

NEW MEXICO CHAPTER OF THE WILDLIFE SOCIETY

President's Message—Ginny Seamster

Happy Spring!

I am happy to write this first message to you as the new president of the New Mexico Chapter of The Wildlife Society and welcome several new members to our board. Casey Cardinal and Ron Kellermueller, both employees of New Mexico Department of Game and Fish, Bill Dunn, entrepreneur and founder of Big Picture Conservation, and Todd Rawlinson, who works for U.S. Forest Service, join us this year and we are very happy to have them on the TWS team! A full list of board members and our contact information is on the Chapter website (wildlife.org/nm).

All hats are off to the Arizona Chapter of the Wildlife Society for an excellent Joint Annual Meeting in Flagstaff, AZ back in February. They had near record-breaking attendance and ran a smooth and enjoyable event. There were many informative workshops dealing with topics ranging from new technological applications to the acquisition of climate change data and Dr. Erika Nowak's ever-popular reptile handling training. The student-mentor lunch gave many students opportunities to mingle and ask questions of professionals, and there was a well-attended and interesting Women of Wildlife panel to round out the technical sessions on Saturday. The New Mexico Chapter was proud to give out many awards at the Friday night banquet, including our Wildlife Professional Award, which went to Leland Pierce, the amphibian and reptile biologist at New Mexico Department of Game and Fish.

The primary task for the New Mexico Chapter board and other members this coming year will be preparing for the 2017 Annual Conference in Albuquerque. The conference will be at the Albuquerque Convention Center September 23rd through the 27th, 2017. Past President, Quentin Hays, is heading up the Arrangements Committee and working to form five planning sub-committees. These committees are doing fundraising for the conference, identifying field trips, getting the word out about the conference, helping gather information on Albuquerque and surrounding areas to help market the conference, and coordinating volunteers to help out during the conference. PLEASE consider emailing Quentin (quentin.hays@enmu.edu) and signing up to participate in one or more of these committees. WE NEED YOUR HELP! I'm co-chair for the fundraising committee and welcome any and all ideas for potential sponsors, exhibitors, and contributors to the conference. If you have contact information for any non-profit, corporation, local business, or agency that might be interested in supporting or attending the conference as an exhibitor, please let me know (virginia.seamster@state.nm.us)!

I'm very excited that the annual conference is coming to New Mexico in 2017; it gives us an excellent opportunity to showcase the incredible biodiversity of our state and show off all the work we are doing to conserve and manage wildlife. Aside from working on the conference, the rest of the board and I want to reach out to the membership and other sectors of wildlife professionals in the state that have been less well served by our Chapter in the past. Among these sectors are members of the wildlife law enforcement community who are out in the field every day, protecting our wildlife from poaching and other illegal activity. If there is anything related to the conservation and management of our state's wildlife that you would like to share with the membership in one of our newsletters, please email our newsletter editor Ron Kellermueller (ronald.kellermueller@state.nm.us), we want to hear from you! Here's to a great spring – talk to you again in the summer.

Ginny

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JAM 2016 – NM TWS Award Winners

Wildlife Professional Award – Leland Pierce, Amphibian and Reptile Biologist at New Mexico Department of Game and Fish

This award is given to an individual who has made significant contributions to wildlife science and/or management in New Mexico. Among other traits, award winners demonstrate exemplary leadership and overcome challenges in the pursuit of improved wildlife management and/or conservation. Leland Pierce earned this award many times over. Leland has worked for New Mexico Department of Game and Fish for over a decade. Until recently he was the Department's Terrestrial Species Recovery Coordinator and developed and helped implement recovery plans for multiple species, including the Gray Vireo and Boreal Toad. Among many other duties, he coordinated revision of the Department's Biennial Review of New Mexico's Threatened and Endangered Species. Leland recently became the state's amphibian and reptile biologist and has been doing a splendid job filling the enormous shoes that his predecessor, Charlie Painter, left vacant. In addition to his many activities on behalf of the Department, Leland has filled many leadership positions within The Wildlife Society, including serving as president of both the New Mexico Chapter and the Southwest Section. Leland has served at the local and national levels of various geographic and geospatial councils and committees. He recently spearheaded the formation of a Geospatial Advisory Committee for the Southwest Section of The Wildlife Society. This committee is an excellent example of Leland's ongoing efforts to bridge the gap between the wildlife and geospatial communities and facilitate integration of geospatial technology into the wildlife management arena. Finally, Leland is always incredibly supportive of everyone he works with, especially students and young professionals. Many thanks are owed to Leland on behalf of the New Mexico Chapter of The Wildlife Society and all of his colleagues for his many efforts on behalf of New Mexico's wildlife!



Outstanding Student Award – Sarah Kindschuh, Graduate of New Mexico State University

Sarah graduated in August 2015 with a M.S. in Wildlife and Fisheries Science and a minor in Applied Statistics from the Department of Fish, Wildlife, and Conservation Ecology at New Mexico State University (NMSU). For her thesis, Sarah adapted GPS cluster analysis methods to estimate carnivory rates for American black bears in the Jemez Mountains, New Mexico. Sarah's M.S. project will provide information to management agencies on the foraging ecology and diets of black bears, particularly as it relates to ungulate predation and scavenging rates. In addition, she developed a model that can be used to predict kill and scavenging sites using GPS cluster analysis. Although this method has been widely used for other carnivores, it has not been tested with omnivorous species such as black bears. Sarah's model is therefore novel and was relatively successful in predicting carnivory sites. Once it is published, it will provide management agencies and other researchers with the ability to remotely estimate carnivory rates of black bears, as well as provide a basis for more refined, behavioral state-movement models. Sarah's project was part of a much larger project designed to assess the influence of large-scale forest restoration on large mammal (i.e., elk, mule deer, black bear, and mountain lion) habitat use and resource selection. Although, Sarah's project was specifically on the foraging ecology of black bears, she was absolutely essential in getting the larger project off to an excellent start. In addition to focusing on her M.S. project and taking course work at NMSU, she took the lead on wildlife captures (e.g., mule deer and elk), establishing vegetation sampling plots, and testing field methods and protocols for the larger project.

