



ANNOUNCEMENTS

Weeks of Friday, September 27th through November 8th 2013

Check out the chapter on Facebook at:

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

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1. NM TWS Awards – Applications due December 15th, 2013

Attached to this announcements email are the applications for 3 awards that NMTWS grants annually. All applications are due on December 15, 2013 and should be submitted to Elise Goldstein at Elise.Goldstein@state.nm.us. You are encouraged to apply/nominate someone for the following awards:

- Professional of the year
- Two scholarships (\$750 and \$250)
- Travel grants for students

Please contact Elise Goldstein (Elise.Goldstein@state.nm.us) for further information.

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2. AZ/NM AFS/TWS Joint Annual Meeting - First Call for Papers – Abstracts due November 22nd

**The Arizona/New Mexico Chapters of the American Fisheries Society and
the Wildlife Society Announce:**

A joint annual meeting to be held at the:
Hon-dah Resort – Casino and Conference Center in Pinetop, AZ
www.hon-dah.com
Thursday – Saturday, February 6-8, 2014

REGISTRATION INFORMATION WILL BE ONLINE SOON
<http://www.aznmfishsoup.org/>

FIRST CALL FOR PAPERS

We are now accepting abstracts, FIRST CALL to be submitted by November 22nd.

The Program Committee for the 2014 JAM invites abstracts for contributed oral presentations and posters. The program will include a plenary session, contributed papers and a poster session on fisheries and wildlife related topics. We expect a wide range of topics from the diverse fishery and wildlife resources found within Arizona and New Mexico. Presentations may include completed projects and works in progress.

We urge students to attend and are particularly interested in student presentations. Several awards will be given for “best papers”. The AZ/NM Chapter of the American Fisheries Society will present a “Best Student Paper” and “Best Student Poster” award for graduate and undergraduate students presenting papers/posters in the fisheries field. The AZ and NM Chapters of The Wildlife Society will present a “Best Student Paper” and “Best Student Poster” award for graduate and undergraduate students presenting papers/posters in the wildlife field.

INSTRUCTIONS FOR ORAL PRESENTATION AND POSTER ABSTRACTS

Speakers should plan for a 15-minute presentation with an additional 5-minute period for questions and answers. A laptop PC and digital projector will be provided for Power Point presentations. Please inquire about other audio-visual aids.

Oral presentation and poster abstract format:

List all authors using first and last names, their affiliation, addresses, telephone numbers, and e-mail addresses. When choosing the title, be brief but descriptive and avoid using acronyms or scientific names in the title unless the common name is not widely known. Please indicate if you are a student (undergraduate or graduate) at the end of the abstract (see example below). Abstracts are restricted to 150 words and should summarize the findings. *Please follow the format from the example below so that program chairs can focus on processing abstracts rather than making edits.*

Poster Size and Display:

Please limit your poster size to 32"x 44" which can be either portrait or landscape; each presenter will have a 4x4 foot space for their poster, which will provide a place to hang the poster and other information such as handouts and category headings. Presenters are required to assemble and disassemble their own poster; you will be advised when to do so. You must provide tacks, push pins, or t-pins.

Poster Presenters should plan on attending the Poster Session at the meeting to be available to answer questions. Breaks and socials will be organized around the Posters to encourage discussion between attendees and poster presenters. All presenters will receive an e-mail confirmation of their abstract submission within one week post-submittal, abstract acceptance within two weeks of submission, and notification of the time and place of their presentation or poster session in January.

Please email your abstracts to the appropriate Program Chair below by November 22nd, 2013:

Oral presentations for fisheries: Aaron Bunch, abunch@azgfd.gov, 480-324-3541

Oral presentations for wildlife: Jon Hanna, moremuledeer@gmail.com, 480-403-1913

Poster presentations for both fisheries and wildlife: Sally Petre, SPetre@azgfd.gov, 623-236-7664

ABSTRACT EXAMPLE

Authors:

Julie Meka Carter, Native Trout Coordinator, Arizona Game and Fish Department; 5000 W. Carefree Hwy, Phoenix, Arizona 85086; Phone (623) 236-7576; jcarter@azgfd.gov

Jeremy Voeltz, Fisheries Biologist and Project Coordinator, US Fish and Wildlife Service, AZ Fish and Wildlife Conservation Office, P.O. Box 39, Pinetop, Arizona 85935; Phone (928) 338-4288 x23; jeremy_voeltz@fws.gov

Title:
A 10-year Plan to Secure a Unique Southwest Native Trout, the Apache Trout

Abstract:
Apache trout recovery has been ongoing since the 1950s. Despite aggressive recovery efforts, historical and present, there are still several ways to improve the present and future sustainability success of Apache trout that go beyond actions guided by the Apache Trout Recovery Plan. Three of the most significant threats to natural and reestablished Apache trout populations that exist today are: non-native trout occupying historical Apache trout habitat, marginal habitat in small recovery streams, and impacts of climate change on trout streams. A new Keystone Initiative grant from the National Fish and Wildlife Foundation addresses these threats by implementing four key strategies that if achieved, could increase Apache trout abundance by an estimated 50 percent by 2017. In combination, actions guided by the Recovery Plan will result in recovery and a possible delisting proposal, and the Initiative will implement key actions that could reduce the effects of stochastic events, expand and improve habitat, and increase Apache trout abundance, ultimately ensuring their sustainability. This presentation will discuss in detail the Keystone Initiative grant for Apache trout and the progress and obstacles experienced since 2008, the first year of implementation.

