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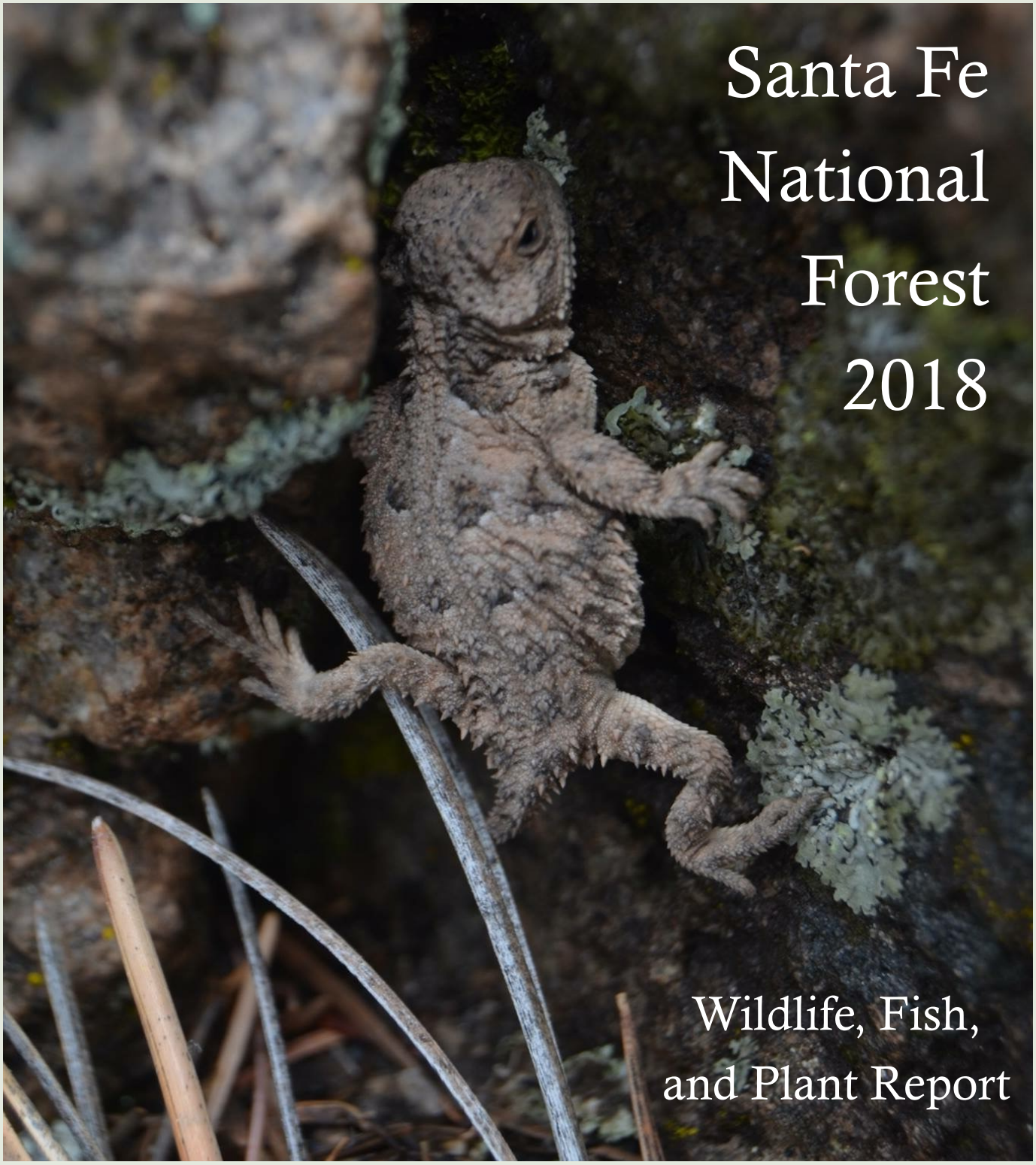

Santa Fe National Forest 2018

Wildlife, Fish, and Plant Report

Forest Service

Santa Fe National Forest

Supervisor's Office

December 2018

Cover Photo courtesy of Christopher Redd. Some people call them horny toads or horned toads but they are actually horned lizards in the family Phrynosoma. Photo captured on the Jemez Ranger District, Santa Fe National Forest.

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WILDLIFE, FISH, AND PLANTS REPORT

SANTA FE NATIONAL FOREST 2018

Santa Fe National Forest

There are at least 1,350 known native plant and animal species found on the forest, all of which can be classified as either terrestrial (living mostly on land) or aquatic (living mostly in water). These species provide the biotic foundation of the ecological landscape and are important to local communities. They provide food, fiber, medicine, and forest products for multiple users as well as providing opportunities for scientific discovery and education, and cultural, intellectual, or spiritual inspiration. The continued existence of all native species is of utmost importance for both the ecological and socioeconomic health of the forest and its users.

What is the purpose of this report?