JAM 2016 – NM TWS Award Winners, continued

For much of her time at NMSU, she was basically doing the work of two M.S. students. Sarah also wrote a small grant proposal for her research project, which was funded, and to date she has presented her research results at professional meetings 5 times and presented twice at meetings for non-professionals. Sarah was an excellent student academically and received a 4.0 GPA at NMSU. Sarah has recently started working as a biologist for the Washington Department of Fish and Wildlife.



Biodiversity Scholarship – Jacob Kay, M.S. Student at New Mexico State University

Jacob graduated from Colorado State University with a Bachelor of Science degree in Wildlife and a concentration in Conservation Biology. He is currently a graduate student at New Mexico State University studying Wildlife Science and will also earn a minor in Applied Statistics. His research will directly benefit the conservation of biological diversity in New Mexico. Specifically, it will aid in conserving critical mule deer herds by facilitating a better understanding of the factors that regulate or limit them. He will work closely with the New Mexico Department of Game and Fish to plan and execute a research project that will inform both mule deer and mountain lion management in New Mexico. Jacob's professional research interests lie in large mammal ecology and conservation, especially those questions and issues that address multi-species systems. Jacob was heavily involved in work promoting and contributing to the conservation of biodiversity prior to his graduate studies. His senior thesis project at Colorado State University explored large carnivore conservation and human conflict in Europe, Asia, and the United States. He later assisted with a project in Guatemala that collected biological data on the declining jaguar population and worked to promote coexistence between local residents and carnivores. While employed by the Bureau of Land Management, he collected data to direct federal and state regulations involving threatened and endangered species. Recently, his work focused on conserving the genetic diversity of high altitude populations of red foxes and examining their relationship with other sub-species of fox. Jacob has spent considerable time working in order to conserve biodiversity across several species and ecosystems. His career goal is to work with state or federal wildlife agencies to practice applied science with tangible management and conservation implications.



JAM 2016 – NM TWS Award Winners, continued

Student Travel Award – Jacob Kay and Susan Bard, New Mexico State University M.S. Graduate Students

The NM TWS Student Travel Awards were awarded to two graduate students at New Mexico State University to support their attendance of the 2016 AZ/NM AFS/TWS JAM in Flagstaff, AZ. Jacob Kay gave an oral presentation entitled “Top-Down and Bottom-Up Influences on Central New Mexico Mule Deer.” Mule deer (*Odocoileus hemionus*) are a keystone species that provides many biological, recreational, and cultural benefits to southwestern ecosystems and societies. However, their populations have progressively declined throughout the west over the last five decades. His presentation provided insight into mechanisms underlying mule deer productivity by examining relationships spanning multiple trophic levels and their relative impacts on deer population dynamics. His project will ultimately enable agencies to better manage critical habitat and game species to ensure the long term survival of mule deer and improve the overall health of local ecosystems. Susan Bard’s oral presentation at JAM included the details of her graduate research in the Jemez Mountains, New Mexico. Her research on black bears is part of a long-term monitoring program investigating the effects of wildfires and forest restorations on large mammals. Specifically, she is investigating landscape-scale habitat selection, day bed selection, and den site selection in an area that has experienced significant wildfire activity in the last decade. By providing information on black bear responses to these disturbances, her project will enable wildlife managers to make more informed decisions regarding future forest restoration projects, ensuring they will maintain or increase black bear populations while forest restoration projects are occurring on the landscape. Her results will also help managers anticipate the influence of wildfires on black bear populations in the fire prone forests of the southwest.



Student Travel Chapter Award – Eastern New Mexico University, Ruidoso

The TWS Student Chapter at Eastern New Mexico University at Ruidoso received a Student Travel Chapter Award that supported travel by several chapter members to the 2016 AZ/NM AFS/TWS JAM in Flagstaff, AZ.

Student Quiz Bowl Winners - Arizona State University (based on ASU article by Maureen Roen)

The 2016 AZ/NM AFS/TWS Quiz Bowl competition drew nine teams: one from Northern Arizona University, one from Prescott College, two from New Mexico State University, two from Eastern New Mexico University, two from Bosque School and one from ASU. This year’s Quiz Bowl committee was chaired by ASU alumnus Brett Montgomery, now with the Utah Division of Wildlife Resources. ASU’s 2016 team of James Ecton, Jacquie Evans, Sky Arnett-Romero, and Jessica Latzko — all applied biological sciences majors from ASU’s natural resource ecology program in the College of Letters and Sciences at the Polytechnic campus — finished strong in every round, earning a place in the finals.

“It was a repeat of last year’s final match-up — we once again faced a team from New Mexico State,” said Latzko, president of the Wildlife and Restoration Student Association at the Polytechnic campus and a veteran of the 2015 ASU team which took home second place. But this year the Sun Devil team prevailed. “The win was truly a team effort,” said Jacquie Evans. “We each had our own areas of expertise: Sky covered the reptile questions; Jessica got the fisheries questions; I knew about birds and plants; and James provided support, random trivia, and a really important quick reflex.”

JAM 2016 - NM TWS Award Winners, continued

The finals drew a standing-room-only audience of more than 150 people for a contest in which teams not only need to know the right answer but must be quick to buzz in.

In addition to competing, students participated in the full range of conference events, including fisheries and wildlife sessions focused on new research, technology, best practices, and the impact of climate change; poster sessions; as well as a timely [plenary session, "Who Will Manage the Future of Our Public Lands,"](#) which brought together elected officials, policymakers, conservation activists, and USDA Forest Service practitioners.

