

New Mexico

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Wildlife

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Game and Fish biologists honored for conservation efforts

Two New Mexico Department of Game and Fish biologists have been honored by peers for their wildlife and fishery conservation work.



Leland Pierce, the department's amphibian and reptile biologist, was awarded the New Mexico Chapter of The Wildlife Society's Professional Award at the organization's annual meeting Feb. 5 in Flagstaff, Ariz.

Bryan Bakevich, the department's Rio Grande cutthroat biologist, was named the Arizona-New Mexico Chapter of the American Fisheries Society's Professional of the Year award.

Leland helped develop and implement recovery plans for numerous wildlife species and was instrumental in coordinating a revision of the department's biennial review of New Mexico's threatened and endangered species. He also helped bridge the gap between wildlife and geospatial communities for use in wildlife management arena.



Bakevich worked on the Rio Costilla Rio Grande Cutthroat Trout Restoration Project, one of the largest inland native trout restoration efforts in North America. The project's record of success helped keep the native trout off the federal list of endangered species.

Game and Fish officer wins prestigious award

The consistency, diligence, and professionalism displayed by New Mexico Department of Game and Fish Corporal Curtis Coburn resulted in his being named the 2015 Shikar Safari Club Officer of the Year.



"I am grateful that I was nominated and selected," Coburn said. "It is special. Nearly 12 years ago, as a new hire, I walked by the plaque in the Santa Fe office with my parents and I told them one day my name would be on it."

Coburn, who was also named New Mexico Officer of the Year by the National Wild Turkey Federation, was involved in many facets of wildlife conservation and law enforcement throughout the year. Two projects in Lincoln County alone encompass over 27,000 acres of public lands.

These projects currently involve: removing encroaching piñon-juniper and cat claw to reinvigorate herbaceous plants, grasses, and woody shrubs; increasing the nutrient value of plant species, and; creating more edge effect to benefit all wildlife species utilizing the area.

Coburn also led a habitat fence modification with local ranchers and land management agencies. The primary focus was to develop wildlife-friendly fences to allow wildlife, especially pronghorn, the ability to roam in an area historically inaccessible since the inception of sheep fencing in those areas.

Approximately 30 modifications have been made, spanning 27.5 miles, and pronghorn in the area are now seen in areas previously inaccessible.

Worthy of Consideration

Many organizations in New Mexico are dedicated to wildlife conservation, habitat improvement and wildlife-related recreation. Whether you are interested in hunting, fishing, trapping or wildlife watching, chances are there is an outfit you'll deem worth supporting. Here are some of them:

New Mexico Quail, Inc.
John Moen, (575) 644-3936

Ducks Unlimited, New Mexico
Cindy Wolfe, cjwolfe@gilanet.com, (575) 854-3365

New Mexico Chapter, Wild Sheep Foundation
Lanny Rominger, (505) 821-5064

New Mexico Trout
newmexicotrout@gmail.com, www.newmexicotrout.org

The Nature Conservancy
www.nature.org/newmexico

New Mexico Wildlife Federation
(505) 299-5404, www.nmwildlife.org

Rocky Mountain Elk Foundation
(505) 892-1250, www.rmef.org

Sportsmen for Fish & Wildlife
(505) 486-4921

Trout Unlimited, New Mexico
(505) 470-4878, www.newmexicotu.org

Audubon New Mexico
(505) 983-4609, <http://nm.audubon.org>

New Mexico Muskies, Inc.
Matt Pelletier, (505) 264-2999, www.newmexicomuskiesinc.org

Friends of the Bosque del Apache National Wildlife Refuge
(575) 878-2320, www.friendsofthebosque.org

Albuquerque Wildlife Federation
(505) 281-4609, <http://abq.nmwildlife.org>

New Mexico Council of Outfitters and Guides
(505) 440-5258, www.nmoutfitters.com

Southwest Consolidated Sportsmen
(575) 526-5056

New Mexico Wild Turkey Federation
(505) 869-3837, www.nwtf.org

Safari Club International
Brian Payne, b_payne10@msn.com.

Southeast New Mexico Wildlife, Inc.
(575) 393-2895

New Mexico Trappers Association
(505) 897-0719, www.newmexicotrappers.com



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.

New Mexico State Game Commissioners

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William "Bill" Montoya, Vice Chairman, 125 Little Creek Hills Road, Alto, NM 88312
Robert Espinoza, Sr.—P.O. Box 6792, Farmington, NM 87499
Ralph Ramos—921 Jana Court, Las Cruces, NM 88005
Robert Ricklefs—167 West Cito Road, Cimarron, NM 87714
Elizabeth Atkinson Ryan—P.O. Box 1612, Roswell, NM 88202
Thomas "Dick" Salopek—975 Holcomb Road, Las Cruces, NM 88007

New Mexico Department of Game and Fish

One Wildlife Way, Santa Fe, NM 87507 1-888-248-6866
Alexandra Sandoval, Director
Donald Jaramillo, Deputy Director
Chris Chadwick, Assistant Director
James Comins, Assistant Director

Regional Offices

Northwest: 3841 Midway Pl. NE, Albuquerque, NM 87109 . (505) 222-4700
Southwest: 2715 Northrise Drive, Las Cruces, NM 88011 . . (575) 532-2100
Northeast: 215 York Canyon Road, Raton, NM 87740. . . . (575) 445-2311
Southeast: 1912 W. Second Street, Roswell, NM 88201 . . (575) 624-6135

Online Licenses, Applications and Harvest Reporting

License Sales and Applications . . . <https://onlinesales.wildlife.state.nm.us>
Harvest Reporting www.wildlife.state.nm.us

Important Telephone Numbers

Gen. Information, License Sales and Harvest Reporting 1-888-248-6866
Bear and Cougar Zone Closure and Harvest Hotline . . 1-877-950-5466
Hunter Education Program Information (505) 222-4731
Off Highway Vehicle (OHV) Information (505) 222-4712
Operation Game Thief 1-800-432-4263
24-hour Depredation Hotline 1-888-727-4883
TDD (number for hearing impaired) (505) 476-8143

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Cover: Eric Frey, sportfish program manager and recipient of the Director's 2015 Wildlife Conservation Professional of the Year Award, holds a rainbow trout prior to release in Eagle Rock Lake. NMDGF photo by Karl Moffatt

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Eric Frey of the New Mexico Department of Game and Fish slipped a big trout into the emerald green waters of Eagle Rock Lake and grinned as only an angler can.

“Just look at this beauty,” said the department’s sport fisheries manager as he released the 18-inch rainbow. “Somebody’s in for a big surprise at the end of their line.”

Building Healthy Fisheries

Catchable-size bargains at half the price

By Karl Moffatt

Big fish like that represent an estimated \$7.40 investment in angler satisfaction, and the response to the department’s big fish stocking program indicates it’s been a huge success.

“An incredible response, lots of trophy trout pictures being posted,” Frey said. “We couldn’t be happier with the outcome.”

The program is an example of the department’s ongoing commitment to keeping its customers happy.

Last year, the department’s six hatcheries spent about \$3 million to grow and stock an estimated 9.3 million fish, including trout, bass, catfish, bluegill, walleye, and salmon.

Then an estimated 179,000 licensed anglers rigged up to catch them.

The big fish stocking program, which began last year, continues this fishing season with plenty of lunkers being added to routine loads of catchable-sized fish destined for popular fishing holes.

The big fish are a real thrill to catch and have made many anglers excited about the sport again.

“I don’t know what they’re feeding them down at the hatchery, but they need to keep it up,” said Josh Anspach Hanson, 34, of Albuquerque. “It’s sure made my fishing really exciting again.”

Hanson was one of the lucky anglers who got into some of the monster stockers the department planted in the Red River above and below the fish hatchery in the fall of 2014.

Most of those big fish had been raised at the hatchery for routine stocking in Shuree Ponds on the Valle Vidal. But because of drought-induced low water levels at the ponds, the fish had to be released elsewhere.

There were other big fish making their way into northern waters at that time, such as the first generation of trout raised at the Los Ojos Fish

Hatchery since it was closed for decontamination of whirling disease several years earlier.

About 1,000 fish had to be held over at the hatchery to ensure they were free of the disease. They grew to around 17 inches each before being stocked in nearby Hopewell and Canjilon Lakes and the Chama River.

Some of those big trout from the two hatcheries were caught by fly anglers on the catch-and-release waters of the Rio Costilla. Kids were pulling them out of fish hatchery ponds and places like Tingley Beach. Even remote Charette Lakes, far out on the plains of eastern New Mexico, got a load of the big fish.

And the response from anglers couldn’t have been better, Frey said.

So a plan was hatched to keep growing bigger fish at several northern New Mexico hatcheries to augment regular loads of catchable-size, stocked rainbows.

This year, fish hatcheries at Red River and Los Ojos will raise thousands of trout in the 15- to 17-inch range for stocking in about 20 selected lakes and ponds.

Anglers can find out where the big fish are stocked by checking the weekly fishing and stocking report posted on the department’s website, www.wildlife.state.nm.us.

Anglers in New Mexico also get plenty of bang for their angling buck from the year-round stocking of “catchable” trout in the 10- to 12-inch range. Frey said those trout are raised at the department’s hatcheries and cost about \$1.50 each to raise and deliver.

Northern fishing waters were stocked with about 2.3 million trout from March to October in 2015. An estimated 1.3 million fish were stocked in winter trout waters in the southern half of the state from October through March. About 32 percent of those trout were catchable size and the rest mostly fingerlings.

“Our catchable trout are a bargain compared to what an angler would pay at a private fishery,” Frey said. “And we can produce and stock our big fish at half the cost of what a commercial fishery charges.”

Catfish are also popular sport fish the department regularly stocks and anglers love to eat.

The department paid about \$3 each for an estimated 27,000 catfish averaging 18-inches in length and weighing about two pounds each for stocking in 2015, Frey said. Those fish were put in special “Big Cat” waters such as Oasis Park Lake, Bosque Redondo, and the Roswell Kids Pond, where anglers can catch and keep two fish.

The department also is raising 3- to 15-inch catfish at its Rock Lake Fish Hatchery in Santa Rosa that are being stocked in New Mexico fishing waters. Most of the smaller fish are expected to grow to a catchable size of 12 inches or more. The larger cats are being stocked into select waters during the spring to kick-start the summer catfish angling season.

Opposite: Anglers have reaped the rewards of the New Mexico Department of Game and Fish big trout program. Last year, the department’s six hatcheries spent about \$3 million to grow and stock and estimated 16 million fish. The program continues in 2016. NMDGF photo by Dan Williams.

Increased access with Open Gate

Landowners earn extra revenue with a hunting or fishing lease



The New Mexico Department of Game and Fish is actively seeking the cooperation of private landowners willing to allow access to public hunters, anglers and trappers.

This cooperation comes with a financial incentive and other benefits through the department's Open Gate program.

“Open Gate is a voluntary leasing program that provides private landowners with incentives to allow public access for hunting, fishing, and trapping,” said Ryan Darr, Open Gate coordinator.

