



## **ANNOUNCEMENTS**

*Weeks of Friday, October 17<sup>th</sup> through November 21<sup>st</sup> 2014*

Check out the chapter on Facebook at:

<https://www.facebook.com/pages/The-Wildlife-Society-New-Mexico-Chapter/122478411098284>

1. Registration information, workshops, and schedule for AZ/NM JAM 2015
2. Second call for papers for the 2015 AZ/NM JAM – Submission Deadline Dec 15<sup>th</sup>, 2014
3. Submit nominations for the NM TWS Outstanding Student Award and the Wildlife Professional Award – Due Dec 15<sup>th</sup> 2014
4. Submit nominations for a position on the NM TWS board by November 30<sup>th</sup>, 2014
5. Species of Greatest Conservation Need workshop to be held at the JAM – February 5<sup>th</sup>, 2014
6. Recording for Women of Wildlife conference call available
7. Concept paper regarding applying the North American model to Herpetofauna now available
8. Interior secretary announces sage grouse deal, praises Wyoming conservation efforts
9. Our Highways' Toll on Wildlife
10. US voters deciding on billions for conservation
11. A fraction of the global military spending could save the planet's biodiversity
12. Miles Moretti: Conserving multiple species at once
13. New Prediction Tool for Birds' Future Habitat Ranges

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## **1. Registration information, workshops, and schedule for JAM 2015**

The 2015 Joint Annual Meeting of the Arizona and New Mexico Chapter of the American Fisheries Society and the Arizona and New Mexico Chapters of The Wildlife Society will be held in Las Cruces, New Mexico at the Hotel Encanto Thursday February 5<sup>th</sup> through Saturday February 7<sup>th</sup>. Please see attached pdf

for more information on how to register and reserve a hotel room and for information on the workshops and an overview of the meeting schedule. Early registration ends January 10<sup>th</sup>, 2015.

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## 2. Second call for papers for the 2015 AZ/NM JAM – Submission Deadline December 15<sup>th</sup>, 2014

The second call for papers for the 2015 Joint Annual Meeting (JAM) of the AZ/NM AFS and the AZ and NM Chapters of TWS is now available (<http://drupal.wildlife.org/nm/sites/wildlife.org.nm/files/2015JAMSecondCallforPapersDec15.pdf>); and see attached .pdf). Abstract submissions are due by December 15<sup>th</sup>, 2014.

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## 3. Submit nominations for the NM TWS Outstanding Student Award and the Wildlife Professional Award - Due Dec 15<sup>th</sup> 2014

Please submit your nominations for the NM TWS Outstanding Student Award and the Wildlife Professional Award. Nominations are due December 15<sup>th</sup>, 2014 and can be submitted to Quentin Hays, New Mexico Chapter of The Wildlife Society, 709 Mechem Drive, Ruidoso, NM, 88345 or electronically to [Quentin.Hays@enmu.edu](mailto:Quentin.Hays@enmu.edu). Please see attached .pdf or the following link (<http://drupal.wildlife.org/nm/sites/wildlife.org.nm/files/2014Student%26WildlifeProfessionalAwardsSept2014.pdf>) for more information.

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## 4. Submit nominations for a position on the NM TWS board by November 30<sup>th</sup>, 2014

The New Mexico TWS Chapter is seeking candidates to run for the Executive Board. Open positions include President-elect, Treasurer, Secretary and 3 board member positions. A description of duties are available at: <http://drupal.wildlife.org/NM/sites/wildlife.org.NM/files/images/2013%20Operations%20Manual.pdf>

If you are interested in running for a position on the executive board, please send an email to [jwcain@nmsu.edu](mailto:jwcain@nmsu.edu) before November 30<sup>th</sup>, 2014.

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## 5. Species of Greatest Conservation Need workshop to be held at the JAM – February 5th, 2014

The New Mexico Department of Game and Fish is holding a workshop regarding revisions to its Species of Greatest Conservation Need list at the 2015 JAM in Las Cruces on February 5<sup>th</sup>, 2015. The workshop will provide attendees with information on the revision process and new list, and will also give them an opportunity to provide feedback on the revised list. Please see the attached flier for more information and go to the following website to register for the workshop and the JAM: <http://www.eventzilla.net/web/event?eventid=2139036783>.