100 Years of Bird Conservation

By Kristin Madden, USFWS, Southwest Region

"The truth of the matter is, the birds could very well live without us, but many -- perhaps all -- of us would find life incomplete, indeed almost intolerable without the birds." Roger Tory Peterson

This August marks the 100th anniversary of the Convention between the United States and Great Britain (for Canada) for the Protection of Migratory Birds (also called the Migratory Bird Treaty). This Migratory Bird Treaty, and the three others that followed, form the cornerstones of our efforts to conserve birds that migrate across international borders.

Throughout the 1700s-1800s, overuse of natural resources and unregulated bird harvest was the norm, driven in no small part by ladies' fashion. It had devastating effects on bird populations. So devastating that, in the 1800s, we lost some species forever, including the Heath Hen, the Great Auk, and the Labrador Duck. In 1857, the Ohio State Legislature proposed a bill to protect the Passenger Pigeon. The State Senate filed a report stating essentially that there were so many Passenger Pigeons and that the resilient species had plenty of habitat so "no ordinary destruction can lessen them" and they needed no protection. The last Passenger Pigeon died in 1914, just 57 years later.

All of this sparked a good deal of early conservation that led up to the Migratory Bird Treaty. For example in 1887, the Boone and Crockett Club was founded and developed fair chase principles for sportsmen. In 1896, Massachusetts Audubon was founded. Founding mothers Harriet Hemenway and Minna Hall persuaded ladies of fashion to forego using plumage for hats. In 1903, President Roosevelt established Pelican Island as the first federal bird reservation. He went on to establish a network of 55 bird reservations and national game preserves for wildlife, the forerunner of the National Wildlife Refuge system.

Since the first Migratory Bird Treaty, bird conservation has taken off. The last 100 years have seen the development of the Duck Stamp that has raised \$800 million to protect more than 6.5 million acres. The waterfowl administrative Flyways and their Councils were developed. In 1940, the Convention for Nature Protection and Wildlife Preservation in the Western Hemisphere became the first treaty to call for protections of migratory species on a hemispheric level. Nineteen countries eventually ratified this. Beginning in 1989, the North American Wetlands Conservation Act (NAWCA) has funded 2553 projects totaling \$1.4 billion, with over \$2.9 billion in match, impacting 30.7 million acres. Three additional Migratory Bird Treaties were signed with Mexico, Japan, and the Soviet Union/Russia and quite a few large-scale conservation plans and legal protections were put into place.



Photo by: Mark Watson

100 Years of Bird Conservation, continued

In this Centennial year, the U.S. Fish and Wildlife Service is working with many partners in both countries to increase awareness, advocacy, conservation actions, and get more people engaged through hunting and birdwatching. These are the main Centennial events coming up in New Mexico.

May 21	Albuquerque BioPark International Migratory Bird Day celebration
Oct/Nov TBA	Albuquerque Open Space Return of the Cranes Celebration
Nov. 15-20	Bosque del Apache Festival of the Cranes
Winter TBA	Rio Grande Nature Center Centennial celebration

NMDGF Conservation Officers - Field Notes

Game Wardens and County Deputies Team up to Stop an Outfitter Driving Under the Influence

By Sergeant K.C. Gehrt

A phone call to the New Mexico Department of Game and Fish (NMDGF) from a non-resident elk hunter led to the arrest of Outfitter Frank Chavez of Socorro, New Mexico for driving while intoxicated, his third such offense. Mr. Chavez was also charged with driving with a revoked license, providing outfitting services without a contract and using information gained from an aircraft to hunt elk.

On September 14, 2015, NMDGF Warden Clint Clarkson received a phone call from an elk hunter claiming his Outfitter and Guide, Frank Chavez, had threatened him and was currently suspected of driving under the influence of alcohol from Datil to Socorro, a distance of approximately 80 miles. Upon receiving the call, Warden Clarkson contacted State Police Dispatch and had the dispatcher issue a "BOLO" (be on the lookout) to all officers in the area concerning Mr. Chavez. Warden Clarkson provided a description of the vehicle Mr. Chavez was driving as well as direction of travel and the BOLO soon went out. A short time later, Socorro Sherriff Deputy Billa stopped the vehicle based on the information given in the BOLO and identified the driver as Frank Chavez. Deputy Billa arrested Mr. Chavez and charged him with driving while intoxicated. Warden Clarkson arrived as Deputy Billa was taking Mr. Chavez into custody and interviewed him concerning the details and his involvement with his client earlier that morning and the day before.

Back in Datil, NMDGF Warden Amos Smith interviewed the hunter that called the Department concerning Frank Chavez. The hunter told Warden Smith he had hired Frank Chavez as an outfitter for his elk hunt in Game Management Unit 13. On September 13, Outfitter Frank Chavez had set his client up at a water hole to hunt near Ox Canyon some 20 miles north of US Route 60 in the Saw-tooth Mountains. Mr. Chavez was to pick up his client fifteen minutes after dark or approximately 8:00 PM. The hunter waited until approximately 9:00PM and realized nobody was going to pick him up and decided to walk back to the Pinon Pines Cabins where he was staying. At approximately 11:47 PM, Mr. Chavez drove up Forest Road 6 and found his client walking towards US Route 60. The hunter told Warden Smith that Mr. Chavez's excuse was that he had fallen asleep. The hunter also told Warden Smith that Mr. Chavez was intoxicated when he did finally pick him up, an accusation that Mr. Chavez denied to Warden Clarkson upon his interview. The hunter told Warden Smith Mr. Chavez had been drinking beer during his entire hunt, with the heaviest drinking occurring on September 12 and September 13. The following day Mr. Chavez's client said he packed his belongings and drove from the cabins at Pinyon Pines to the nearby town of Datil to eat breakfast. The hunter said Mr. Chavez came into the café and accused him of trying to leave without paying for the additional day of hunting. The hunter explained to Mr. Chavez he was not leaving and would meet with him mid-morning back at the cabins. After Mr. Chavez left the café, the hunter checked his voice mail and text messages. Mr. Chavez left two voicemails and three text messages on his client's phone, all of which were "threatening" in nature towards his client. When Mr. Chavez's client returned to the Pinyon Pines cabins, the owner said Mr. Chavez had hooked up his trailer and left for Socorro. The hunter thought Mr. Chavez was intoxicated and called the Department to relay the information.