Darr said landowners may participate in two ways: allowing public access directly to a private parcel for hunting, fishing or trapping; or providing right-of-way access to public lands where exceptional fishing, trapping or hunting opportunities exist and access is limited.

Participating private landowners receive multiple benefits, including monetary compensation, flexible lease agreements, liability protection, signs installed to manage access, and conservation officer patrols during open seasons.

“This is a win-win situation for all involved,” Darr said. “Game and Fish helps improve overall access for hunting, fishing and trapping, and the participating landowners receive compensation.”

Payments are based on property location, acreage, type of wildlife habitat, and the

hunting, fishing and/or trapping opportunities that will be permitted. The lease must support public hunting or fishing and provide access for the duration of the agreed season.

“It’s important to understand that none of the money for the program comes from the state’s general fund,” Darr said. “Open Gate leases are provided solely from hunters, anglers and trappers when they purchase Habitat Management & Access Validation stamps.”

The department is accepting applications for the Open Gate program. Qualifying landowners are encouraged to apply early and all applications are subject to evaluation prior to leasing.

Left: Monastery Lake, an Open Gate property in the Pecos River Canyon, is regularly stocked with trout and provides good handicap access.

Below: Those with questions, or wanting to apply should contact Ryan Darr, Open Gate coordinator (right), at (888) 248-6866 or visit the department website at www.wildlife.state.nm.us or do a keyword search for "NMDGF Open Gate."



Above right: New Share with Wildlife plate, released in late 2015, sports a picture of a mule deer.

Program releases new Share with Wildlife license plate

By Ginny Seamster



For those looking for a quick, inexpensive way to support wildlife conservation in New Mexico, the Department of Game and Fish has the solution: the new mule deer Share with Wildlife license plate.

The initial cost for the plate is \$27, of which \$15 goes to the Share with Wildlife Program. The entire \$12 plate renewal cost each subsequent year also goes to Share with Wildlife. All money donated to the program goes to funding Share with Wildlife projects; none of it goes to program administration.

The program has supported wildlife research, habitat enhancement, education and rehabilitation projects since 1981.

In the past 10 years, it has provided over \$1 million for more than 100 projects intended to further the conservation and management of species that do not receive funding from other sources, primarily nongame species.

The most recent plate features a mule deer, but Ginny Seamster, the program coordinator, hopes to continue expanding the options available to the public. She said she'd like to see a hummingbird on the next plate as it is the program's symbol.

The new plate does not replace the original Gambel's quail, which is still available. The Share with Wildlife plates can be obtained by filling out an application for a wildlife artwork plate available on the New Mexico Motor Vehicle Division's website. It can also be purchased in person at an MVD office, but call ahead to make sure the plate is in stock.

Share with Wildlife depends on donations from the public. These funds are matched with federal dollars to maximize the amount of money supporting New Mexico's wildlife.

For additional information e-mail Seamster at virginia.seamster@state.nm.us.

Building Healthy Fisheries

Eagle Rock Lake

By Karl Moffatt

Following the loss of a mine that sustained the Questa economy for years, the small village needed to look in a new direction.

As it turned out, a quick peek outside a window provided a potential solution: outdoor recreation.

That transition recently received a boost as the New Mexico Department of Game and Fish partnered with Chevron Mining, Inc., Trout Unlimited, Questa Economic Development Board, the Bureau of Land Management and U.S. Forest Service on a fish habitat improvement project at Eagle Rock Lake and the Red River.

The project, which cost over \$800,000, involved installing large boulders and tree trunks as well as reconfiguring the streambed to increase pools and create better places for fish to live. Gravel bars were built to increase river channel sinuosity, and new trails and bridges were developed to improve angler access.

While improvements were being made to the river reaches, Chevron was busy dredging and relining adjacent Eagle Rock Lake. The river and stream project were connected by a new trail system that created a unique angling opportunity.

The nearby Red River that feeds the lake received in-stream habitat improvements along with riverside trails, footbridges and other park amenities.

"This is a real plus for us as we transition from a mining-based economy to one more focused on outdoor recreation and tourism," said Alberta Bouyer, Questa's tourism director of the project.

"It's a really nice aquatic park where folks can fish and have fun in a beautiful mountain setting," said Eric Frey, sport fish program manager for the department.

The longtime Chevron molybdenum mine at Questa, which sustained the local economy for generations, shut down for good in June 2014 due to poor market conditions.

Sitting pretty in one of the best outdoor recreation areas in New Mexico, the village is trying to capitalize on the state's thriving tourism sector and attract more visitors seeking outdoor fun.

The effort makes sense considering Questa is near the Rio Grande del Norte National Monument and the Hondo/Columbine Wilderness. The Valle Vidal, Costilla Park and Latir Peak Wilderness are also nearby as well as much of the Carson National Forest.

"We're a small, historic village surrounded by unspoiled wilderness and that's what makes us unique," Bouyer said. "This project will really help as we work to promote ourselves as one of the best fishing, hiking and camping destinations in the state."

"These two projects will tie in nicely and make the area more attractive to visiting anglers and help promote tourism," Frey said.

Fly shop owner and Trout Unlimited member Nick Streit of Taos Fly Shop agrees.

"It's going to be a popular place," he said. "We've been working on this for years and it's exciting to see the finished product."

As a result, the fishing in the area can't be beat.

The Red River has rebounded nicely from poor habitat conditions and now supports a resident population of feisty brown trout and is regularly stocked with rainbow trout from the hatchery.

The nearby Rio Grande Gorge within the national monument continues to provide anglers with excellent fishing for wild rainbow and cutthroat trout, while the Rio Costilla in the Valle Vidal boasts some of the best



open-meadow fly-fishing for native cutthroat trout in the state.

Funding for the Eagle Rock Lake and Red River improvements came from the sales of fishing and hunting licenses and proceeds from habitat stamps purchased by hunters and anglers along with their licenses.

Apple Mountain Construction of Estancia and Riverbed Engineering of Albuquerque handled the design and construction of the river improvements. Chevron Mining, Inc., took care of dredging and lining the lake on U.S. Forest Service land.

For more information about Questa and what it has to offer, visit www.questa-nm.com. Anglers can find the latest fishing conditions for Eagle Rock Lake and Red River in the department's weekly fishing and stocking report at www.wildlife.state.nm.us/fishing/weekly-report.

Above: Eagle Rock Lake and the Red River near Questa have undergone renovations town officials believe will help boost an economy impacted by the closure of the longtime Chevron molybdenum mine. The town is in an area that provides some of the best outdoor recreation in the state and officials hope to capitalize on outdoor recreation activities, including fishing. NMDGF photo by Karl Moffatt

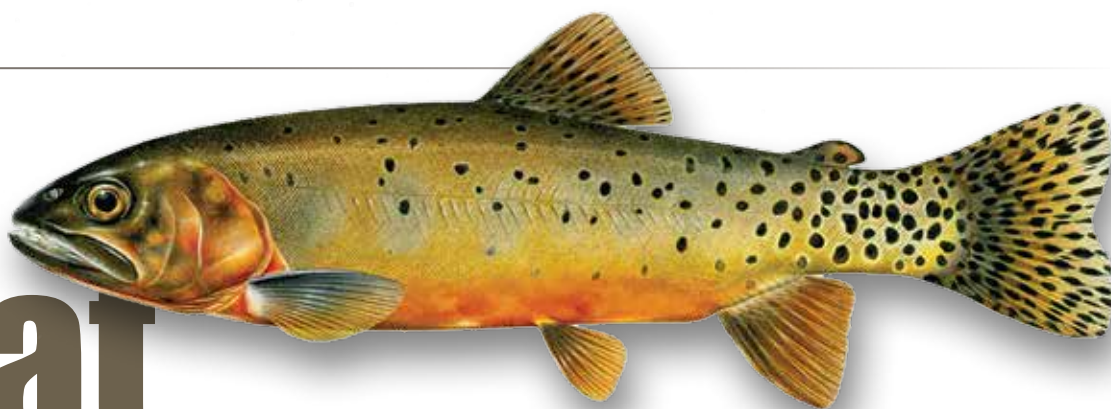


Karl Moffatt is a writer, photographer and spokesman for the New Mexico Department of Game and Fish.

Bad weather lifts Stewart
Lake to top of the list for

Cutthroat

By Zen Mocarski



Katherine's loss was Stewart's gain. No, that's not the plot for a movie to appear in theaters soon, it's the story of a wilderness adventure to stock Rio Grande cutthroat trout into high-country lakes.

Lake Katherine was the original Pecos Wilderness destination in October, but weather called for a change of plans and a group of fisheries biologists with the Department of Game and Fish made a snap decision and it was off to Stewart Lake instead.

As a result of the inclement weather, Stewart Lake, in the Santa Fe National Forest's Pecos Wilderness, received 800 Rio Grande cutthroat trout of Pecos lineage.

While Lake Katherine remains on the list to receive cutthroats, it missed the opportunity to be the first to be stocked with these fish in over a decade.

"It's been a while," said Laurence D'Alessandro, coldwater biologist with Game and Fish. "We haven't spawned these cutthroats in the Pecos in 10 to 15 years."

The state fish of New Mexico, the Rio Grande cutthroat is a subspecies of cutthroat trout and is the only native cutthroat in the state.

In recent history, the subspecies have been stocked only in the Rio Grande drainage.

"But those aren't of the Pecos lineage," D'Alessandro said. "These are probably my favorite cutthroat because they're such a pretty fish."

"I'm excited about restoring a native fish to its historic range and to be providing future opportunities for anglers to catch them. The long-term goal is to create a better native cutthroat fishery."

The possession limit for the cutthroats is two with unlimited catch-and-release. However, anglers shouldn't get too excited just yet.

First, the stocked fish were no larger than two inches in length and will not reach catchable size for two years or more. Secondly, it isn't the easiest lake to wet a line. Located directly west of the Cowles ponds, the lake is a five-mile hike from the trailhead.

Still, D'Alessandro said the lake receives moderate use.

"There's good habitat for trout at this lake," he said. "It has the depth, low-lying debris, and cold water. These are a high-elevation fish."

