

conifer trees –most notably junipers– have invaded large swathes of formerly unbroken sagebrush. These trees, like other vertical structures including powerlines, storage tanks and buildings, provide perches for birds of prey that ambush mature sage grouse and their young. When their terrain goes vertical, grouse migrate to less perilous territory.

Still more problematic are invasive grasses, worst of which is cheatgrass. This Eurasian native chokes out the indigenous forbs and grasses which critically supplement the grouse's diet for much of the year, then withers early in summer (earning its familiar name, as ranchers and herders felt "cheated" by the loss of livestock forage so early in the season). As cheatgrass dries out, it provides a singularly potent fuel for wildfires, burning sufficiently hot and continuously to kill adjacent sagebrush, which are either displaced entirely by successional plants or take long decades to rebound into a mature ecosystem. Fire cycles are less than half of what they once were in many places, leaving no time for ecosystems to recover; more than a quarter of Great Basin sagebrush habitat has burned since 1980. Despite valiant efforts, the science of restoring sagebrush habitat is still in its infancy; biologists have yet to unlock the keys to restoration, and results have been frustratingly uneven and sporadic.

In their eastern, more populous range, the Sage Grouse's biggest problems are more overtly human in origin. While instances of overhunting were recorded in the 1800s, the rapid development of farming and ranching in the twentieth century exacted a much greater toll. The healthiest, tallest sagebrush often grow in the same deep, rich soil deposits appropriate to agriculture, and with the expansion of irrigation, much of that territory gave way to fields of wheat, hay, and other crops. In Montana alone, 19% of prime sagebrush habitat disappeared forever, while 84% has been affected by agricultural development. The use of herbicides and insecticides gave further



Photo: Mia McPherson

hopes of keeping tabs on as much of the population as possible. A critical source of this data comes from hunters, who deposit wings in collection boxes or by mail, and report statistics from their hunts.

In another small hopeful step, many partners to the conservation plan resisted the administration's rollback. In one example, a Montana District Court overturned 440 new energy leases on protected sagebrush habitat. Oregon has also made notable efforts to uphold the provisions of the 2015 agreement. Most of the 1.6 million acres of new leases sold by the BLM have persisted, however, and these will be difficult to reverse even if subsequent administrations are more sympathetic to sage grouse conservation.

Despite the Trump administration's best efforts, it is unlikely that the grouse will go extinct in the near future. Large islands of undeveloped and mineral-poor habitat exist (though in growing isolation) across its range. Rather than reassurance and complacency, this fact should give us pause to reconsider how we define animals and their habitat as "threatened" or "endangered". If absolute extinction is our only benchmark, we will allow species, even ones like the sage grouse which define landscapes spanning half a continent, to dwindle down to almost meaningless relict populations: vulnerable to future pressures, stricken by genetic bottlenecks, inaccessible to all but a privileged few, and certainly unavailable for hunting. This is, of course, the fate of many species in the world today, but few are symbolic of so vast and fundamental a geography as the sage grouse.

Hunters have a critical role to play in this moment of decision. As of late, energy lobbyists have used calls for an end to grouse hunting as a political foil to greater protections from oil and gas development.

Whether hunters choose to acknowledge it or not, their side in this battle has already been chosen. The Sage Grouse Initiative was successful, however briefly, because it mobilized a diverse coalition of private and public interests on behalf of grouse conservation, charting a path forward to robust habitat protections without resorting to sweeping federal interventions—last-ditch, blanket solutions that would put an end to sage grouse hunting, cut off recreational access to huge stretches of sagebrush landscape, and alienate ranchers and other rural constituents whose buy-in to grouse conservation was hard-won. Because the sage grouse is an umbrella species over millions and millions of acres of landscape, their listing could mean an end of access to



hundreds of other species in that ecosystem, from antelope to elk and mule deer, among innumerable less sought-after species.

Veteran conservation figures I spoke with agreed that enlistment under the ESA—though it may eventually become necessary—would inaugurate an era of unprecedented legal struggle concerning wildlife. The current administration's utter indifference to the future of Sage Grouse, and their efforts to undermine inherited conservation plans, may well culminate in renewed pressure to list these animals under the ESA. A still bleaker scenario, hinted at by the administration's recent drafting of legislation to permanently disallow the

sage grouse from enlistment, would see the Endangered Species Act undermined in its entirety, threatening several thousand other listed species and dramatically multiplying risks to other threatened organisms. It is not entirely implausible that the sagebrush sea, quietly and persistently under attack, might become in a few short years the final battleground over all nationwide species protections.

Though only a small percentage of Americans today are aware of the Greater Sage Grouse's predicament, it may be the most momentous North American species under threat in our lifetimes. Herein lies the deeper meaning of the sage grouse's status as a "landscape species": they are indicators not only of the sagebrush sea's integrity, but a litmus test for the willingness and ability of Americans to set aside space in our landscapes for nonhuman life, to safeguard traditions of hunting and wildlife appreciation which link us to past generations and to nature. The loss of sage grouse not only diminishes our material world, carving a piece from the heart of what is most beautiful and unique in this continent, but impoverishes us spiritually, depriving future generations of the right to exist alongside magnificent creatures.

The German philosopher Hegel famously remarked that "the owl of Minerva spreads its wings only with the falling of dusk"—meaning that philosophers could only hope to understand a given historical period as it was passing from the earth. As we contemplate the doubtful future of this majestic and irreplaceable American bird—caught between ecological changes, energy and agricultural interests, deceitful politicians, hamstrung government agencies, upland hunters and conservationists—we can only hope that future generations will not find themselves lamenting how the sage grouse took flight at dusk.