NMDGF Conservation Officers - Field Notes, continued

Warden Clarkson later met with the District Attorney's Office in regards to filing assault charges against Mr. Chavez for the phone and text messages he left on his client's phone. The District Attorney did not recommend doing so because the threats did not occur in the hunter's presence, only through text messages and voice mail. However, Warden Clarkson did find other criminal violations during his investigation and filed two criminal complaints with Catron County Magistrate Court against Mr. Chavez for using information gained from an aircraft within 48 hours of a hunt and providing outfitting services without a contract.

On December 8, 2015, Frank Chavez was found not guilty for using information gained from an aircraft within 48 hours of a hunt. He was found guilty of providing outfitting services without a contract with his client.

On February 25, 2016, Frank Chavez entered into a conviction plea of guilty for the counts of: Driving while intoxicated (third offense) and driving with a revoked license. He was sentenced to wearing an ankle bracelet for 60 days.

Frank Chavez's outfitting license, which is issued through the Department of Game and Fish, is subject to revocation for up to three years.

Deer Poacher Caught in the Act

By Sgt. Richard McDonald

It was a Thursday afternoon in mid-January and the states archery only deer hunt was in full swing when I received a telephone call from Captain Ty Jackson of New Mexico Department of Game and Fish (NMDGF). Captain Jackson told me he and NMDGF Colonel Robert Griego were archery deer hunting in GMU 30 and had just witnessed an adult male shoot a big buck mule deer with a high powered rifle during the archery deer hunt. Captain Jackson gave me their location and I headed that way. While in transit, Captain Jackson called to advise me that they had detained the shooter and were awaiting my arrival.

When I arrived, Colonel Griego informed me that he had been glassing a large mule deer buck when he heard two shots. Colonel Griego and Capt. Jackson ran up a nearby hill to get a better view of where the shots came from. At the top of the hill, he saw a man pointing a high-powered rifle at the buck. The buck was still standing, and as he watched the man fired two more shots, hitting the big buck at least once. After seeing the man shooting at the large buck, Colonel Griego and Capt. Jackson made contact with him and after displaying their badges they held him for my arrival. Colonel Griego walked to where he had seen the buck when it was shot, and found a large amount of blood along with several bone shards on the ground but the deer was not there. Colonel Griego followed the blood trail until it got too dark to see. Capt. Jackson detained the man, later identified as William Colwell, on the hillside while the Colonel conducted the search.

Once I arrived, Capt. Jackson and Colonel Griego escorted Mr. Colwell down to my department vehicle. Mr. Colwell told me he had just gotten off work and decided to go deer hunting. He had walked to the top of a small hill which overlooks a deep canyon and saw a big buck standing in the bottom of the canyon. He said he knew he did not have much time because the sun was going down so he grabbed his rifle instead of his bow and shot at the big buck several times. Mr. Colwell told me he thought he might have hit it once or twice.

Mr. Colwell is a 19-year-old local who grew up in the area, and is also very familiar with the area. NMDGF officers often find crimes like this, where people believe no one is watching and they can do whatever it takes to kill a big animal in what they consider "their backyard". Mr. Colwell was arrested and later pleaded guilty to hunting deer with a rifle during an archery only deer hunt.



NMDGF Conservation Officers - Field Notes, continued

The following morning Colonel Griego, Captain Jackson and I met at the location where the big deer had been wounded and continued to track it. After hours of meticulous tracking, we jumped the big deer and saw it run/limp for several hundred yards until it disappeared into some cat claw brush in a draw to the south. It was apparent the deer had suffered a large wound to the front left shoulder.

Approximately one hour later, I was glad to learn that the big buck had mercifully been killed by a legally licensed archery hunter, and that it had not gone to waste or to the poacher.

Mr. Colwell was fined \$373, which included court costs. A civil penalty of \$250 was also assessed for the loss of the state's deer.

Had it not been for Captain Jackson's and Colonel Griego's due diligence, the adult male would have gotten away with illegally killing a deer with a rifle during an archery only hunt. Large buck deer are more vulnerable during this time of the year due to the rut, which makes them an easy target as they more frequently expose themselves as they look to mate.



HOOKED ON FISHING

By Sgt. Chris Ortega

April is typically a busy time for the New Mexico Department of Game and Fish (NMDGF) as Officers are tying up loose ends from the previous deer and elk hunts around the state and getting ready for the start of a new license year. Not only are they catching up on investigations, they are busy attending meetings, attending training sessions, responding to wildlife complaints; the list goes on. Somehow, they manage to find the time in their very busy schedules to give conservation education presentations to local schools within their districts and provide their expertise with fishing clinics in their respective districts.

For the past 24 years, The Mesilla Valley Flyfishers (MVFF), a Las Cruces flyfishing club, has co-sponsored an annual Kids Fishing Clinic with the New Mexico Department of Game and Fish every April. The MVFF was founded in April of 1987 by a group of Las Cruces residents who had an interest in fly fishing. The Club was later incorporated in 1991 with goals of conserving, restoring and educating through flyfishing.

This year the annual MVFF Kids Fishing Clinic was held on April 2 at Alumni Pond on the New Mexico State University (NMSU) Campus and was open to all children and their parents at no cost. The Fishing Clinic was mainly for kids 6-11 years old with little or no fishing experience, and especially for children in single parent families. This was an opportunity for kids and their parents to learn hands on fishing techniques from the experts. If you have ever been intimidated by how to tie an improved cinch knot or how to properly cast a line, then this was the clinic for you.