**Student

For more information please visit: <http://www.aznmfishsoup.org/>

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3. Playa Lakes Joint Venture Solicits Habitat Conservation Proposals for the 2014 ConocoPhillips Grant Program – Applications due December 6th

PLJV Solicits Proposals for 2014 ConocoPhillips Grant Program
Funds Available for Habitat Conservation Projects; Applications Due December 6

Playa Lakes Joint Venture announces the availability of funding for projects that address the PLJV mission within the Joint Venture's boundaries. The PLJV supports and promotes habitat conservation for wintering, migrating and breeding birds in portions of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, and Texas (see www.pljv.org/partners/funding/conocophillips for map).

Funding is available for proposals in three categories — habitat conservation, research, and outreach — with the majority of the funding dedicated to habitat

conservation projects. Funding is limited to no more than \$25,000 per project. Proposals must have a minimum of a 1:1 match, with preference given to projects that have higher levels of matching funds, and must show support and involvement from state wildlife agencies and how the project fits with PLJV priorities. Projects selected are funded on a reimbursement basis, with all funds to be spent by Dec. 1, 2014.

Visit www.pljv.org/partners/funding/conocophillips to download the proposal instructions and template. Please pay close attention to the instructions and requirements when developing and submitting your proposal to ensure it is accepted. Send a PDF of your proposal to PLJV Conservation Delivery Leader Christopher Rustay at christopher.rustay@pljv.org. Applicants will be notified of funding decisions the first week of February 2014.

Deadline: Applications are due by 5pm MST on December 6, 2013.

For more information please visit: www.pljv.org/partners/funding/conocophillips

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4. Wildlife handling courses by GWR in ID, MT, MI, and TN

Message from Dr. Mark Johnson

Dear New Mexico Chapter of TWS,

Global Wildlife Resources has scheduled several wildlife chemical immobilization training courses for spring, 2014. Each course is the most extensive wildlife handling training in North America with live animals and designed for state/tribal/private/federal wildlife professionals, zoo caretakers and captive wildlife organizations, animal control officers, university students, and veterinary technicians. Attached is a course announcement for each class. A student rate is available for full time college students.

GWR courses in spring 2014 include:

March 18-20, 2014	University of Tennessee, Knoxville, TN
April 22-24, 2014	Idaho Humane Society, Boise, ID
May 6-8, 2014	Demmer Shooting Sports Training Center, Lansing MI
May 20-22, 2014	Career Transitions Building, Belgrade, MT

These are the most extensive courses in North America. Each one is a practical field-oriented course with hands-on labs every day. Few courses in the country have live animals. On the third day of this course, you will be able to chemically immobilize goats, which simulate deer in an excellent way.

You can register through our website Course Schedule. Most courses become full so register early to get a seat! Our website has additional information including testimonials.

Global Wildlife Resources website: <http://www.wildliferesources.com/> Contact Dr. Johnson (mjohnson@wildliferesources.org) for further information.

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5. IPCC climate report: human impact is 'unequivocal'

Fiona Harvey in Stockholm
theguardian.com, Friday 27 September 2013 06.48 EDT

UN secretary-general urges global response to clear message from scientists that climate change is human-induced

World leaders must now respond to an "unequivocal" message from climate scientists and act with policies to cut greenhouse gas emissions, the United Nations secretary-general urged on Friday.

Introducing a major report from a high level UN panel of climate scientists, Ban Ki-moon said, "The heat is on. We must act."

The world's leading climate scientists, who have been meeting in all-night sessions this week in the Swedish capital, said there was no longer room for doubt that climate change was occurring, and the dominant cause has been human actions in pouring greenhouse gases into the atmosphere.

In their starker warning yet, following nearly seven years of new research on the climate, the Intergovernmental Panel on Climate Change (IPCC) said it was "unequivocal" and that even if the world begins to moderate greenhouse gas emissions, warming is likely to cross the critical threshold of 2C by the end of this century. That would have serious consequences, including sea level rises, heatwaves and changes to rainfall meaning dry regions get less and already wet areas receive more.

In response to the report, the US secretary of state, John Kerry, said in a statement: "This is yet another wakeup call: those who deny the science or choose excuses over action are playing with fire."

"Once again, the science grows clearer, the case grows more compelling, and the costs of inaction grow beyond anything that anyone with conscience or commonsense should be willing to even contemplate," he said.

He said that livelihoods around the world would be impacted. "With those stakes, the response must be all hands on deck. It's not about one country making a demand of another. It's the science itself, demanding action from all of us. The United States is deeply committed to leading on climate change."

In a crucial reinforcement of their message – included starkly in this report for the first time – the IPCC warned that the world cannot afford to keep emitting carbon dioxide as it has been doing in recent years. To avoid dangerous levels of climate change, beyond 2C, the world can only emit a total of between 800 and 880 gigatonnes of carbon. Of this, about 530 gigatonnes had already been emitted by 2011.

That has a clear implication for our fossil fuel consumption, meaning that humans cannot burn all of the coal, oil and gas reserves that countries and companies possess. As the former UN commissioner Mary Robinson told the Guardian last week, that will have "huge implications for social and economic development." It will also be difficult for business interests to accept.

