sometimes permanently.



The Intermountain West Joint Venture is teamed up with the Bureau of Land Management in an initiative called Partnering to Conserve Sagebrush Rangelands. Together, they are increasing voluntary collaboration and partnerships, improving science and technology transfer, advancing communications, as well as implementing projects in sagebrush country. Ninety percent of the sagebrush ecosystem lies within the IWJV's boundary.

of the entire sagebrush range, identify the major conservation challenges, and recommend strategies to address these challenges. Ken Mayer, one of the organizers of the effort and a Mule Deer Foundation Science Advisor, says land managers and conservation organizations need to take the threat of cheatgrass seriously. He says that it may come to the point where there will be no reasonable solution to the problem.

“Idaho, Nevada, and other Great Basin states are already deeply caught in the fire and invasives cycle,” Mayer said. “Other more eastern sagebrush states like Colorado, Wyoming, and Montana are seeing cheatgrass expand at an alarming rate. As cheatgrass adapts and expands in these states, so too will the fire and invasives cycle.”

Mayer says the good news is there is still time to make a difference and that there are tools land managers can use now to manage cheatgrass and the spread of fire.

“The bottleneck comes in terms of capacity, like dollars and manpower, and long-term commitment to the fight,” Mayer said. “It’s going to take a huge effort from everyone who cares about sagebrush country - the agency leaders, managers, researchers, private landowners, and politicians, even the sportsmen, birders and hikers need to get involved, but we have to act now!”

Mayer also emphasized the need to increase scientific knowledge as fire and invasive grasses alter the sagebrush sea. By applying what is already known and

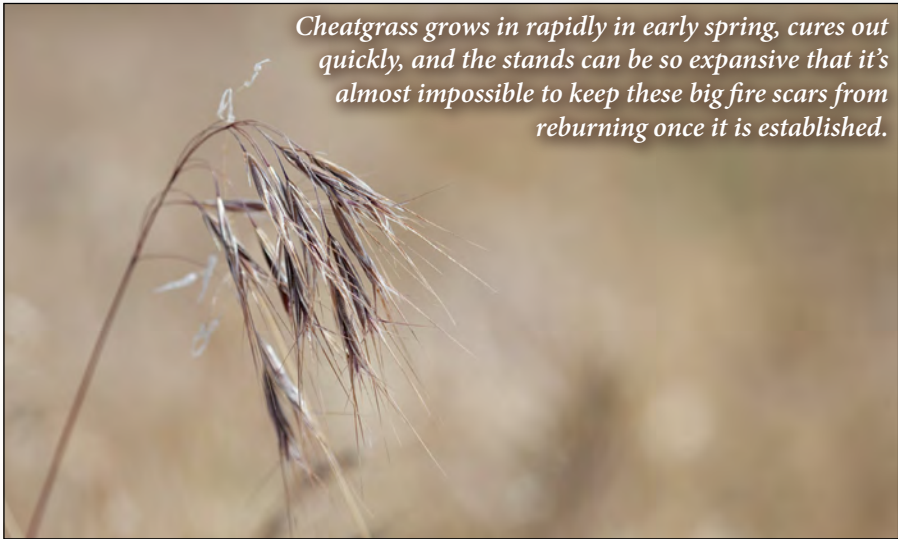
investing in new research, the conservation community can get ahead of this huge challenge, he said.

What Can Hunters Do?

Hunters are recognized as some of the original conservationists as they’ve chosen to self-regulate and self-tax to conserve both wildlife and their habitat. These leadership efforts can continue in the fight against fire and invasives in sagebrush mule deer country.

With the majority of fires being human-caused, outdoorsmen and women have a major role to play to keep fires from happening, educate their hunting comrades about this issue, and report fires quickly when they happen. Cheatgrass is sometimes called “grassoline” due to how fast a fire can ignite and race across this fine fuel. Knowing that fires can be ignited by a single spark from dragging trailer chains, target shooting in rocky areas, or parking a hot vehicle in tall grass, recreationists can take steps to not let these activities light up their favorite hunting spots. And hunters can





Cheatgrass grows in rapidly in early spring, cures out quickly, and the stands can be so expansive that it's almost impossible to keep these big fire scars from reburning once it is established.



be prepared by carrying a shovel and extra water in their vehicles to put out a fire that might start.

Another action hunters can take is contacting their elected officials to voice support for strong conservation funding at state and national levels. This can be in the form of a short phone call or email to the congressional district office in your area. It's important that elected officials hear from their constituents that state fish and game agencies as well as federal land management agencies need continued and increased funding to keep sagebrush rangelands healthy for wildlife, bountiful hunting opportunities, and economically resilient communities. These funds also support

the committed men and women that have dedicated their careers to wildlife and land conservation.

“Sportsmen and women can also help by supporting the many conservation professionals as they are constantly studying, implementing, and analyzing management practices to keep growing healthy deer and their habitats,” said Miles Moretti, President/CEO of the Mule Deer Foundation. “There are excellent wildlife managers out there and we can do our part in supporting their efforts by advocating for sufficient funding and policy measures to keep conservation happening. The Mule Deer Foundation is proud to partner with them across the West.”

Hannah Nikonow is the sagebrush communications specialist for the Intermountain West Joint Venture in Missoula, Montana. While writing this story, her mind wandered back to this past fall in central Montana. Hidden behind a sagebrush, she took many deep breaths filled with the sage's scent before squeezing the trigger on the mule deer buck that would feed her family throughout the year. Not a wisp of cheatgrass was in sight. Montana, and other Rocky Mountain states, have not yet been overwhelmed by the fire and invasives cycle, but it's slowly creeping in. The time is now to address this major threat to mule deer.



THE MULE DEER FOUNDATION IS DEDICATED TO WORKING COLLABORATIVELY TO CREATE HEALTHY SAGEBRUSH RANGELANDS. HERE'S HOW YOU CAN HELP:

- 1) Don't start a wildfire! The majority are human-caused. Take care of your campfires, don't park a hot vehicle in grass, and wash your truck's undercarriage to remove any hitch-hiking vegetation and seeds after your hunt.
- 2) Support strong conservation funding. Contact your elected officials and tell them to support key programs and funding sources including BLM's sagebrush habitat conservation funding as well as strong fire and fuels budgets, Farm Bill conservation programs, and the Recovering America's Wildlife Act. In this way, hunters can help invest meaningful resources into proactive conservation that directly benefits the animals we love to pursue afield. Your membership to the Mule Deer Foundation is also a huge contribution to achieving this!
- 3) Get your local chapter involved in sagebrush restoration projects. Many Mule Deer Foundation chapters are key partners in boots-on-the-ground habitat projects, some of which deal directly with post-fire restoration. What if your chapter doesn't have anything planned? Take the lead and the hunting karma will follow!



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