NMDGF Conservation Officers - Field Notes, continued

The Fishing Clinic was designed for kids who have never been fishing or for whom it has been a long time since they have 'wet' their line. It is also designed to get the kids to come out and play, enjoy the outdoors and gain an appreciation for our aquatic environment. Fishing equipment and bait were provided for kids to use during the clinic, but children who own fishing tackle were encouraged to bring it with them. Prior to the event the Department stocked Alumni Pond with 300 Rainbow trout for the kids to try their newly acquired skills learned during the clinic.

As the children showed up for the event, they registered prior to participating in the clinic. Once they were registered, they were given a card with a list of 10 learning stations for them to complete before turning in their completed card for a chance at winning a new fishing rod and reel or tackle box provided by the MVFF. Learning stations consisted of casting techniques, fly tying, rules and regulations, fish identification, knots, aquatic insects, bait and tackle, fish guts, fish prints and conservation and ethics.

Many volunteers were needed for this event and the MVFF provided a minimum of two of their members for each station to include the registration process and a photographer. Students from NMSU were also on hand to volunteer their expertise for this event. While the MVFF provided most of the volunteers, New Mexico Game and Fish Officers Ken Griffith and Mark Holguin of the Las Cruces Supervisory District were also on hand to teach the young kids and their parents about the rules and regulations pertaining to fishing in New Mexico as well as the conservation and ethics of fishing.



A total of 63 kids participated in the clinic and all were ecstatic to try their newly acquired skills at fishing. The MVFF along with the Department have been running this program for the past 24 years and have taught thousands of kids the joys of fishing. The clinic has always been well supported and if we get just one child "hooked on fishing", we consider the event a success.

New Mexico National Forests Are All Revising Their Land Management Plans

By Sarah Beck and Daryl Ratajczack

Changes are afoot for all of New Mexico's National Forests. The Carson, Cibola, Gila, Lincoln, and Santa Fe National Forests are all in various stages of revising their land management plans (forest plans) under the 2012 planning rule. Every national forest or grassland managed by the Forest Service is required by the National Forest Management Act of 1976 (NFMA) to have a forest plan. The process for the development and revision of the plans is outlined in the federal planning regulations, often referred to as the planning rule (the 2012 Planning Rule is the current rule).

New Mexico National Forests Are All Revising Their Land Management Plans, continued

Managers of individual forests and grasslands follow the direction of the planning rule to develop a land management plan specific to their unit. The 2012 planning rule changes how forest plans are developed and implemented in several key ways. Revised plans are to be developed with robust public involvement and should improve a unit's ability to respond to climate change and other stressors, take an all-lands approach which includes understanding what is happening both on and off the National Forest System, place an emphasis on the need to restore National Forest System land and waters, and use and document the best available science information.

The 2012 planning rule also introduces a new concept: species of conservation concern or SCC. An SCC is defined as a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' ability to persist over the long-term in the plan area. SCC and federally recognized species are collectively referred to as at-risk species and are part of a dual coarse-filter/fine-filter approach to maintain the diversity of plant and animal communities and the persistence of native species within our National Forests.

Forest plans revised using the 2012 planning rule will provide the ecological conditions necessary to restore ecosystem integrity, including structure, function, composition, and connectivity; and ecosystem diversity, specifically maintaining and restoring the diversity of ecosystems and habitat types throughout the plan area. The ecosystem integrity requirements or "coarse filter" will provide habitat for the persistence of the vast majority of species within the plan area and for the diversity of plant and animal communities. Where the "coarse filter" alone is not enough to support a species at risk, the 2012 planning rule requires that plans include additional plan components to provide the necessary ecological conditions. The species specific plan components or "fine filter" will identify specific habitat needs of species with known conservation concerns or whose long-term persistence in the plan area is at risk (threatened, endangered, proposed, and candidate species and SCC), and for which the coarse filter conditions are insufficient.

Refer to each New Mexico National Forest's website to learn more about where they are in the plan revision process. For more information and the 2012 rule in general, refer to the Forest Service Planning Rule website (<http://www.fs.usda.gov/planningrule>).

Riparian Restoration Sees Early Success in Cebolla Wilderness

By Andrea Chavez

It's no news that water is scarce in the desert southwest. Riparian ecosystems comprise a small proportion of the landscape, yet they support a remarkably high amount of biological diversity. They come in all shapes and sizes, and even relatively small riparian areas can have a profound influence on the distribution of wildlife. It is known all too well that riparian habitats have been heavily impacted by a wide range of human activity. Past and present land uses have contributed to the degradation of many riparian ecosystems throughout the southwest, and have caused habitat loss and fragmentation resulting in myriad species declines. Cebolla Canyon is located in El Malpais National Conservation Area, and was heavily grazed and farmed by homestead communities in the past. The natural hydrology of the landscape was altered and eventually led to severe soil erosion, which has affected water retention and the vegetative community (Figure 1). In 2012, the Bureau of Land Management Rio Puerco Field Office began a large-scale restoration effort to restore the stream channel within Cebolla Canyon to its natural course and repair erosion.



