

New Mexico

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# Wildlife

## Opening Doors for Anglers

### Inside:

Gila trout restoration

Where to fish

Bringing fish back to Berrendo

Bear aware

Targeting walleye

Gould's wild turkey

and more . . .





# Game and Fish unveils **new magazine online format**

After years of being available as downloadable PDF editions, the New Mexico Department of Game and Fish now has a dedicated, interactive website for its New Mexico Wildlife magazine publication.

The magazine, available in print since January 1961, now can be viewed at [magazine.wildlife.state.nm.us](http://magazine.wildlife.state.nm.us). The site's creator, Aaron Wiley, designed a dynamic layout that offers a flexible, user-driven reading experience, together with eye-catching photographs.

"This is something we've wanted for a while to answer the needs of a tech-savvy audience," said Dan Williams, assistant chief of information for Game and Fish. "We'll still have printed and PDF versions available, but having a dedicated site provides a host of viewing options and interactive features."

Visitors to the site can select specific areas of interest, such as fishing, hunting, photography and outdoor recreation. People also can look for a variety of categories that span editions that are focused on individual tastes, or perform a specific word search.

Past articles of importance are also available, including a nine-part series by John Crenshaw that appeared between the winter 2002-03 issue through the summer 2005 edition about the history of wildlife management in New Mexico.

The spring, summer and fall 2016 issues currently occupy the site, but it will continue to grow as each issue is published. Archived PDF versions are available dating back to 2005.

"The site is designed for desktop and mobile devices and there's the ability to share specific stories on social media," Williams said. "The stories are entertaining and educational and I think people are going to enjoy the visual graphics."





## New Mexico Department of Game and Fish

*Conserving New Mexico's Wildlife for Future Generations*

It is the mission of the New Mexico Department of Game and Fish to conserve, regulate, propagate and protect the wildlife and fish within the State of New Mexico, using a flexible management system that ensures sustainable use for public food supply, recreation and safety—and to provide for off-highway motor vehicle recreation that recognizes cultural, historic and resource values while ensuring public safety.

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*Laurence D'Alessandro, coldwater fisheries biologist, displays a Gila trout during a recent survey conducted at Willow Creek in the Gila National Forest. Cover: NMDGF photo by Jill Wick*

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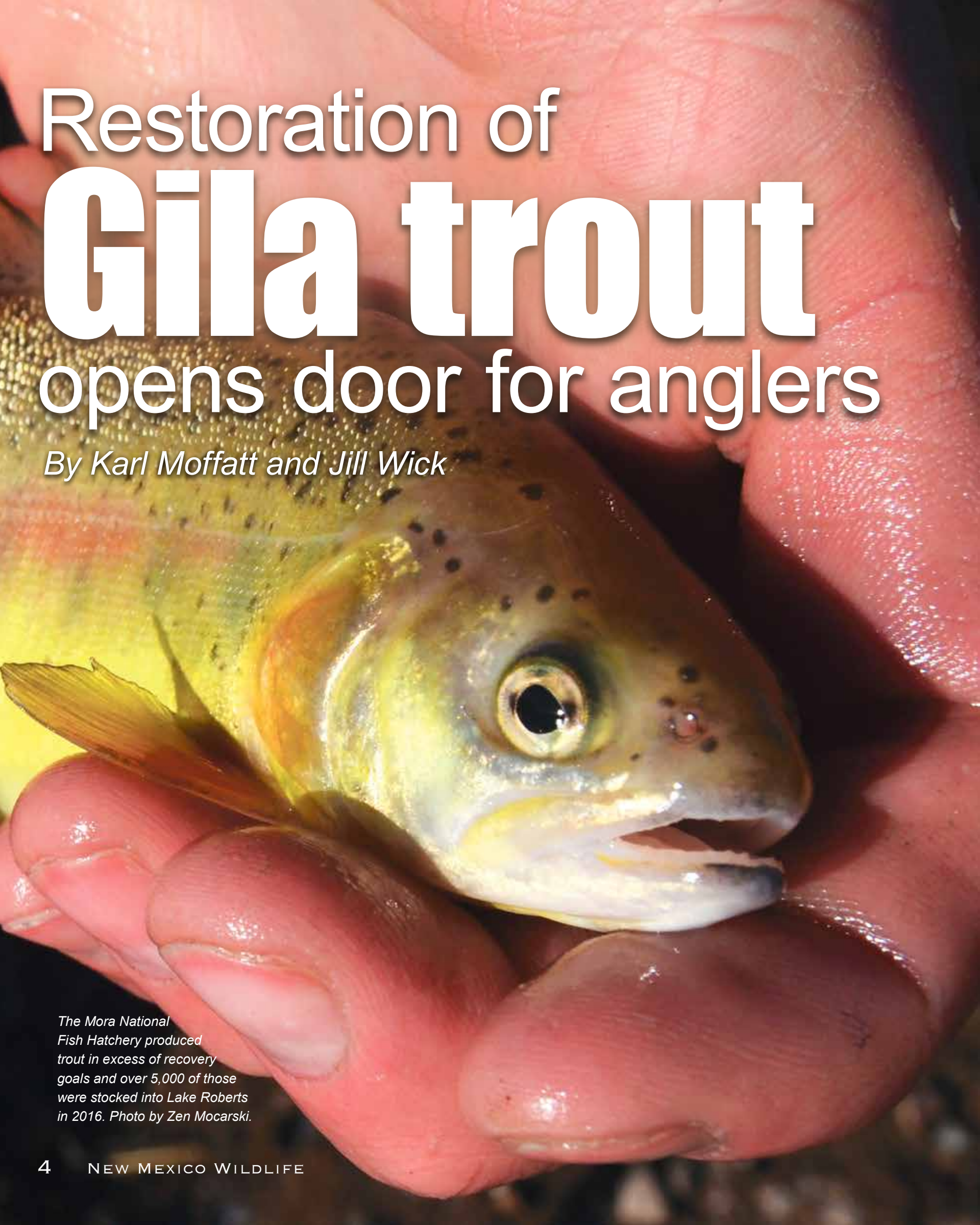
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# Restoration of **Gila trout** opens door for anglers

*By Karl Moffatt and Jill Wick*

*The Mora National Fish Hatchery produced trout in excess of recovery goals and over 5,000 of those were stocked into Lake Roberts in 2016. Photo by Zen Mocarski.*



**It's been five years** since two massive wildfires roared through the Gila Wilderness and surrounding national forest, destroying years of painstaking native trout restoration work.

"I was interviewing for this job while everything was burning up," said Jill Wick, Gila trout biologist for the New Mexico Department of Game and Fish. "It was pretty devastating to see how much damage had been done."

The Whitewater-Baldy Fire in 2012 charred almost 300,000 acres and wiped out six populations of Gila trout. The following year's Silver Fire scorched an estimated 138,000 more acres and killed off two more populations.

Many fish died from the poisonous effects of ash washed into the streams following the fires. Unchecked rain runoff swept mud and debris into the streams, wiping out habitat and smothering any remaining fish and the insects upon which they fed.

Altogether the fires destroyed 8 of 17 Gila trout populations and 47 miles of habitat. It was a significant setback to Gila trout restoration.

But Wick and her partners at the U.S. Forest Service and U.S. Fish and Wildlife Service have since rallied and made enough gains that angling opportunities for the elusive trout have been expanded.

"The last five years have been challenging, but we've been able to restore several of those lost Gila trout populations and even added a couple new ones," Wick said.

"A big part of the reason we have been able to rebound so quickly is because of the partnerships, planning and work that's already been done," Wick said. "And the Mora National Fish Hatchery has been crucial to our ability to return fish to streams so quickly."

Gila trout have been restored to White Creek, Black Canyon and Langstroth Creek. Two others, Willow and Mineral creeks, were cleared of non-native game fish by the fire and have been restocked with Gila trout.

Five other streams containing Gila trout that were killed off by the fires are in remote, rugged areas where it will take years of natural processes to improve stream conditions to the point where they can be restored. Four of those also will require the construction of barriers.

Barriers, such as the one recently completed on Willow Creek, prevent non-native fish from migrating upstream into Gila trout habitat. Non-native fish compete with Gila trout for food and shelter, prey upon their young and threaten their bloodline through cross-breeding.

At one point during the 1970s, Gila trout could only be found in the headwaters of five streams within the Gila region and it was on the federal endangered species list primarily because of competition with non-native fish and hybridization.

Fish and Wildlife downgraded the Gila trout's status to threatened in 2006 based upon more than 20 years of intense restoration efforts by partnership agencies.

Limited angling for the prized trout was then allowed under the new listing.

Many of those previous projects included the installation of fish barriers and instream habitat improvements, along with the removal of non-native fish and the restocking of pure-strain Gila trout.

The fires then roared through and wiped out much of the restoration work.

"Now, five years later, we're back to about where we were before the fires," Wick said.

Recovery efforts have restored Gila trout to pre-fire conditions of 17 populations and about 81 miles of habitat.

The department's long-term goal is to restore Gila trout to a self-sustainable point where repeated human intervention won't be necessary to ensure its survival.

The plan is to restore 168 miles of habitat with 39 distinct populations of Gila trout. Currently, these trout occupy approximately 12 miles of historical habitat in four populations in Arizona and 69 miles of historical habitat and 16 populations in New Mexico.

"Having more trout spread out over a wider area can help mitigate the effects of these kinds of catastrophic wildfires," said Kirk Patten, assistant chief of fisheries for Game and Fish.

The next phase is to restore Gila trout to a 24-mile stretch of Whitewater Creek.

Most non-game fish in the creek were killed by the fire, presenting biologists with an opportunity to restore Gila trout to the stream. They plan to return this fall and the spring of 2018 to finish clearing the creek of any remaining non-native fish.

The stream will be treated with rotenone, a naturally occurring substance derived from the roots of tropical plants that affects only gill-breathing animals. When used according to the product label, rotenone poses no threat to humans. It is effective at killing fish, degrades rapidly and can be neutralized immediately below the treatment area.

Gila trout, speckled dace, desert suckers and Sonora suckers will be stocked in the creek once it is free of any remaining non-native fish and insect life has recovered.

Wick said a barrier won't be needed on Whitewater Creek because several natural waterfalls provide deterrents to upstream migration of any non-native fish.

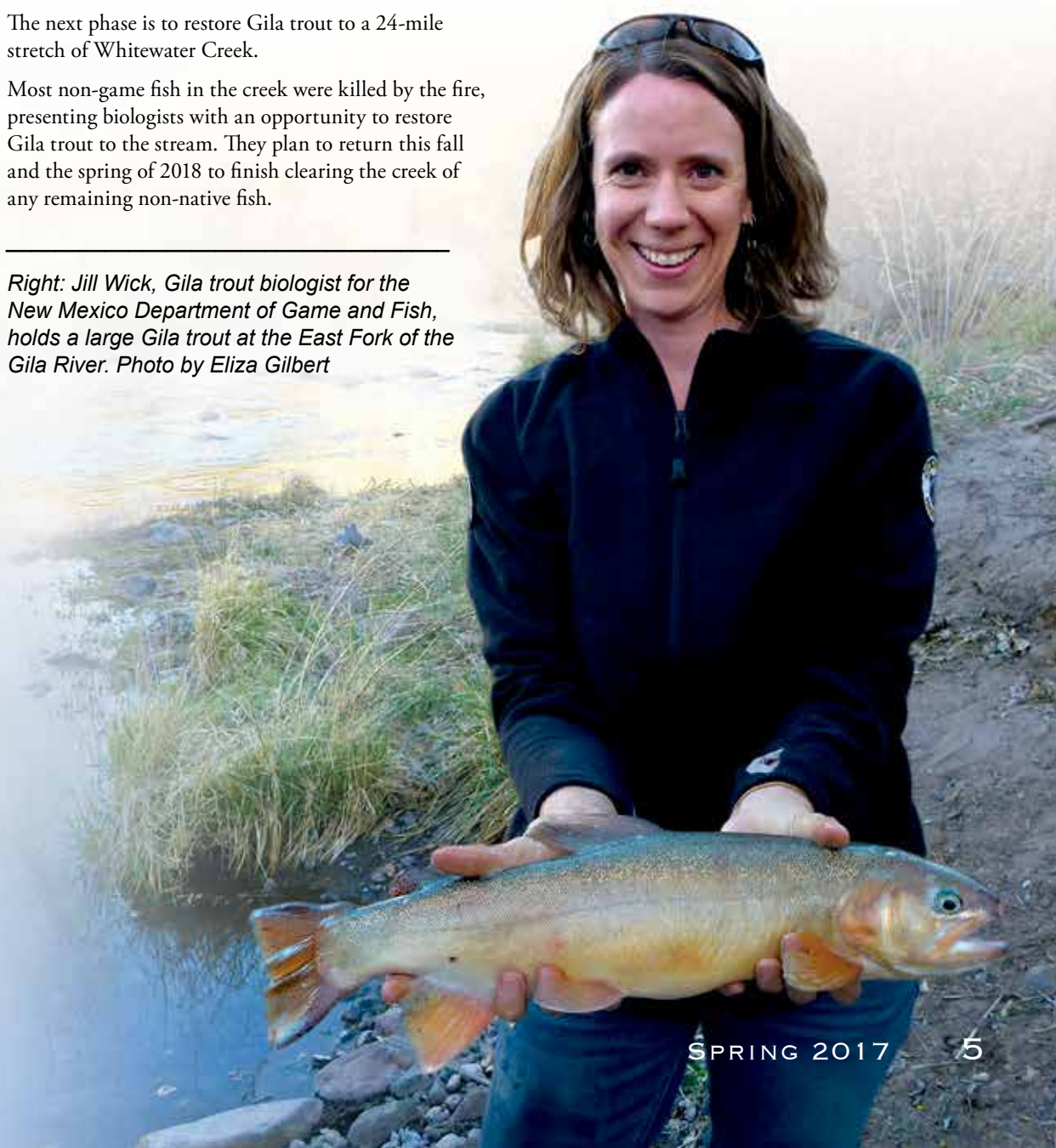
The estimated \$200,000 project is funded primarily through excise taxes collected on the sale of fishing tackle and motorboat fuel, with the remainder of the cost picked up by the department.