The REAL purpose is YOU!!!

Multiple scientific surveys show the American public holds wildlife near and dear to their heart. All one needs to do is think back to their childhood and remember the family vacation to a far away forest or National Park. The visions of bear and elk easily stand out in one's own mind. We want to bring Santa Fe wildlife back into your mind and show how we are managing and protecting your wildlife resources.

We also want you to see all the wonderful work being done by our dedicated staff and volunteers who care for our forests!

"The Santa Fe National Forest has a critical role providing for the protection and restoration of habitats for listed species in northern New Mexico".

"Great diversity of wildlife: birds (red-tailed hawks, ravens), bears, bobcats, elk, squirrels with tufted ears, Jemez salamanders; seeing a mountain lion take down a deer "

- Public comments from the Revised Forest Plan Panning process

Collared lizard soaking up the sun on the Jemez Ranger District, Santa Fe National Forest

In This Report

- Federally Listed Species
- Forest Wildlife
- Habitat Restoration
- Habitat Stamp Program
- Birding News
- Hunting and Fishing
- Wildlife Biologist Corner
- A Look Ahead

Federally Listed Species

Currently, four federally listed species are documented and known to exist on the Santa Fe National Forest. The following documents the work conducted by Forest Service personnel and their partners for the benefit of the four listed species: Jemez Mountain Salamander, New Mexico Meadow Jumping Mouse, Mexican Spotted Owl, and the Holy Ghost Ipomopsis.

Mixed conifer forests with rock outcroppings makes for excellent Mexican Spotted Owl habitat.

Mexican Spotted Owl

is a federally threatened species known on all five ranger districts of the Santa Fe NF. This species is apparently non-migratory and feeds primarily on small mammals. Young owls, however, are known to disperse long distances as one was banded on the Gila NF and found on the Carson NF. There are 198,888 acres of designated critical habitat on the Santa Fe NF. The Mexican spotted owl requires a variety of mixed conifer habitats, proximity to riparian areas, standing large snags for roosting and nesting, or cavities in vertical canyon walls. Timber management activities negatively affected habitat before the Mexican spotted owl was listed as threatened in 1995. Timber harvest, prescribed burning, and other management activities are designed following the Mexican Spotted Owl Recovery

Mexican Spotted Owl
(*Strix occidentalis lucida*)

Owl Habitat Restoration

The Santa Fe National Forest with its vast expanses of Ponderosa Pine and Mixed Conifer forests offers potentially wonderful habitat for the Mexican spotted owl (MSO). But just because the forest is there doesn't mean it offers everything the owls need. Mexican spotted owls require certain features that exist is a healthy forest such as large snags and easy access to foraging grounds, especially high quality riparian areas.

In 2018, forest staff continued to improve MSO habitat by improving forest conditions through mechanical thinning, prescribed fire, and managed wild fire. Overall, over 28,000 acres were treated in Ponderosa Pine and Mixed conifer habitats which invariably will improve habitat conditions for owls.

Owlettes anyone?

Besides improving habitat conditions, forest biologists keep a close eye on owl reproduction, making sure the owls that do reside on the forest are healthy and producing viable offspring. This ensures continued persistence of MSO on the forest. To document reproduction, nest surveys are conducted every spring in areas known to harbor breeding pairs. These areas are called primary activity centers, or PACs. Though we cannot provide detailed information on the surveys we are happy to report successful reproduction in many of the PACs over the last few years.

Jemez Mtn Salamander

is a federally endangered species known only to the Santa Fe NF. It was listed as endangered in 2013. There are 56,770 acres of designated critical habitat on the Santa Fe NF. The salamander feeds primarily on invertebrates. Threats include habitat loss from severe wildfire or other activities that alter hydrology and disease including chytrid fungus. Chytrid fungus is a disease that is beginning to affect amphibians worldwide. Although it's impact on the Jemez Mountain salamander is unknown it causes extremely high mortality in some amphibian species. Unfortunately the fungus has been discovered in multiple locations on our forest.

Jemez Mountain Salamander (Plethodon neomexicanus)

An Underground Specialist

The Jemez Mountain Salamander (JMS) is a master at hiding, spending most of its life within subterranean tunnels in the understory of Ponderosa pine and Mixed Conifer forests. They especially love old decaying logs where many of the entrances to their underground lairs begin. So how does one monitor such an elusive species? It's not easy but fortunately these lungless salamanders come to the surface every monsoon season, preferring to make their above-ground appearance during moist warm weather.

The Santa Fe NF oftentimes contracts an independent survey crew to monitor the salamanders throughout the summer rainy season. Unfortunately, the drought throughout much of the Southwest during the 2018 season kept most of these salamanders hidden from view. That doesn't mean efforts to improve conditions for JMS on the forest cease.

Old decaying logs provide excellent habitat for Jemez Mountain salamanders.