The remote location and high elevation were only part of the challenge facing the personnel. The crew had to spawn the cutthroats out of

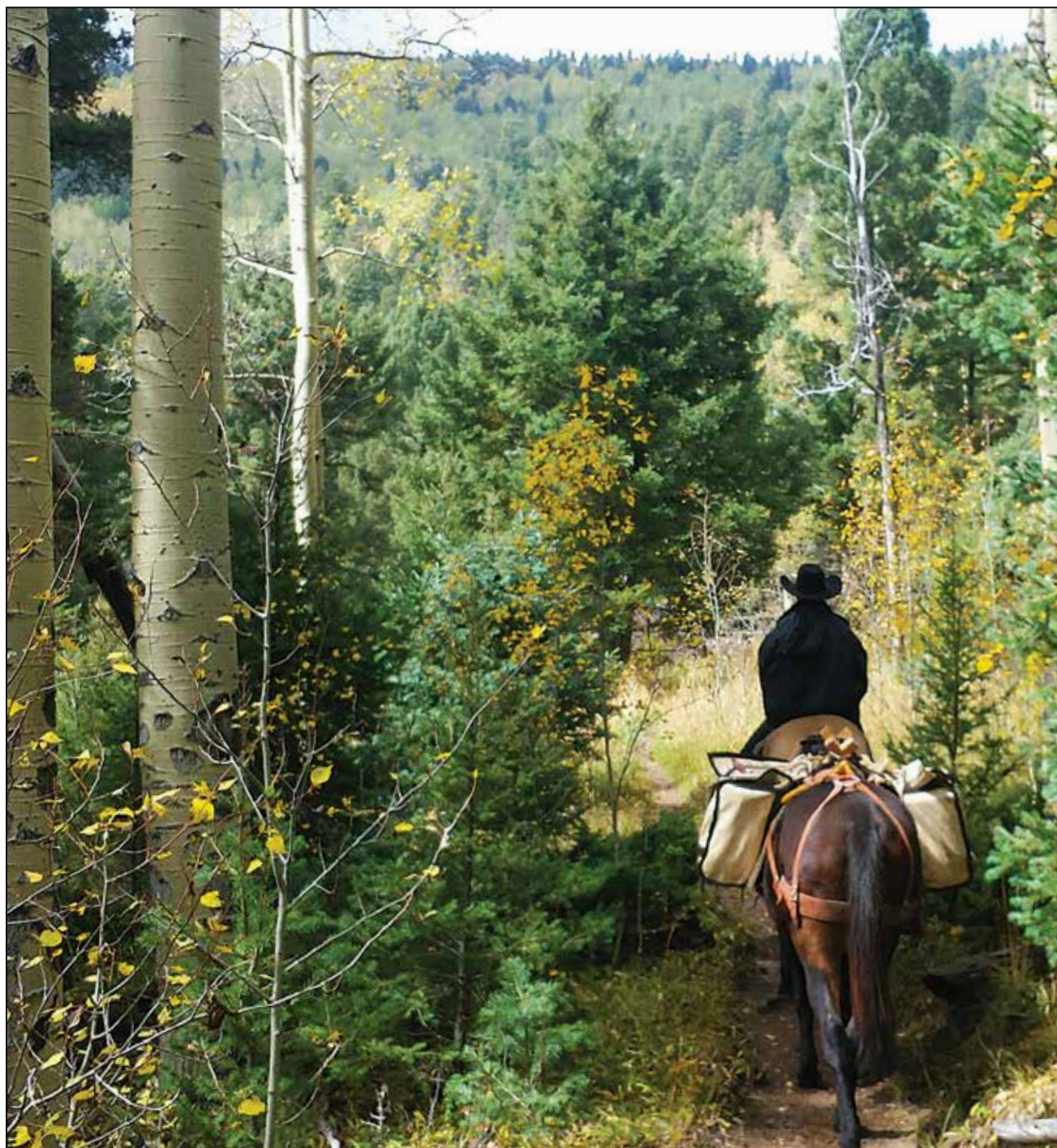


Jack's Creek and needed Lisboa Hatchery, which normally raises rainbow trout, to set aside room to raise the cutthroats.

"That was huge," D'Alessandro said. "This was a big effort. We had native and sport fish personnel involved. Then, to get the fish up to the lake we utilized a conservation officer and his mule."

While this was the first stocking in the Pecos, it isn't the last. There is a list of potential locations for continued stocking efforts in 2016 ... including Katherine Lake.

Opposite (left): Rio Grande cutthroat trout await stocking into Stewart Lake. The fish remained in bags and were placed in the shallow water to provide time to acclimate to the water temperature prior to release; (right) A conservation officer's mule proved invaluable in getting the fish to the final destination at Stewart Lake.



Above: (left) Laurence D'Alessandro, coldwater biologist for Game and Fish, poses momentarily with a bag of Rio Grande cutthroat trout prior to stocking. (right) Tommy Heck, the department's Pecos District officer, rides his mule loaded with Rio Grande cutthroats to their Stewart Lake destination. NMDGF photos by Laurence D'Alessandro.



Zen Mocarski is the NMDGF Information and Education Division's magazine editor.

Top 10 places for kayak fishing

By Zen Mocarski

Fishing is fishing, but kayak fishing is a whole different experience.

Shoreline anglers often are limited by the access points and the distance an individual is willing to hike for solitude. With a kayak, finding the 'road' less traveled becomes a more realistic prospect.

New Mexico Department of Game and Fish personnel sat down and discussed some of the best potential kayak-fishing destinations for those wanting an experience that will take them off the beaten path. Below, in no particular order, are their top 10 choices.

Be sure to check the local weather forecast for your desired destination and always wear a life jacket. Strong winds can result in some dangerous swells on New Mexico lakes. Those heading out can check out the latest fishing reports at www.wildlife.state.nm.us.

Fenton Lake State Park

This popular state park provides the closest large waterbody trout fishing for many in the Albuquerque metro area. With motor boats restricted to electric trolling motors, this is a quiet spot and a favorite for anglers with canoes, kayaks and waders.

About 70 miles northwest of Albuquerque in the Jemez Mountains, this 37-acre man-made lake provides a stunning scenic view of ponderosa pine. With the cool forest,

multi-colored volcanic cliffs, and great fishing, it is a top spot to go paddling. If lucky, you might just encounter an angler better than yourself as osprey nest in the summer and are seen flying over the water in search of trout.

The lake is stocked regularly with rainbow trout and is home to some large brown trout. Not far up the road is the Seven Springs Fish Hatchery and youth pond, which occasionally stocks Rio Grande cutthroat trout from its tanks.

Directions: Off N.M. 126 in the Jemez Mountains approximately 20 miles north of Jemez Springs. **Contact:** (575) 829-3630.

Heron Lake State Park

At over 7,000 feet, this quiet, high-elevation lake is surrounded by ponderosa pines and picturesque cliffs. With approximately nine square miles of surface area, the lake can serve as host to many recreationists without feeling crowded.

The lake is currently 80 feet low and only kayaks, canoes, and trolling boats are allowed. If water levels rise, sailboats and motorized boats are allowed, but only at no-wake speeds, meaning there will be no jet skis or water skiers. When it comes to angling, the question at this lake is what to pack for your trip. With fantastic fishing for kokanee salmon, rainbow trout and lake trout, you'll want to be sure and bring a variety of baits and lures.

Heron Lake has gorgeous views of mesas to the west, high peaks to the north and the dramatic Brazos Cliffs to the east.

There are campsites at Heron Lake State Park, with many close enough to the water that you can just keep your boat on the beach. Stop at the visitor center and pick up a brochure of suggested paddle trips. If you need a break and want to explore the area, Heron Lake also has a 5.5-mile hiking trail, which crosses the Rio Chama River by suspension bridge and will land you at El Vado Lake.

Directions: Take U.S. 84/285 from Santa Fe to Española. From there, take U.S. 84 North to Los Ojos. Turn left onto N.M. 95 South and Heron Lake will be on your right. **Contact:** (575) 588-7470.

Lake Maloya

Near the Colorado border, this 130-acre lake is in a ponderosa pine forest and is part of Sugarite Canyon State Park near Raton.

Only electric motors are allowed, which makes it great for kayaking and canoeing. Conditions for kayaking are best from mid-spring to mid-fall. No swimming is permitted per a lease agreement with the City of Raton.

This is a quiet, serene location. The ban on gasoline motor boats makes this a great spot to paddle and catch rainbow trout.

Those wanting a break from the water will find places to land and hike on the northwest side of the lake. Nearby is Lake Alice, which does not permit any boating, but has a year-round campground and excellent shoreline fishing.

Directions: Take I-25 to exit 452 at Raton and follow N.M. 72 east for 3.5 miles. Then go north on N.M. 526 for about three miles to the park entrance. **Contact:** (505) 445-5607.

San Juan River below Navajo Lake to Blanco

The San Juan River below Navajo Lake is in the high desert and is fed by the cold water from the bottom of Navajo Lake. This makes for a fantastic location for those wetting a line for trout. While stretches can be busy from the shoreline, drift boats provide an opportunity to use the entire 16-mile run on the San Juan.

This stretch starts from access points below the dam through Navajo Lake State Park to Blanco most of the year. Be sure to have your rod and reel and New Mexico fishing license. It's never a bad idea to check on river flows before your trip. Canoes and kayaks will generally find favorable conditions at 900 cubic feet per second.

As with any fishing trip, it'll pay dividends to know the area and what to pack. This means knowing the dominant food source for the fish at a given time of year. Keep an eye on the Game and Fish fishing report for some helpful tips.

Directions: Approximately 40 miles east of Farmington, the area can be accessed several ways. The shortest route from Farmington is to take U.S. 64 to N.M. 511 N. Then look for a sharp right onto N.M. 539 and it will be on your right. If heading west on U.S. 64, take N.M. 539. **Contact:** (970) 385-6560 or waterdata.usgs.gov/nm/nwis/rt for flow information.

Clayton Lake State Park

Clayton Lake is a beautiful, high plains 510-acre state park approximately 15 miles north of Clayton. It has two miles of shoreline and a depth of about 45 feet along the old riverbed. The park is near New Mexico's border with Colorado, Oklahoma, and Texas with a landscape of rolling grasslands, volcanic rock and sandstone bluffs. While motor boats are permitted, they are restricted to trolling speed only.

The lake was created by the Department of Game and Fish in 1955. Game and Fish has a joint agreement allowing New Mexico State Parks to operate a park on Game and Fish property and anyone who possesses a valid fishing license and is actively fishing is not charged an entrance fee provided they park in the free parking area at the boat ramp. The fishing season on the lake generally runs from March through October. During the winter months, fishing is closed and the lake serves as a resting area for waterfowl. During the summer months, it can be warm during the heat of the day, but is pleasant in the early mornings and evenings.

Lake levels can vary, so it is prudent to call in advance. With trout, catfish, largemouth bass, bluegill and walleye, anglers have options at this lake. Clayton Lake holds every state record walleye since 1980, including the current record of 16 pounds 9 oz. caught on March 19, 1989.

Directions: Head to Clayton and onto North 1st Street. In about ½ mile, turn right onto Clayton Lake Road and continue onto N.M. 370 North. In approximately 10 miles turn left onto N.M. 455 and continue to the park. **Contact:** (575) 374-8808.

Quemado Lake

Quemado Lake, approximately 20 miles south of the Town of Quemado, is nestled between piñon-juniper woodlands and pine forests at an elevation of nearly 8,000 feet. It is an out-of-the-way spot that offers uncrowded waters and great fishing. The surrounding U.S. Forest Service recreation area includes the 131-acre lake with two ADA fishing piers, two boat ramps, developed campgrounds and access to more than seven miles of hiking trails. Boat use is restricted to oars or electric motors.