The project is expected to be completed in three years and will add about 14 percent more Gila trout habitat toward the restoration goal.

In the process, the work will provide anglers with a unique opportunity to fish for native trout in more accessible areas.

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*Right: Jill Wick, Gila trout biologist for the New Mexico Department of Game and Fish, holds a large Gila trout at the East Fork of the Gila River. Photo by Eliza Gilbert*





# Gila Trout Swim Mineral Creek

Devastating fire cleared path for trout's return

By Craig Springer, U.S. Fish and Wildlife Service



**Wear and tear on boot soles** and a helicopter were prerequisites to getting Gila trout safely placed in the remote headwaters of Mineral Creek inside the Gila National Forest of southwestern New Mexico.

U.S. Fish and Wildlife Service, working with the New Mexico Department of Game and Fish and the U.S. Forest Service, released two age classes of Gila trout ranging up to a foot long into the creek in November.

The rare yellow trout were spawned, hatched and raised at the service's Mora National Fish Hatchery.

The 1,033 trout were hauled eight hours to meet a helicopter at the Gila National Forest Glenwood Ranger Station. The aircraft made multiple flights carrying an aerated tank full of Gila trout.

Biologists from the three agencies hiked several miles to meet the trout and place them in the cool, shaded runs and pools of Mineral Creek, a tributary to the San Francisco River near Alma, N.M.

Streams in this watershed harbor one of five known relict genetic lineages of Gila trout, which live only in New Mexico and Arizona.

"This release is a large step forward in conserving Gila trout," said Andy Dean, lead Gila trout biologist with the service's New Mexico Fish and Wildlife Conservation Office in Albuquerque.

"Not only does this add a population within the San Francisco River drainage, it helps establish Gila trout populations across a larger geographical area."

Mineral Creek came to the attention of biologists as a candidate stream to receive Gila trout following the massive Whitewater-Baldy Fire of 2012.

"Destructive as it was, the forest fire made Mineral Creek suitable for Gila trout," Dean said. "The fire burned in the headlands of the stream and summer rains washed a slurry of ash and debris down its course."

The resulting ash flow created a toxic aquatic environment for unwanted non-native species, opening the door to stocking the native trout when conditions improved.

"Though the mountain slopes and streamside vegetation are not fully stabilized post-fire, sufficient habitat exists to harbor Gila trout in Mineral Creek," Dean said.

Mineral Creek Canyon is certainly among the more remote and more difficult Gila trout habitats to reach, but it's not the only stream to receive them. Last fall, another 8,621 Gila trout were placed in other waters to advance the species' recovery and entice anglers to go after native trout in native habitats of southwest New Mexico.



Willow, Gilita and Sapillo creeks and West Fork Gila River were recipients of the fish. Unlike the hike into Mineral Creek, these waters are readily accessible.

Gila trout lie in dark water behind boulders and in the scour pools beneath log jams, waiting for bugs or for what anglers may throw their way.

Fishing regulations are available on the Game and Fish website, [wildlife.state.nm.us](http://wildlife.state.nm.us).

The Gila trout, protected under the Endangered Species Act, was listed as endangered in 1973 but, through conservation, was downlisted to threatened in 2006.

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*Left: Andy Dean, Gila trout biologist with the U.S. Fish and Wildlife Service, places a bucket into Mineral Creek and watches as Gila trout reared at the Mora National Fish Hatchery, begin to explore their new habitat. Photo by Craig Springer, USFWS*

*Above: Mineral Creek, in the Gila National Forest, is reclaimed habitat for Gila trout. They once existed in the creek, but were out-competed by non-native species. Photo by Craig Springer*



*Craig Springer has worked for the U.S. Fish and Wildlife Service for 24 years. He published a piece in New Mexico Wildlife in 1995, titled "Fish in the Desert," a story about the rare White Sands pupfish.*



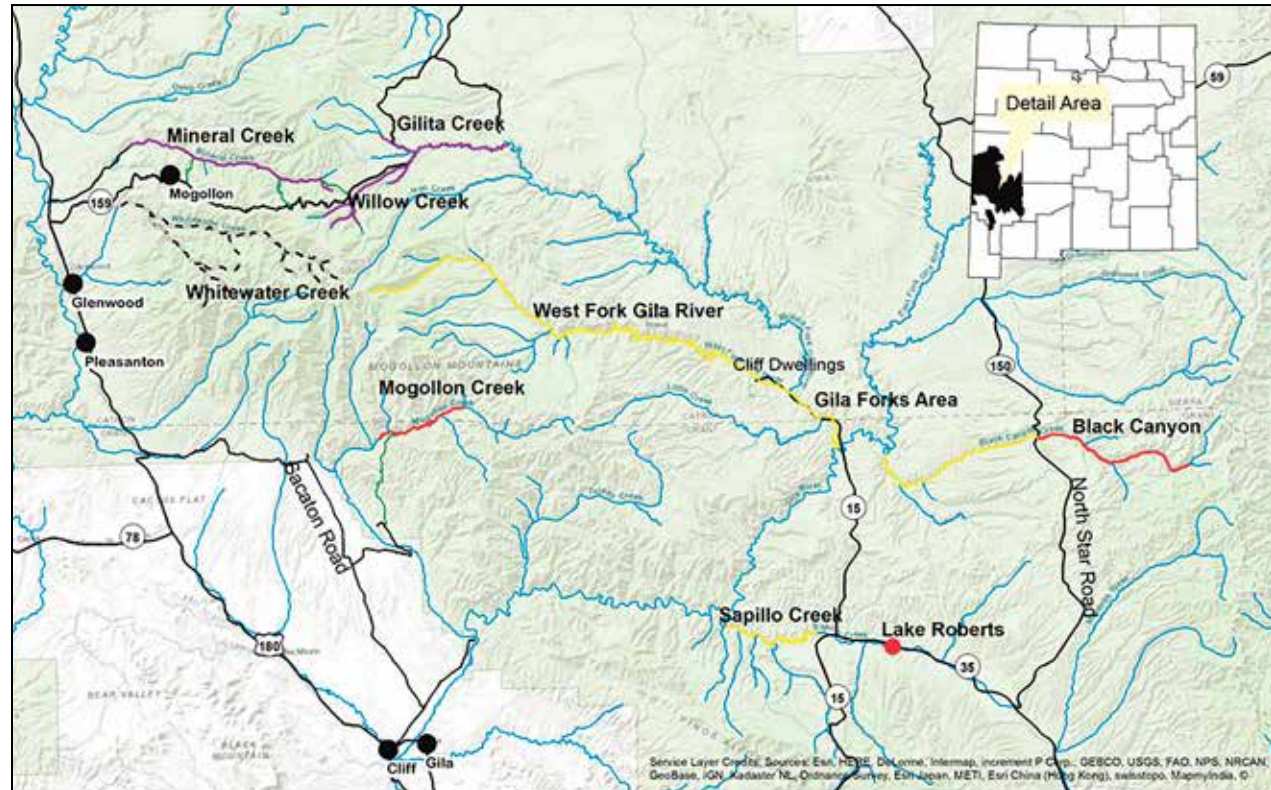
# Where to go for Gila trout

By Jill Wick

**Mogollon Creek** from the waterfall to Trail Canyon is open to angling for Gila trout from July 1-Oct. 31. Only catch-and-release angling with single, barbless artificial fly or lure is allowed. To get to Mogollon Creek, take U.S. 180 west from Silver City to the town of Cliff. At Cliff, turn right onto N.M. 211/293 and proceed three miles to Sacaton Road and turn left. Follow for about eight miles to the intersection of 916 Ranch Road, take a right and head north for another 6.5 miles to the 74 Mountain trailhead and parking area. Follow trail 153 about seven miles to the creek.

**Willow Creek** is open to anglers year-round and has a two-trout bag limit. Approximately 3,000, 5-inch Gila trout were stocked in November. To get to Willow Creek, head south from Reserve on N.M. 435/Forest Road 180 approximately 34 miles to an intersection marked by a sign for Willow Creek and Snow Lake and turn right. After about two miles, arrive at a Y intersection. Turn right and follow about three miles to Willow Creek Campground. Anglers can fish the river on the way to or at the campground or continue upstream by following Willow Creek Ranch Road through a small section of private property. Make sure to close the gate and park at the road's end. Fishing is possible upstream for about two miles to the headwaters. Alternatively, from U.S. 180 just north of Glenwood, take N.M. 159, known as Bur-sam Road, east to the Willow Creek Campground. Be advised this road is steep, winding and narrow and is closed during winter.

**Black Canyon** above the fish barrier is open to catch-and-release angling from July 1-Oct. 31 with single, barbless artificial fly or lure. Trout populations here were severely impacted by the 2013 Silver Fire and subsequent



flooding, but the trout population and habitat is beginning to rebound. Over 3,500 Gila trout were stocked in September 2015 and an additional 1,015 in March 2016. To get to Black Canyon, take U.S. 180 east out of Silver City for about eight miles to N.M. 152, turn left and follow for 15 miles. At N.M. 35, turn left and proceed for 15 miles and turn right onto Forest Road 150, known as North Star Road. Follow for 20 miles to the Black Canyon Campground and the large concrete fish barrier. Anglers can fish here for about a mile to a private property boundary. Anglers can access the stream above the private property by following Forest Road 150 north for another 1.5 miles to a parking area and trailhead found on the right at a sharp curve in the road at the top of the mesa. Follow a steep trail for about three miles to Black Canyon.

## Mora National Fish Hatchery

Gila trout are stocked regularly in six other streams and occasionally in Lake Roberts. The stocked trout are excess fish from the hatchery. The department is planning to raise its own stock of Gila trout at its Glenwood Fish Hatchery to supplement stocking.

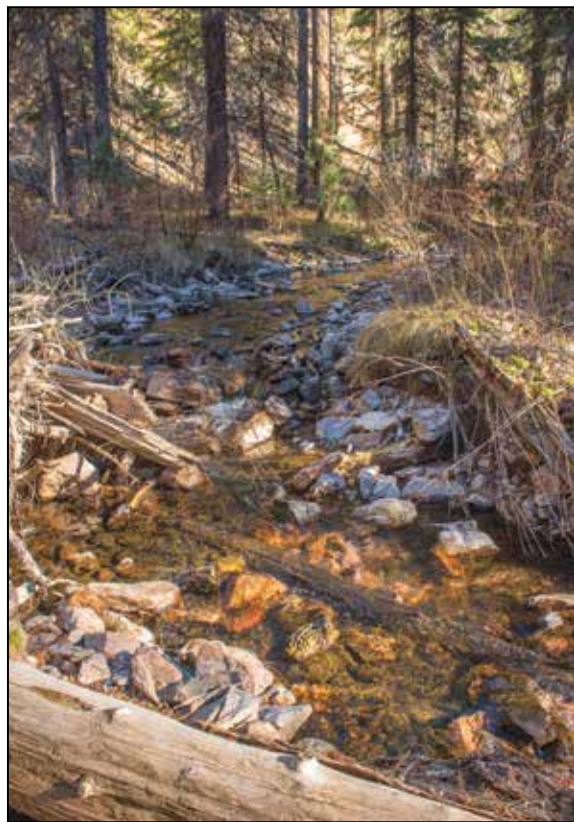
**West Fork Gila River** between Pine Flats and Ring Canyon has a healthy population of Gila, rainbow and brown trout. It was last stocked with 1,200, 4-inch Gila trout in November 2014. Regular bag limits apply. To get to the West Fork of the Gila River, follow the 151 West Fork Trail from the trailhead at the Gila Cliff Dwellings National Monument. Hike about seven miles to Ring Canyon to access dozens of miles of prime, backcountry fishing.

**Gilita Creek** has been stocked annually for the past three years, most recently in December 2016 with 1,000, 5-inch Gila trout. There is a two trout per day bag limit. To get to Gilita Creek, follow the Willow Creek directions and hike downstream to the confluence of Gilita Creek.

*Above: Gila trout angling streams.*

- 2 Gila trout limit
- 5 trout limit
- Catch and release, limited season
- - - Future stream - 2 trout limit
- Access trail





*Access trail*

**Gila River Forks** area was stocked with 2,300, 5-inch Gila trout in November and 2,300, 6-inch Gila trout in January. Regular bag limits apply. To get to Gila River Forks area, follow N.M. 15 between Grapevine Campground and the Gila Cliff Dwellings. Public access points include Grapevine, Forks and Scorpion campgrounds, bridge crossings, the Heartbar Wildlife Management Area, TJ Corral and the Cliff Dwellings National Monument parking area.