The central estimate is that warming is likely to exceed 2C, the threshold beyond which scientists think global warming will start to wreak serious changes to the planet. That threshold is likely to be reached even if we begin to cut global greenhouse gas emissions, which so far has not happened, according to the report.

Other key points from the report are:

- Atmospheric concentrations of carbon dioxide, methane and nitrous oxide are now at levels "unprecedented in at least the last 800,000 years."
- Since the 1950's it's "extremely likely" that human activities have been the dominant cause of the temperature rise.
- Concentrations of CO₂ and other greenhouse gases in the atmosphere have increased to levels that are unprecedented in at least 800,000 years. The burning of fossil fuels is the main reason behind a 40% increase in CO₂ concentrations since the industrial revolution.
- Global temperatures are likely to rise by 0.3C to 4.8C, by the end of the century depending on how much governments control carbon emissions.
- Sea levels are expected to rise a further 26-82cm by the end of the century.

- The oceans have acidified as they have absorbed about a third of the carbon dioxide emitted.

Thomas Stocker, co-chair of the working group on physical science, said the message that greenhouse gases must be reduced was clear. "We give very relevant guidance on the total amount of carbon that can't be emitted to stay to 1.5 or 2C. We are not on the path that would lead us to respect that warming target [which has been agreed by world governments]."

He said: "Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions."

Though governments around the world have agreed to curb emissions, and at numerous international meetings have reaffirmed their commitment to holding warming to below 2C by the end of the century, greenhouse gas concentrations are still rising at record rates.

Rajendra Pachauri, chair of the IPCC, said it was for governments to take action based on the science produced by the panel, consisting of thousands of pages of detail, drawing on the work of more than 800 scientists and hundreds of scientific papers.

The scientists also put paid to claims that global warming has "stopped" because global temperatures in the past 15 years have not continued the strong upward march of the preceding years, which is a key argument put forward by sceptics to cast doubt on climate science. But the IPCC said the longer term trends were clear: "Each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850 in the northern hemisphere [the earliest date for reliable temperature records for the whole hemisphere]."

The past 15 years were not such an unusual case, said Stocker. "People always pick 1998 but [that was] a very special year, because a strong El Niño made it unusually hot, and since then there have been some medium-sized volcanic eruptions that have cooled the climate."

But he said that further research was needed on the role of the oceans, which are thought to have absorbed more than 90% of the warming so far.

The scientists have faced sustained attacks from so-called sceptics, often funded by "vested interests" according to the UN, who try to pick holes in each item of evidence for climate change. The experts have always known they must make their work watertight against such an onslaught, and every conclusion made by the IPCC must pass scrutiny by all of the world's governments before it can be published.

Their warning on Friday was sent out to governments around the globe, who convene and fund the IPCC.

It was 1988 when scientists were first convened for this task, and in the five landmark reports since then the research has become ever clearer. Now, scientists say they are certain that "warming in the climate system is unequivocal and since 1950 many changes have been observed throughout the climate system that are unprecedented over decades to millennia." That warning, from such a sober body, hemmed in by the need to submit every statement to extraordinary levels of scrutiny, is the starker yet.

"Heatwaves are very likely to occur more frequently and last longer. As the earth warms, we expect to see currently wet regions receiving more rainfall, and dry regions receiving less, although there will be exceptions," Stocker said.

Qin Dahe, also co-chair of the working group, said: "As the ocean warm, and glaciers and ice sheets reduce, global mean sea level will continue to rise, but at a faster rate than we have experienced over the past 40 years."

Prof David Mackay, chief scientific adviser to the Department of Energy and Climate Change, said: "The far-reaching consequences of this warming are becoming understood, although some uncertainties remain. The most significant uncertainty, however, is how much carbon humanity will choose to put into the atmosphere in the future. It is the total sum of all our carbon emissions that will determine the impacts. We need to take action now, to maximise our chances of being faced with impacts that we, and our children, can deal with. Waiting a decade or two before taking climate change action will certainly lead to greater harm than acting now."

Article link: <http://www.theguardian.com/environment/2013/sep/27/ipcc-climate-report-un-secretary-general>

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6. Wyoming wildlife crossings labeled success

October 08, 2013 7:00 am • By the Star-Tribune staff

More than 13,000 mule deer migrate safely through Nugget Canyon near Kemmerer because of six underpasses and deer-tight fencing, according to a media release from the Wyoming Game and Fish Department.

The Wyoming Department of Transportation recently received special recognition from the Western Association of Fish and Wildlife Agencies in recognition for its work with underpasses and overpasses throughout Wyoming.

Vehicles killed about 130 mule deer each year throughout the 1990s in the Nugget Canyon area, according to research from Western EcoSystems Technology, Inc.

The underpasses, combined with deer-proof fencing, reduced crashes between deer and vehicles by 85 percent, the release stated.

The department of transportation built six more underpasses and two overpasses in 2012 near Pinedale. The Trapper's Point project addressed a major barrier in one of the longest seasonal ungulate migrations in the Lower 48. The crossings provided mule deer and antelope safe passage along U.S. Highway 191.

Migrating big game travel more than 150 miles between summer ranges in the northern Wind River and Gros Ventre Mountains and winter ranges in the Red Desert of southwestern Wyoming.

"Although the project was designed to benefit both mule deer and pronghorn, the overpasses are especially important to pronghorn because they are some of the first structures ever built in North America to get this species across a major highway," state Game and Fish Director Scott Talbott said in a release.