Trout are the primary sport fish in this man-made lake. While tiger muskie is primarily catch-and-release, anglers can keep one tiger musky 40 inches or larger.

Directions: From Quemado take N.M. 32 south 14.2 miles to Quemado Lake/N.M. 103 sign. Turn left at the sign onto N.M. 103 and go four miles to Forest Road 13. Continue straight for one mile to the campground. **Contact:** (575) 773-4678.



Opposite: Kayak fishing provides an opportunity for anglers looking for some tranquility to reach more remote locations where they can enjoy some time alone. NMDGF photo by Dan Williams.

Above: Fenton Lake (top) provides the closest large-body-of-water trout fishing for many in the Albuquerque metro area. Heron Lake (center), while 80 feet low at the time of publication, remains a fishing hot spot for kokanee salmon, rainbow trout and lake trout. Trout are the primary sport fish at Quemado Lake (bottom), which sits at nearly 8,000 feet above sea level and provides a picturesque scene for those looking for some tranquility. NMDGF photos.

Bluewater Lake State Park

Because motorized boats and waterskiing are permitted at this lake, it might not be the best choice for a summer kayak fishing trip. However, consider a weekday in the spring or fall when visitation is slower and temperatures aren't quite ideal for water sports.

Why? New Mexico has world-class tiger muskie fishing at Bluewater Lake State Park. Tiger muskies aren't overly picky when it comes to bait, biting on everything from crankbait and flies to hotdogs and water dogs. While this fish is primarily catch-and-release, anglers can keep one tiger muskie 40 inches or larger. Although the tiger muskie is the primary appeal, the lake also holds rainbow trout and channel catfish.

If you go fishing here, it's a good idea to first learn about safely catching and releasing tiger muskies. This fish has sharp teeth and a delicate nature, which dictates special precautions and equipment.

In addition to the fishing, anglers will enjoy the beautiful ponderosa pine-clad Zuni Mountains in the background. The park, west of Grants, also offers camping, hiking, birding and horseback riding.

Directions: Take I-40 to N.M. 612 and follow to the lake. **Contact:** (505) 876-2391.

Taos Junction Bridge to Pilar

This particular trip is on a relatively calm segment of the river with no significant rapids. However, there are other hazards such as the cold water that can result in hypothermia, so those new to kayaking might want to get comfortable with their equipment before this visit. Put in at the Taos Junction Bridge and you've got six miles of waterway down to the Orilla Verde Campground.

Before departing, consider what you'll be looking to catch. The primary catch in this area will be rainbow and brown trout, but cutthroats are possible along with smallmouth bass and northern pike. Pike provide a bit of a challenge and you'll need to pack items specific to reeling in one of these fish, such as flashy lures, big streamers on a fly rod, or a Rapala, which is also good for the larger browns.

This can be a crowded area for kayaking, especially on warm-weather weekends, so consider a visit during cooler times or weekdays.

This stretch, beginning at the bridge, is not far from Taos and there are developed campgrounds in several areas. This reach also has some great takeouts and boat ramps that make access easy. The trip will provide beautiful natural scenery and abundant shoreline areas to take a break.

Directions: Heading north on N.M. 68 from Pilar, turn left onto N.M. 570 and follow about six miles to the Taos Junction Bridge. **Contact:** (575) 758-8851.

Rio Grande Below Elephant Butte

If having a lot of access to the Rio Grande is your goal, the river below Elephant Butte is a relatively tame 10-12 miles. You can enter the river at Elephant Butte Dam State Park and finish at Caballo Lake State Park. Fishing this stretch is good throughout the year. During the spring and early summer, you're likely to land white, smallmouth and largemouth bass, walleye, and catfish. A bit farther downriver, trout will be your primary catch during the winter months between October and March.

There are several perks to kayak fishing in this area, one of which is that kayaks can be rented at Elephant Butte. In addition, for a multiple-day trip, there is camping just below the dam, although reservations are on a first-come, first-served basis. The Town of Truth or Consequences also has a variety of services.

Water releases from the dam can vary depending on the time of year and can be somewhat turbulent during irrigation season, so be sure to check flows in advance. The water feeding the river comes from lower depths in the lake and is cold, so be sure to dress appropriately before taking to the river.

Directions: Take I-25 to exit 83 (N.M. 181/195). Turn onto N.M. 181/U.S. 85 for about ½ mile. Turn left onto N.M. 195. You'll go through the Town of Elephant Butte and follow to the state park entrance. **Contact:** (575) 894-6661, Ext. 105.

Eagle Nest Lake State Park

Surrounded by mountains and rolling hills, this lake provides a great scenic experience. Motorized boats are allowed on this lake. However, this alpine lake sits at an elevation over 8,000 feet and the water is cold. As a result, water skiing, jet skiing and swimming are not recommended.

For those wishing to kayak fish during the summer, this lake provides a break from the heat and has a variety of facilities, including boat ramps, 19 developed campsites, restrooms, trails, wildlife viewing and picnic areas. The lake offers 16.5 miles of shoreline, meaning those wishing to find a secluded spot should be able to do so. The primary species for anglers are rainbow and northern pike, and yellow perch. Kokanee salmon are also present in the water.

Remember to dress appropriately for the cold water. Check the forecast before leaving because strong afternoon winds can lead to rough water.

Directions: From Española, follow N.M. 68 North and U.S. 64 East to Fisherman's Lane and continue on until reaching Eagle Nest Lake State Park. **Contact:** (575) 377-1594.

Below: For anglers wishing to try kayak fishing, Elephant Butte rents kayaks, providing an opportunity to test the waters before investing heavily in equipment. Among the benefits of kayak fishing is being able to reach locations not accessible from the shore. NMDGF photos by Dan Williams.



When the trash piles up,
there's nothing like having a tiger
to clean things up.

In 2004, when "trash" fish such as white suckers and illegally introduced goldfish provided less than an ideal angling experience at Bluewater Lake, the New Mexico Department of Game and Fish decided it was time to bring in the tigers to clean up.

Tiger muskies, that is.

A relatively long-lived, large predatory fish, tiger muskies have improved angling opportunities that will continue for years as stocking of these fish resumed in 2015 following a three-year hiatus.

"We wanted to allow some time for the population to thin," said Eric Frey, sportfish program manager at Game and Fish. "The time was right to begin stocking again."

Because tiger muskies are sterile, a continuing influx of the fish is necessary to maintain a population and Game and Fish acquires fingerlings, fry or eggs from out-of-state sources.

"It's important to ensure there aren't large gaps in the year classes with fish species that we manage in New Mexico and these fish were last stocked in 2012," said Shaun Green, coldwater fisheries biologist with Game and Fish.

A benefit to the exceptional clean-up effort by the tiger muskies is that, for the first time since the spring of 2014, the department resumed stocking rainbow trout at Bluewater.

You put the two together and Bluewater Lake has become a fishing hot spot.

"They've done their job," Green said of the muskies. "In the process, Bluewater Lake has become a premier New Mexico destination for anglers wanting the challenge of landing tiger muskies."

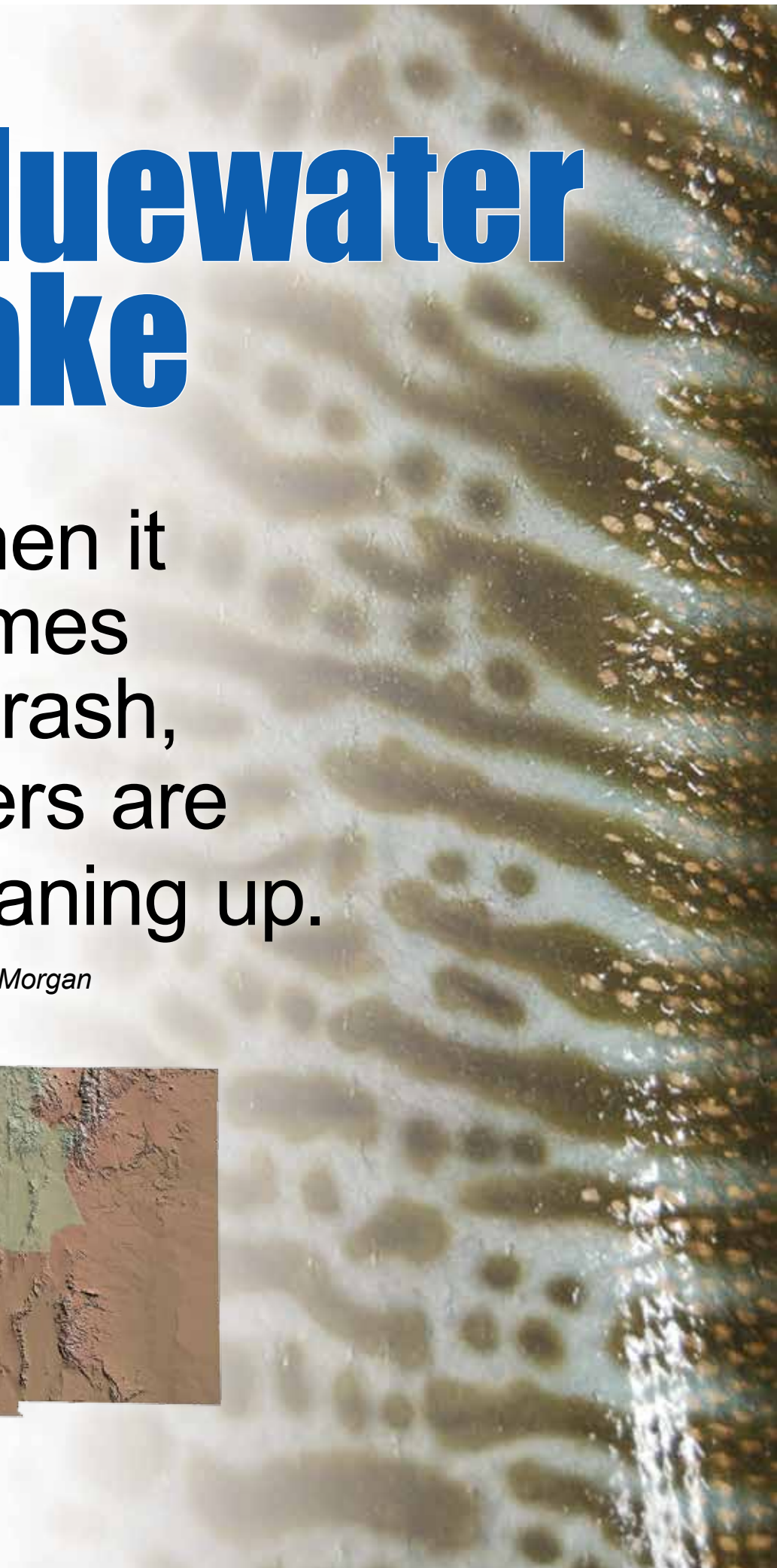
Matt Pelletier of New Mexico Muskies, Inc., and a fishing guide at Bluewater Lake, knows about the popularity of these fish and offered some advice.