**Black Canyon** below the fish barrier was stocked with 200 Gila trout in March 2016. Recent surveys found plenty of Gila trout in the river below the barrier. Regular bag limits apply. To get to Black Canyon, follow the directions for Black Canyon above the fish barrier and fish downstream of the barrier for several miles.

**Sapillo Creek** was stocked with 2,300, 5-inch Gila trout in November and 2,000 in January. Regular bag limits apply. The trail to Sapillo Creek is near the intersection of N.M. 15 and N.M. 35. Park in the area at the intersection. Do not park on private property. Walk south down N.M. 15 to an unmarked trail found just before the arroyo crossing and hike downstream about a mile to a ranch gate. Fishing begins there and extends several miles.



**Mineral Creek** was stocked for the first time in May 2016 with 320, 8-inch Gila trout and again in November 2016 with 530, 12-inch and 500, 5-inch Gila trout. To get to Mineral Creek, hike in on either Log Canyon Trail 808 or South Fork Mineral Creek Trail 798. Both trails are about two miles one way and can be accessed from N.M. 159, known as Bursam Road. Other forest trails can be used to reach various portions of the creek. Consult a reputable map, such as U.S. Forest Service or Bureau of Land Management, for directions.

**Lake Roberts** was stocked with 5,150, 5-inch Gila trout in January 2016 and 320, 20-inch Gila trout in June. The state record for Gila trout is 20 inches, 4 pounds, 8 ounces. Despite the stocking of numerous record-breaking fish in Lake Roberts, none have been reported caught. Lake Roberts is located on N.M. 35 approximately 19 miles northwest of Mimbres.

**Whitewater Creek** can be accessed from the Catwalk National Recreation Trail parking area off U.S. 180 near Glenwood upstream 24 miles to the creek's headwaters and all of its tributaries. The creek will be stocked in the near future upon completion of a project.



*Note: All anglers fishing for Gila trout must obtain and have in possession a free special Gila trout permit. The permit is available online at the department's website, [wildlife.state.nm.us](http://wildlife.state.nm.us). Log into your account and in the Main Menu choose Free Permits. The permit is an important tool for department personnel to use in managing Gila trout waters. Anglers are urged to help in the effort by completing any angling surveys they receive seeking information about their fishing experiences.*

*Left: The Whitewater-Baldy Fire of 2012 didn't directly impact fish in Mineral Creek, but the subsequent ash flows during the monsoonal rains created a toxic environment in the waterway, smothering the stream and killing aquatic life. It took four years before the water conditions were considered suitable for the reintroduction of Gila trout. USFWS photo by Brett Billings*

*Center: Lake Roberts likely is home to the next state-record Gila trout. NMDGF photo by Dan Williams*

*Right: The West Fork of the Gila River offers miles of wilderness fishing. NMDGF photo by Dan Williams*



Restoration effort on

# Mimbres River

expected to help threatened chub

By Karl Moffatt

The Mimbres River is the only place in the country the threatened Chihuahua chub calls home, and New Mexico Department of Game and Fish biologists are working to make sure they'll always feel that way.

Department personnel recently completed almost \$500,000 worth of habitat restoration to nearly a mile of river owned by the State Game Commission and managed by the department near the Village of Mimbres, about 25 miles east of Silver City.

And the improvements will aid other wildlife as well.



"The habitat restoration will also benefit the Rio Grande sucker and the threatened Chiricahua leopard frog that reside in the Mimbres River," said Mike Ruhl, the department's native fish program manager.

In June, contractors carved out deeper pools, added numerous rock and wood in-stream structures and improved adjoining wetlands to make the department's property more habitable for the native fish and amphibians.

Ruhl said the department bought the property in 1988 for the purpose of someday restoring the habitat to benefit the chub.

That work began in earnest after the devastating Silver Fire of 2013. Flooding following the fire wiped out most native and non-native fish in the river and destroyed much of their habitat.

With restoration complete, the river was stocked with 1,000 native chubs raised and held at the U.S. Fish and Wildlife Service's Southwestern Native Aquatic Resources and Recovery Center in Dexter.

A colony of self-sustaining chubs also lives nearby on Nature Conservancy property in spring fed pools that could help repopulate the department's stretch of the river.

The U.S. Fish and Wildlife Service's State Wildlife Grant Program will reimburse the department up to 65 percent of the cost of the

project, with the remaining costs covered by the department.

Biologists hope to continue working with neighboring property owners to help further restore fish and wildlife habitat in the area.

For more information about the department's native fish programs, please visit [www.wildlife.state.nm.us](http://www.wildlife.state.nm.us).

*Top: Listed as threatened in 1983, the Chihuahua chub is native to the Mimbres River in New Mexico. Adults are dark on both the head and snout. NMDGF photo*

*Left: In the United States, the threatened Chihuahua chub occurs only in the Mimbres River in New Mexico. Game and Fish biologists are enthusiastic that habitat restoration work to nearly a mile of the river is going to help recovery efforts. NMDGF photo by Mike Ruhl*



Karl Moffatt is a writer, photographer and spokesman for the New Mexico Department of Game and Fish. He can be reached at (505) 476-8007 or [karl.moffatt@state.nm.us](mailto:karl.moffatt@state.nm.us).



# Spring is here **it's time to hunt sheds**

*By Storm W. Usrey*

*Shed hunting is a family-friendly activity that provides an opportunity to spend quality time outdoors. James Gonzales was out with his parents on a shed hunting expedition that resulted in the discovery of shed elk antlers. Photo by Joe Gonzales*



**Spring is a time** many hunters put their gear away and begin the painstaking wait for autumn and the arrival of the 2017 hunting season.

But hunting season is far from over.

For those suffering from cabin fever and ready to enjoy a family-friendly opportunity, lace up a pair of hiking boots and head out in search of shed antlers.

The time is right for people to load up and explore the mountains for sheds. Not only can it be great exercise, but those hoping to be drawn in 2017 also can start to look at areas they hope to hunt.

Elk bulls and buck deer will drop their antlers between February and May, providing a good window of opportunity to spend time outdoors hunting for the elusive sheds.

## Where to go?

Those heading out need to look in areas where bull elk and buck deer have wintered. Fields and edges along fields are good locations. Walking fence lines where animals jump are great spots because the jarring of jumping can cause loose antlers to fall off.

## Equipment

For those planning to spend time in the mountains, it is prudent to pack survival and shed hunting equipment.

Bringing a pack frame for hauling out antlers is a good idea because it will take some leg work. A spotting scope and good set of binoculars will aid in glassing far ridges for antlers lying on hillsides and ridges.

Shed hunting will likely mean navigating a good deal of uneven, rocky terrain, making such a trip a great time to break in a new pair of boots obtained for Christmas.

GPS units provide useful information on areas that were already explored to maximize coverage in the field.

## Be prepared

When heading to the mountains it is important to be prepared. It can still be quite cool at higher elevations, especially after sunset, so it's important to dress appropriately and have survival equipment, including fire starting ma-

terial, navigational tools, plenty of food and water, needed medication and a first aid kit.

Providing a location and return date to family and friends is always wise. Consider servicing your vehicle beforehand and have shovels, axes, winches and spare tires. Take the extra steps to protect yourself and your family.

Temperatures will also dictate when rattlesnakes will become active, so be alert and always know where you are placing your hands and feet.

## What to do with shed antlers?

After finding some antlers, some of which can be quite large, the next step is deciding what to do with the prize.

Many possibilities exist, including using them to decorate a home or yard.

Some may use the antlers to make home furnishings, for artwork or to create knife handles. The uses are limited only by a person's imagination; deer antlers can be used as wine or coat racks.

Others may prefer to sell sheds to antler buyers. Payment is usually by the pound and they may, in turn, be sold to private collectors, made into dog chews or utilized for medicinal purposes.

Those who sell antlers from animals harvested or legally picked up in the field with skull plates need to pass along the paperwork with receipt numbers and hunting license numbers.

## Rules

Shed hunting should be a fun and challenging experience, so before heading out, know the laws.

Currently, a license or permit is not required to collect shed antlers in New Mexico. However, permission is required from private landowners. Vehicles need to remain on designated roads and trails and be sure off-highway vehicles are in compliance with registration and safety equipment.

Tribal lands have their own rules and regulations, so it is important to check with the appropriate tribal game and fish before venturing out.

*Continued on Page 12 ...*



...continued from Page 11

Antlers still affixed to a skull or piece of skull, whether found on public or private land, cannot be picked up. These are the property of the state and picking them up is illegal.

If antlers affixed to a skull plate are found, take a picture in the field, note GPS coordinates and contact the local Game and Fish conservation officer to obtain permission to bring them out.

The antlers will need to be purchased, but upon doing so a possession permit will be issued and the revenue collected supports the Game Protection Fund. Unused carcass tags or a hunting license cannot be used to bring heads out from the field.

Documentation is also required for an individual to legally transport a skull from another state or on tribal lands into New Mexico or across tribal boundaries. Contact a local conservation officer in the state or jurisdiction to obtain documentation stating the head came from their state or tribal lands.

### Additional thoughts

Skulls of other protected animals, such as oryx, pronghorn antelope, barbary sheep, cougar, javelina or bears are also illegal to pick up in the field. A person must get permission to remove these from the field from the local Game and Fish conservation officer.

When permission is granted to retrieve the skull, it then needs to be purchased from the department and a receipt will be issued.

Report any bighorn sheep skulls and department staff will obtain these from the field. Bighorn skulls will be tagged and auctioned.

Pronghorn antelope horn sheaths, which are shed annually and are an exception to other horned animals, may be collected.

Spring is here, so head to the woods for some fun in search of shed antlers.

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*Spending time shed hunting can result in various sizes of antlers that can be used as decorations in the home. Some people prefer to sell sheds, which are usually purchased by the pound, after which they may be sold to collectors, made into dog chews, or used for medicinal purposes.*  
DGF Photo by Dan Williams



Storm Usrey has been a conservation officer for the New Mexico Department of Game and Fish for over 11 years. He is currently a corporal in the Belen/ Grants supervisory district and is stationed in Gallup. He can be reached at (505) 795-1935 or by email at [stormw.usrey@state.nm.us](mailto:stormw.usrey@state.nm.us).



### Prime shed-hunting areas

Shed hunting locations will change from season to season because the travel patterns of elk and deer will vary. The Lincoln and Santa Fe National Forests hold good elk populations along with the Magdalena and Mount Taylor ranger districts in the Cibola National Forest. For those new to the activity, the Valle Vidal and Apache Creek are good places to start

#### Valle Vidal - Carson National Forest

There are many great spots to hike, camp and ride horseback in this beautiful area of the Carson National Forest. It is located five miles northwest of Cimarron and north-east of Questa.

The Valle Vidal has some specific dates when people can visit. The east side from Highway 64 to the Clayton Corrals is open from April 1 to Dec. 31. The west side from Costilla to Clayton Corrals is open from July 1 to April 30.

Typically, elk will start dropping their antlers in mid-March.

To have a great chance at finding shed antlers, traveling east from Cimarron, turn off N.M. 64 onto Forest Road 1950. The next 22 miles is private property owned by Vermejo Park Ranch. Beyond that shed hunters have plenty of opportunities to hike or ride.

#### Apache Creek - Gila National Forest

The Gila National Forest is large and one of the best places in New Mexico to look for shed antlers. Head into Reserve and drive north on N.M. 12 about 12 miles until reaching the Apache Creek Campground.

Places to look for sheds here are endless. Drive down Forest Road 94 and start looking for sheds anywhere or drive to John Kerr Peak or Eagle Peak. A GPS is recommended because it is easy to get lost. Looking on the east and north side slopes of mountains is always a great start.





# Bear-resistant dumpsters benefit wildlife, people

By Zen Mocarski

There is a difference between unintentional and intentional or negligent feeding of wildlife. Unfortunately, the end result is often the same.

Bears are notorious for becoming quickly conditioned to human surroundings and habituated to human foods after consuming enticing treats found in garbage. Following such rewards for brazen behavior, bears begin associating humans with food, and as the familiar slogan warns: "A fed bear is a dead bear."

Bears that forage on human-derived resources are a problem. Conversely, bears foraging on natural foods, such as acorns or berries near humans is not as worrisome.

"For years, people in bear country have heard about the importance of securing trash and keeping wildlife wild," said Rick Winslow, bear and cougar biologist for the New Mexico Department of Game and Fish.

A few have learned tragic lessons, such as a woman in Colorado, who after years of feeding bears and other wildlife was killed by a bear. Four bears were euthanized as a result, two prior to the attack because they became aggressive toward humans and two others following the fatal incident.

Bear biology is governed by food availability, so bears naturally gravitate to an easy food source, such as the contents of dumpsters. A person visiting a dumpster that is not bear resistant at the wrong time could be faced with a dangerous encounter with a powerful animal.

In an effort to minimize the chances of such interactions and to protect bears, the Department of Game and Fish collaborated with the cities of Raton and Los Alamos last year to install a number of bear-resistant dumpsters.

The project happens at a time when Winslow anticipates an increase in bear activity.

"We've had three consecutive average to above-average years of precipitation and the vegetation has responded by producing abundant natural forage for bears," he said. "That usually equals good bear reproduction, which means more bears on the landscape competing for sometimes seasonally finite resources."