The over and underpasses essentially eliminated vehicle collisions on the highway, according to preliminary results.

About 30,000 big game animals use crossings across Wyoming installed by the department of transportation.

The Western Association of Fish and Wildlife Agencies is represented by 23 states and Canadian provinces.

Reach Open Spaces reporter Christine Peterson at 307-746-3121 or christine.peterson@trib.com. Follow her on Twitter @PetersonOutside.

Article link: http://trib.com/lifestyles/recreation/wyoming-wildlife-crossings-labeled-success/article_50658617-4dc9-5327-8bf3-4ce7c6f7778c.html

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7. Studies, states seek to halt mule deer population decline

October 17, 2013 10:00 am • By BRETT FRENCH/Billings Gazette

Wildlife management agencies, hunters and wildlife organizations have done a lot of research, habitat work and plain old head scratching in recent years over what is causing a decline in the number of mule deer across parts of the West.

A recent report by Western wildlife agencies found mule deer declining in four states, including Wyoming, and one Canadian province. Montana's population was reported as stable, although certain regional populations have seen some dramatic declines.

"Certainly numbers are still down," said Quentin Kujala, Fish, Wildlife and Parks wildlife management section chief, but whether that constitutes a downward trend or simply a temporary pause he could not say.

"It's varied across the state, for sure," he added.

A FWP report to the Western Association of Fish and Wildlife Agencies in July noted "significant declines in recruitment and observed numbers of mule deer during 2007-11."

The report goes on to note the regional differences in mule deer populations.

"Surveys during 2012-13 revealed improved recruitment and stable numbers in central and eastern Montana. Western Montana mule deer populations continue to perform poorly. Recent, significant declines in eastern Montana mule deer populations were associated with inclement winter/spring weather and drought."

Down in Wyoming

Wyoming, on the other hand, is reporting a steadily decreasing population of mule deer.

In its report to WAFWA, Wyoming noted that the decline was evident as early as the late 1980s, when fawn production began to decline, blamed on "decreasing habitat availability and/or quality."

The report goes on to note that, "Over the past 30 years, fawn productivity, on average, has decreased statewide by about 20 percent and has been below 65 (fawns per 100 does) 12 times."

That number is significant since any time the numbers hit 65 or lower there will be a decline in populations, said Darryl Lutz, Lander Region wildlife coordinator for the Wyoming Game and Fish Department. That's been the case in the Cowboy State.

"Throughout Wyoming, mule deer populations have declined by an estimated 168,000 (31 percent) since 2000. After the 2011 hunting seasons, it was estimated there were 376,000 mule deer in the state. This is 24 percent below the statewide objective of 564,650 mule deer," Wyoming's WAFWA report stated.

Lutz said that in 1989 Wyoming saw fawn production start to drop off significantly. That corresponded with the beginning of an extended drought.

Other states that reported declines include North Dakota, Colorado, New Mexico and the province of Saskatchewan. In Colorado the decline of mule deer was great enough that the deer hunting opportunities dropped by 94 percent over five years for the state's largest mule deer herd.

Mule deer habitat

One theory behind the animals' decline is a loss of habitat, or changes to existing habitat.

Mule deer are ruminants, animals with multi-chambered stomachs that help them break down the often fibrous plants they eat, which includes the tips of shrubs like bitterbrush and sagebrush.

The mule deer's range across the West, as in Montana, varies from high in the Rocky Mountains to rugged prairies like the Missouri River Breaks. One thing all of the various mule deer habitats have in common is their reliance on timely moisture to produce nutritious forage. So drought – which commonly and sometimes seriously strikes the West – can deplete mule deer populations.

Demonstrating the importance of quality nutrition, one study found that "well-nourished does lost only about 5 percent of their fawns; does fed deficient diets during the winter lost about 33 percent; and does underfed throughout their pregnancy lost 90 percent of their fawns."

Lutz, from Wyoming Game and Fish, said his agency once believed that winter habitat was the most important factor in ensuring the deer's survival. In recent years, that switched to a greater focus on the habitat deer use in the late summer and fall. "This is a common theme across areas of the West," Lutz said.

If deer aren't going into the winter well fed, it doesn't matter if the winter range is in good shape or not. Deer in poor condition won't survive, or a pregnant doe's fawn has less chance of surviving.

Altering habitat on a large enough scale to affect mule deer populations isn't easy or cheap, though, Lutz pointed out.

"It takes a lot of money to do it on a scale large enough to make a difference," he said.

Still, the department is partnering on a project near Saratoga, Wyo., called the Platte Valley Habitat Partnership, to see if large-scale landscape improvements can have a positive effect on mule deer population trends.

"We're refocusing our attention," Lutz said. "I don't think we yet understand how much effect drought has on habitat."

Other factors

Although drought may be a major player in the decline of mule deer, there is a laundry list of other occurrences affecting mule deer habitats, including weed infestations by nonnatives, especially species like cheatgrass that can spread rapidly following fires. Fire, too, has the ability to reshape habitats – sometimes for the good, by removing old overstory and promoting new growth, and sometimes for the bad, by ridding the landscape of cover vital to fawn survival.

Some studies suggest that the increase in logging during America's building boom, settlement of the West and the mining boom, may have opened up the forest floor to species more palatable to mule deer in the early 1900s, promoting what some have termed the golden era of mule deer.