The same thinning and burning timber treatments that improve the habitat for the Mexican spotted owl also improve conditions for the salamander. By thinning the overly dense pine forests within the frequent-fire pine systems and by reintroducing periodic low-intensity fire we are reducing the threat of an uncharacteristic, high-intensity, large-scale fire on the Santa Fe National Forest. Such fires can have long-lasting negative effects on not only the JMS populations but the specific soil conditions they require.

Did you know?

JMS belong to a family of lungless salamanders called Plethodontidae. They breathe through their skin and through the delicate lining of their mouth. This is helps them to stay underground for long periods of time without coming to the surface.

New Mexico Meadow Jumping Mouse (Zapus hudsonius luteus)

New Mexico Meadow Jumping Mouse

is federally listed as endangered. The species occurs in dense mid-elevation riparian long grass habitats in the western U.S. In other words, they prefer living along clean, natural looking streams above 7,500 ft. elevation. Critical habitat exists on the Santa Fe NF and the mouse has been noted in multiple locations on the forest. The major threats faced are the degradation of riparian habitat caused by actions such as legacy grazing, post-wildfire flooding events, and unmanaged recreation. Off the forest, agricultural uses and development of land have permanently changed historic locations so one of its strongholds remains the Santa Fe NF.

Leaving Tracks

New Mexico Meadow Jumping Mice (NMMJM) are superb escape artists often making it difficult for researchers to see them in their preferred riparian habitats. These stream-loving critters can easily hide amongst the dense vegetation usually found in wet soils. Though they can hide with the best of them, they cannot go about their business without leaving tracks...that's where the researchers catch up to them. In their tracks!

Though they rarely lay eyes or hands on the mice researchers on the Santa Fe NF are keeping track of NMMJM by keeping tracks….literally! Since the mouse has a very distinctive footprint (see photo to the right), biologists on the forest can place track plates in suspected mouse habitat to see if NMMJM are present. The plates are placed in areas where the mice are likely to travel and should an unsuspecting mouse travel over a plate, his distinctive footprint will be recorded. Pretty clever!

Streamside Struggles

The NMMJM is not the only forest creature that loves to be near the water. Countless other wildlife as well as people and livestock also flock to the water. After all, "El agua es vida!"...Water is Life! Because water is essential for all creatures, streams are often high-traffic areas. This has caused many of these riparian areas to become degraded. Not only is water quality affected by over-use but sometimes invasive plant species take over areas that have become denuded of natural vegetation. Restoring these "aquatic runways" is vital for the mouse, check out the great riparian repairs that have been made by BDAs later in the Aquatic Habitat section of this issue!

(NMMJM photos by Jennifer Frey and Brittney Van Der Werff)

A researcher prepares to release a NMMJM mouse. Their track is all we need to determine their presence in an area.

Holy Ghost Ipomopsis

is a federally endangered plant species found only on the Pecos Ranger District. It is a genetically distinct species found nowhere else in the world and only occurs within only one canyon within the Sangre de Cristo mountain range. A Recovery Plan was written for it in 2002 by the USFWS, while additional attempts have been made to experimentally plant seedlings to increase the overall population. The species has been transplanted to a few other sites but success at increasing its numbers is uncertain.

The ipomopsis sometimes takes advantage of bare soil and disturbed conditions, this allows plants to occasionally germinate alongside the roadway. Unfortunately due to the proximity of the plant to the road, some specimens invariably get trampled or picked.

Forest staff continuously work with the public to raise awareness and protect this incredibly rare plant. The public is reminded NOT to pick flowers in that area due to the rarity of the species. As of right now there is still considerable concern regarding maintaining healthy populations of Holy Ghost Ipomopsis.

Holy Ghost Ipomopsis
(Ipomopsis sancti-spiritus)

Other Federally Listed Species

The Rio Grande Silvery Minnow, Western Yellow-Billed Cuckoo, Southwestern Willow Flycatcher, and Canada Lynx are all federally protected species that have historically been documented on the Santa Fe but are not known to currently use the forest. Habitat for the species is often maintained in hopes of their eventual return.

Just passing through...

The Santa Fe National Forest is the year-round home for four federally listed species (owl, salamander, mouse, and ipomopsis) but a few other listed species have been known to pass through our forest. In the early 2000s, the Colorado Division of Wildlife released 218 Canada lynx in the San Juan Mountains of Southern Colorado. Some of those cats wandered far and wide and a few were even documented on the Santa Fe. Unfortunately it does not appear that any of the lynx felt the Santa Fe offered suitable habitat though since no denning or reproduction has ever been recorded. You can't blame the cats for trying to find new homes though...one even ended up in Nebraska!

Other listed species that come close to our forest but have yet to call it home are the Southwestern Willow Flycatcher and the Western Yellow-billed Cuckoo both of which may pass through the forest on their migratory routes but rarely find the places they prefer to stay. The Rio Grande Silvery Minnow would typically be found within the borders of the forest however the Cochiti dam prevents this aquatic creature from making its return to the forest. If any of these four species find the means to make it to the Santa Fe and call it home, rest assured we will be overjoyed to welcome them back!