"These projects are beneficial to bears and people," said Bob Osborn, assistant chief of private land programs for Game and Fish. "Human food has the potential to place both bears and humans in harm's way. If bears can't access the dumpsters, hopefully they'll remain in the forest and forage naturally."

The Raton area has experienced problems with dumpster-diving bears in the past and worked to find a possible solution.

"The city came up with a bear-resistant trash dumpster design that worked with its trash-collection vehicles," Osborn said.

The city and Game and Fish worked together to get 650 of the dumpsters built and distributed. The department contributed about \$382,500 and the city provided another

\$213,000 to make the project possible.

"The new containers have provided numerous benefits, including decreasing operating costs associated with cleanup, a cleaner city and a healthier environment for the area's wildlife," said Scott Berry, city manager for Raton.



For Game and Fish personnel, protecting one of the state's valuable resources made the purchase worth the cost.

"Nobody enjoys euthanizing a bear deemed a danger to the public," Winslow said. "It is done in the interest of public safety. If bears don't become habituated to human food, it reduces the potential for unwanted encounters."

Later in the year, a call came in to Game and Fish from the Los Alamos Medical

*Continued on Page 14 ...*

*Left: Black bears find human trash appealing and they are quite adept at getting into traditional dumpsters. Once an easy food source is discovered, bears will return to the same location to feed and relocated bears have been known to travel long distances to return to an easy food source. NMDGF photo*

*Right: Bob Osborn, assistant chief of private land programs for the New Mexico Department of Game and Fish, affixes a "Be Bear Aware" sticker to one of the new bear-resistant dumpsters installed at the Los Alamos Medical Center. NMDGF photo by Zen Mocarski*



*continued from Page 13 ...*

Center about regular visits from bears to dumpsters on the property. The call resulted in a collaboration between the department, medical center and town of Los Alamos.

"The bears had become regular visitors and we were concerned about the bears and potential issues with people," said Carlos Branch, director of plant operations at the medical center. "This will dramatically reduce litter and risk."

The litter is often overlooked, but it had become a problem in Los Alamos. Angelica Gurule, environmental services manager for the county, said locations were identified around the town that involved a lot of food waste.

"The community is happy about getting these dumpsters in place," she said. "We've had issues with bears dragging trash into the canyons and making a mess."

But the safety of the public and well-being of wildlife are paramount.

"This will help address the public safety aspect of bears in areas of high human use," Osborn said. "Human-wildlife conflicts often don't end well for wildlife. Hopefully this will encourage bears to remain wild."

Bears are highly opportunistic omnivores and their diet changes from season-to-season depending on what is available. Grasses and forbs, acorns and piñon nuts, berries, roots, insects and their larvae, carrion and juvenile deer and elk are some of the staples of a bear diet in New Mexico.

"We want them to be wild animals," Winslow said. "They shouldn't rely on human food. Research indicates that bears relying on human food become more nocturnal when they really should be most active around dusk and dawn. In addition, they can have shorter life spans, shorter denning periods and exhibit lower cub survival relative to bear populations that rely solely on natural foods."

"Don't feed bears. It's never a good idea."

Whether it be intentional or not.



# Changes

help protect people and bears

*By Zen MocarSKI*

Nestled on 40 square miles of pristine wildlife habitat, the Los Alamos National Laboratory property provides a host of wildlife viewing opportunities.

Unfortunately, not all encounters are welcomed, so the lab is taking steps to protect personnel and bears.

"From a visibility point of view, 2016 was quite active with bears around the facility," said Chuck Hathcock, wildlife biologist for the laboratory.

Hathcock said several of calls were received from lab employees spooked by bears at some dumpsters around the facility, but two cases accelerated the process of getting bear-resistant dumpsters in place.

One case involved police wounding a bear that had been hanging out at the Los Alamos Medical Center. It ventured into the national laboratory area before being euthanized. The event culminated in the closure of hiking and nature trails around the lab.

A second incident involved a facility truck loading trash from a dumpster not knowing a bear was foraging inside. The truck backed up to some trees and the bear climbed down and disappeared into an adjacent canyon.

The facility already had replaced 20 dumpsters, but approximately 180 remained easily accessible to bears.

"That incident reinforced the need for these dumpsters," Hathcock said.

Employee safety and the welfare of the bears took center stage. Approximately 50 more bear-resistant dumpsters have been placed at locations with the highest bear activity. The desired outcome is for bears to forage naturally in the forest.

"This is about employee safety," Hathcock said. "That's always a priority. But you also don't want to have to kill the bears."

The national laboratory is absorbing the entire cost of the dumpsters, with a goal of replacing them all.

"This is a step in the right direction," Hathcock said. "They aren't cheap, so it's a budgeting exercise. I'm happy with the 50 we're getting now."

Laboratory officials also felt education was a critical safety component. Rick Winslow, bear and cougar biologist for the New Mexico Department of Game and Fish, spent time at the facility for Safety Day last year.

"The more a person knows about bear behavior and why the bear is where it is, the more they can avoid a potentially negative encounter," Winslow said.

He said bears most often will avoid interactions with people. Making a lot of noise will let a bear know humans are in the area before there is a confrontation.

"Wear bells, sing a song to yourself or go out with other people," Winslow said. "If there is an encounter, shout at the bear and don't allow it to get the upper hand right away. Don't run. Instead, back away slowly with your arms out wide to make yourself look bigger. Running can trigger a bear's predatory instinct, possibly causing an individual to be viewed as prey in response."

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*Unbeknownst to the driver, a bear was inside a dumpster on pickup day at the Los Alamos National Laboratories. After discovering the bear had climbed on top of the truck, the driver backed up to some trees. The bear climbed into a tree and eventually retreated to the woods. Photo courtesy Los Alamos National Laboratories*



# Ways to keep bears alive and you safe



## Bears at home

- **Garbage:** Store your garbage in airtight containers inside a garage or a sturdy shed, or in an approved bear-resistant receptacle. Clean trash cans with ammonia to reduce odors that can attract bears. Put the garbage out the morning of a scheduled pickup, not the night before.
- **Pet food:** Feed your pets indoors. Don't leave pet food outside. Store it in a sturdy building or the garage. Make sure your garage door is closed at night.
- **Barbecues:** Keep grills clean and free of grease. Store them in the garage or a sturdy shed.
- **Birdfeeders:** Hang birdfeeders out of reach of bears, not on your porch or from the house rafters. Bring hummingbird feeders inside every night.
- **Fruit trees:** Plant fruit trees away from your house, and pick fruit as it ripens. Spoiled fruit that falls to the ground should be removed because the odor is a powerful bear attractant.
- **Compost piles:** Keep compost piles away from your house. Don't put meat, fish, other pungent scraps or fragrant fruits such as melons on your compost pile. Add lime to reduce odors and accelerate decomposition.

## Bears in camp

- **Garbage in, garbage out:** Keep your camp clean and store food and garbage in bear-resistant containers if possible. If not, suspend food, coolers and garbage from a tree at least 10 feet off the ground and 4 feet out from the tree trunk. Do not bury or burn your trash.
- **Stow your cooler, pots and pans:** Keep your cooler and cooking utensils in a secure place, preferably in a bear-proof container. Vehicles or hard-sided camp trailers usually are secure, but bears have been known to break in anyway.
- **No food in the tent:** Keep your tent and sleeping bag free of all food smells and toiletry items -- even chewing gum and toothpaste. Change your clothes and store the ones you wore while cooking outside the tent with your food.
- **Don't cook where you sleep:** Your cooking area should be a good distance -- some say at least 100 yards -- from where you sleep, if possible.

## Close encounters

What would you do if you suddenly came face-to-face with a black bear on the trail or in your back yard?

- **Don't run.** If you come across a bear, stay calm and slowly back away while continuing to face the animal and avoiding direct eye contact. Pick up small children so they don't panic and run.
- **Travel in groups:** There is strength in numbers, and most bears will respect that and leave the area.
- **Make yourself big:** Hold out your arms and spread your jacket so the bear doesn't consider you its prey.
- **Back away:** If the bear has not seen you, slowly back away while making noise so it knows you are there. If it still approaches, stand tall, yell, rattle pots and pans or whistle. If you are on a trail, step off on the downhill side and give the animal room to pass.
- **Don't mess with mama:** Never, ever, get between a mother and her cubs.
- **Never offer food:** Offering food to a bear is inviting it to stick around.
- **If you are attacked:** Fight back aggressively, using anything you can reach as a weapon. Do not play dead.

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*Above: Keeping human food and trash away from bears can help avoid unpleasant encounters. Photo courtesy Beth Perry*





# The importance of telemetry in wildlife conservation

By Ross Morgan

*Right: Tracking devices exist that can aid in the research of birds, mammals, fish, insects and arachnids, but with each different species come separate challenges. This backpack-style transmitter works well with wild turkeys. NMDGF photo by Zen Mocarski*



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**Wildlife tracking** has been around for centuries, but most of the time it had little to do with research.

More than 500 years ago, falconers in Europe were known to place leg bands on their birds as a sign of ownership, but it wasn't a big leap to go from banding to define ownership, to banding for research.

In North America, John Audubon's desire to understand the behavior of birds would alter the course of wildlife research forever. He banded a few phoebes near Philadelphia in the early 19th century, making the birds easily identifiable when they returned to the same nesting site the next year.

Advances in technology broadened the possibilities, and by the 1960s VHF tracking devices allowed researchers to delve deeper in their studies of wildlife behavior.



These devices require a user to acquire transmissions from a device attached to an animal using an antenna, either carried in hand or attached to a vehicle or aircraft. Although similar, GPS devices are capable of providing precise information either stored on a collar and collected when it drops off an animal or transmitted to a satellite that emails the user. GPS collars can be cost prohibitive.

"Not only does the information collected help biologists locate and track wildlife, but the data gathered also can provide wildlife officials with information about migratory routes, the types of habitats a particular species likes and causes of mortality," said Bill Taylor, northwest region wildlife biologist for the New Mexico Department of Game and Fish.

With low calf survival, a number of newborn elk in the Mount Taylor herd were fitted with ear-tag VHF transmitters in 2015 and 2016.

Biologists will analyze the information to determine why the survival rates have been low. Possible causes could range from a high density of predators, calves being born in poor condition, disease or other factors.

"Not one, but all of these factors play important roles in the management of wildlife," said Chuck Schultz, northwest region habitat biologist for Game and Fish. "It's crucial to pay attention to all possibilities when making decisions on management of wildlife."

The potential uses for transmitters are not limited to documenting factors for low survival rates. VHF transmitting devices are used on many species of wildlife, ranging from those that fly to those that swim.

"There are transmitters used for birds, mammals, fish, insects and arachnids," said Nicole Quintana, big game manager for Game and Fish. "The type and size of a transmitter will vary depending on the species and the reason for its use."

Telemetry makes it possible to document survival, migration patterns, timing and locations of birth, food habits and seasonal landscape use. Some states have used the technology to study migration routes across roadways.

"Wildlife management doesn't end with knowing the population size of a specific species," Quintana said. "Tracking movement of the different species improves the ability of biologists to mitigate problems and guide resources where they would be most beneficial."

Collars have been vital in developing an understanding of pronghorn antelope behavior, which has led to fence modification projects because pronghorn prefer to go under, rather than over, fences.

Recently, 27 Gould's turkeys were fitted with backpack radio transmitters to gather information on survival rates and dispersal. Necklace-style radio transmitters were fitted to six white-tailed ptarmigans in the Pecos Wilderness area to gather information on seasonal habitat use.

The work isn't easy and at times can put those in the field in harm's way.

"Wildlife doesn't know you're trying to help, so they're going to fight," Quintana said. "Dedicated biologists and conservation officers in the department and other agencies work diligently to make on-the-ground conservation a reality."

Hunters play a vital role as well, providing the funding source for conservation work. However, collared animals are not off-limits during the legal hunting season.

"Because each collar is identifiable, a harvested animal with a collar provides information about where it has travelled if the batteries are no longer functioning," Schultz said. "This is a primary reason biologists encourage hunters to return these collars to the department."

"Many transmitters aren't cheap and some of them can be refurbished and used again for less money than buying a new one."

"Harvesting an animal with a tracking device is a frequent question asked of department personnel," Quintana said. "People are either afraid they've done something wrong or they passed up a collared animal thinking it wasn't legal. In fact, we would like hunters to treat animals with transmitters just like any other animal."

"If they would typically harvest that animal, then they should do so. It helps us learn how much hunting plays a role in the population management and is useful in making management recommendations that could include expanding hunting opportunities."



As the last rays of daylight fade over the horizon, a voracious predator with needle-like teeth and large reflective eyes goes on the prowl.

It's not a large, furry mammal, but a fish.

Walleye are a popular sport fish because of their delicious white, flaky meat that lacks the typically strong, fishy taste. They can be found in most large lakes across the state, but their natural reproduction is limited in New Mexico.

"The majority of waters in New Mexico don't have enough suitable spawning habitat for walleye, such as gravel- to cobble-sized substrate free of sediment that can choke eggs," said Eric Mammoser, warmwater fisheries biologist for the New Mexico Department of Game and Fish.



As a result, department biologists conduct artificial spawning to support the species and provide angling opportunities.