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## 6. Recording for Women of Wildlife conference call available

The Southwest Section Women of Wildlife committee held a conference call. Below is the recording information in case members of the New Mexico Chapter of The Wildlife Society wish to listen in.

Playback Number: 605/562-0029

Meeting ID: 634-775-555

Reference Number: 1

Time: Overall, approximately 83 minutes

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## 7. Concept paper regarding applying the North American model to Herpetofauna now available

The Association of Wildlife Agencies has released a concept paper related to the application of the North American model to the management and conservation of herpetofauna. Please see attached documents for more information.

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## 8. Interior secretary announces sage grouse deal, praises Wyoming conservation efforts

October 15, 2014 7:00 pm • By BENJAMIN STORROW Star-Tribune staff writer

PINEDALE -- Interior Secretary Sally Jewell hailed an agreement with nine Wyoming landowners as a milestone in national sage grouse conservation efforts at a ceremony Wednesday, saying the move could prevent the bird from being listed under the Endangered Species Act.

Under the agreement, ranchers will voluntarily agree to employ conservation practices aimed at halting the species' demise on their land.

In exchange, landowners will not be asked to take additional conservation measures if the sage grouse is listed and won't be penalized for incidental fatalities.

Federal officials said they hope the agreement, which covers about 40,000 private acres in Wyoming, will be the first of many deals with private landowners to protect the bird.

"The Fish and Wildlife Service would love to have healthy environments so that the need for a listing as threatened or endangered for this bird is not required or warranted because of the stuff that is happening on the ground," Jewell said from a temporary lectern stationed at Trapper's Point, the Wind River Mountains serving as her background.

Wyoming has much at stake in the sage grouse debate. The state accounts for 37 percent of the world's sage grouse habitat and 26 percent of the bird's occupied North American range.

Some 15 million acres, or roughly 25 percent of Wyoming's land mass, is considered prime sage grouse habitat.

The prospects of a listing under the Endangered Species Act have raised fears among ranchers and energy companies, which share the sagebrush steppe with the bird. They worry a listing could greatly restrain their operations.

The U.S. Fish and Wildlife Service is expected to make a decision on the listing in September.

Gov. Matt Mead joined Jewell at the ceremony. He applauded the Interior Department's efforts to work with landowners. Ranchers are the original environmentalists, the first to notice changes in the land and in the animals it supports, he said.

"Well-run ranches mean great habitat for wildlife," Mead said.

Speaking to the ranchers on hand, he added: "These agreements help provide protection to you, but on a broader scale, they help provide protection for species and, in particular, sage grouse."

Mead has made the 30 lawsuits brought by his administration against various federal agencies a talking point of his re-election campaign, arguing that litigation is the best means of preventing Washington overreach.

### **Change in tone**

The tone of Wednesday's events was markedly different. Mead and Jewell greeted each other with a hug. The governor said he was "delighted" at the secretary's presence.

And Jewell praised Mead's leadership while adding that he is the only governor to ever invite her to go rock climbing, in this case up Devils Tower.

More significantly, federal officials praised Wyoming's efforts to conserve sage grouse.

"I will say Wyoming is way ahead of the curve," Jewell said. "More than a decade ago, Wyoming recognized the importance of these ecosystems and started to take steps to protect habitat important to the sage grouse."

Dan Ashe, U.S. Fish and Wildlife Service director, said his agency supports Wyoming's core area strategy, which limits development in areas of prime habitat.

The federal government may implement the core area strategy as its management plan for restoring sage grouse if the bird is listed, Ashe said.

“It is a good plan for the conservation of sage grouse in Wyoming,” he said.

Agreements with private landowners, known officially as Candidate Conservation Agreements with Assurances, have been effective in reversing the declines of other species, Ashe said.

Private landowner efforts have been especially effective in recovering the red cockaded woodpecker in the southeastern United States. Similar agreements have also been used in the case of the lesser prairie chicken and a host of other species, he said.