"For best results, 6- to 12-inch lures work wonderfully and sometimes you can land a fish on 15- to 20-inch stuff," he said. "Whatever you choose, make sure it's rigged to an 18- to 30-inch long steel leader. You'll also need heavy line on your spool, 40 to 80-pound test, depending on the size of the lure being used."

Bluewater Lake

When it comes to trash, tigers are cleaning up.

By Ross Morgan





Once hooked, there's some cautionary steps involved for both the fish and angler. Tiger muskies have some large teeth and anglers need to be careful to avoid potential injury. However, despite their size and teeth, these fish can be somewhat temperamental.

While the possession and bag limit is one tiger muskie 40-inches or greater, most practice catch-and-release. As a result, it's important to become educated before heading to the lake.

Delayed death of a fish can occur when not properly released or handled, especially when lake temperatures are high.

A Game and Fish instructional video on protecting yourself and the fish can be found at [youtube.com/watch?v=QgnXbndViB8](https://www.youtube.com/watch?v=QgnXbndViB8) and a brochure on tiger muskies can be found on the department website, www.wildlife.state.nm.us.

While tiger muskies can be caught year-round, it's best to avoid the warmer months. When water temperatures exceed 70 degrees, which is typically in July and August, there are reduced oxygen levels, making the muskies a bit lethargic and they aren't as actively feeding.

The record tiger muskie for Bluewater Lake is over 50 inches and 38 pounds. However, these fish grow quickly and the record's been repeatedly broken.

While the tiger muskies are doing their job, it is important not to compound the problem, and those visiting the lake should be sure to check the regulations for legal bait.

Left: After a short hiatus, stocking of tiger muskies resumed at Bluewater Lake in 2015. The muskies, which are sterile, were introduced into the lake to help control populations of white suckers and illegally introduced goldfish. The introduction created a whole new adventure for anglers looking to land one of these large, predatory fish. Photo by Mark Sawyer.



Ross Morgan is the Department of Game and Fish public information officer and conservation officer for the Northwest Area. He can be reached in Albuquerque at (505) 222-4707 or ross.morgan@state.nm.us.

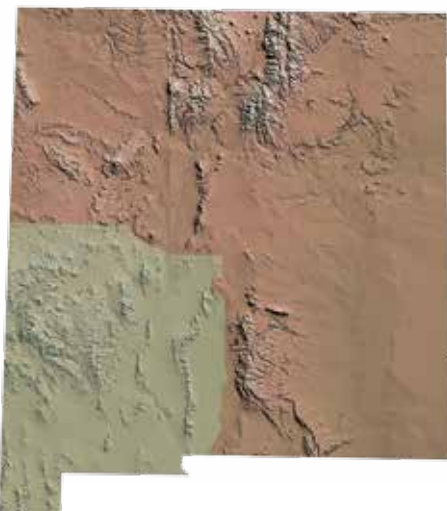
Armendaris Youth Hunt

Getting kids out

By Jeremy Lane



There was no need for words following the Armendaris Youth Small Game Classic.



Top: Clarence Seagraves, a volunteer guide, and his dog Copper, lead the way for a youth hunter during the Armendaris Youth Small Game Classic.

The looks on the faces of the young participants said it all.

“To see the youths and their families enjoying time hunting and being outdoors, and to see the smiles on their faces when they harvested their first quail was thanks enough,” said Jennifer Morgan, hunter education program coordinator with the New Mexico Department of Game and Fish.

In only its second year, the hunt is designed to introduce youths to the sport. To be eligible, the young hunters, ages 12-17, had to successfully complete a hunter education class, but never have held a hunting license.

“Many youths take hunter education and then never follow through with hunting,” Morgan said. “We don’t want to lose these kids. Getting them out with mentors helps remove the barriers that may have been preventing them from following through.”

For the Dec. 11-13, 2015 hunt, 10 youths were randomly selected from a pool of 40 to participate. The fortunate hunters and their parents

or guardians assembled on the Armendaris Ranch near San Antonio, N.M., for an all-inclusive weekend of target practice, bird hunting, educational presentations, food and comradery.

The festivities began with attendees receiving goody bags that included blaze orange caps and quail calls. Clay target practice was first on the agenda with the shotguns, ammunition, targets and throwers all provided by Game and Fish.

Jessica Fisher, the department’s youth shooting sports program coordinator, and David Stambaugh, director of the New Mexico Youth Conservation Foundation, provided instruction and advice on the use of shotguns.

And, to make sure the youths understood the target species (quail, doves and rabbits), Tim Mitchusson, a retired Game and Fish biologist now with the Friends of the Bosque del Apache, provided instruction about game identification.



At dinner that evening, the youths were provided hunting licenses paid for by the Foundation for North American Wild Sheep, and Conservation Officer Ross Morgan reviewed pertinent rules and regulations. Food provided by the Rocky Mountain Elk Foundation was served and names were drawn for raffle prizes ranging from hats and sweat-shirts to a free quail mounting service from a taxidermist.

After all the first-day instruction, the kids were ready to get in the field. While cooler temperatures may have dropped the thermometer readings, it was hardly enough to dampen their spirits.

“They were ready to get out and start their hunts,” Morgan said. “It was fun to watch as the kids got ready. They were all excited to begin the journey from novice to experienced hunter.”

Excited faces gathered around a table to learn where they would be hunting. The youths were randomly assigned into pairs and then drew for their hunting areas and volunteers with trained bird dogs loaned their animals’ services for an even better experience.

“All the people and organizations that donated their time and money are what makes something like this possible,” Morgan said. “These are people that understand the need to get youths involved in outdoor activities. Memories are made outside.”

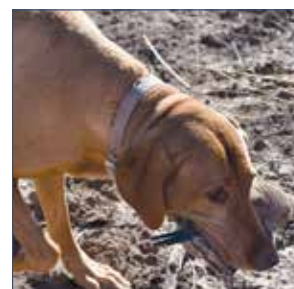
The hunters spent several hours scouring the countryside, learning to work with their dog partners, admiring the occasional treed raccoon, and learning firsthand how heavy a shotgun can feel after a long afternoon of hiking.

With the help of the dogs, coveys were located. Harvested birds were used to show hunters how to identify gender and age and how to field-dress their game. However, as they were taught in hunter education, success is simply a matter of perspective: Being afield and experiencing nature is the prize and any harvest is just icing on the cake.

On the final day, the youths changed partners, dogs and hunting areas.

“I never had any experiences like this as a kid,” said James Lucero with the Rocky Mountain Elk Foundation. “We need to expose more kids to hunting, the outdoors and exercise. We need to pass on the hunting heritage.”

This event was made possible through partnerships with New Mexico Game and Fish, Armendaris Ranch, New Mexico Rocky Mountain Elk Foundation, New Mexico Conservation Officer’s Association, Bosque del Apache National Wildlife Refuge, Friends of the Bosque del Apache, New Mexico Chapter of the Foundation for North American Wild Sheep, Rio Grande Chapter of the National Wild Turkey Federation, Bird by Bercier, and the New Mexico Youth Conservation Foundation.



Above: Copper, a Vizsla owned by volunteer Clarence Seagraves, retrieves a bird.

Left (top to bottom): Jennifer Morgan, the NMDGF Hunter Education Program coordinator (center) and Jessica Fisher, the Shooting Program coordinator (right) check out shotguns to youth hunters.

Tim Mitchusson, a retired Game and Fish biologist now with the Friends of the Bosque del Apache, shows youth hunters how to age their quail harvest.

Volunteers guide youth hunters and their parents during their quail hunt.

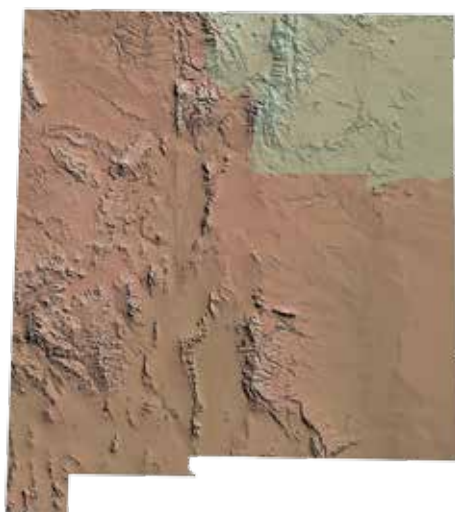


Jeremy Lane is the Department of Game and Fish public information officer for the Southwest Area. He can be reached in Las Cruces at (575) 532-2100 or Jeremy.lane@state.nm.us.



Time to get out A few of my favorite places

By Clint Henson



Spending 20 years as a conservation officer in northeastern New Mexico has introduced me to many unique and fantastic locations. I have been fortunate to see the diversity of wildlife and explore some of the most beautiful country this state has to offer.

Of course I'd like to keep my favorite areas to myself, but that would conflict with my desire to get people outdoors. As I have traveled around the state and spoken to people, it is amazing to find out how many are unaware of the outdoor opportunities New Mexico has to offer.

The connection people once had with nature has become more distant and there are many avenues available to re-establish that relationship. This is critically important for youths, who then develop a healthy respect for the environment and, ultimately, work to protect our natural resources.

Valle Vidal

Consider if you've always dreamed of visiting Yellowstone National Park, but wanted a bit more solitude than the destination hotspot.

Well, New Mexico might have the replacement location for you: Valle Vidal.

About 50 miles west of Raton in the Carson National Forest sits Valle Vidal, 100,000 acres I like to refer to as New Mexico's Yellowstone, and the time to visit is quickly approaching.

Because the area can be inaccessible in winter due to poor road conditions and seasonal closures for areas deemed critical resting habitat for elk and calving season in the spring, the best time to visit is in the summer and fall. You won't regret setting aside the time to travel to this location: it's stunning.