In late March and early April, Game and Fish personnel can be found at Conchas Lake spawning walleye.

Sexually mature walleye, 4 years and older, are moved to lakeside net pens for holding. Fish are squeezed over a pan, releasing eggs from the females or milt from the males. The contents are then stirred together using a crane or turkey feather and the now fertilized eggs are brought to Rock Lake Hatchery near Santa Rosa for rearing. Fry, newborn fish about one-fourth inch long, are raised for four to seven days and then stocked around the state.

In recent years, factors such as low water levels have caused many of the state's walleye populations to decrease. Conchas Lake, considered the primary brood lake, was hit especially hard, making it difficult for Game and Fish personnel to collect enough eggs to support walleye stocking.

"We try to maintain a stocking rate of 500 fry per surface acre of water," Mammoser said. "In recent years, fry or eggs from the Genoa National Fish Hatchery in Wisconsin and other agencies helped us meet our stocking goals."

"This past year's spawn was a great success. A large cohort of walleye that have been watched at Conchas Lake for several years reached sexual maturity. The large numbers of adult walleye led to one of the highest egg collections in almost a decade."

With eggs received from the Genoa National Fish Hatchery and Iowa Department of Natural Resources and eggs/fry from Colorado Parks and Wildlife, Game and Fish met the stocking recommendations at all New Mexico lakes.

"Meeting the recommendations would not have been possible without those cooperating agencies," Mammoser said. "Our hope is that 2016 will mark the beginning of a new trend: spawning enough walleye to fully support the stocking program and possibly return the favor of sending surplus eggs to other agencies in the future."

The work doesn't stop at stocking young fish.

"Any fish that died in gill nets during fall surveys are collected because crucial data needed to assess population health and growth can be studied," Mammoser said. "A tiny bone in the fish 'ear' – called the otolith – can be read like tree rings to estimate age."

"Based on average age estimates, researchers can continually evaluate the success of management practices, such as stocking rates."

The success of the stocking program translates to improved opportunity for anglers wanting to taste the non-fishy fish.

And finding them isn't difficult in New Mexico.

Walleye can be found in Ute, Conchas, Santa Rosa, Sumner, Abiquiu, Clayton and Stubblefield lakes. Smaller numbers occur in Cochiti Lake, Caballo Lake and Elephant Butte Reservoir. The state record walleye, caught at Clayton, tipped the scale at 16 pounds, 9 ounces.

"Clayton may have lower numbers, but larger individuals can be found," Mammoser said. "Eight to 10 pounds is a big walleye."

The best time for anglers to target walleye is around dusk and into the night during the spring when they are preparing to spawn. Their large eyes work great in low light and they cruise shallows in darker hours, chasing their primary food source: shad. This makes rocky shorelines or points the premium locations.

An effective, inexpensive bait is a 3-inch white, curly-tail grub lure, but anything that mimics shad, such as crank bait or live bait, where legal, will work.

Walleye "keepers" must be at least 14 inches long and anglers are allowed to keep five per day and have no more than 10 in possession.

"They're definitely one of the better-tasting freshwater fish," Mammoser said. "When considering how to prepare walleye, you can't go wrong with beer-battered."



## Timing is right to target walleye

By Jeremy Lane

*Left: Kevin Rodden, southwest area regional biologist for the New Mexico Department of Game and Fish, works to untangle walleye from gill nets along with a New Mexico State University student volunteer. The fish are then moved to lakeside net pens for holding. Photo by Eric Mammoser*



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# Pecos bighorn

## numbers are dangerously high

By Zen MocarSKI



There are times when words appear to paint a rosy portrait, but upon closer inspection the painting is found to be a forgery.

Such is the case in the Pecos Mountains, where more is not always better.

The most recent surveys in the Pecos Wilderness Area in Game Management Unit 45 identified a minimum population of 342 Rocky Mountain bighorn sheep. Because not every bighorn on the landscape can be counted, New Mexico Department of Game and Fish wildlife biologists estimate the total population between 350 and 400.

“This year’s survey documented the largest number of bighorn sheep in the Pecos since 1996 and the 99 rams are the most we’ve ever seen,” said Steward Liley, chief of the wildlife management division for Game and Fish.

The news may sound wonderful, but alarm bells started to ring as personnel began examining the available habitat during the winter months.

There is plenty of available forage during the summer, but when snow begins to blanket the ground, sheep are left to feed in areas where food remains accessible.

“Having a growing, vibrant population is good news, but the available habitat during the winter is a concern,” Liley said. “At this time of year, the sheep are confined to wind-swept areas that are free of snow.”

After careful consideration, wildlife biologists determined the population should not exceed approximately 350 animals. As a result, Game and Fish increased the number of available licenses in the Pecos.

“This will mark the first year the department will allow the harvest of ewes in the Pecos,” Liley said.

Due to concerns of overpopulation on winter range habitat, this fall there will be 30 ewe licenses in the Pecos, three for youth hunts and 27 for adults.

“With the population estimate above 350, we need to use legal harvest as a management tool,” Liley said. “The goal is to stabilize the situation and hopefully avoid a future die-off from starvation.”

The concern is the carrying capacity, which is the maximum number of animals a particular area can support before the available resources, such as food and water, can no longer sustain that population size.

“We have to do something,” Liley said. “We believe a small reduction in the population is critical at this time to avoid a large-scale die-off. If the bighorn overshoot carrying capacity, the consequences can be disastrous. If nothing is done, it’s possible a substantial number of animals could be lost.”

When the available resources have been depleted, other factors can impact a population.

“When forage becomes scarce, it can result in a stressed herd and this can lead to disease and increased infighting for limited forage resources,” Liley said. “In the end, the results are not favorable.”

There are also 10 ram licenses available in the draw, but removal of a few rams will do little to control the overall population.

Because rams mate with multiple females, legal harvest of males has little to no impact on the overall population and there has been limited natural predation on bighorn sheep in the Pecos. Nearly every ewe, however, will have a lamb, so removal of a small number of females will help maintain an appropriate population.

“Along with managing the population, the hunt provides an opportunity for families to fill their freezers with healthy meat instead of allowing animals to die on the landscape, the result of starvation,” Liley said.

The aim is simple: remove a few to benefit the many. If successful, the bighorn sheep population in the Pecos will continue to prosper, with the hunting dollars then used to further sheep conservation throughout the state.

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*Left. While forage is readily available in the Pecos throughout most of the year, bighorn sheep are dependent on wind-blown areas clear of snow during the winter months. Wildlife biologists believe the population should be maintained at approximately 350 animals to avoid a potential die-off from starvation due to a lack of available food. NMDGF photo by Clint Henson*



A red bridge passes over the Berrendo River on Red Bridge Road just north of East 19th Street on the outskirts of Roswell.

Nowadays it's more of an orange bridge from years of weathering.

Just east of the bridge is a dam that, legend has it, was built by former Lincoln County Sheriff Pat Garret. The dam creates a body of water that historically has produced and held good-sized largemouth bass along with other fish species.

Longtime anglers tell stories of how they once came to this location and caught bass in their childhood and speak about wishing it was that way again.

Because the properties in this area are privately owned, lack of access has prevented fishing here for years. The only public land is along the red bridge itself and the county road right-of-way, but fishing off the bridge is prohibited due to safety concerns.

However, hope springs eternal. Despite a variety of challenges, following three years of work a portion of this stretch of river is again open to fishing.

Through the New Mexico Department of Game and Fish Open Gate Program, landowners to the west of Red Bridge have entered into an agreement to open access to licensed anglers on the Berrendo River.

"There were a variety of obstacles, but bringing this opportunity back to the community of Roswell, and anglers in general, has been a goal for some time," said Ryan Darr, lands program manager for Game and Fish.

"The property provides about a half mile of riverside access with waters that should yield some good bass in an underserved area," said Shawn Denny, warmwater fisheries biologist for Game and Fish.

After receiving an importation permit from Game and Fish, Bill Fenn, an adjacent landowner, stocked the Berrendo River Open Gate property with 600 largemouth bass ranging in size from 1.5 to 4 pounds on Oct. 6, 2016.

Along with the stocking, the Chaves County Flood Control worked to create an impressive fishing area and a parking lot that can hold up to 30 vehicles. Sportsmen for Wildlife provided the initial setup for trash removal on the property.

There was a good deal of additional support and cooperation.

"This wasn't the result of a few people or a single program," Darr said. "There are many thanks to go around to all the agencies and people who participated to make the project possible."

Game and Fish has posted signs on the property and personnel are working to address the potential challenges of a high-use area, such as keeping people out of closed areas and making sure people leave by sunset.

The bass fishing will be catch-and-release only, with bag limits posted for trout, bluegill and catfish.

"We ask the public to respect the property and obey the posted signs because this amazing opportunity can disappear quickly," said Capt. Andrew Gray, a conservation officer with Game and Fish. "It is against the law to violate posted signs on an Open Gate property."

"This is a great opportunity for the public. With recent public recreation closures in Roswell, the youth of the community need fun and safe activities to occupy their time. Game and Fish is excited to play its role in improving recreational opportunities for the Roswell community as well as anglers," Gray said.

The property is a few minutes from Roswell by car and is within bike-riding or walking distance for some people of the community. The parking area for the property is located off Red Bridge Road, .3 miles north of East 19th Street on the west side of the road. There is a large metal trash container and outhouses for public use on the property along with the parking area off the county road.

The property opened for licensed anglers on the Berrendo River on Oct. 1, 2016, giving those longtime anglers an opportunity to recapture their youth while newcomers now have the chance to make lasting memories.

*Right. An area of the Berrendo River on the outskirts of Roswell offers a quality angling experience and now sports a parking area that can hold up to 30 vehicles. NMDGF photo by Tyson Sanders*



*Tyson Sanders has worked for the New Mexico Department of Game and Fish for eight years and currently serves as the Roswell corporal. He can be reached at (575) 840-7483 or tyson.sanders@state.nm.us.*



## Many partners work together to bring fishing back to Berrendo

*By Cpl. Tyson Sanders*





# GAIN

## changes benefit outdoor enthusiasts

By Zen Mocarski

The scene is a bit like Jurassic Park, minus the dinosaurs, with eyes wide open, afraid to blink for fear of missing out on a spectacular experience.

Faces pressed against the window of a car or eyes peering through binoculars or the viewfinder of a camera awaiting a sight never before seen.

There's no need for an expensive journey to a far-away island. Such spectacles abound in New Mexico for those participating in Gaining Access Into Nature (GAIN) activities at 36 of the State Game Commission lands.

These lands – not to be confused with State Trust Lands – include Wildlife Management Areas and other properties owned, managed or controlled by the commission and managed by the New Mexico Department of Game and Fish for the benefit of fish, wildlife and their habitats.

Implemented in 2005, the GAIN program added the opportunity for wildlife-associated, low-impact recreation activities such as hiking, birding, horseback riding, bicycling, photography, camping and cross country skiing on select commission lands

Hunting and fishing has been allowed on many of these lands for decades.

Game and Fish staff observed the GAIN program's progress over the next decade and made note of ways the program could be enhanced to improve the public's experience.

As a result, starting in 2015, Game and Fish personnel worked diligently to improve and simplify public access to commission lands so people could enjoy what the outdoors has to offer.

Those efforts came to fruition in late 2016.

"The department's objectives were to simplify permit requirements and standardize property rules as much as possible," said Ryan Darr, lands program manager for Game and Fish. "We also expanded the number of lands where GAIN activities are allowed."

A major change was removing the requirement of a \$15 GAIN permit and \$4 Habitat Management and Access Validation stamp for individual, yearly access. Instead, a single individual with a hunting, fishing or trapping license or the \$4 stamp provides access for up to four adults. Youths younger than 18 are exempt. Those fishing or hunting need to be properly licensed.

Before the modifications, the philosophy was that the lands were closed unless otherwise open. In the spirit of welcoming public use, the lands are now considered open unless otherwise closed.

Some additional changes to encourage outdoor recreation include more properties open to access, and extending the camping limit to 14 days from 9 days, where permitted.

Because the commission lands are managed primarily for the benefit of fish, wildlife and their habitats, some lands are closed to access and others have seasonal closures to conserve the natural resources. Certain activities are also restricted on specific lands.

There are many free outdoor experiences on other public lands, but the possibilities to commune with nature are vast at a Wildlife Management Area.

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*Opposite : It is easy to get caught up in the moment watching sandhill cranes standing on a frozen pond at the Bernardo Wildlife Management Area with a picturesque mountain background. NMDGF photo by Zen Mocarski*





*Bernardo Wildlife Management Area.  
Photo by Dan Williams.*



*One of three viewing platforms at Bernardo.  
Photo by Dan Williams*



*Managing Bernardo corn fields.  
Photo by Zen Mocarski*



## Outdoor Opportunities

*Continued from Page 20 ...*

“The attractant is that these properties are managed specifically for wildlife and fish, and as a result provide excellent habitat and superb outdoor recreation opportunities,” Darr said. “If you want to see or photograph wildlife, these are the places to visit.”

Among the best-known of these properties is the Bernardo Wildlife Management Area on the east side of I-25 off exit 175. The property is a wintering haven for thousands of sandhill cranes and snow geese and other waterfowl. Deer and elk are year-round residents.