Sage grouse range widely, meaning federal and state governments need to work with private landowners to effectively protect the bird, federal officials said.

Sage grouse often retreat to the private hay fields lining creek beds during the dry season, while spending the wetter months on the sagebrush steppe, which is typically managed by the U.S. Bureau of Land Management.

The federal and state governments manage about 25 to 30 percent of the land mass in the United States, making the efforts of private landowners essential, Ashe said.

“We are really seeing a revolution in the conservation of wildlife and endangered species where private landowners are coming to the table,” Ashe said. “If we are going to do our job to conserve wildlife, we need private landowners.”

### **Voluntary agreements**

The agreements outlined Wednesday are voluntary. Measures range from rotational grazing to removal of fences or windmills used as water pumps. Ravens, which eat sage grouse eggs, often nest in the old turbines.

Brad Bousman, a Sublette County rancher, was the first to accept a so-called CCAA for sage grouse in Wyoming. Many of the practices sought by the Fish and Wildlife Service are already employed on his ranch, Bousman said.

“I hope this might prevent it from being listed,” Bousman said. “It would be bad news for the economy and everything if they list it.”

Especially appealing is a second agreement with federal agencies governing grazing allotments on public lands. Some environmental groups have sued in recent years to prevent the renewal of permits.

By agreeing to a series of conservation practices in advance, ranchers can streamline renewals and avoid potentially time-consuming litigation, he said.

Bousman is to date the only rancher to sign a conservation agreement for a grazing allotment on federal land in Wyoming.

The deals are an insurance policy of sorts should the bird be listed, said Jim Magagna, executive director of the Wyoming Stock Growers Association.

Ranchers won't be asked to go beyond what they've already committed to doing on their land. They will also be provided what is known as an incidental-take permit, meaning ranchers will not be penalized for inadvertently killing a sage grouse.

Six of the landowners to agree to the deals on their own land are in Sublette County. Two of the remaining three are in Johnson County while the third is in Campbell County. They included state Treasurer Mark Gordon, who operates a ranch east of Buffalo.

"We signed up because we wanted to be proactive," Gordon said. "To have the stability this ensures is very valuable."

Article link: [http://trib.com/business/energy/interior-secretary-announces-sage-grouse-deal-praises-wyoming-conservation-efforts/article\\_d31947b0-58cd-5c04-975c-1e58fdc9e418.html](http://trib.com/business/energy/interior-secretary-announces-sage-grouse-deal-praises-wyoming-conservation-efforts/article_d31947b0-58cd-5c04-975c-1e58fdc9e418.html)

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## 9. Our Highways' Toll on Wildlife

By AMANDA HARDY and RENEE SEIDLER OCT. 23, 2014

BOZEMAN, Mont. — FALL is the season of apples, frost, turning leaves and roadkill. A 2008 congressional study found that one in 20 reported motor vehicle collisions is animal-related, and the numbers peak in autumn. Annually, these incidents result in about 26,000 injuries and 200 human deaths.

Across the country, collisions with deer — the most common type of animal-related incident — cost more than \$8.3 billion per year, including vehicle repair, medical services, towing, law enforcement time and carcass disposal. The damages increase when larger animals like moose or elk are hit.

Spring and autumn, when animals are migrating, searching for mates or evading hunters, are the riskiest periods. Many animals, including deer, are active at dusk and dawn, when twilight reduces their visibility to predators — and to drivers, resulting in more collisions. The transitions to and from daylight saving time are especially hazardous because the timing of our commutes shifts overnight before animals can adjust to avoid the rush hour. This also contributes to the seasonal spike in animals killed.

It's hard to quantify the full impact of vehicle collisions on wildlife populations because most reported incidents involve larger animals like deer (and even those are underreported). The toll on smaller creatures like squirrels, salamanders and birds goes largely uncoun­ted, but a recent study estimated that as many as 340 million birds are killed by vehicles annually. For 21 species listed by federal authorities as threatened or endangered — including the Canada lynx, the red wolf, the Florida panther, the crested caracara and Florida scrub-jay — road death is a major threat to survival.