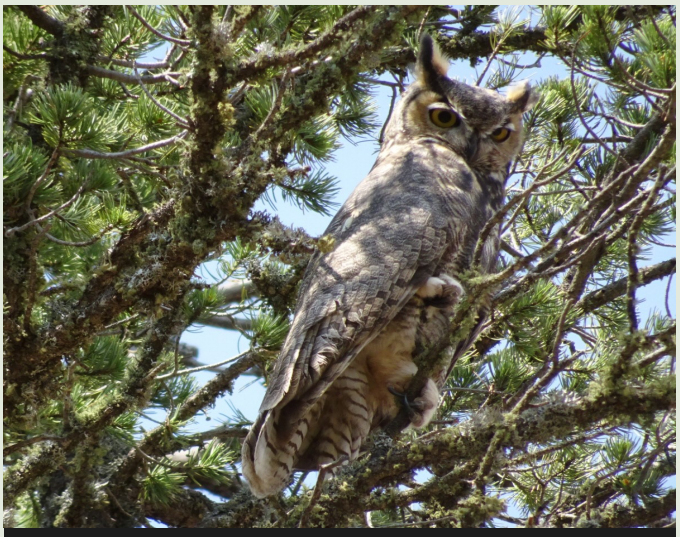
Forest Wildlife

The Santa Fe National Forest is teeming with wildlife big and small. You just have to know where to look for it. The varied landscapes found throughout our forest provide homes for over 1,500 species!

Creatures Big and Small

Oftentimes the large charismatic creatures like bears and elk captivate the minds of wildlife lovers. Though those larger animals are awesome there are countless other creatures that dwell within the Santa Fe National Forest that are unique and wonderful in their own right.

For example, did you know that monarch butterflies migrate? Depending on what side of the Rockies a monarch comes from their winter journey will take them to Mexico of the southern parts of California. Some of the monarchs passing through our forest are making a 2,500 mile trek!



Great Horned Owl (*Bubo virvinianus*)

Minimizing Impacts to Wildlife

The Forest Service is a multi-use agency meaning the forest is managed for multiple purposes. Knowing the forest is home to so many creatures we strive to minimize impacts that may occur through other forest uses. As much as we like to believe the forest is a home to wildlife alone, it has also been a home to man for thousands of years. Considering we have lived together with wildlife for so long there is no reason to believe we can not continue to do so.

There are numerous management strategies the forest staff employs to make multi-use more compatible for seemingly competing resources. Roads that are constructed or rehabilitated are now built to accommodate wildlife passage. This is especially important for aquatic organisms when roads intersect waterways. Cattle are grazed on a rotational basis and only put out when forage can support both cattle and wildlife. Infrastructure is designed to reduce wildlife mortality. Water features often include escape ramps so smaller creatures can climb out should they fall in. Areas are closed when recreational use disrupts important breeding or wintering grounds.

Without a doubt, there will be disagreements on forest uses but working together is the only way we can overcome our differences and make things better not just for the people that use our public lands but for the forest creatures that make these amazingly diverse lands their home.

Wildlife Test: Can you name these forest species found on the Santa Fe?

Answers are provided on the last page. If you get all three correct you should think hard about a career as a wildlife biologist!.

Upland Habitat Restoration

The varied ecosystems within the Santa Fe NF provide the habitats for the many species of wildlife, fish, and plants. Whether it be a dense forest or open grassland, keeping the land healthy is top priority.

Returning the Right Kind of Fire to Our Forest

Over fifty percent of the Santa Fe National Forest consists of Ponderosa Pine or Mixed Conifer (Dry) forests. These systems historically burned about every 8-12 years. Due to an emphasis on fire suppression over the last century, many of our frequent-fire forested systems have become too dense. In other words, there are more trees in our forests than at any other point in recorded history. Not only does this alter the function of the forest but these excessive fuel loads create conditions that may result in uncharacteristic, large-scale, high-intensity fire. These large-scale catastrophic fires are not only dangerous to humans they are devastating to wildlife.

A Hotshot crew member lays down fire in a Ponderosa pine forest to help clean-up and reduce the amount of fine fuels that gather on the forest floor.

A Landscape Effort

Restoring more natural ecological conditions to highly altered landscapes is not an easy task. It takes time, dedication, and lots of resources but we are making headway! In 2018, forest service staff and contractors treated 28,376 acres to help reduce fuel loads and lessen the danger of catastrophic fires in Ponderosa pine and Mixed Conifer forests. But reducing fuel loads isn't the only benefit of fire on the forest. Over 7,000 acres of habitat was restored specifically for wildlife through thinning, prescribed burns, and managed wild fire. The Rocky Mountain Elk Foundation (RMEF) provided $20,000 to help cover the costs of the Fresh Mesa burn which alone improved wildlife habitat on 3,300 acres! Thank you RMEF!