Longtime Wyoming hunter Mike Eastman, who has written two books on mule deer, said the lack of hunting during World War II also helped mule deer populations blossom in that era. He puts part of the blame for the population decline on liberal hunting seasons following World War II.

"They treated them like buffalo and killed them all off," Eastman said. "By the 1970s, they were all gone and they went, 'Oops.' They'll never be like that again."

Eastman blames the lack of predator control, suppression of fire and the encroachment of development on deer habitat as the top three reasons for the declining mule deer populations.

One curiosity is that mule deer have thrived in some urban environments, such as in the Montana towns of Colstrip, Glendive and Helena, prompting special hunts or outright trapping and removal. Are mule deer numbers in towns swelling because of the well-watered forage provided by homeowners, or maybe because of a lack of traditional predators like coyotes, or both?

Competitors

Other possible suspects in the decline of mule deer are competitors for the same resources — animals like elk, whose numbers have climbed in many regions of Montana, as well as cattle.

There is often a big decline from the number of fawns born to those living at a year old, and predators such as coyotes, bears and lions are often blamed for limiting mule deer population rebounds. Utah has even gone so far as to pay a \$50 bounty for coyote pelts as a way to reduce their numbers.

But studies have shown that reducing the numbers of predators isn't always effective. One study suggested that if mule deer numbers are strong, then predators will simply fill the void if a resident predator is shot, since the food source is so bountiful, creating a constant in-migration.

A Montana study showed that coyotes, if they have other food sources such as small mammals, may not be a problem even when abundant. And research in Nevada showed that even when predator control was at a high in the 1960s, game harvest was better in 1996 and 2000 when many of the old means of killing coyotes, such as with poisons, were no longer used.

Despite many studies, it seems there is still a lot of uncertainty about how to reverse the decline of a species that many consider a Western icon. The only thing that is certain is that there are no easy answers.

"It's complex," said Lutz, of Wyoming Game and Fish. "The things that are impacting mule deer are numerous."

Article link: http://missoulian.com/news/state-and-regional/studies-states-seek-to-halt-mule-deer-population-decline/article_e7b84102-3737-11e3-9830-0019bb2963f4.html

##

8. Climate change blamed for plight of wolves on Isle Royale

11:58 AM, October 18, 2013
By Louise Knott Ahern
Gannett Michigan

At Michigan's Isle Royale National Park, a rugged chain of islands in north Lake Superior, a battle is playing out that will impact the entire Park Service.

The wolves of Isle Royale have become critically isolated, forced into generations of inbreeding because the ice bridge that used to allow new animals in from the mainland has all but disappeared during winter months.

Federal officials must decide whether to get involved and attempt to save them or step aside and let nature choose their fate.

No matter what park officials do, the plight of the Isle Royale wolves represents an historic tipping point in National Park Service policy -- the first time the agency has considered saving a population of animals that are not suffering from direct human activity.

Isle Royale is considered the first test case in how the challenges of climate change will force a new way of thinking and doing in the nation's more than 300 parks and wilderness areas.

Climate change, says National Park Service Director Jon Jarvis, changes everything.

One of the highest points on Isle Royale is at the top of Mt. Ojibway, a flattened crest above the trees where eagles nest, winds buffet and wild blueberries grow.

From there, you can see all the way to Canada — it's closer than Michigan — and watch the laughing white caps of Lake Superior pound the rocky shores in every direction.

It's from way up there that Rolf Peterson listens for signs of life.

Getting there isn't easy, but even at 64 years old, Peterson barely breaks a sweat despite the terrain. He has made this trek so many times he recognizes individual trees and juneberry bushes.

"You see that radio tower way over there?" he asks, pointing to a steel structure, small and hazy in the distance.

He chuckles with compassion. "It's actually farther away than it looks."

Under the canopy of aspen trees and balsam fir, the trail he follows is little more than a rough-hewn path of jagged boulders and exposed roots, the red soil packed hard by the countless footfalls of nature lovers and adventure seekers who visit the island every year.

When the trail breaks above the tree line, he climbs the 50 steps to the top of the radio tower.

He pulls from his 40-year-old backpack a receiver and two small antennas. He slowly swings the antennas left to right, waiting for a sound, listening for something other than static.

It has been more than a month since he has picked up the ping — the sign that Isabelle or Pip, the two radio-collared wolves on the island, are nearby.

He knows they're not dead. Not yet, at least. He, more than anyone else, would know.

For more than 40 years, he has spent every summer on the island with his wife, Candy, in a cabin with no running water as the chief researcher on a world-renown study through Michigan Technological University called the Wolf-Moose Project.

Now in its 55th year, it's the longest running study of its kind in the world, and it could happen only at Isle Royale.

The island park is the only place on the entire planet where a major predator and a major ungulate — a fancy biologist's term for things like deer, elk and moose — live together without the interference of some other species.

Peterson turns the antenna in another direction.

Several minutes pass.

All he hears is silence.

Nights on Isle Royale used to have a mournful soundtrack. During the wolves' heyday, their howls could be heard all night long, an almost guaranteed wildlife experience for Isle Royale visitors.

The nights have grown silent now.

There are only eight adult wolves left on Isle Royale, and they have little to say.

Though not technically native to the island — that is, there's no evidence of a breeding pack here until shortly after World War II — the wolves here enjoyed a population of 50 in the early 1980s.