How can we reduce this carnage? Most collisions with animals occur on two-lane highways that have relatively low traffic volumes (fewer than 5,000 vehicles per day). With greater awareness, motorists can adapt their driving. Research shows that drivers who anticipate danger can halve their reaction time and cut the risk of collision.

Roadside signs may warn us of wildlife crossing these stretches of road, but if drivers rarely encounter animals, they can become habituated to the warnings. Flashing lights augmenting these signs can slow drivers, but they're most effective if used only during the riskiest periods. Drivers are less likely to ignore animal crossing warnings that are activated by systems that detect moving animals in real time, but these dynamic signs are relatively rare. Ultimately, any system that relies on altering driver behavior will only have limited success.

Surprisingly, changing animal behavior is more promising. The most effective tactic uses fencing to channel animals toward structures that safely cross roads. Panthers and alligators in Florida travel through culverts under a section of Interstate 75 known as Alligator Alley. Grizzly bears in Canada's Banff National Park use overpasses designed for wildlife to cross the Trans-Canada Highway. Texas is planning underpasses along Highway 100 that, when constructed, could protect our 50 remaining ocelots.

In Wyoming, pronghorn following the 6,000-year-old "Path of the Pronghorn" (our only federally protected migration corridor) are now guided by fences to overpasses and underpasses that cross a highway that lies between their summer and winter ranges. When work on the safe passages and fencing was completed in 2012, we watched the initial crossing attempts of the pronghorn in suspense.

When they first encountered the guide fences, they chaotically tried to get through, unaware of the nearby overpass. In time, though, every group of pronghorn found its way over the busy highway. Their instinct to reach their winter range exceeded their fear of the unfamiliar structures; now, these are simply part of their migration path.

The value of conserving this magnificent phenomenon — one of the last intact long-distance terrestrial migrations — is, in one sense, immeasurable. But it works in monetary terms, too. Before the project, drivers risked colliding with the 140-pound horned animals that crossed the highway by the thousands during their twice-yearly migrations. Over time, the cost savings from avoided collisions will offset the initiative's \$9.7 million price tag. Based on the accident reduction rate so far, the investment will pay off in about 12 years.

Later this year, Congress must reauthorize a transportation bill that includes provisions designed to reduce animal-vehicle collisions and protect both drivers and wildlife. Congressional representatives must back clauses in the bill that would empower transportation agencies to use these engineering solutions where needed.

Drivers must do their part to avoid wildlife collisions by slowing down and paying attention when there's a high probability of encountering wildlife. But the best way of avoiding collisions is to build highways that reduce the hazards for drivers and animals alike where the risks are highest.

Article link: [http://www.nytimes.com/2014/10/24/opinion/our-highways-toll-on-wildlife.html?\\_r=0](http://www.nytimes.com/2014/10/24/opinion/our-highways-toll-on-wildlife.html?_r=0)

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## 10. US voters deciding on billions for conservation

By JASON DEAREN - Associated Press - Thursday, October 30, 2014

GAINESVILLE, Fla. (AP) - Voters across the nation are deciding whether to set aside billions of dollars for parks and preservation in what some environmentalists are calling one of the most significant elections for land conservation in American history.

Pollsters say it's one of the few places on Tuesday's ballots where voters of all kinds can find common ground.

The most money at stake is in Florida, California and New Jersey.

"These are highly developed and dense states, and they are watching the good natural places disappear," said Will Rogers, president and CEO of the Trust for Public Land, which tracks and raises money for the ballot measures. "People know if they don't step up and protect it, it will be gone."

Nationwide, it adds up to more than \$15.7 billion overall in taxes and bonds for land and water conservation, the most in a quarter-century of elections, according to the trust's data, which was independently verified by The Associated Press.

Other states with significant conservation funding on state or local ballots include Utah, New Mexico, North Dakota and Oregon. In Colorado, voters in Larimer County could renew a sales tax to generate \$131 million over 25 years for open spaces.

"One of the things we see in this hyper-partisan age is that support for these measures can extend across party lines," said Lori Weigel, a pollster in Denver, Colorado, who has been tracking voter preferences on this year's measures. "There's something appealing about conserving these natural areas, whether that's for sportsmen like hunters or environmentalists."