A low intensity fire creeps along the forest floor reducing fuel loads and returning nutrients back into the soil.

It's not only frequent-fire forests that need help. Pinyon-Juniper ecosystems are home to numerous bird species including the scaled quail. Though more prevalent in the southeastern portion of the state, these quail can be found in healthy P-J grasslands and sagebrush ecosystems on the Santa Fe. When these systems become too overgrown and dense, quail have a much harder time foraging and eluding predators. Fuelwood permits issued in these areas often help keep these P-J habitats healthy for the birds that depend on them.

Needless to say lots of things are required to create the best possible upland habitat conditions, some within our control, some not. As long as we continue to manage for those ecological conditions our wildlife need, the forest will be home to a multitude of species large and small.

Aquatic Habitat Restoration

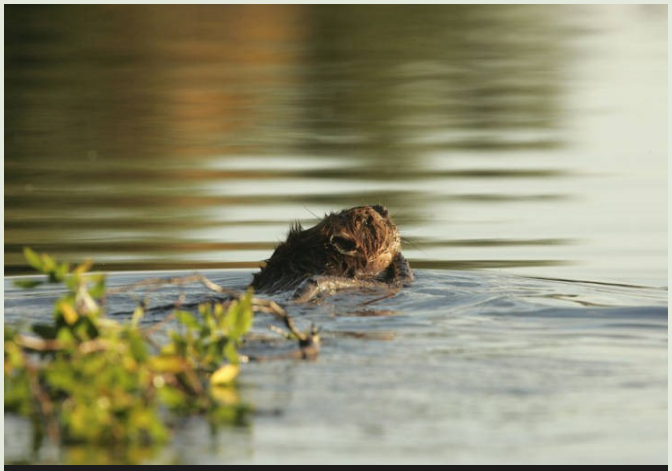
Streams and rivers within the Santa Fe National Forest are the lifeblood for wildlife and humans alike. Preserving and protecting our waterways is critical for maintaining the health of the forest.

Nature's Engineers

Riparian areas, otherwise known as streams and its' surrounding vegetation, are vitally important to the health of our forest. Unfortunately due to overuse, many of our riparian areas have become degraded. The loss of native vegetation not only allows non-native plants to come in but oftentimes it changes the profile of the stream. Water moves faster and eventually cuts out deep incised channels. Those deep channels are usually not natural and negatively impact many species of wildlife. So how do you slow water down and restore the natural meander of a stream?

Easy...ask a beaver to do it!

And if you can't get them to do it… you copy their work!



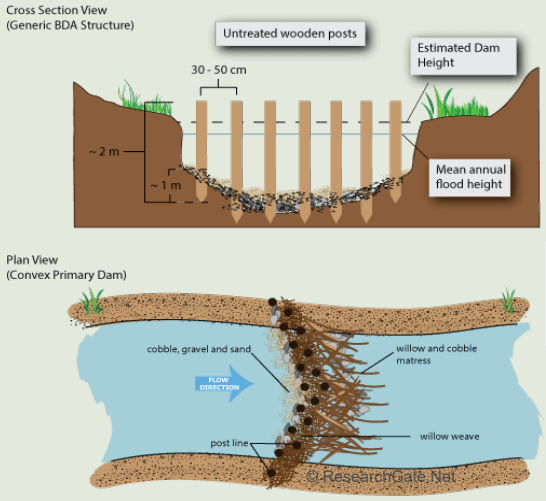
North American Beaver (*Castor Canadensis*) Photo: USFWS

Beaver Dam Analogs

In 2018, the Santa Fe National Forest undertook a new and innovative method for restoring riparian systems and their associated wetlands. Beaver dam analogs, otherwise known as BDAs, are exactly what they appear to be...imitation beaver dams. By installing features that look and function like real beaver dams, forest staff and their partners hope to return streams to their natural flows and encourage more natural vegetative conditions. What's even better is once the BDAs are installed they have a tendency to attract real beavers to help maintain them. Apparently the beavers must think we do shoddy work and prefer to take over the project!

So far 35 BDAs have been installed on the Rio Cebolla and improvements are already visible. Besides constructing the dams using native willows, wildlife and fisheries biologists are seeing more natural flows restored, especially in areas immediately above the dams. This reduced flow not only benefits wetland dependent plant species but the vegetation filters and stores more water for use that lasts longer throughout the year.

It came as quite a surprise to find one of the recently installed BDAs to be "under reconstruction" by a resident beaver. We knew there was a possibility that would happen but not that fast! Keep up the great work!



Construction of BDAs could not take place without the wonderful support of local non-profits and conservation groups.

Habitat Stamp Program

Sportsmen and women of New Mexico help fund wildlife habitat improvement projects on Forest Service lands when they purchase a Habitat Stamp through the New Mexico Department of Game and Fish.