The population has steadily declined since then, and those that are left are suffering.

Their backs are bowed and heavy from a genetic deformity, the result of generations of inbreeding, according to Peterson.

He and his research partner, John Vucetich, discovered in 2009 that one-third of the wolf skeletons they'd collected and studied over the years had a condition known as lumbosacral transitional vertebrae. In mainland wolf populations, only 1 in 100 suffer from it.

They have not found a healthy skeleton in 15 years.

In the past two years, only 2 percent of moose deaths on the island have been attributed to wolf kills. In previous years, it averaged 14 percent.

Though several factors have played a role in the wolves' demise — including a devastating epidemic of canine parvovirus brought to the island in 1981 by a boater and his dog — Peterson and Vucetich assert that the most prominent cause of their plight is something far less direct.

The wolves, they say, are dying because of climate change.

Ice coverage on the entire Great Lakes has shrunk 70 percent since 1973 as water temperatures have steadily increased. The water of Lake Superior alone has warmed by 4 degrees in 25 years.

The ice bridge that used to connect Isle Royale to Ontario, and which allowed wolves to walk back and forth, has all but disappeared.

During the 1940s, '50s and '60s, an ice bridge formed nearly every other year.

Today, ice bridges form roughly once every 15 years.

Peterson wants the National Park Service to try a "genetic rescue" to save the wolves. He wants to bring new wolves to the island to mate with the current packs and literally clean up the gene pool.

What he's asking for, however, is a bigger deal than just moving a handful of animals around. It is, in fact, one of the biggest and most controversial issues facing the National Park Service, planting Michigan in the center of a broader debate about the effect of climate change on our natural treasures.

It also has sparked a passionate debate in the scientific community, pitting Peterson and Vucetich against longtime friends and colleagues who think intervention would make things only worse for the island.

The director of the National Park Service, Jon Jarvis, is considering three options.

He could do nothing. He could let the wolves die out and let nature run its course.

He could order the genetic rescue Peterson recommends, bringing in some fresh blood to reproduce and repopulate the island.

He could wait until the wolves die out and then bring new wolves to the island, attempting to rebuild the population from scratch.

Jarvis has promised to make a decision sooner rather than later — least before nature decides for him.

Whichever option he chooses, it will have a ripple effect on the entire National Park Service. The agency has adhered to a strict hands-off policy for managing wildlife in much of its 100-year history, only intervening when animals are endangered or suffering from the direct actions of humans.

If Jarvis chooses a genetic rescue, it will signal a sea change in policy — an intervention because of indirect human activity.

The stakes could not be higher, Peterson says.

There were a few decades at the beginning of the 20th century when moose on Isle Royale partied and indulged.

They were alone on the island — a major ungulate with no predator. Lynx were long gone, and wolves had not yet arrived.

Isle Royale's vast, undisturbed food supply fueled an uncontrolled population boom.

In 1929, a biologist who visited the island estimated the moose population at 3,000 — unsustainable by anyone's measure.

Experts predicted a crash, and they were right. By 1934, the party was over. The island's balsam fir had been devastated and the moose began to starve.

Within just a few years, the population dropped to roughly 400 or 500.

There are places on Isle Royale where the balsam fir still struggle to recover from the moose overpopulation.

Time is critical, Peterson says. Not just for wolves, but the entire ecosystem of the island.

Without wolves — the only large predator on the island — the moose population would explode again.

With too many moose, plant life would suffer and die, and the habitats of other animals would be destroyed.

A genetic rescue doesn't only save the animals, Vucetich says. It saves an entire ecosystem.

"The one thing on which there is universal agreement," Vucetich says, "is that wherever there are large ungulates like moose or deer or elk, there needs to be a top predator to maintain ecosystem integrity. Absolutely, positively, beyond a shadow of a doubt, we know the moose are capable of damaging the forest. The only uncertainty is how quickly they will."

Peterson understands genetic rescue is a scary concept to some. It challenges the longstanding philosophy that nature is always right and humans are always wrong.

Peterson, however, sees it differently.

"This is an opportunity," he says, "to inject positive human influence for once."

But as Peterson learned in June this year, that's a tough argument to make.

David Mech is founder of the International Wolf Center in Minnesota and — along with Peterson — is considered one of the world's foremost experts on wolf biology.

He was the original researcher on the Wolf-Moose project back in 1958. Isle Royale and its wolves are dear to his heart, he says.

Yet he is adamantly opposed to rescuing them.

"We've been crying wolf about the wolves on Isle Royale for quite some time," he told an audience at a forum on the issue at the University of Minnesota in June. "We've had a long history of claiming these wolves are going to go extinct. Maybe someday that will be right. ... However, this population has survived, this inbred population has survived for 60-plus years. Do we really think it can't survive another few?"

One after another, more speakers outlined their opposition to genetic rescue.

Wolf and moose aren't native to the island, one speaker argued. Moose didn't arrive until the beginning of the 20th century, either by swimming from Ontario or — as a handful of people have suggested — were brought there by humans. Wolves didn't arrive until after World War II.

It would violate national park policy to attempt to save animals that aren't native to a region, said Tim Cochrane, park superintendent at Grand Portage National Monument in Minnesota and the author of a book about the American Indian history on Isle Royale.