Riparian Restoration in Cebolla Wilderness, continued

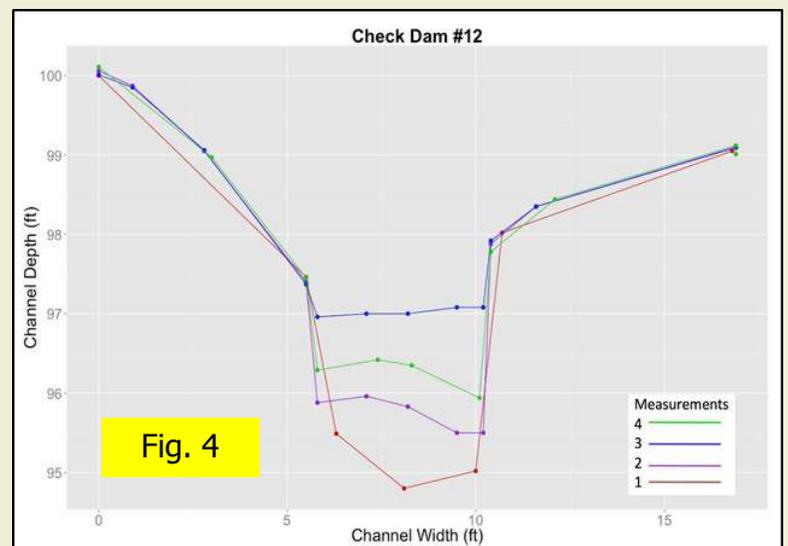
One of our ongoing projects is a series of check dams, which are low-grade loose rock structures constructed in the channel bed to dissipate high-energy flows and capture sediment when water travels through the system (Figure 2). This method causes the stream-bed to rise, and promotes retention of water, which can then support the establishment and proliferation of vegetation that stabilizes soil and provides valuable habitat for wildlife (Figure 3). To date, twenty-seven of these structures have been placed along a stretch of channel approximately 2 miles long. Cross-sectional soil measurements have been taken upstream of each structure throughout the life of the project, and indicate that they are functioning as expected. Some of the dams have collected up to 2 feet of sediment in less than 1 year (Fig 4)!



These check dams are a simple and cost effective approach to reversing erosion. Our original plan included the physical planting of native riparian vegetation. However, much of this area has already begun to revegetate naturally. Western wheatgrass has established on the banks and coyote willows have already grown above 6 feet in some areas. Based on the early success of this work, we are evaluating the potential condition of this riparian system. Future work includes maintenance and construction of new check dams where necessary and continuation of soil cross-section and vegetative monitoring.



Being in a Wilderness Area, this project has undergone environmental analysis to determine the minimum tools necessary to successfully conduct the project in a manner that will not disrupt the Wilderness characteristics. As a result, large piles of loose angular rock are moved in and meticulously placed by hand laborers.



Riparian Restoration in Cebolla Wilderness, continued

The dams have been built using various youth groups including college undergraduates from the University of New Mexico, New Mexico State University, Central New Mexico Community College, and high school and college student crews from the Student Conservation Association. Various BLM employees have also played a large role in this valuable but labor-intensive work.

An Update on New Mexico's Newest Rocky Mountain Bighorn Population

By Caitlin Ruhl

Just when they thought they had reached a dead end, when their inferior human abilities prevented one more step, there it was. The GPS collar boldly rested just inches shy of a 400 foot vertical drop into Cochiti Canyon. The crew member that spotted the collar hoisted it victoriously into the air and all breathed with trepid relief; pleased to have recovered the collar and its valuable data, but aware of the precipitous situation and the impending scramble to safer ground. These retrieval efforts marked one year since the establishment of the Jemez bighorn population and represented great progress made since their disappearance over a century ago.

The Jemez was selected for reintroduction because of historic bighorn occupancy in nearby White Rock Canyon (Bailey 1931), and more importantly, the recent expansion of suitable habitat following a historic wildfire in 2011. The Las Conchas fire burned over 150,000 acres and was pivotal in generating low-elevation bighorn sheep habitat of about 135km², ample enough to support a self-sustaining population. Restoration of the iconic bighorn to this region fulfilled a biological vacancy and cultural void on the landscape, but also facilitated a necessary removal from the burgeoning Wheeler Peak population. Reintroduction involved several days of captures and resulted in the



translocation of 45 Rocky Mountain bighorn sheep in August 2014. Thirty animals were fitted with VHF radio collars and twenty of these individuals received an additional GPS collar, in the hopes of gaining insight into the movements of this newly established population. Ten of these collars would continually collect and transmit GPS data via satellite, allowing biologists to monitor bighorn over the internet, while the other ten stored GPS data "on board", and their pre-programmed drop-off is what led to the initial scene described above.

Due to poor weather conditions, the 2015 survey was not informative enough to produce a sound population estimate. However, summer and fall observations indicated above average lamb to ewe ratios. Known mortalities included one ewe that made contact with domestic goats shortly after being released. The transmission of highly contagious respiratory pathogens from domestic sheep and goats may result in pneumonia outbreaks among wild sheep. This serious disease risk led New Mexico Game and Fish (NMDGF) to euthanize the ewe before she returned to the herd. Only one other known mortality has occurred in the Jemez. Predation by mountain lion was the cause, though evidence at the kill site suggested that a bear was the ultimate benefactor. Given the combination of good recruitment and low incidence of mortality, the Jemez bighorn performed well overall in their first year.

An Update on New Mexico's Newest Rocky Mountain Bighorn Population, continued

The first generation of Jemez bighorn will become potential breeders in the upcoming rut. Only two mature rams have been present since the herd's inception, so without intervention father-daughter mating would be unavoidable, extensive, and persist for several years. To address this issue, NMDGF has conducted a small-scale transplant of rams to the Jemez to decrease the occurrence of inbreeding. Three rams taken from Questa, NM were released in the Jemez range in April 2016, but further additions may occur. Removal of the two founding rams is another management strategy currently being explored. Broader management considerations for the Jemez population include future augmentation. Expected to occur in conjunction with the next removal from Wheeler, translocation efforts would supplement the existing Jemez herd and help to ensure their long-term sustainability.