Habitat Projects

In FY18 the New Mexico Department of Game and Fish provided the Santa Fe NF with $40,000 through their Habitat Stamp Program. These monies come from hunters and anglers who purchase a Habitat Stamp to hunt or fish on public lands in New Mexico. The monies must be used to improve habitat conditions for wildlife.

The fire staff put the money to good use conducting the Cedar Springs prescribed burn in highly departed Ponderosa pine and Mixed Conifer forests. The 1,500 acre burn not only reduced fuel loads but released nutrients back into the soil and encouraged new growth of grass and forbs. Over the last few years over 3,000 acres were improved for wildlife!

Mule deer take advantage of new growth within newly burned areas.

Wildlife Drinkers

The Southwest has long been known for long-periods of dry hot weather, because of that wildlife have adapted to those difficult conditions. Typically, animals know where reliable sources of water are to be found. Unfortunately, humans have intentionally or unintentionally altered or removed those water sources. This sometimes makes it extremely difficult for animals to find water.

Cuba Mesa wildlife drinker.

Through the HSP program the NMDGF manages over 1,900 wildlife drinkers across the state, 145 of which are located on the Santa Fe NF. Unfortunately not all of these drinkers are in operable condition so we are looking to focus on a more manageable number. HSP money is used to restore the function of the most vital drinkers on the forest. In 2018, forest staff helped restore the Cuba Mesa wildlife drinker.

Water is Life!

There is no underestimating the importance of water. Besides restoring old water features, future monies will be spent on projects that help retain more water on the landscape such as promoting the return of beavers through BDAs. One group of animals particularly dependent upon water are the amphibians that spend most, if not all of the life cycle in or near water, or at least moist conditions.

The Northern Leopard Frog is a species we are particularly concerned about because a new threat on the landscape called Chytrid Fungus. It is a relatively new threat causing widespread amphibian decline in many areas. Some waterways on the forest have been found to contain the fungus so extra efforts must be made not to contribute to the spread of this deadly killer.

Northern Leopard Frog (*Lithobates pipiens*)

Birding News

The Santa Fe National Forest is a great destination for birding. It offers montane forests, a variety of piñon-juniper woodlands and savannahs, moist riparian areas and high elevation grasslands that host a wide variety of birds.

Black Rosy-Finch (Leucosticte atrata)

Birding Hotspots

Located at the end of NM 475 near Santa Fe, the forest around the Santa Fe ski area is above 10,000 ft and provides excellent high altitude birding in spruce-fir habitat. Featured birds include Dusky Grouse, Canada Jay, Mountain Chickadee, and Cordilleran Flycatcher. Near Los Alamos, the Jemez Falls campground is situated in a Ponderosa Pine forest with opportunities for Band-tailed Pigeon, Grace's Warbler, and Pygmy Nuthatch. Black Swift nests in the grotto behind the falls. Piñon-juniper woodlands in the Caja del Rio area and in the foothills around the Sangre de Cristo and Jemez mountains feature Juniper Titmouse, Black-throated-gray Warbler, and Gray Flycatcher.

The Birding Experience

The range of habitats on the Santa Fe National Forest provide many opportunities for birding throughout the year and can always provide unexpected surprises. William Gambel, passing through what is now Glorieta on the Santa Fe Trail in 1841 found the Mountain Chickadee, and was the first to describe it for western science. Since then, birders of all levels of expertise have found the National Forest an unending source of discovery, wonder and excitement.

Mountain Chickadee (*Poecile gambeli*)

The Jemez mountains, although ravaged by megafires in the recent past, still holds interest and good birding. For example. A trip up FR 144 produces the expected American Three-toed Woodpeckers and Golden-crowned Kinglets in the higher elevations but also rewards birders with a Pine Grosbeak as an unexpected bonus. On a trail near the Pajarito Mountain Ski Area, a male Williamson's Sapsucker appears close by at eye level, showing off his beautiful black, white, and yellow plumage. On the way back, a Prairie Falcon circles above screaming at the intrusion. Oddballs also turn up, often in migration season. A Pacific Wren was reported in upper Water Canyon near Los Alamos in November and a California Condor showed up in a yard next to the forest in 2015!

Steller's Jay (Cyanocitta stelleri)

The area around the Santa Fe ski basin is a great destination any time of year. Access is easy from Santa Fe and birds are plentiful. Strolling through the Aspen stands in the early summer, the chattering of young Red-naped Sapsuckers comes from a hole in one of the larger trees while Hermit Thrushes sing from the understory. Hiking up the Winsor trail, inquisitive Canada Jays come to visit and hope for a handout while Red-breasted Nuthatches sound off in the distance. Even in winter, a visit produces Canada and Steller's Jays during a visit to the feeder sponsored by Audubon and Wild birds Unlimited that hopes to attract rosy finches, and provides jays, Clark's Nutcracker, and juncos with winter sustenance.