There is also the reality of island ecosystems, he said. Species die out all the time on islands — including Isle Royale. Caribou and lynx used to be the primary mammals, but they died out long before wolves and moose showed up.

And then there's this nagging question, Cochrane says.

"If (wolves) are so common now," he asks, "why were they so rare in the past when ice and access was easier?"

The question gets to the heart of why genetic rescue on Isle Royale is dangerous, he says.

If wolves and moose are not part of Isle Royale's natural state, he argues, we need to leave nature alone to reset the balance.

Cochrane and other critics call genetic rescue the slippery slope of manipulation. What if it doesn't work the first time? Do we do it again? How many times?

Restraint is difficult, he said. Especially when we're talking about a species as iconic as wolves. But it's what the Wilderness Act requires of us.

If nature wants to save these wolves, critics say, it will find a way.

The Park Service won't make a decision until officials have finished gathering public comments and have a chance to review several scenarios about how life without wolves could impact the island, said park Superintendent Phyllis Green.

Nature gave them some breathing room this year in the form of two or three wolf pups. Officials don't yet know how many pups there are — either two or three. If they survive the winter, they have a good chance of reaching adulthood.

They give us time but not much, said Isle Royale Superintendent Phyllis Green. But even if they survive and even if they eventually reproduce, they're just perpetuating diluted, inbred genes, Green said.

The Park Service won't make a decision until officials have finished gathering public comments and have a chance to review several scenarios about how life without wolves could impact the island, Green said.

One major factor in the the Park Service's decision will be not just the role of wolves in the ecosystem as it exists today on Isle Royale, but also what visitors expect there.

The wolf is an iconic animal. For some, she said, it is the very face of Isle Royale, the symbol of all that is wild and pure about the island. Which is why the idea of letting them go is so difficult.

"There are people who say, 'I want my children to see what I've seen here,'" Green said. "I hope they can. The island will always be here. The question is, how heavily does man lay its hand on this island? People want you to intervene because we don't ever like to feel helpless in the face of change."

But change is already upon us, said Jarvis, director of the National Park Service. We must adapt where we can, save what we can, and use our parks to educate people about the changing world.

But we also must accept that we've already lost control. There are things happening that cannot be undone.

Someday, there will be no glaciers at Glacier National Park.

Someday, the seas will rise and swallow the Everglades.

Someday, no matter what we do, many of the things we cherish most will be gone.

And all we can do, he said, is learn to say good-bye.

Article link: <http://www.freep.com/article/20131018/NEWS06/310180069/wolves-Isle-Royale>

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9.What do Ugly Animal Contests Tell Us about Conservation?

October 23rd, 2013 By Andrew Tipp

Andrew Tipp questions why society seems to prioritise the conservation of cute animals over ugly ones, and urges us to shift our focus to all endangered species, beautiful or otherwise.....

It's pink, slimy and looks like a caricature of a sad, dribbling face. It is, of course, the humble blobfish. This bizarre-looking creature, which lives in deep water off the coast of Australia, recently [won a competition](#) held to find the ugliest animal in the world.

But why was this significant, and why should we care?

The competition matters because it says a lot about our relationship with endangered wildlife. The contest was organised by the [Ugly Animal Preservation Society](#) (UAPS), to raise the profile of vulnerable and endangered animals overlooked because of their looks.

So what are these animals? Do we *really* treat wildlife conservation differently based on an animal's appearance? And if we do, why we do it and how should we change?

Top of the pops

The poor blobfish's gelatinous mass has bobbed to the top of the ugly polls, but there are plenty of candidates close behind. New Zealand's kakapo, Mexico's axolotl, Borneo's proboscis monkey and the Bolivian 'scrotum' water frog were all in the top ten of the world's least aesthetically pleasing critters.

And the list of unattractive-but-widely-ignored wildlife doesn't end there. On the UAPS's website you'll find passionate defences of sturgeons, hagfish, earthworms and the unfortunately named [purple pig-nosed frog](#).

While the UAPS site and their competition are light-hearted in tone, there's a deadly serious undertone - and one that reveals an awkward truth about our outlook on wildlife. And it's a very simple trend.

When it comes to threatened species, [we prioritise cute animals](#) over ugly ones.

Awareness of attractive endangered animals is far higher than unattractive ones. The polar and panda bears of the world simply get the lion's share of publicity - or should that be the sturgeon's share?

Seriously, how many charity appeals, billboards or fundraising drives have you seen in aid of the purple pig-nosed frog?

Confronting natural prejudice

So why does this happen? Why is it necessary for groups like UAPS to promote the plight of these animals? There's no one absolute reason, but it basically comes down to relatability; animals we can easily anthropomorphise tug on our heartstrings more than creatures that seem alien. The more we can see of ourselves in animals, the more we will empathise with them. And if they're cute and furry and look like toys we'd give our kids to cuddle in their sleep, then they're likely to be at the front of the conservation bandwagon.

Don't believe me? Check out the World Wildlife Foundation's extinction status [species directory](#). There are plenty of conservation A-listers, such as gorillas, tigers and orangutans. But how many initiatives do you see for the unappealing African wild dog, the spider monkey or the humphead wrasse?

The phenomenon [even extends to zoos](#), where big, attractive species are more likely to find a home, regardless of their conservation needs. Some cute, cuddly species even receive more resources than animals more vital to their environment.