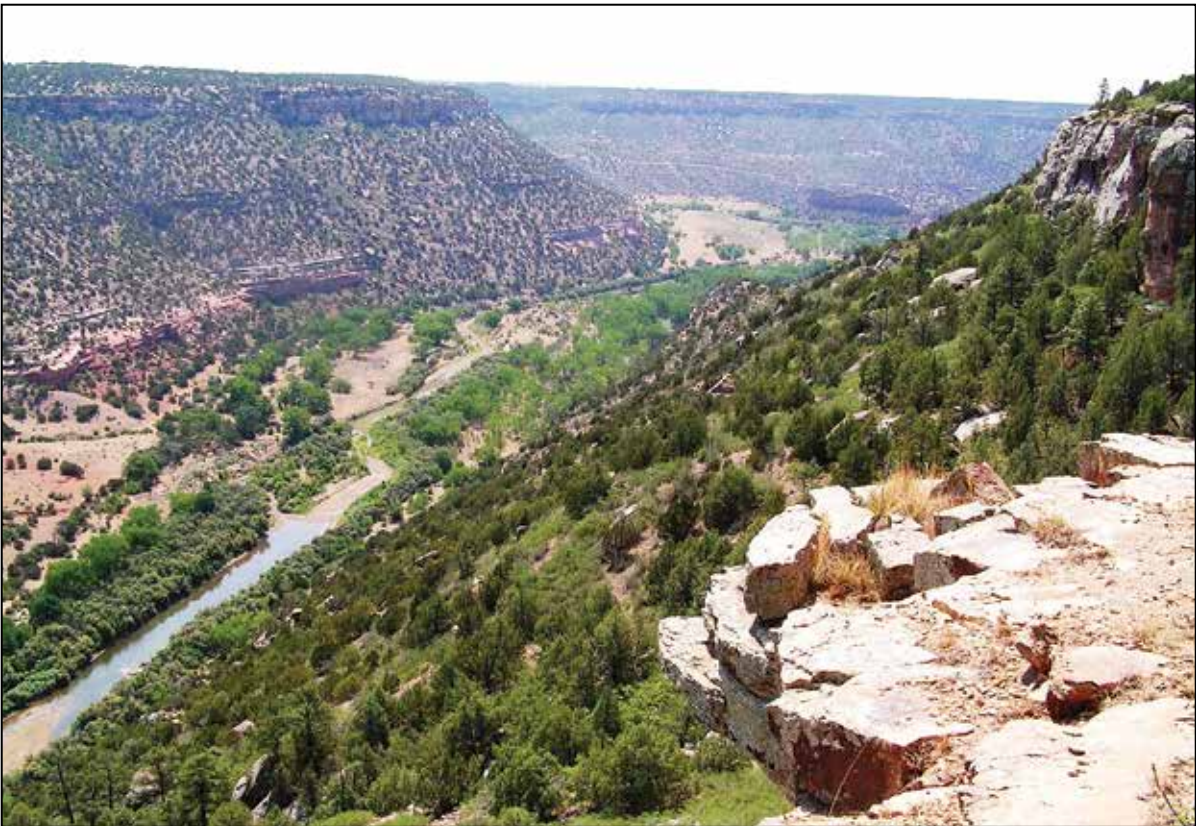
The area has big open meadows surrounded by aspens that turn golden in late September. And that's just the scenic views; wildlife is abundant throughout the area. This area provides the whole package for those wanting to commune with nature.

There are two U.S. Forest Service campgrounds in the area, but you can backcountry camp as long as you leave your vehicle in a designated parking spot and hike at least a half-mile from the road. Visitors are welcome to park anywhere along the road for day hikes. Just a few steps from your car and you'll be far away from everyone and, with no off-road vehicles allowed, your experience won't be interrupted.

There is some world-class fly fishing on the west side of the area, so make sure to pack your rod.

It is important to remember that summer weather can be unpredictable and temperature drops, even during the warmer months, can be extreme. Those visiting should check the forecast and bring some extra clothing as a precaution.

Above: Reaching Goose Lake is an adventure in itself and requires a high-clearance vehicle. But getting there is just half the fun. The entire area provides a wonderful outdoor experience. Hiking up the ridge will provide a wonderful view of Wheeler Peak and, if you're lucky, some bighorn sheep.



The Valle Vidal (top) will provide visitors with the wonders of Yellowstone National Park without all the foot traffic. Located west of Raton in the Carson National Forest, the time to visit the Valle Vidal is nearly at hand. While it might be a little difficult to find, Mills Canyon (bottom) provides an opportunity to spend time outdoors without another person in sight.



Clint Henson is the northeast area captain for field operations and was formerly the public information officer in Raton.

Goose Lake

For those looking to put their 4x4 to the test, Goose Lake, just south of Red River, will provide a good outdoor experience. The road is rough and visitors will need a high-clearance vehicle to get there ... and back.

There is a small parking lot at the lake and many nearby places to pitch a tent.

From Goose Lake you can hike up the ridge and get one of the best views of Wheeler Peak. There are usually a few bighorn sheep wandering around the area, too. Seeing them is always a treat, but remember to view from a distance and, when possible, remain at a lower point than the sheep.

Goose Lake is a great place to fish, but the water is crystal clear and the fish can see you as well as you can see them. This means you need to be sneaky to not scare them away. This is a popular day drive for off-highway vehicles, but few people stay the night.

Mills Canyon

Among the best-kept secrets might be Mills Canyon, a place I really like to visit when it's time to get away from everything. Northwest of Roy, this is the place to go if you don't want to see another person. Mills Canyon is totally hidden if you just drive by on the highway.

You seem to drive along the flat plain then suddenly drop into a huge canyon carved by the Canadian River. The canyon bottom is sandy with huge cottonwood trees. There are some catfish in the river, but you might simply enjoy jumping in to cool off in the summer.

Camping is all primitive.

Clayton Lake

For those visiting the northeastern part of New Mexico, Clayton Lake is another place to visit even if it's only to stop and see the dinosaur tracks. For those looking for a place to camp from an RV, Clayton Lake is a good choice.

New Mexico is filled with amazing places to get outdoors and connect with nature. Get out and find your favorite spots. Remember, take only photographs and leave only footprints.

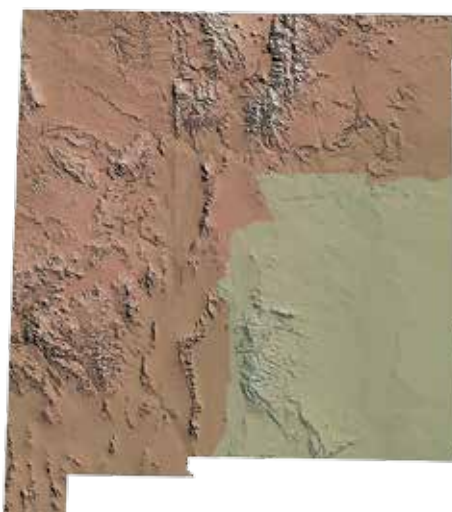
Salad shooting

yearlong bowhunt preparation

By Mark Madsen



Although hunting season is over and the holidays have passed, you may want to think twice before packing away your bow.



Top: While the bow hunting season might be over, putting away your archery equipment might be a mistake. The most successful bow hunters continue to practice in the offseason and salad shooting can provide the means to stay sharp. NMDGF photo by Mark Madsen

That's a mistake a lot of bow hunters make; storing their bow until shortly before next fall's hunting seasons.

For bow hunters, year-long practice is essential to success. Archery is all about form and physically making the shot the same way every time. If your form is off it will directly affect the flight of the arrow and even seasoned bow hunters can get a little rusty if they don't regularly practice.

In order to maintain good form, bow hunters have a variety of options. Simply shooting at a bull's eye or 'block' type target on a regular basis can help. Others prefer to shoot at 3D targets to help maintain good shooting form and shot placement. Both methods can be done in the backyard (where legal) or in any open field or empty lot.

The problem with just shooting at foam targets is that it can become mundane, boring and expensive.

Another method of staying in practice for bow hunting is called roving or stump shooting. Of course having stumps to shoot helps and tree stumps are in short supply in the desert southwest unless you're fortunate enough to live in or near the mountains.

Instead of stump shooting, consider "salad shooting." This involves using plants such as yuccas, cactus, small bushes, and even

sunflowers as your intended target; hence the name 'salad shooting.'

Not only are potential targets plentiful in the desert, but salad shooting allows the bow hunter to practice estimating distances to each target. Yardage estimation is a critical skill for a bow hunter and can make the difference between a successful hunt and a discouraging one. Pick a target, make the shot and then step off the distance or use a range finder to find the actual yardage.

Salad shooting, like target shooting, can take place in any open field or lot. Even better, salad shoot in the same area or terrain where you plan on hunting. Practice with the same bow and arrows you plan on hunting with and, if possible, wear the same clothes you use during a hunt.

Change out your expensive broadheads for cheap blunts or judos before you go. They are durable and won't damage the vegetation.

Whether it be a compound, recurve, or long-bow, salad shooting allows the bow hunter to practice shots at various yardages and shooting positions depending upon the terrain.

Salad shooting will help a bow hunter to work on another necessary skill: spot and stalk. You will find that stalking a prickly pear cactus or yucca is fairly easy; they don't see well, can't



smell or hear you, and they don't move very fast. If your miss with your first shot, follow-up shots are normally pretty easy, which will provide an opportunity to perfect those stalking and/or sneaking skills.

Experienced bow hunters learn to "pick a spot" when hunting; don't aim for the entire animal or, in this case, plant. Focus on a small spot on your target and make the shot. And, honest salad shooters always "call the shot" before they shoot.

Ever try hitting a two-inch sunflower at 20 yards with a blunt-tipped arrow? Choosing an individual sunflower or prickly pear cactus fruit forces the bow hunter to focus on a small spot to make the shot. Remember the old adage "aim small, miss small."

This year, instead of putting away that bow, try roving, stump shooting or salad shooting. You owe it to yourself and the animals you hunt to make every shot count.

Yearlong practice with your bow could make the difference when that shot of a lifetime presents itself.

Left: Some of the different arrow tips include a rubber blunt arrow point (left), a bludgeon (center), and a clawed-blunt tip (right).

Right: Using one of these tips, bow hunters can "stalk" their prey, which might be prickly pear cactus or yucca. Try to pick a specific spot on the plant and come as close to hitting that mark as possible.

NMDGF photos by Mark Madsen.



Mark Madsen is the Department of Game and Fish public information officer and conservation officer for the Southeast Area. He can be reached in Albuquerque at (575) 624-6135 or mark.madsen@state.nm.us.



Mutualistic relationship critical for **pinyon jays and piñon pines**

By Peggy Darr

Pinyon jays and
New Mexico go together
like peanut butter and jelly.

Or, in this particular case,
more like piñon pines
and their seeds.

These long-billed, sky-blue jays are found in piñon-juniper habitats throughout the west, including New Mexico. In fact, it is estimated nearly one-third of the world's pinyon jay population resides within New Mexico's borders.

There are many reasons to admire this bird, not the least of which is its commitment to its mate. Pinyon jays are monogamous (have only one mate). The couples are so faithful that a researcher in Arizona, who separated couples and placed them with other attractive individuals, could not get them to "cheat" on each other.

This seems more impressive considering the highly social nature of this bird. They occur in large flocks that may contain more than 500 individuals and are rarely seen alone. Many jays remain in their birth flocks for the duration of their lives and flocks nest in large colonies, usually in the same general location year-after-year.

As suggested earlier, the pinyon jay has a close relationship with the piñon pine tree and its seed. This relationship is critical to both for survival: For the jay it's a means of sustenance and for the tree, it is dependent on the jay to spread its seeds.

The pinyon jay specializes in collecting, transporting, and caching the seeds. In a good year, one pinyon jay may store in the ground approximately 2,600 pine seeds. As members of the same family as crows and ravens, which are known for their intelligence, pinyon jays are among the smartest of birds.

Individual jays can remember where they cached approximately 95 percent of their piñon seeds and, even after several months have passed, they can remember thousands of locations even if the spots are under snow. In addition, given their monogamous nature, members of a pinyon jay couple ensure they know where their partner's seed stash is hidden — a bird version of a life insurance policy.