The dynamic has shown up even in tax-averse Alabama, where 75 percent of voters amended the constitution in 2012 to fund open spaces with oil revenues after a campaign targeting hunters and environmentalists. In Missouri, 71 percent voted in 2006 to renew a sales tax for parks and erosion control that originally passed by just 50.1 percent in 1984.

"It has worked really well. We have over 80 state parks and not only are they nice places but they bring in a lot of tourist revenue," said William Lowry, a political science professor who focuses on environmental issues at Washington University in St. Louis.

Florida voters are considering a constitutional amendment that would dedicate \$18 billion in existing real estate taxes to environmental protection over the next two decades. About half the revenue would go to buy nearly 2 million acres - pockets of wilderness including swamplands, beaches and other places that link key corridors of open space where wildlife can migrate naturally.

New Jersey's voters could renew part of a tax on corporations to pay for \$2.1 billion for open spaces and farmland.

And drought-suffering Californians are being asked to pass Proposition 1, a \$7.5 billion voter initiative to fund more dams on the Sacramento and San Joaquin Rivers to improve water supplies in the central part of the state, where most of the nation's fruits and vegetables are grown. The same bond measure would set aside much less money - about \$1.5 billion - for land and watershed conservation.

That's hard to swallow for some environmental advocates. The Natural Resources Defense Council is backing Proposition 1, but the Sierra Club decided

to not take a public stance, concerned that resource conservation funding could be dwarfed by the billions going to concrete in the form of new dams.

The scope of the initiative is so vast, chances are that environmentalists don't truly understand its overall effects on land and water resources, said Sejal Choksi, program director of San Francisco Baykeeper. Choksi expressed skepticism about the "vague language and the state's shabby history of water policy implementation," and said the proposition's wording opens too many loopholes for developers.

In Florida and New Jersey, business groups and Gov. Chris Christie are against locking in environmental funding, saying that the Legislature needs power to move money where it's most needed in tough times.

But the measures' backers feel good about Tuesday, optimistic that the strengthening economy has made voters willing to pay to preserve natural resources for future generations.

"Wherever you look, in the interior West, in the Rust Belt, the Sun Belt, people care about places, they care about nature and are willing to vote with their wallets to do something about it," Rogers said.

Article link: <http://www.washingtontimes.com/news/2014/oct/30/us-voters-to-decide-on-billions-for-conservation/>

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## 11. A fraction of the global military spending could save the planet's biodiversity

Posted By News On November 5, 2014 - 7:30pm

A fundamental step-change involving an increase in funding and political commitment is urgently needed to ensure that protected areas deliver their full conservation, social and economic potential, according to an article published today in *Nature* by experts from Wildlife Conservation Society, the University of Queensland, and the IUCN World Commission on Protected Areas (WCPA).

The paper, *The performance and potential of protected areas*, comes ahead of the IUCN World Parks Congress 2014 – a once-in-a-decade global forum on protected areas opening next week in Sydney, Australia.

To access the paper, [click here](#).

According to the authors, allocating US\$45 - \$76 billion to protected areas annually – just 2.5% of the global annual military expenditure – could help adequately manage those areas, ensuring their potential contribution to the well-being of the planet is fully met.

Many threatened species, such as the Asian elephant, the tiger, and all rhinoceros species, as well as numerous plants, reptiles and amphibians, survive thanks to protected areas. Well-managed marine protected areas contain more than five times the total large fish biomass and 14 times the shark biomass compared with fished areas.

"Protected areas offer us solutions to some of today's most pressing challenges" says Dr James Watson of the Wildlife Conservation Society and The University of Queensland and lead author of the study. "But by continuing with 'business as usual', we are setting them up for failure. A step-change in the way we value, fund, govern and manage those areas is neither impossible nor unrealistic and would only represent a fraction of what the world spends annually on defense."

According to the latest data, protected areas cover around 15% of land and 3% of oceans. Experts warn, however, that despite the significant increase in their coverage over the past century, this is still short of the global 2020 targets to protect at least 17% of land and 10% of oceans. Many ecosystems remain poorly conserved because protected areas do not always encompass the most important areas for biodiversity.