Obviously, there are granular levels of detail when it comes to deciding how much to spend on conserving one species compared to another. With some animals, it can even get political - governments might spend incredible amounts of money to save an animal that has national symbol status.

Adopting extreme positions

Some people have reacted extremely to this imbalance - to the point of arguing that expensive, endangered species like the panda [be left to face extinction](#). Commentators have claimed the amount of money spent per bear is scandalous, and that the species is 'lazy', 'stupid' and 'unworthy' of saving.

These articles are controversial. But their authors don't mean it. They just want a serious conversation about our values when it comes to conservation. By going to the extreme, they move the conversation to the middle ground.

So what can we do about all [the poor, ignored ugly species](#) in the world - many of which need our help? Well, the answer isn't to petition toy manufacturers to start making cuddly kakapo dolls, or Build-a-Blobfish stores. We just need to

individually do our bit to raise awareness of the more unloved animals around the world. We need to realise that just because an animal lacks human appearance, traits and mannerisms it doesn't mean it's undeserving of our attention.

Warm-blooded, fuzzy and cute-faced mammals shouldn't take priority over reptiles, insects and birds - even though they might be more cuddly.

An increase of interest in animal activism and conservation is a healthy foundation to this. There are lots of [animal volunteering projects](#) and plenty of [conservation media content](#) to engage us, shape our interest and enable us to get involved in hands-on work.

The idea that we prefer attractive animals over less attractive ones isn't new. But competitions to raise awareness of ugly endangered creatures is relatively new, refreshing and a good thing. It's a timely reminder to address our wildlife prejudices before it's too late.

Andrew Tipp is a writer, blogger and editor working in digital publishing. He's spent more than a year volunteering and travelling around the world, and is interested in environmental and sustainability issues. He has written online for conservation, green living and renewable energy websites.

Article link:

http://www.theecologist.org/blogs_and_comments/commentators/other_comments/2130455/what_do_ugly_animal_contests_tell_us_about_conservation.html

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10. Report: Wildlife Refuges Create \$2B for Economy

WASHINGTON November 5, 2013 (AP)
By MATTHEW DALY Associated Press

Bird watching, hunting or just picnicking. Whatever the reason, visits to the nation's 561 wildlife refuges are big business.

A new report says visitors to federal wildlife refuges generate more than \$2 billion a year in economic activity, helping to employ more than 35,000 people and produce about \$343 million in local, state and federal taxes.

Recreational activities such as birding, hiking and picnicking account for nearly 75 percent of total expenditures at wildlife refuges across the country, the report says, while fishing and hunting account for about 28 percent of expenditures.

The report by the Fish and Wildlife Service says wildlife refuges drew 46.5 million visits in 2011, with three of every four visitors coming from outside the local area. Visitors generated \$2.4 billion of economic activity, making refuges a major contributor to ecotourism.

By comparison, the 401 national park units drew about 279 million visits in 2011, generating an estimated \$30.1 billion in economic activity, the Interior Department said.

"Although national wildlife refuges are used less intensively than the other federal lands, they are a major contributor to the mix of outdoor recreational opportunities in the United States," the report said.

Interior Secretary Sally Jewell released the report Tuesday during a visit to a wildlife refuge in Minnesota.

Jewell said in a statement that the U.S. wildlife refuge system is not only "the world's greatest network of lands dedicated to wildlife conservation, but it is also a powerful economic engine for local communities across the country." Refuge visitors come from around the world and support hundreds of local restaurants, hotels and other businesses, she said.

In addition to conserving and protecting public lands for future generations, the report shows that "every dollar we invest in our refuge system generates huge economic dividends for our country," Jewell said.

Jewell visited the Minnesota Valley National Wildlife Refuge in Bloomington, Minn., on Tuesday, part of a weeklong push to highlight the role of public lands in boosting ecotourism and conservation.

Jewell will be in San Francisco Thursday to kick-off an initiative to encourage young people to engage with public lands. On Friday she will visit a scenic area along the Mendocino coastline in Northern California to stress the importance of outdoor recreation and wildlife habitat.

The trip comes after Jewell issued a call for increased conservation spending at a speech last week. In her first major address since taking office this spring, Jewell urged Congress to push for full funding for parks and other public lands in the federal budget.

If Congress does not act to protect mountains, rivers and forests from development, President Barack Obama will use his executive authority to do so, Jewell said. Obama designated five new national monuments earlier this year and will not hesitate to protect historic or ecologically significant sites, she said.

During the government shutdown last month, national parks and other public lands became a focus of political tension as lawmakers bickered over who was to blame for closing the Grand Canyon and other national landmarks.

Jewell said one of the few positive effects of the shutdown, which she called "absurd" and "wasteful," is a renewed appreciation for the nation's network of public lands, from national parks to wildlife refuges to vast areas maintained by the U.S. Bureau of Land Management. The Interior Department manages more than 500 million acres in national parks and other public lands — 20 percent of the nation's total land mass.

The report released Tuesday says refuge visitors pay for recreation through entrance fees, lodging nearby and purchases from local businesses.

Daily visitor expenditures were listed in four categories — food, lodging, transportation and other expenses — for six activities: freshwater fishing, saltwater fishing, migratory bird hunting, small-game hunting, big-game hunting and recreational activities such as birding and picnicking.

Article link: <http://abcnews.go.com/Politics/wireStory/report-wildlife-refuges-create-2b-economy-20785748>

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