Visitors to Bernardo can hike or drive a three-mile loop featuring elevated viewing and photography platforms and a blind at the wintering waterfowl pond. Although a number of the bird species fly north in the spring and summer, opportunities remain to see resident hawks, falcons, reptiles and a host of mammals and songbirds.

The Game and Fish website, [wildlife.state.nm.us](http://wildlife.state.nm.us), will be the primary source of information for those ready to get outdoors and experience nature at GAIN properties.

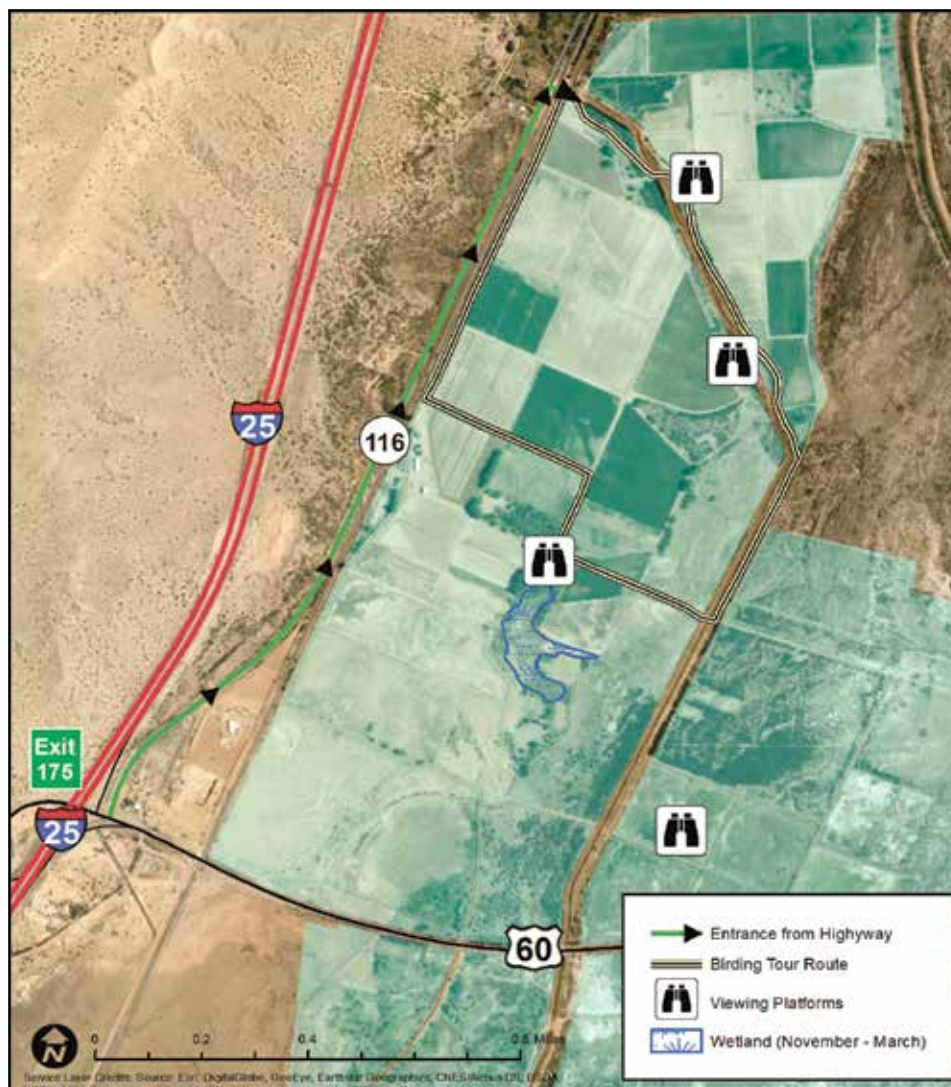
“People will know whether a property is open by visiting the website,” Darr said. “It will include closures and provide information about opportunities at the sites as well as restrictions.”

“Activities need to fit within the rules and laws, but the goal is to get people outdoors so they can enjoy the diversity New Mexico has to offer.”

Maps to the lands will be included on the website along with a list of the types of animals that may be present at the different locations.

There are plans to replace signs on all open lands. New signs will include rules and closures along with site maps. Darr said personnel are also exploring the possibility of having additional roadway signs directing people to each open land.

So, while dinosaurs may not be on the agenda for any of the properties, the time has come to stop procrastinating and start exploring the many wonders awaiting an audience.



*Top: Bernardo Wildlife Management Area. NMDGF map.*

*Bottom: An elevated viewing platform at the Bernardo Wildlife Management Area provides visitors with a wonderful vantage point to watch wildlife. The platform is ideal for watching or photographing migrating sandhill cranes. New rules adopted in 2016 simplified access to encourage the public to get outdoors and experience nature. NMDGF photo by Zen Mocarski*



# Improved aquatic habitat

expected to improve angling at Rio de Los Pinos

By Karl Moffatt

For years, the remote New Mexico Department of Game and Fish Rio de Los Pinos Wildlife Management Area was best known among anglers for its solitude and scenery, not the fishing.

That could change now that the department has completed an estimated \$300,000 habitat improvement project on almost two miles of the river flowing through the property in north-central New Mexico.

The department's contractors, Riverbend Engineering of Albuquerque and Robins Construction of Antonito, Colo., designed and installed dozens of in-stream fish habitat structures and deepened many pools.

They also narrowed the stream in some places, redirected it in others and planted plenty of native grasses, shrubs and willows to improve erosion control and provide future shade for the river.

The Rio de Los Pinos has long been a wild brown trout fishery but, because it lacked depth, structure and shade, it could not support a thriving population.

"What we were seeing up there was less than half of what we'd like to see in a brown trout fishery," said Shaun Green, a coldwater fisheries biologist with the department.

Department personnel regularly stock the river with hatchery-raised rainbow trout between May and September to augment the angling, but biologists thought they could improve the fishing by improving the conditions.



Visitors will now find deeper pools that provide better holding areas for trout.

Construction crews created plunge pools that help oxygenate the water and provide more habitat for trout to reside, and big boulders and tree stumps were strategically installed to create additional habitat for fish.

"It's a beautiful spot and this is another example of angler license fees being put to good work," Green said.

## To get there

Take U.S. 285 north through Tres Piedras toward Antonio, Colo. Take the San Antonio turnoff at Conejos County Road C. Follow to the intersection of Road 12.5. Turn left and follow along the river for about six miles to signs designating the department's wildlife management area. Primitive camping is allowed year-round. Vault toilets are on site, but there is no water, electric or septic available.

*The scenic Rio de Los Pinos Wildlife Management Area, top, in northern New Mexico boasts impressive scenery in a quiet, remote location. Plunge pools, bottom, provide deep, well-oxygenated places where fish can hide and thrive. NMDGF photos by Karl Moffatt*



# Memorable Albuquerque wildlife calls

By Josh Wood



Nuisance wildlife calls can fall into a variety of categories: urgent, entertaining, painstaking, frustrating and “I have got to see this.”

New Mexico Department of Game and Fish personnel who spend time in the field will at some point experience a myriad of calls and may end up adding yet another category to the list.

Prior to becoming the Albuquerque district officer for Game and Fish, I worked approximately three years in Questa. I understood encounters with wildlife in an urban setting would be different in Albuquerque because it is not common to see a deer eating a rose bush or a bear raiding the local dumpster.

What I did not prepare myself for was the number of “unusual” calls.

## Masked bandit

While driving through rush-hour traffic on a Friday morning, a call came in about a raccoon in a bathroom.

I arrived at the house and acted as professional as possible, but honestly, a raccoon in a bathroom?

Turns out the back door was left open all night so the dog could go in and out. About 3 a.m. the daughter went to use the bathroom and was greeted by the raccoon.

They closed the bathroom door and contacted Game and Fish.

There I was, catch pole in hand, Kevlar gloves on, ready for the unknown. I used my building-clearing training for a raccoon instead of bad guys, cracking the door open and “pieing” my corners, a technique used to see around corners.

The raccoon wasn’t in view from the door, so I jumped into the bathroom and closed the door.

Peeking around the edge, I expected to find a hissing raccoon curled under the toilet bowl.

Nothing.

The only other possible place was a built-in cabinet, but the door was closed and it was approximately 4 feet off the ground. I cracked the cabinet door open to find the burglar-like mask of a raccoon staring at me.

I stuck my catch pole in the cabinet and grabbed hold of the raccoon and the two of us made record time going from the cabinet to the front porch before getting it into a transport trap.

Remember, given the opportunity, wildlife will enter a house, so make sure all entryways are secured before nodding off.

## Something’s in the washer

I was spending time completing some online training when I received a message from dispatch.

“RP (reporting party) advised that he has some type of animal stuck in his dryer, possibly a squirrel or rat. Would like some help getting it out.”

For both rats and squirrels, callers are generally advised to contact a pest control specialist, but the gentleman was distraught. I called the individual and it was a squirrel, but it wasn’t in the dryer where it could be shoed out the vent, but the washer.

The man got little sleep due to the squirrel making loud “squirrel” noises.

I was intrigued, so I decided to visit; it’s not every day you see a squirrel in a washer.

My first question: “How did a squirrel get in your washer?”

Apparently it entered through an open door, scaled a pile of dirty clothes onto the counter-top and imitated Superman as it jumped from the counter into the open, top-loading washing machine.

This was new.

I decided to take the squirrel out the back door and let it outside.

I reached inside the drum and grabbed hold of the juvenile ground squirrel and took it straight from the utility room to the street outside. The squirrel ran as fast as it could in one direction while the man ran just as fast in the other.

## Leave a message at the beep

As the saying goes: Save the best for last.

A message from dispatch was received regarding a cougar. Typically, bear or cougar calls are a priority, but this one was different.

“RP stated there is a cougar or mountain lion that has gotten into the vents of the apartment building he is living,” was the message from dispatch.

The building complex was in downtown Albuquerque, where there should be a mountain lion population of zero. However unlikely, the cougar gentleman deserved a return call.

I left a voicemail with my call-back number, a decision I would later regret. It took a week to get a return call.

I tried explaining if there was any validity to his story, it would have been breaking news on television and in the newspapers, which didn’t happen.

As we ended our conversation, I wondered if this would be our last conversation.

It wasn’t.

About two weeks later, I received a voicemail from a number I immediately recognized and mentally prepared myself for what I was about to hear.

He said he was 100 percent sure he thought he saw a hyena at a car wash in downtown Albuquerque.

To this date, I have not received any reports of a hyena running around the area.

I wonder what my next conversation will be like with this gentleman who has my callback number.



# There are days when nothing goes right

By Zen Mocarski

In my 14 years working for wildlife agencies, many exciting and sometimes frustrating experiences have presented themselves.

Capturing wildlife certainly can get the adrenaline flowing when everything goes as planned. However, no matter how well everything is planned, success depends on animals doing what we expect.

In February, New Mexico Department of Game and Fish personnel stepped out of their work trucks into single-digit temperatures at Eagle Nest Lake with a goal to net and haul up about 60 perch for disease testing before moving thousands of the fish to Abiquiu Lake to serve as a prey base for walleye and smallmouth bass.

Personally, the day had an auspicious beginning. The winter jacket that was supposed to be in the back seat was keeping the countertop warm back home.

The fisheries personnel were busy with augers and chainsaws cutting holes in the ice. Everything was going as planned. A net was dropped through a large rectangular cut in the ice and a few crew members dropped baited hooks and lines to try and catch perch one-by-one.

Several hours later it was time to pull the net. Video was rolling and still cameras were ready in anticipation of the haul.

Nothing. Not a single fish in the net, but plenty of video and photos of an empty net.

However, thanks to the crew fishing, 15 students from Taos High School and other anglers donating a portion of their catch, enough fish were available for testing.



Capture-relocation projects are highly dependent on the cooperation of a particular species, and even the best-laid plans can go awry.

Such was the case during a turkey capture in Raton in January 2016.

The weather was perfect, a chilly morning warming up nicely as the sun came up. I was there to get video and images for a future article possible Facebook post.

We arrived before sunrise and saw the silhouettes of about 30 turkeys in the trees lining the golf course where one of the traps had been set. Personnel baited the birds for a few days prior in hopes of increasing the odds of capturing approximately 40.

The sun began to rise and the turkeys left the roost. Everything was progressing perfectly.

Or so it seemed.

Golf courses tend to attract a wide variety of wildlife that reside in the area. In this case, not only turkeys were present in good numbers, but also deer.

After chasing a few deer away from the trap, it became evident that trapping turkeys was going to be difficult with deer present and humans hazing them away. All the commotion prevented any opportunity for the turkeys to feel comfortable.

We decided to sit back and see what would happen.

The deer proceeded to enter the turkey trap. Upon the approach of department personnel to remove a doe from the trap, it jumped through the top, tearing the netting and knocking down fencing. The doe was fine, but the trap was in shambles.

Although it took some time, the trap was repaired and all returned for round two the next day, having caught just two turkeys at a second trap site.

The deer were relentless. Hazed away, they returned. With little fear of humans, the deer never ventured far from the trap.

In the end, the two captured turkeys were released on site instead of traveling more than five hours to the planned relocation area in the Lincoln National Forest. There was some mumbling about once having liked deer, but no longer.

The frustration aside, a day in the field still beats a day in the office.