One goal of the Jemez reintroduction was to expand recreational opportunity, including wildlife-viewing. Initial analysis of the recovered GPS data reveals current bighorn viewing opportunity in the publicly accessible Santa Fe Forest, as well as intermittent availability in White Rock Canyon and Bandelier National



Park. Population growth bolstered by augmentation and the associated expansion across available habitat will serve to improve wildlife-viewing and other recreational opportunities. Whether viewed through a lens, encountered during a short hike, or found after a daring trek across hoof-worthy terrain, seeing bighorn sheep in the wild is an exhilarating experience. The team searching for collars in the Jemez was reminded of this after tracing the steps of one of nature's best mountaineers. Gazing upon a landscape as ruggedly beautiful and complex as its history, they were pleased to know this place and its most ancient inhabitants were finally reunited.

Bailey, V. 1931. Mammals of New Mexico. United States Department of Agriculture. Bureau of Biological Survey. North American Fauna 53.

Center for Applied Spatial Ecology (CASE)

The Center for Applied Spatial Ecology (<http://case.nmsu.edu/>) is affiliated with the USGS New Mexico Cooperative Fish and Wildlife Research Unit and located in the Department of Fish, Wildlife, and Conservation Ecology at New Mexico State University. CASE conducts research and provides technical assistance to university, non-governmental organizations, local, State, and Federal agencies. CASE's goal is to provide technical and biological knowledge and expertise to support natural resource management across spatial and temporal scales. Research results provide managers with the ecological context needed to make management decisions at a variety of temporal and spatial scales by incorporating field investigations with the application of computer technologies. Applied research endeavors incorporate principles of biology, wildlife ecology, range ecology, landscape ecology, forestry, and conservation biology. Current Staff include Dr. Ken Boykin, Dr. Nicole Harings, Dr. Eric Salas and Guillermo Alvarez. Below are several of the current projects that CASE staff are working on.

Center for Applied Spatial Ecology (CASE), continued

Ecosystem Services

CASE is working with the United States Geologic Survey's Gap Analysis Program (<http://gapanalysis.usgs.gov/>) and the Environmental Protection Agency's EnviroAtlas team to identify and quantify biodiversity metrics that represent ecosystem services for the nation. Ecosystem services are the benefits that humans derive from the natural world. This effort is providing information on biodiversity conservation at the local, regional, and national level. Products are being provided to the EPA's EnviroAtlas (<https://www.epa.gov/enviroatlas>) which provides decision support for ecosystems services. We have completed analyses of the southwestern US and the southeastern US. The current effort is working at a national scale, with metrics for birds and reptiles completed, and those for mammals and amphibians are under development.

Modeling Climate Change

CASE is modeling the effects of environmental change on crucial wildlife habitat with funding from the South Central Climate Science Center. We are assessing the impact of varying climate and land use change scenarios for the South Central US (New Mexico, Oklahoma and Texas) on the distribution of suitable climatic conditions for key species. This includes developing models of present day and potential future distributions of suitable climatic conditions for 20 terrestrial vertebrate species, and incorporating information on potential future urban growth patterns into existing data on landscape condition. We will integrate the results of these assessments of alternative future scenarios into the New Mexico Crucial Habitat Assessment Tool (NM CHAT; <http://nmchat.org/>). The NM CHAT was developed by New Mexico Department of Game and Fish and Natural Heritage New Mexico (NHNM). NHNM is a collaborator on this project. We are considering the effects of climate change on wildlife including different General Circulation Models (GCMs) and multiple greenhouse gas emission scenarios. We are using multiple statistical techniques for modeling suitable environmental conditions for species. Demonstration of this research will be balanced with presenting a tractable set of results useful to land managers.

Biodiversity and Acequias

CASE is collaborating with researchers from New Mexico State University, New Mexico Institute of Technology, University of New Mexico, and Sandia National Laboratory on research on the nexus between hydrology, ecosystems, and culture in northern New Mexico. The effort is studying the resiliency of the acequia systems in El Rito, Alcalde, and Rio Hondo to identify how changes may affect the sustainability of these 400-year-old irrigation systems. CASE staff focus is on determining the effect of changing hydrology and cultural values on the biodiversity associated with the riparian systems within the acequias and the upland systems. The project seeks to understand acequia-moderated linkages between culture and nature and to quantify tipping points. The objective is to quantify the role of acequias in hydrologic buffering, community resilience, and ecosystem health.

Modeling for the Conservation Effects Assessment Program

CASE worked with the Natural Resources Conservation Service in support of the Conservation Effects Assessment Project (CEAP) to develop a process for identifying key species and determining the effects of conservation practices on those species. Biodiversity and species conservation priorities were identified using a broad-scale approach and conservation practice effects were assessed at the fine scale. At the broad-scale we revised and applied an existing method for assessing the importance and potential contributions that a particular management unit can make to regional conservation efforts. The model identifies the species, land cover type, area for each species by land combination, and the impact for a conservation practice. We also compiled information on the relationship between land management practices and a prioritized list of focal species for the study area. Our fine scale approach included developing a Dynamic Systems Model to assess the effects of conservation practices on the priority wildlife species.

Center for Applied Spatial Ecology (CASE), continued

This model was informed by state-and-transition vegetation dynamics; relationships among soil properties, water availability, and plant growth; and focal species habitat requirements. We focused on scaled quail (*Callipepla squamata*) and brush control techniques, but the model could be extended to consider effects of other practices, species, or suites of species with similar ecological requirements.

Marco Polo Argali Rangeland Habitat in the Southeastern Pamir Mountain of Tajikistan

CASE is working with Dr. Raul Valdez (NMSU) on modeling habitat for the Marco Polo sheep. Using remote sensing techniques and geographic information systems (GIS), individual layers were created to acquire more information on sheep patterns and habitat suitability. We introduced an improved object-based image analysis in our mapping of the vegetation cover by utilizing spectral, topographic, and texture variables. We exhausted every Landsat image band and texture feature combination to select the best pairing of band-texture components.