The relationship with the piñon pine comes from the 5 percent the jay forgets in the ground, effectively planting new piñon pine forests. The relationship is so intertwined that one cannot survive without the other.

The news isn't all good for this brightly-colored bird or the pine. While New Mexico remains a haven for the pinyon jay, these birds are not doing particularly well. Since

the 1960s, it is estimated that pinyon jay populations throughout the west have declined by more than 80 percent, making their population among the fastest declining of the western forest bird species.

The reasons are varied, including the past clearing of piñon-juniper woodlands and die-offs of piñon pine due to drought and bark beetle attacks. Researchers are also looking at the potential impacts of climate change.

These factors have left the pinyon jay with an uncertain future and, as a result, has been listed by the New Mexico Department of Game and Fish as a Species of Greatest Conservation Need. The department is working with a variety of partners to protect and improve pinyon jay habitat so future generations of New Mexicans may continue to enjoy this smart and social bird while ensuring the continued seeding of piñon pines throughout its range.

Left: Pinyon jays can remember, months later, and even under snow, the locations where they have stored piñon pine seeds. The few locations that are forgotten promotes new growth. The relationship between the tree and the bird is critical to the survival of both. Photo by Mark Watson.

Editor's note: While most New Mexicans are familiar with the spelling, "piñon," when referring to the jay, the tree or the nut, the American Ornithologists' Union, the organization responsible for standardizing common and scientific bird names, prefers "pinyon" as the official common name of the jay.



Peggy Darr is the Department of Game and Fish nongame avian biologist at headquarters in Santa Fe.



Biologists are branding fish in a quest for answers

By Zen Mocarski



Following the old adage, "there's always a bigger fish," New Mexico Department of Game and Fish biologists are collecting information to determine the size at which catfish have the best chance to survive.

Simply stocking thousands of catfish might draw anglers to a water, but it doesn't always translate into an enjoyable experience, especially if those fish are being quickly consumed by other fish.

Shawn Denny, a Game and Fish warm water fisheries biologist in Roswell, is part of a group

trying to enhance catfish survival rates and, in turn, improve the experience of anglers visiting warm water locations.

"We've stocked thousands of small channel catfish with a low survival rate," Denny said, adding that the research is not associated with the big catfish program. "If they don't survive, then raising and stocking small fish is not an effective use of funds.

"In addition, stocking a large, expensive fish is a waste of funds if we can raise smaller fish and have them grow naturally."

The question Denny and others are trying to answer is the ideal size of the fish being stocked, but trying to monitor fish is no easy task.

Personnel considered a number of options including electronic markers (PIT tags) and anchor tags. But, for reasons such as expense, they were each shuffled to the side.

Branding, however, isn't overly costly and, during surveys, the fish will provide the information needed to make effective decisions.

However, a hot branding iron isn't something you'd use on fish. Instead, it's a method known as cold branding, which has been used on livestock and at fisheries since the 1960's.

"You're gonna what?" Denny said of comments received when he spoke to a local welding company supply store when he asked about the need for some liquid nitrogen to freeze-brand catfish.

The process was used to mark channel catfish produced at the Game and Fish warm water hatchery in Santa Rosa.

Before going full-scale, biologists tested the method on a number of fish to determine short- and long-term mark retention.

It worked, and using a variety of marks ranging from dots and bars to angles, biologists began branding large numbers of fish prior to stocking. During sampling, biologists will know the size of the fish when they were stocked and that they weren't wild born.

"Now we'll know if they were stocked and how much they grew during an established time frame," Denny said. "We're also able to determine a specific growth rate and see if it is in an acceptable range."

Denny said several factors impacting survival rates are well known, such as cold weather

stocking and predatory fish. Where they are present, largemouth bass and tiger muskies are known to have significant impacts on small catfish.

Pinpointing the ideal size, however, has proven elusive.

Denny is looking at factors such as stocking fewer 7-inch fish with a better chance of survival than thousands of 3-inchers that are easy prey.

Over the next year, biologists will be surveying the stocked catfish using baited hoop nets. Initial research suggests, in locations where predatory fish such as largemouth bass and northern pike are present, the survival rate for stocked channel catfish at 7 inches is much better than at 4 inches. The effort, however, is ongoing in order to obtain the necessary data to make science-based decisions.

"We'll know how quickly they're growing," Denny said. "It is not effective to stock fish if it takes 10 years to reach a harvestable size."

And, when they reach that ideal size, the bigger fish won't have the same impact and those wishing to bring catfish home for dinner will have a better experience on New Mexico waters.

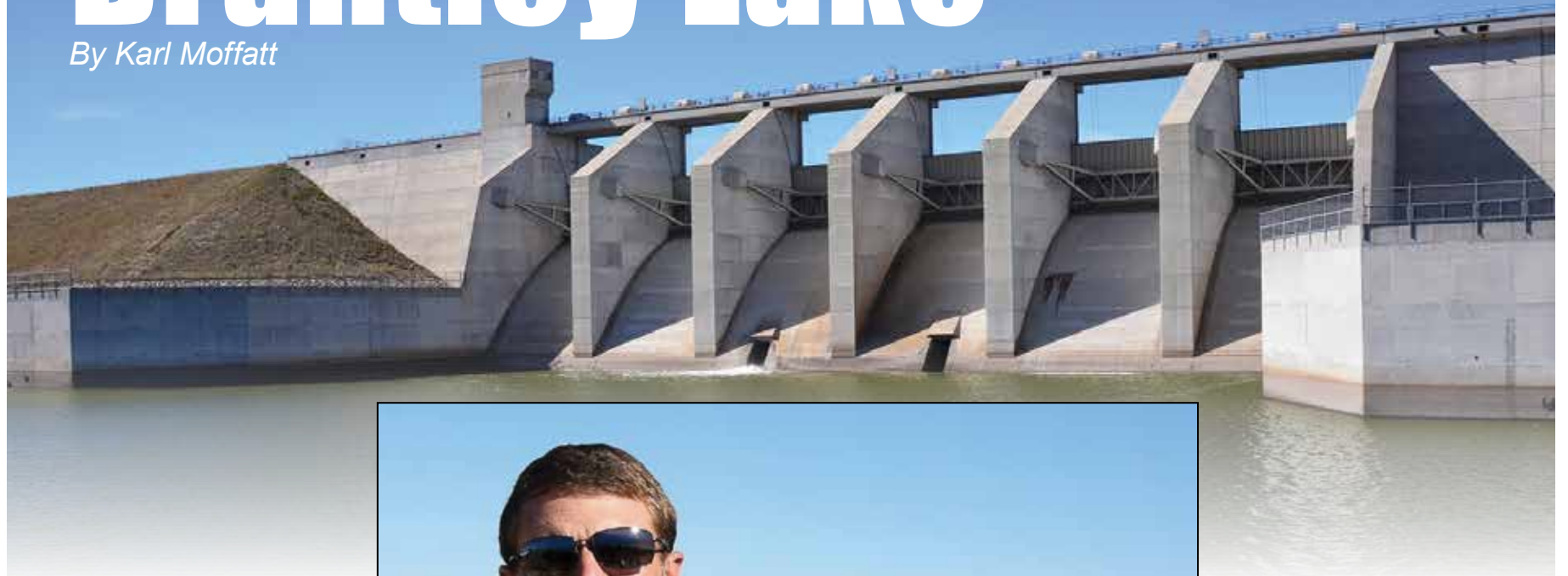
Left: (left to right) Richard Hansen, NMDGF cold water supervisor, John Caldwell, native fish biologist, Eric Mammoser, warm water technician, Casey Harthorn, retired NMDGF, and Jason Blakney, former coldwater biologist, work to cold brand the fish.

Below: Freeze-branding a channel catfish. NMDGF photos.



Time right to reacquaint yourself with Brantley Lake

By Karl Moffatt



Anglers who have abandoned Brantley Lake as a prime fishing destination may want to reconsider in 2016.

Following recent improvements, the lake is shaping up as a hot spot for catfish and bass this spring.

“Conditions haven’t been this good in years,” said Shawn Denny, warm water fisheries biologist with the New Mexico Department of Game and Fish. “The lake is back up and so are the number of bass and cats. I’m betting the spring fishing will be excellent.”

In the southeastern corner of the state, Brantley Lake has suffered in recent years from drought-induced low water levels and periodic fish kills from golden algae blooms.

Denny said little is known about what causes golden algae blooms, but it appears most often during winter months and during periods of extreme instability such as low water levels.

While it is not harmful to humans, golden algae produce a toxin that limits a fish’s ability to absorb oxygen. A bloom often results in



massive fish kills. It can be chemically controlled to some degree, but not on a large scale.

Brantley Lake hasn’t produced a bloom since 2007 and recent drought-busting monsoon rains and better winter snowpack have helped improve conditions.

“A nice, stable system without a lot of upheaval seems to keep the algae at bay,” Denny said. “But it always seems to be lurking in the background.”

While it hurt angling opportunities, the drought did play a role in the current conditions. Fish habitat improved considerably due in part to “lake effect,” where shoreline vegetation grows as the lake recedes. When the lake level rises again the submerged vegetation

provides food and shelter for fish.

“We saw historic flooding last year that brought the lake back up,” Denny said. “And if we get good winter snowpack and plenty of spring runoff this year, the fishing should be exceptional.”

Recent fish surveys at the lake found plenty of hefty channel

catfish in the 18–24-inch range and lots of largemouth bass 12–16-inches.

Denny is hoping the favorable conditions will produce plenty of baitfish and crawdads on which the fish can thrive.

Brantley Lake remains under a “catch and release” order from the state Game Commission due to detection of the now banned insecticide DDT (dichlorodiphenyltrichloroethane) in some fish.

Above: Shawn Denny, warm water fisheries biologist for the department, shows off a typical bass found at Brantley Lake during fish population surveys in late 2015. The spilling basin at Brantley is reputed to be a great fishing hole.

Recreational Opportunities

Denny said the department continues to monitor the situation and could seek to have the order lifted when a sufficient number of fish show little or no evidence of the highly persistent chemical.

Bank fishing for bass is relatively easy at Brantley and tips on how to do it can be seen in an instructional video posted on the department's YouTube channel at youtube.com/NMGameandFish.

Brantley Lake State Park, about 12 miles north of Carlsbad, sports two boat ramps and day use areas on opposing sides of the lake. There are two primitive lakeshore camping sites and Limestone Campground, which provides sheltered sites with electricity and water. The campground also features restrooms with showers.

"It looks like it's shaping up to be a really good year," said Leila Haver, New Mexico State Parks marine enforcement officer at Brantley Lake. "When the water's high, the fish thrive. The anglers have been telling me the fishing's been incredible."

Haver said Brantley Lake is an oasis in the desert where visitors can enjoy quiet camping, excellent fishing and stunning sunsets on the outskirts of a major metropolitan area. For those visiting nearby attractions such as Carlsbad Caverns, Sitting Bull Falls and Living Desert Zoo and Gardens State Park, the campground provides an inexpensive alternative to costlier accommodations in town.