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*Above: New Mexico Department of Game and Fish personnel set up a number of turkey traps in Raton hoping to capture about 40 that would be moved to the Lincoln National Forest. It became evident the first morning that reaching that number would be difficult with deer continually getting inside the trap. NMDGF photo by Zen Mocarski*



# Poaching case

a reminder that it is more than illegal

By Zen Mocarski



**The photo tells a story:** two conservation officers kneeling in front of two recently killed deer, a number of skull-capped antler mounts and the tools used for an illegal enterprise.

The case involved brazen acts of poaching by individuals who likely believed they wouldn't get caught. They failed to consider the tenacity of New Mexico Department of Game and Fish conservation officers or how concerned members of the public embraced the ideals of modern wildlife management.

It took nearly a year of investigative work and time in the court system, but an elaborate endeavor to steal from New Mexico residents was foiled in large part due to individuals who took a few minutes to pick up a phone.

"All of it started with an anonymous tip through Operation Game Thief and some information from a confidential informant," said Sgt. Kyle Jackson, one of the conservation officers who worked the case.

In 2014, charges were filed against Esequiel Mascarenas, 36, of Las Vegas, N.M., in Colfax, Harding, San Miguel and Mora counties. He was found guilty of killing deer out of season, exceeding the bag limit, spotlighting while hunting and three counts of possession of deer out of season.

He agreed to pay \$4,500 in civil restitution and was fined another \$2,000 by the courts. He also paid \$600 in donations to Operation Game Thief and \$305 in court costs.

The State Game Commission then revoked Mascarenas' hunting, fishing and trapping privileges

for 10 years, matching the longest revocation in New Mexico's history. Because New Mexico is a member of the Interstate Wildlife Compact, Mascarenas also has been revoked in all 45-member states, meaning he will be unable to purchase a hunting license nearly anywhere in the United States.

"What we got him on was just the tip of the iceberg," said Capt. Ty Jackson, who also worked the case. "This is an example of a true poacher. This was for the sole purpose of personal gratification and bragging rights."

"They were intentionally targeting big mule deer and they knew what animal they were going to kill before they left the house."

## To Catch a Thief

In January 2012, the Raton Game and Fish office received a call about an arrow protruding from a wounded deer in Cimarron. The deer was euthanized due to its wound and evidence was collected, including a crossbow bolt. There was no deer season in the area and hunting with a crossbow was not legal at the time.

Capt. Jackson said a confidential informant hoping to reduce the amount of poaching near Las Vegas, and a separate anonymous call to Operation Game Thief pointed to the activities of Mascarenas and Nick Jaramillo, now deceased. Both callers supplied names and a description of the vehicle, a blue, four-door Buick car. The trunk of the car had been stripped and a drain plug installed to simplify cleaning up the blood.

"Investigations are a process," Capt. Jackson said. "First we had to collect enough evidence to support a search warrant. It takes time, especially in poaching cases because people don't generally poach year-round."

In October 2012 Capt. Jackson filed a request for a search warrant to allow officers to track the Buick in order to document the movements of Mascarenas and Jaramillo for the timely collection of evidence.

The afternoon before Thanksgiving, conservation officers followed Mascarenas and Benjamin Arguello, 38, of Las Vegas, as they drove to Cimarron. Under cover of darkness, they shot a mule deer buck with a crossbow behind the historic St. James Hotel. Unable to find the deer, they drove to Roy, shooting two bucks with a rifle west of the town.

To avoid detection, they called Kevin Archuleta, 26, of Las Vegas, to pick up the deer in his car.



The three arrived at Mascarenas' home after midnight. Officers watched as they unloaded the deer from a small red car.

A search warrant was executed to examine Mascarenas' home and car on Thanksgiving Day.

Conservation officers found a 7mm magnum rifle and Excalibur crossbow, both with scopes, in the trunk of the Buick. A search of the house turned up five buck deer skull caps, two elk skull caps,



deer and antelope capes and two deer killed the night before along with three packages of hunting photos.

"From the photos and other evidence found, we were able to determine the poaching activity had been going on for years, but the total number of deer illegally killed may never be known," Capt. Jackson said. "There were a lot of officers involved who did outstanding work finding the kill sites so DNA could be collected that tied him to the animal.

"Those who were familiar with the areas located blood trails, crossbow bolts and other evidence at all three crime scenes. At one location, the only evidence that a deer had been killed was a spot of blood slightly larger than a half dollar."

Archuleta and Arguello also were convicted for their roles in the case.

"It was satisfying to catch them," Jackson said. "The night we caught them, they drove about 300 miles to shoot three deer.

"This case is not representative of the hunting community; it's about the 1 percent."

## Impact of Poaching

Poaching is the illegal taking of game or fish and can negatively impact wildlife populations across the nation.

When Game and Fish personnel survey wildlife and establish the number of available licenses, it is done so with the thought process of legal take.

"In determining sustainable harvest through licensed hunting, department wildlife biologists take into account many things," said Stewart Liley, chief of the Wildlife Management Division. "They will look at success rates for certain hunts, other population mortality factors, such as predation, disease or starvation, and how the overall population is performing."

Poaching is difficult, if not impossible, to factor into the equation and can be particularly damaging to smaller wildlife populations.

"If we have a lot of excess poaching, there's more mortality than we accounted for when determining license numbers and that can negatively impact herd size," Liley said. "Smaller populations are more susceptible to poaching-related herd decreases. The department heavily monitors smaller populations and hunting opportunities are closely tied to our surveys, so a loss of three or four to poaching on top of licensed harvest can have long-term impacts."

True conservationists understand hunting and angling license dollars are the primary funding mechanism for wildlife conservation efforts. In contrast, poaching dates back to a time prior to modern practices when unregulated and market hunting decimated wildlife populations.

"Hunters support conservation through license sales and that money supports both game and nongame species," Liley said. "Poachers aren't supporting conservation. We have regulated harvest, which has allowed populations of all species to flourish and proper management is critical to maintaining these populations."

Anyone with information about any wildlife crime should contact the department's 24-hour, toll-free Operation Game Thief hotline, (800)

432-GAME (4263). Callers can remain anonymous and may be eligible for rewards if charges are filed. Reports also can be submitted anonymously online at [wildlife.state.nm.us/ogt](http://wildlife.state.nm.us/ogt).

## The Fines

Game and Fish personnel often receive questions about the leniency of fines and lack of jail time in cases involving heinous poaching cases, such as an animal's head being removed and the meat left to waste.

"A warden's job is to make a case against a poacher, but we don't determine sentencing in the courts," Capt. Jackson said. "Our goal is to present a solid case with enough evidence to get a conviction, it's up to the judge to sentence them."

Some cases involving endangered species and wildlife trafficking are federal offenses that can carry stiff fines and jail time.

"Having a poacher pay for their crime begins in court where our goal is to get a guilty plea or verdict," Capt. Jackson said. "If that happens, then we have been successful. Of course, officers are disappointed when there is little or no fine assessed in cases where the crime is a serious offense, but that is not our job."

To promote modern wildlife management practices and discourage poaching, civil assessments for the loss of the state's wildlife have existed in New Mexico for over a century. Civil assessments are separate from the criminal case and often require a separate civil trial. If the animal happens to be especially large, the civil assessment can exceed \$10,000. The State Game Commission adopted the current assessments in 2006, covering elk and ibex to beavers and birds.

"But assessing an individual for the loss of an animal begins with conservation officers presenting a strong case that leads to a guilty plea or verdict," Capt. Jackson said. "If an individual is found not guilty, there is no restitution.

"People who are not satisfied with fines assessed in poaching cases should consider addressing this with their local magistrates," Capt. Jackson said.

*Opposite: Sgt. Kyle Jackson and Capt. Ty Jackson, conservation officers for the New Mexico Department of Game and Fish, kneel behind evidence collected at the home of convicted poacher Esequiel Mascarenas. NMDGF photo*

*Left: Officers found two freshly killed deer at a convicted poacher's residence. NMDGF photo.*



# Opportunity for citizens to aid in conservation

By Leland Pierce



In some areas of New Mexico, the anxious sound of a dog might just be ... a frog.

The two share a common trait: They both bark.

The word is even in its common name, the eastern barking frog. Found in the Chihuahuan desert in southern New Mexico, the barking frog lives in arid conditions and has a limited range in the state.

The New Mexico Department of Game and Fish has a history of monitoring the status of the eastern barking frog, *Crinia australasica*, which can be found in Chaves, Dona Ana, Eddy, and Otero counties.

The appearance of the frog is distinctive, with a broad head and chunky body, but small limbs and enlarged toes believed to aid in climbing.

The adult barking frog is greenish or brown and has dark blotches, whereas juveniles are dark with a light cream band crosswise over the back. The species is much different from most other amphibians in the state, surviving in arid conditions, generally in creosote flats with soils amenable for burrowing to provide shelter from the sun and predators.

The barking frog also differs in how it reproduces. All other amphibians in New Mexico lay eggs that hatch into a tadpole and the tadpole then changes

into a small version of an adult. The barking frog, however, lays eggs that hatch straight into juvenile form, skipping the tadpole stage.

Perhaps most unusual of all is its call.

During breeding season, the male eastern barking frog emits an explosive single note every 2-3 seconds, which, when heard from a distance, sounds like a dog barking. At a closer range the call is more of a "whurr."

Because its habitat is dry and it has limited range within the state, the species was deemed a "Species of Greatest Conservation Need" under the 2006 Comprehensive Wildlife Conservation Strategy. In 2015, researchers from the University of New Mexico, with a grant from the department's Share with Wildlife program, assessed the status of the species in the state.

These people, trained in the call of the barking frog and where to find it, went out to historic sites to determine if the frog was still breeding in particular locations.

The researchers found several important populations in the regions of Roswell and Carlsbad, near the Organ Mountains close to Las Cruces and north of Dell City, Texas, on the southeastern New Mexico border.

Bitter Lakes National Wildlife Refuge near Roswell continues to have a healthy population, but researchers found the project to be challenging because of the nature of the barking frog.

The species is secretive and is only detectible when it is calling to find a mate. That only happens when the right rainfall conditions occur, often just for a few days.

The timing of the barking frog's activity has Game and Fish looking for public assistance.

Within their findings, the researchers recommended using local citizen science volunteers to monitor important areas for the barking frog. Given the tight window of opportunity each year, local volunteers would have the best chance to hear the call of the frogs at the most opportune times.

Department personnel are working with the researchers to set up forms and maps to be given to interested volunteers, along with instructions on how to properly monitor for the barking frog, including identification of the call, and how to submit their data.

The plan is to have everything in place by May, when breeding might begin, depending on rainfall. The objective is to build upon the work already

done by way of citizen science, providing New Mexicans with an opportunity to help the department meet its goal of conserving wildlife for future generations.

Those interested in participating should contact Leland Pierce at (505) 476-8094 or email [leland.pierce@state.nm.us](mailto:leland.pierce@state.nm.us).

*Left: Aptly named, the eastern barking frog sounds like a domestic dog when bellowing for a mate. Unlike any other amphibian in New Mexico, eastern barking frogs do not have a tadpole stage. Instead, they metamorphose within the egg, so there is no aquatic stage in the life cycle. Photo by James Stewart*



## ■ Potential Range of Eastern Barking Frog

The eastern barking frog occurs in the southeastern portion of New Mexico. A study conducted by University of New Mexico researchers surveyed several important populations, including the Bitter Lakes National Wildlife Refuge near Roswell, as well as one not on this map in the mountains near Las Cruces.



Leland Pierce is the herpetologist for the New Mexico Department of Game and Fish. He is entering his 14th year with the department, first as the GIS coordinator and then as a recovery coordinator before taking his current position. Pierce has been involved in the conservation of amphibians and reptiles, particularly in New Mexico, for nearly 30 years.



# Gould's wild turkey in New Mexico

By Casey Cardinal

The wild turkey is a popular game bird throughout the United States, with their excellent eyesight and cautious behavior making for a challenging hunt. The excitement of calling in a tom or hearing the first gobble of the morning will create a lifelong memory.

Turkey hunting wasn't always an attainable pursuit.

Wild turkey numbers dwindled throughout the early 20th century due to over-hunting and poor timber harvest practices, but with the establishment of wildlife hunting regulations, improved habitat management practices and trap-and-transplant efforts, turkey populations have increased substantially.

Habitat management was critical to the recovery of wild turkeys due to their dependence on large trees for roosting, wooded areas for escape cover and mesic open areas for brood-rearing habitat.

There are six subspecies of wild turkey, and New Mexico is home to three: Merriam's, Rio Grande and Gould's.

The Merriam's turkey is the most abundant subspecies, found in most mountain ranges in New Mexico. Rio Grande turkeys are common in several of the state's river valleys.

The Gould's turkey, however, is of particular conservation interest to the New Mexico Department of Game and Fish. The majority of its range is in Mexico, but it does extend into southern Arizona and New Mexico.

The Gould's can be distinguished from other subspecies by its size – it's the largest subspecies in North America – and the white tips on its tail feathers and tail rump coverts.

Preferred habitat types for this species are pine-oak forested canyons into adjacent piñon-juniper grassland slopes and cottonwood-sycamore riparian habitats.

In New Mexico, the Gould's inhabits southern Hidalgo County and occupies major canyons and adjacent foothills in the Peloncillo, Animas and San Luis Mountains, as well as along drainages leading into the middle Animas Valley.