In addition, the vast majority of existing protected areas that are well placed do not have sufficient resources to be effective, with some studies finding as few as one quarter of them are being effectively managed. Growing threats from climate change and the escalating poaching crisis place additional pressures on protected areas globally.

"Some of the most iconic protected areas, such as Ecuador's Galapagos National Park, are undergoing significant degradation, partly due to an inability to manage them effectively," says Professor Marc Hockings of The University of Queensland, co-author of the study and member of the IUCN WCPA. "But governments cannot be solely responsible for ensuring that protected areas fulfill their potential. We need to find new, innovative ways to fund and manage them, actively involving government, business and community groups."

The paper also highlights an alarming increase in governments - in both developing and developed countries – backtracking on their commitments through funding cuts and changes in policy. A recent global analysis has documented 543 instances where protected areas saw their status downgraded or removed altogether.

For example, recent cuts to the Parks Canada budget have reduced conservation spending by 15%. In Uganda, active oil exploration and development is occurring inside many protected areas, including Murchison Falls National Park. In Indonesia, in 2010, mining permits were issued inside 481,000 hectares of protected areas and in the Virgin Komi Forests in Russia, significant boundary changes have been made to reserves such as the Yugyd Va National Park to allow mining. The Arabian Oryx Sanctuary in Oman was removed from the World Heritage List after the government reduced the size of the reserve by 90% to allow for oil and gas extraction.

"There is a fundamental need for an increase in support of global protected areas, including better recognition, funding, planning and enforcement" says Nigel Dudley, co-author of the paper, from Equilibrium Research and The University of Queensland, member of the IUCN WCPA. "It is government's responsibility to step up but there is also the need for the wider community to take collective responsibility for protected areas."

Protected areas conserve biodiversity and sustain a large proportion of the world's poorest people by providing them with food, water, shelter and medicine. They play a key part in climate change mitigation and adaptation and bolster national economies through tourism revenues. In Rwanda, for example, tourism revenue from visits to see mountain gorillas inside Volcanoes National Park is now the country's largest source of foreign exchange, raising US\$200 million annually. In Australia, the 2012–2013 budget for the Great Barrier Reef Marine Park Authority was approximately AUS\$50 million, but tourism to the reef was worth more than A\$5.2 billion annually to the Australian economy.

"The growth of the modern global protected area movement over the last 100 years is arguably the greatest conservation achievement," says Julia Marton-Lefèvre, IUCN Director General. "It is also increasingly important for livelihoods and global security. The key now is for countries to recognize the return on investment that protected areas offer and realize that those places are fundamental to the future of life on earth. This is exactly what we hope to achieve at the upcoming IUCN World Parks Congress."

Effective management of protected areas, the threats they face and the solutions they offer to today's global challenges will be discussed at the IUCN World Parks Congress taking place in Sydney from 12 to 19 November 2014.

Article link:

[http://www.sciencecodex.com/a\\_fraction\\_of\\_the\\_global\\_military\\_spending\\_could\\_save\\_the\\_planets\\_biodiversity-144965](http://www.sciencecodex.com/a_fraction_of_the_global_military_spending_could_save_the_planets_biodiversity-144965)

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## 12. Miles Moretti: Conserving multiple species at once

By Miles Moretti For the Deseret News

Published: Sunday, Nov. 9 2014 12:00 a.m. MST

Updated: Saturday, Nov. 8 2014 7:01 p.m. MST

The greater sage grouse has stolen the headlines lately, both in the West and nationally, as the decision to list the bird under the Endangered Species Act looms large. Unfortunately, too much attention has focused on the bird itself and the negatives of a listing rather than the proverbial big picture — and the opportunities resulting from conservation of the bird and its habitat.

Sagebrush ecosystems, on which the grouse depends during all stages of its life, are home to more than 350 species of plants and animals. Therefore, many refer to the sage grouse as an indicator or “umbrella” species, meaning that conservation and habitat management that benefits sage grouse is also good for those 350 other species — one of which is mule deer.