New MexicoView

CASE is the lead entity in New MexicoView (<http://newmexicoview.nmsu.edu/>), a state-wide consortium focusing on remote sensing research and education. New MexicoView along with the national AmericaView consortium have a goal to advance the availability, timely distribution, and widespread use of remote sensing data and technology through education, research, outreach, and sustainable technology transfer to the public and private sectors. We are working with the Southwest Section of The Wildlife Society and the New Mexico Chapter on the Geospatial Advisory Committee. We continue work with NASA and Sigma Corporation on beta-testing and application of the Adopt-a-Pixel program and bringing that curriculum into NM high schools to provide geospatial education with Earth Observation Day.

Funding Bigger Share with Wildlife Projects

By Ginny Seamster

The Share with Wildlife Program at New Mexico Department of Game and Fish funds wildlife research, habitat enhancement, education, and rehabilitation projects annually. The program puts out a call for project information and accepts proposals for new Share with Wildlife projects in the spring or summer. For the past several years, the budget for each Share with Wildlife project was capped at \$50,000, and most projects received much smaller dollar amounts. Starting this year, the normal call for project information will be followed (potentially in early 2017) by a formal Request for Proposals. The call for project information was released May 4th and will accept proposals for projects that address any of a broad suite of topics and species through July 1st, 2016. Projects will still be limited to a maximum per project budget of \$50,000. The Request for Proposals will focus on one or two much more narrowly defined project topics and will accept proposals with larger (>\$50,000) budgets. The goal of the formal Request for Proposals will be to enable the Share with Wildlife program to fund a larger project that addresses species and/or habitats of top priority to the Department and of great value in the context of non-game wildlife management and conservation in the state. The call for project information is available through the Department's Share with Wildlife website (<http://www.wildlife.state.nm.us/conservation/share-with-wildlife/>). The Request for Proposals will be released as soon as possible but currently depends on final approval of New Mexico's State Wildlife Action Plan. Any questions should be directed to the Share with Wildlife program coordinator, Ginny Seamster (virginia.seamster@state.nm.us). Thanks to Mark Watson with New Mexico Department of Game and Fish for the hummingbird photo!



New Mexico Game Warden Recognized as Officer of the Year by Shikar Safari Club International

SANTA FE - Shikar Safari Club International has named New Mexico Department of Game and Fish Corporal Curtis Coburn the 2015 New Mexico Wildlife Conservation Officer of the Year. Coburn received the award at the department's second annual Governor's Special Hunt Auction and Award Banquet on Feb. 20 in Albuquerque. Coburn, 35, currently is stationed in Ruidoso. He is a 12-year veteran of the department and holds a bachelor's degree in Forest/Wildlife Management from Western New Mexico University in Silver City.

Shikar Safari Club International annually presents awards to wildlife law enforcement officers in all 50 states and 10 Canadian provinces and territories. The club is dedicated to the protection, enhancement and preservation of wildlife, with particular emphasis on endangered and threatened species through the promotion of enforcement of conservation laws and regulations.

Coburn was lauded for his work with ranchers and land management agencies in modifying fences to allow pronghorn antelope to freely roam across a 28-mile area on the plains northeast of Capitan. His wildlife habitat improvement work to benefit mule deer within the Lincoln National Forest was also noted.

Coburn also has been named the 2015 Officer of the Year by the National Wild Turkey Federation.



Southwest Section of The Wildlife Society Geospatial Advisory Committee Co-chaired by Ginny Seamster and Leland Pierce (both New Mexico).

The SWS Geospatial Advisory Committee (SWS GAC) has been busy in 2016. In February we hosted a workshop by Dr. Jeremy Weiss out of the University of Arizona on managing data for climate change studies. The workshop was held in conjunction with the Arizona-New Mexico Joint Annual Meeting in Flagstaff, Arizona. Attendees had a half-day of training on not only data mining and assessment, but hands-on work with two open source software packages QGIS and R. In March the committee produced an article in the parent society magazine, "The Wildlife Professional." The article was written by Ginny and Leland with significant input from other committee members and individuals at multiple state agencies (Arizona Game and Fish Department; Missouri Department of Conservation; New Mexico Department of Game and Fish). The article was concerned with how agencies are using mobile phone applications to better manage wildlife. If you didn't see the article, contact Ginny or Leland (see contacts at the end of this report). Moving forward, the SWS is developing a webpage for the SWS GAC where we will post links, charters and maybe even a logo. In the short-term, the committee will be focusing on our next webinar to inform SWS membership about a geospatial issue or subject pertinent to the southwest region. Looking farther down the road, we will be seeking to have a strong presence at the parent society conference in Albuquerque, in September 2017. For more information, contact Ginny at virginia.seamster@state.nm.us or Leland at leland.pierce@state.nm.us.

NEW MEXICO CHAPTER OF THE WILDLIFE SOCIETY

New Mexico Chapter -
The Wildlife Society
P.O. Box 35936
Albuquerque, NM 87176

NM-TWS is an active affiliate of The Wildlife Society that is dedicated to promoting sound management and conservation of New Mexico's wildlife resources.

Membership is open to all professionals, students, and laypersons interested in wildlife research, management, education, and administration.

Our chapter works to maintain communication among wildlife professionals; encourages communication between those professionals and the general public; supports continuing education through grants, workshops, and regional meetings; encourages student involvement in the wildlife profession; and actively participates in shaping management and conservation policy through letters, public statements, and resolutions.

We're on the Web!

Check out our new website that was created last year. <http://wildlife.org/nm>



Membership Form

<i>First name</i>				
<i>Last name</i>				
<i>Organization</i>				
<i>Address</i>				
<i>City</i>		<i>State</i>		<i>ZIP</i>
<i>Telephone (day)</i>		<i>Fax</i>		
<i>Email</i>				

Please join or update your membership today!

Thank You!

Please complete the membership form and mail it with your \$8 dues to:

**The Wildlife Society
New Mexico Chapter
P.O. Box 35936**

Albuquerque, NM 87176-3593

*For updates to your mailing or email address
please contact Dan Collins, collinsdp3@gmail.com*