The Gould's turkey was first documented in New Mexico in 1892, after which there were limited records of sightings until the 1980s. A lack of information on the subspecies and its limited habitat range resulted in it being listed as State Threatened in 1975 under the New Mexico Wildlife Conservation Act.

In 1982, researchers at New Mexico State University began gathering information on population status, life history requirements and habitat use. Based on the research, population estimates of Gould's turkeys in the Peloncillo Mountains ranged from 12 to 75 birds in the 1980s and '90s.

Less is known about their status in the Animas and San Luis Mountains because the areas are mostly private property, but a Game and Fish contractor surveyed these ranges about 20 years ago and estimated the population to be 50 to 100 birds within both ranges.

Following the university's research, Game and Fish personnel began annual spring surveys in the Peloncillo Mountains to monitor population trends and determine a minimum population estimate.

Starting in 2006, surveyors began documenting roost use, recording the number of birds encountered and categorizing birds according to age and sex. The number of Gould's detected during the survey has increased from 18 in 2006 to 95 in 2016.

The increase was supported by a translocation of turkeys when New Mexico, in an agreement with the Arizona Game and Fish Department, traded 40 pronghorn antelope for 60 Gould's turkeys.

The 60 turkeys were moved from southeastern Arizona to the Peloncillo Mountains between 2014 and 2016, 27 of which were fitted with radio-backpacks. With this technology, researchers can monitor the turkeys and the data is providing information on dispersal and mortality rates.

Small turkey populations may be vulnerable to inbreeding and genetic drift, which can make them more susceptible to disease and may decrease their biological fitness. Increasing genetic diversity is important so populations are better able to survive future changes to climate, habitat and disease. Transplants provide wildlife biologists the opportunity to boost population numbers while enhancing genetic diversity.

Through population monitoring, habitat improvement and population augmentation, Game and Fish biologists were able to justify a limited

hunt of Gould's turkeys. Two licenses are offered annually, one as a raffle and one as an auction. Proceeds generated from the sale of the licenses fund habitat improvement projects and research efforts for the species.

One such project, in collaboration with funds from the National Wild Turkey Federation and U.S. Forest Service, involved reducing fuel loads around known turkey roost sites. This project reduced the risk of habitat loss due to wildfire and improved access to roost trees.



The goal to downlist Gould's turkeys can best be accomplished by identifying and implementing a recovery strategy along with strong collaborations with federal agencies, nonprofit organizations and the public.

Habitat – areas in New Mexico offering the necessities for this bird to thrive – is limited, but with proper management biologists believe a stable population can be achieved.

*Above: New Mexico is home to Merriam's, Rio Grande and Gould's turkeys. The Gould's, the largest of the three birds, was first documented in the state in 1892. Photo by Chuck Schultz*



*Casey Cardinal is the Turkey and Upland Game Biologist for the Department of Game and Fish. She can be reached at (505) 476-8091 or [casey.cardinal@state.nm.us](mailto:casey.cardinal@state.nm.us).*





# Ears, not eyes

## critical in documenting small birds

Walking through the Sangre de Cristo Mountains in the Santa Fe National Forest offers the opportunity to see wildlife diversity.

Sometimes, however, seeing isn't the best option.

When trying to identify small birds, there are times it helps to close your eyes, stand perfectly still and listen for specific songs. The method requires spending time studying the many different calls any particular bird can make.

"Remembering all the calls can be difficult, but the process is simple: Head out in the early morning and listen," said Kirsten Cruz-McDonnell, chief biologist for Envirollogical Services, Inc. "It takes a lot of prawctice, and I've got 20 years of experience."

For some, the practice may be for pleasure, but for Cruz-McDonnell and Octavio Cruz-Carretero, the work is part of a research project. They have spent the last two years in search of Grace's and red-faced warblers, two understudied species in New Mexico.

The two are working to develop a more accurate statewide population estimate.

"There's little known about them," Cruz-McDonnell said.

The Grace's warbler lives high in pine trees and feeds on insects. That, along with its diminutive size, has made the bird difficult to research because they are difficult to see. In the United States, the red-faced warbler occurs only in New Mexico and Arizona in high-elevation forests.

The purpose of the project, which is partially funded through the New Mexico Department of Game and Fish Share with Wildlife Program, is to estimate population sizes of both species in New Mexico and provide department biologists with baseline data that will help future management.

"New Mexico has a high stewardship responsibility because so much of the population of these two warblers occurs in the state," Cruz-McDonnell said. "But we aren't limited to those two birds. We are cataloging everything we hear or see with the same methodology so we're getting species inventories for the different ranges throughout the state."

The two avian experts are in the process of conducting two-mile transects, a predetermined route used to conduct observations. They stop at up to 20 points for 10 minutes during each of the transects.

"We follow standard guidelines that've been established for conducting point-count surveys," Cruz-McDonnell said. "Consistency is important when trying to determine population sizes and densities in mountain ranges throughout New Mexico. We need one methodology so we can calculate a robust estimate of densities."

Two years into the research effort, they have documented over 100 species, but remain focused on their primary subjects. To do so, the researchers are examining population status in ponderosa pine forest ranges throughout New Mexico, but knowing where they should occur and actually identifying the range are difficult tasks to accomplish.

"Looking at them visually is extremely difficult, especially for the Grace's warbler," Cruz-McDonnell said, noting the small birds tend to stay near the tree tops. "If we were to try and do this visually, we wouldn't get an accurate representation of the population."

Although the work can be tedious at times, two years into the research effort the two biologists have found satisfaction in the findings.

"One thing that surprised me is how common the Grace's warbler is in their specific habitat," Cruz-McDonnell said. "That's good news and I hope we'll continue to document higher-than-expected numbers as our research continues."

Getting out in nature and listening to the many different sounds heard in the wild is a practice Cruz-McDonnell encourages others to try because it provides an opportunity to connect with nature.

"People don't need to learn all the bird calls," she said. "That would be quite a lengthy process. Talking to other birders can help, but there are also many apps available with a variety of calls as well as their historical range."

"Start with the most common species that can be found in a particular area and then work on figuring out the ones that are different."

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*Opposite: Kirsten Cruz-McDonnell, chief biologist for Envirollogical Services, Inc., walked a predetermined route in the Santa Fe National Forest, stopping at up to 20 points for 10 minutes identifying different bird species primarily by their calls. Photo by Zen Mocarski*





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# Turkey Vulture

Did you know ...

Many people refer to this bird as a buzzard, which is incorrect.

The term buzzard in the United States probably is the result of old western movies, but buzzard, in Europe, refers to a member of the *buteo*, or hawk family.

The turkey vulture's diet consists almost entirely of carrion. Its scientific name, *Cathartes aura*, translates to "golden purifier," which seems fitting for a bird that spends a good deal of time cleaning the desert free of charge.

This is important for humans," said Peggy Darr, nongame avian biologist with the New Mexico Department of Game and Fish. "Turkey vultures are disposing of dead things that could otherwise become a breeding ground for disease."

But, the vultures aren't without standards, preferring relatively fresh meat.

"Unlike most members of the avian world, turkey vultures have an excellent sense of smell to go along with a good sense of sight," Darr said. "They can find a dead animal without actually seeing it."



Their sense of smell is so good, they can detect odors at just a few parts per trillion. So, they simply need to take flight, soar low to the ground and let their sense of smell do the rest.

That is an important adaptation because turkey vultures are not designed to be effective at hunting live animals.

"Their feet are flat and weak and not well-designed for grasping," Darr said. "Unlike the strong talons many raptors possess for grasping prey – such as hawks and eagles – the turkey vulture has blunt talons that aren't made for holding their quarry."

Many people have likely seen this bird along roadsides cleaning up messes left behind after a wildlife-vehicle collision. That's just one reason this bird is a common sight throughout New Mexico, especially from late spring until mid-autumn.

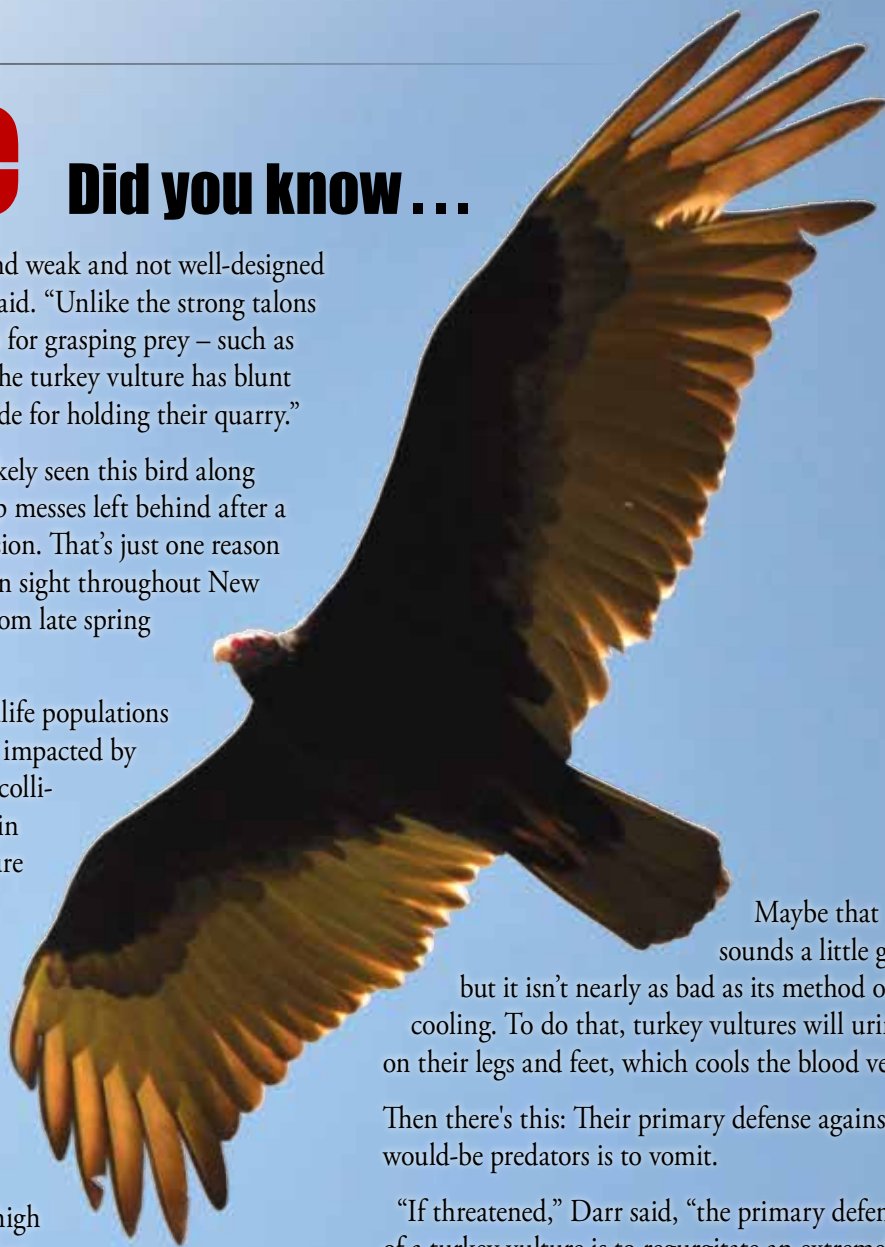
Although many wildlife populations have been negatively impacted by humans, the vehicle collisions may help explain why the turkey vulture population has been on the rise since the 1960s: an abundant, easy-to-locate food supply.

At times they can be seen soaring above, catching thermals and rising high above the ground. Even at higher altitudes they are easily identified because turkey vultures appear rather awkward in flight, often wobbling side-to-side and rarely flapping their wings. The underside of the wings is silver and there's a noticeable V-shaped look to the wings when in flight.

The other identifying trait turkey vultures possess is their size. Outside of eagles, this is the largest bird a person will find in New Mexico, with a wingspan of 5 to 6 feet and an overall length over 2 feet.

Among the most common sightings is this bird perched with its wings spread wide. The assumption that a turkey vulture does this as a way to warm up in the morning sun is correct, but there is another reason.

"It has to do with a turkey vulture's diet," Darr said. "The ultraviolet light from the sun burns off bacteria after eating and standing on dead animals."



Maybe that sounds a little gross, but it isn't nearly as bad as its method of cooling. To do that, turkey vultures will urinate on their legs and feet, which cools the blood vessels.

Then there's this: Their primary defense against would-be predators is to vomit.

"If threatened," Darr said, "the primary defense of a turkey vulture is to regurgitate an extremely foul-smelling, somewhat digested, batch of meat."

Even a skunk would be envious of the odor, which is pungent enough to drive most predators from a nest and, if caught feasting on the ground, provide time to escape. Releasing its most recent meal also reduces the load, allowing the vulture to take flight a bit more quickly.

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*Top: The underside of a turkey vulture's wings is silver and they form a noticeable V shape when in flight. Unlike most bird species, a turkey vulture has a keen sense of smell and can locate a potential food source before it is seen. NMDGF photo by Zen Mocarski*

*Left: A pair of turkey vultures rest on a rock at Lake Roberts. With a wingspan of 5 to 6 feet, they are the second-largest bird species in New Mexico, next to eagles. NMDGF photo by Dan Williams*