***** Special thanks to the Sangre de Cristo Audubon Society for providing the Birding News. Photos by Tom Taylor. *****

Hunting and Fishing News

Countless individuals head to the forest in search of fish or game to help feed their families. The Santa Fe is a renowned destination for hunters and anglers from all over the country. Here is why folks flock to the Santa Fe.

Wild Game Opportunities

New Mexico is a dream destination for hunters across the country. Though many come for the magnificent animals that are found on the forest, most come for the opportunity to fill their freezer. Elk meat is not only fine table fare, a single animal provides countless meals for the family so hunting is a long-held and necessary tradition for many local families.

The New Mexico Department of Game and Fish regulates the number of game animals taken but given the Vallez Caldera is a world-renown elk calving area almost completely surrounded by the Santa Fe NF, there is usually is no shortage of animals. Besides elk, the forest also offers limited opportunity for mule deer and bighorn sheep as well as for black bear and cougar. Countless smaller game animals such as turkeys, squirrels, and rabbits are also pursued on our forest for sustenance.

There is something magical about sharing a meal that comes from our amazing public lands!

The eerie but beautiful sounds of a bull elk bugling at early light.

The Pecos River offers many angling opportunities.

Fresh Fish Anyone!

If hunting is not your forte' but you still cherish the idea of a wild-caught organic meal then why not try fishing? Though the Santa Fe manages primarily for native species there are a few areas where the New Mexico Department of Game and Fish has stocked Rainbow and German Brown trout (non-native) solely for the purpose of creating fishing opportunities.

Whatever your endeavor is please make sure you know and follow all the hunting regulations and purchase the proper hunting and fishing licenses and . The money from the sale of those licenses is what funds the vast majority of wildlife programs in the state.

Stocked German Brown Trout

OPERATION GAME THIEF

Operation Game Thief is a New Mexico Department of Game and Fish program, which pays rewards to citizens who turn in poachers. If you see an animal being poached please call: 1-800-432-GAME

Wildlife Biologist Corner

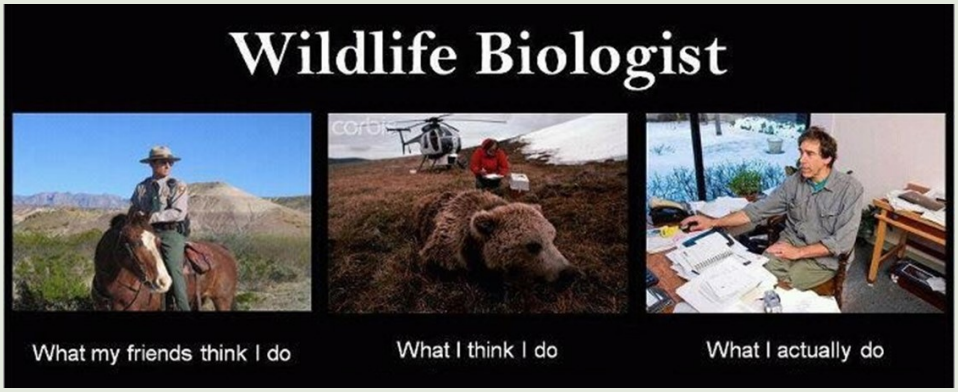
Managing wildlife is no easy task, that is why the Santa Fe National Forest employs an incredible team of District Biologists that are responsible for doing almost all of the on-the-ground work. Here is some of their fantastic work!

On the Ground Wildlife Work

Bet ya' didn't know! Each year our district biologists and part-time and seasonal employees spend countless hours surveying and improving habitat conditions for wildlife. Here are some of the amazing projects they worked on in 2018 to make sure our forest creatures are doing well. Kudos to them and all the amazing partners and volunteers that helped them out!

- Seven Mexican Owl activity centers were monitored for the Southwest Jemez Mountains Landscape Project.
- Carol Chambers a professor of wildlife ecology from Northern Arizona University conducted the third consecutive year of sampling for the New Mexico Meadow Jumping Mouse which included several weeks of live trapping and telemetry work. This information has led to improved management and the development of meaningful conservation measures and mitigations for multiple types of projects which include thinning, roadwork, prescribed fire, meadow restoration, and stream habitat improvement.
- USFS- deployed a non-invasive sampling method called track plates in three areas on Jemez Ranger District. NMJM were detected at a previously unknown location at La Cueva Campground.
- Borrego Mesa Trick tank had a fence installed and the infrastructure was improved with State Habitat Stamp Program funds and multiple prescribed fires across the Forest were funded by HSP.
- The Pecos-Las Vegas District utilized a small crew which was tasked with the removal of non-native, invasive weeds. Once established, these weeds, such as scotch, bull and musk thistle, can take over a site and outcompete native vegetation, so it is important to manage these weeds to reduce spread. Weed removal occurred across the District at numerous sites, with many days focused in the Pecos Canyon, especially in proximity to HG Ipomopsis which could be negatively impacted by weed spread.
- District personnel partnered with other local groups and agencies, such as the National Park Service, NM Game and Fish, the Pecos Business Association, Trout Unlimited and others, to provide an opportunity for families to enjoy a day of fishing, food, prizes and learning about conservation, and the resources of the area.
- Work was conducted in Cow Creek and Holy Ghost Creek, that focused on improving water resources, such as in-stream structures to provide fish habitat, reduce sediment movement, and maintain riparian and floodplain function.