A recent study in Wyoming demonstrated that sage grouse conservation measures in the state overlapped and will benefit 60-70 percent of migration corridors used by the Green River mule deer herd in southwest Wyoming. These conservation measures also overlap about 75 percent of critical stopover habitats used by mule deer during migration and up to 90 percent of winter range for this important mule deer herd. The researchers concluded that where mule deer habitats overlap with sage grouse core, or priority, habitat, increased protection for mule deer results.

What’s good for the bird is good for the deer herd, too.

Mule deer continue to struggle across the West for a variety of reasons, but we’ve long known that addressing habitat management and enhancement on a landscape scale is critical to halting and reversing these negative trends. It’s also clear that no individual entity has enough resources to do all needed conservation by itself, so taking advantage of “umbrella” conservation approaches for large landscapes and partnering to leverage funding is vital to the future of wildlife conservation. Overlaying sage grouse conservation with mule deer habitat in Wyoming is but one example of the opportunities to blend conservation efforts to benefit multiple species that lie before us.

In Utah, the state’s sage grouse plan leaves the birds vulnerable to impacts from development, but projects like the watershed initiative, of which the Mule Deer Foundation is a partner, has improved or restored more than 1 million acres of habitat for sage grouse, mule deer and other wildlife.

We can have our cake and eat it, too, but baking that cake and icing it will require strong conservation plans from states and federal agencies, partnerships among like-minded stakeholder groups, and a little change and compromise. Restoring sage grouse and their habitats is the greatest conservation challenge of our time. How we handle it could define conservation for the next 100 years and beyond. But the challenge also represents an opportunity — an opportunity to demonstrate that what’s “good for the bird” is good for everyone.

Article link: <http://www.deseretnews.com/article/865615097/Conserving-multiple-species-at-once.html?pg=all>

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## 13. New Prediction Tool for Birds’ Future Habitat Ranges

By Hannah L. Robbins  
Posted on November 14, 2014

A newly developed tool from the United States Geological Survey (USGS) shows how the habitat ranges for select species of North American birds might look in 2075 and could eventually help wildlife biologists make their own local predictions. USGS scientist Terry Sohl looked 50 species of birds in a study published in PLOS ONE and found the results varied by species — some birds could have expanding ranges, while others might see theirs shrink.

The study is not the first to cast light on how bird ranges will shift in the future. The Audubon Society released a comprehensive report detailing how 588 bird species in North America will react to the changing climate. A forecast map illustrates how species’ ranges may shrink, expand, or shift over the next 65 years. Climate change is only one of many challenges that birds will face according to Sohl.

How humans use the land within a bird’s given range can be just as important as climate shifts. The spread of urban areas, land development, and deforestation are a few things that can cut into vital bird habitat and impact bird ranges locally. “Climate gives you the big brush picture of what will happen over all, but if you have the land use data you can see the fine detail,” said Sohl. “It can really change the picture.”

For some birds the picture looks good. By 2075, climate change will increase temperatures by three to seven degrees Fahrenheit, making larger swaths of area in the southwest suitable for species such as the Gambel’s quail and the cactus wren that breed there. The study predicts the ranges of both species will increase by more than 50 percent.

Other birds may not be so lucky. The model projected that the Baird's sparrow could lose up to 90.8 percent of its range in the U.S. as warming temperatures drive it out of its summer breeding grounds in the Dakotas, Minnesota, and Montana northward further into Canada. Similarly, the forest-dwelling hooded warblers may move north into upstate New York, northern New England, and Michigan as the climate warms, but its northern range may become fragmented as agricultural lands in the east expand and replace forested areas.

While Sohl looked at large range changes over North America, he believes the approach — taking into account both climate change and future land use — can be useful on a smaller scale. He and other USGS researchers are working on a tool that would allow land and wildlife managers to make their own projections about how the landscape will change locally. Researchers could then plug their projections into climate change prediction models and achieve similar results but on a local scale.

“What we are trying to say is ‘hey, all you guys using climate modeling, land use data is interesting too,’” said Sohl. “You are only telling part of the story if you are just looking at climate going out into the future.”

Article link: <http://wildlife.org/new-prediction-tool-for-birds-future-habitat-ranges/>

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