Installing wildlife drinkers on the Cuba District.



Forest Biologists

One of the greatest jobs in the world is being a wildlife biologist. As fun as it sounds, it also entails a lot of hard work. From field surveys in inclement weather, to stacks of paperwork, to statistical analysis, it takes a highly skilled team to watch over our forest wildlife. Rest assured, the Santa Fe is in great hands!

Forest Planning

Multiple resources require a guiding document so management stays consistent over time. Wildlife is no different. The Wildlife, Fish, and Plants section of the Forest plan provides direction for current and future forest managers.

SFNF At-Risk Species

Federally Listed

Jemez Mountain Salamander (E)
NM Meadow Jumping Mouse (E)
Holy Ghost Ipomopsis (E)
Mexican Spotted Owl (T)

Species of Conservation Concern

Mammals:
- Gunnison's Prairie Dog
- Snowshoe Hare
- American Marten
- Masked Shrew
- Water Shrew
- Spotted Bat

Birds:
- American Peregrine Falcon
- Western Burrowing Owl
- White-tailed Ptarmigan
- Lewis's Woodpecker
- Northern Goshawk
- Boreal Owl
- Black Swift
- Pinyon Jay

Amphibians:
- Northern Leopard Frog

Fish:
- Rio Grande Cutthroat Trout
- Rio Grande Sucker
- Rio Grande Chub

Invertebrates:
- Jemez Woodlandsnail
- Ruidoso Snaggletooth
- Liljeborg's Peaclam

Plants:
- Large Yellow Lady's-Slipper
- Heil's Alpine Whitlowgrass
- Gunnison's Mariposa Lily
- Springer's Blazing Star
- Chama Blazing Star
- Tufted Sand Verbena
- Greene's Milkweed
- Chaco Mikvetch
- Pecos Fleabane
- Arizona Willow
- Wood Lily

A New Forest Plan

Since 2014 the Santa Fe National Forest has been in "plan revision" mode. The current forest plan, which guides forest management, is over 30 years old so it is in urgent need of updating. Before updating the Forest plan, however, the forest needed to complete a forest-wide assessment. This included inventorying all that was going on within each resource area. For wildlife, this meant looking at all the species on the forest.

How does one inventory wildlife, fish, and plants?

Over the course of a few years we evaluated all the species found on the forest to determine if any of them were "at-risk." This simply means we are afraid their populations may continue to decline or disappear from the forest. As you can imagine, there is much we don't know...but there is a lot we do know! After completing the assessment it was determined there are 36 at-risk species on the forest, four of those species are federally threatened or endangered while 32 are Species of Conservation Concern (SCC).

So are these the only species the forest will be managing?

Heck no! We care about ALL species on the forest...but managing for all these individual species is often not possible. Therefore, we use the list of at-risk species to determine what ecological conditions "need work.' In other words if many of the at-risk species are being impacted by frequent-fire systems that are out-of-reference, we'll work to restore those systems and help a number of species all at once. The threats and issues facing at-risk species can be found in the Forest Plan EIS when it is released (Spring 2019).

Santa Fe National Forest Planning Team

A Look Ahead

The Santa Fe NF has done some amazing work but there is still a great deal of work ahead of us. In the coming years, forest restoration will be our primary goal with a heavy emphasis on returning frequent-fire systems to more natural conditions. Uncharacteristic fire remains one of our greatest concerns. Besides fire, there are still many issues and threats that negatively impact wildlife, some natural such as drought and disease, some human-caused such as excessive or ill-timed disturbance. We will continue our efforts to lessen our impacts on wildlife so they will remain on our forest in healthy numbers for generations to come.

Special Thanks...

We could not provide the wonderful resources our forest has to offer without the amazing work of our partners. Besides other government agencies like the U.S. Fish and Wildlife Service and New Mexico Department of Game and Fish there are countless conservation organizations that are doing an amazing job protecting our wildlife. Though they are too numerous to mention by name, we are deeply indebted to them for the wonderful work they do!

Keep an eye on our Santa Fe National Forest web page for new and exciting information about our forest wildlife!

https://www.fs.usda.gov/santafe/

Contact Us

Forest Biologists are always here to help. If you have any concerns about wildlife on our forest, please do not hesitate to contact us. Your Forest Biologists are:

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Wildlife Quiz answers (Pg. 5): Large Yellow Lady's-Slipper, American Badger, and a Silk Moth. You should be a wildlife biologist!

Natural resource students from numerous pueblos and rural communities throughout New Mexico participated in the 2018 Student Wildlands Adventure Program and learned how to better manage forest resources for our future and theirs!