The park sees a lot of use by locals on weekends but usually has plenty of camp sites available during the week. Anglers can purchase fishing licenses, bait and tackle at local sporting goods stores.

For more information about Brantley Lake State Park, please visit New Mexico State Parks website at nmparks.com.

To stay abreast of the latest fishing conditions at Brantley Lake, monitor the New Mexico Department of Game and Fish stocking and fishing reports found online at www.wildlife.state.nm.us/fishing/weekly-report.



An aerial view of Brantley Lake in southeastern New Mexico. The lake had suffered from low water levels and periodic fish kills from golden algae blooms, but recent improvement and higher water levels have the lake shaping up to be a fishing hot spot in 2016.

Commission adopts new rules to combat Aquatic Invasive Species



Quagga mussels and other aquatic invasive species can create a host of problems, not just for boaters and anglers but for all the residents of New Mexico. Quagga mussels can damage critical infrastructures and can have adverse impacts on wildlife. Not yet detected in New Mexico, rules have been put into place in an effort to prevent their arrival.

The time to attack invasive species is before they arrive, not after.

All that's needed is to mention states already impacted. The cost to state and federal agencies, as well as the taxpaying public, is extensive.

Although they have yet to be documented in New Mexico, quagga and zebra mussels are among the most damaging. They now infest over 600 bodies of water across the nation.

These invasives cost taxpayers billions of dollars due to damaged infrastructures such as hydroelectric, irrigation and water intakes. They also can lead to population declines and local extinctions of native wildlife.

Because of those threats the State Game Commission approved a number of new rules that went into effect Feb. 12.

In an effort to keep New Mexico free of some highly destructive aquatic invasive species and to stem the spread of others, the amended rules were adopted.

"Not all invasive species are created equal," said James Dominguez, the New Mexico Game and Fish Department's aquatic invasive species coordinator. "Some, such as the zebra and quagga mussels, can have a wholesale impact on the existing environment, including recreation and agriculture.

"Some of these invasive species could thrive in New Mexico waters and, once introduced, getting them out would be expensive and possibly impossible."

The quagga mussel, for example, can live for about five years and can release approximately one million fertilized eggs a year.

New Mexico is one of only six western states to remain free of the invasive mussels. However, it is surrounded by neighboring states where the mussels are established.

The primary method for introduction is water-based activities such as mussels hitching a ride on a watercraft or in bilges, live wells or any other equipment that holds water or remains wet.

In 2007, 1,000 miles farther west than previously documented, quagga mussels appeared in Lake Mead along the Arizona-Nevada border. They quickly spread to other

waterways in Arizona, California and other states in the west.

"By the time you document they're in a water, it's too late," Dominguez said. "The breeding ability of these mussels is virtually unmatched. By the time you find one, there are thousands, maybe millions, and currently there's no method for which to eradicate them."

The most effective deterrent to their spread is to clean, drain, and dry watercraft after each use.

Dominguez said it is important for all watercraft users to know which waters are positive for invasive mussels and the resources available to remove them before boating in New Mexico.

For more information about the rule changes and other news about aquatic invasive species, visit wildlife.state.nm.us/ais or facebook.com/aquaticaliens.

AIS Rule Changes

- Mandatory watercraft inspection required whenever an inspection station is set up and in operation.
- Mandatory inspection and, if necessary, decontamination of all out-of-state registered watercraft or watercraft re-entering New Mexico.
- Fourteen-day advance notification of intent to transport watercraft 26 feet long or longer into New Mexico.
- All boaters are required to "pull the plug" and drain watercraft when transporting in New Mexico.
- Implementation of a voluntary watercraft seal program to expedite boater access to a body of water with limited need for inspection.





Spring fever advice for turkey hunters

By Storm W. Usrey

Above: Found throughout the west, Merriam's turkeys are most often associated with ponderosa pines. The over-the-counter license spring season is April 15–May 10 and the youth-only season is April 8–10. NMDGF photo by Storm Usrey.

For hunters planning to chase gobblers this spring, preparation will be a critical element for a prosperous hunt. Being a successful turkey hunter takes time and effort and, if you are fortunate in taking a tom, it can be an exhilarating experience. Taking some time prior to heading into the field will increase a turkey hunter's odds for success.

Preparation

A successful turkey hunter prepares all hunting equipment in advance of their planned dates to be chasing strutting toms. Make sure your turkey vest/hunting pack is well stocked and organized. A few items to include are turkey calls, decoys, camouflage face mask and gloves, a sharp knife, map and compass, GPS unit, flashlight, spare batteries, water, snacks, first-aid kit, rain jacket, water purification system, whistle, signal mirror, waterproof matches and fire starter, rope or cordage, spare shotgun shells, applicable hunting license and stamps, and written permission from any landowners allowing you to hunt their private land.

You need to make sure all of your camouflage clothing and hunting boots will be adequate for the terrain you plan to hunt. Weather can be unpredictable in the mountains, so have adequate clothing and dress in layers. Make sure to wear camouflage clothing from head-to-toe. Turkeys have excellent vision, see colors, and spot movement quite well.

Because state laws can vary, take time to read up on hunting rules and regulations for the area or state you will be hunting. Make sure you know them before heading out.

It's also important to get your vehicle in working order and complete a checklist of camping and food supplies. Have adequate tools for your vehicles and camp (tool set, jack, lug wrench, ax, shovel, tire chains, tow rope) and make sure to change the oil in your vehicle and check the condition of your tires. It's also important to make sure your registration is up to date on any ATVs you will be taking. Go through your camper or tent and make sure everything is ready before getting to your campsite.

Planning ahead prevents headaches down the road.

Preseason Scouting

Among the biggest factors in success is to become familiar with the terrain and the habits of the birds. Make time before your hunt to go scouting and learn where turkeys are roaming in areas you plan to hunt. Look for green tender grass in canyon bottoms, water and leftover acorn or pinon nuts or juniper berries on the forest ground, as well as any insects and proper roosting trees (usually tall ponderosa pines).

Most of all, search for turkey sign and actual visual sightings of turkeys. Find areas where they feed, roost, where they travel once they fly down from roost and where they obtain water. Once the breeding action starts, find the strut areas. Mark these locations on your map. Find the turkeys and you have put yourself in a position to become successful at filling your tag.

The bonus to preseason scouting is twofold for me. I learn the lay of the land and ownership and I also get to look for elk sheds.

Once I have narrowed down my hunting area, I begin to formulate a hunt plan, which I share with family members before I depart. In this hunt plan I inform them of camping locations and areas I plan to hunt. That way, if I fail to report in the time I have given, they know where to find me.

Part of the preseason scouting involves contacting the local land management agency and finding out what their rules are for the area. Visit with their staff along with local Game and Fish officers to help narrow down spots to hunt.

Pattern Your Shotgun

Before heading to the woods, make sure your shotgun is shooting well with the choke tube of your choice. Try to use full- to super-full-choke tubes on turkeys. I recommend using size 4 to 6 shot on turkeys.

Today, you can purchase special turkey loads that shoot remarkably well. Shotguns with adjustable sights are great because you can sight in your shotgun, much like an open-sighted rifle, and with today's turkey chokes and ammunition you can shoot tight patterns. When you have the opportunity to take aim on a gobbler's head and neck area you don't want to miss because you failed to test your shotgun.

Practice Your Hunting Calls

Take time to become comfortable with using whatever turkey call you prefer. Whether it be a box, slate, glass or diaphragm call, make sure you can use it properly. You can find some turkey calling instructions on YouTube that can help with the quality of your calls. There are also videos available of actual turkeys calling. Then take some time to practice.

Many of these hunting information videos provide turkey hunting tips as well. If you can yelp, cluck and putt-and-purr on one call of your choosing, you should be ready to head to the woods and attempt to call in a wiley old mountain bird.

During the breeding season, turkeys can shock-gobble at just about any noise. A crow caw, owl hoot and coyote howl have proven to make a tom gobble, which gives up his location. So, become efficient with these calls as well and it may help you find turkeys that have flown up to roost.

Calling is a big component of spring turkey hunting and this is why many love the action of the woods in the spring.



Patience and Persistence

When hunting wild turkeys, you must have a lot of patience and be willing to sit for long periods of time and give the turkeys the opportunity to work in your direction. The 10- to 15-minute calling stands performed for coyote hunting will not work for turkeys.

If you have done your preseason scouting and found or patterned turkeys, then you should give them the time to head to your calling and decoy set. Just because a gobbler has gone silent does not mean he has left the area, he probably has hens with him.

Remember, in nature hens go to the gobblers and we are reversing that by trying to call in gobblers. Gobblers that are henned-up during the early morning hours may head your way by mid-morning, so don't give up on them. He may come back and he may come in silent, so be ready.

Pastime and Present Memory Making

With the hustle and bustle of modern life, and the average age of hunters increasing every year, don't wait to get your children and family into the turkey woods this spring. You will make memories of a lifetime. Share your experience in the woods and turkey hunting with others.



Storm Usrey is a corporal in the Belen/ Grants Supervisory District.

With the help of a box call and a .12-gauge shotgun, Heather Gonzales got this gobbler in the Cibola National Forest. She had to reposition once after fly down to call it in. NMDGF photo by Storm Usrey.



Wild Turkey Posole Recipe

Cooking Time 4-6 Hours.

You will need a crock pot.

Ingredients

½ partially frozen turkey

1 pound, 12 ounces of uncooked red chile

2 cans, or 25 ounces Mexican-style hominy

Choice of seasonings

Directions

While you can find many online recipes, one you might consider is wild turkey posole. It is easy to make and delicious. Here is a quick and easy recipe for your slow cooker.

Take half of a partially frozen and clean turkey breast and cut it into small or bite-size pieces. It can be easier to cut if left partially frozen. Heat up a pan with a little olive oil in it and cook the cut turkey meat thoroughly. Feel free to season the meat. Once the turkey meat is cooked and slightly brown put it into a crock pot filled up with a 1-pound, 12-ounce tub of uncooked red chile (mild, medium, or hot), two cans, or 25 ounces, of Mexican style hominy, and fill the crock pot up with water. Cook on low for four to six hours. Season to taste with garlic salt and feel free to cook with a few pieces of raw garlic. Serve and enjoy with a tortilla.



Newborn wildlife alert

Do not remove young animals from the wild!

Above: Well-intentioned people seeking to help occasionally remove baby animals from the wild. Newborn wildlife is rarely abandoned and should be left alone. The more likely scenario is that the mother is foraging for food or has been frightened away by the presence of a human. NMDGF photo by Dan Williams.

The sirens are sounding because a mother's child has gone missing.

The wildlife Amber Alert has been activated and word is spreading throughout social media as mom searches in vain for her missing offspring.

"Every year, around this time, well-intentioned individuals try to save wildlife newborns that appear to have been abandoned by their mothers," said James Pitman, elk program manager with the New Mexico Department of Game and Fish.

The problem, of course, is that the animal the person seemingly rescued wasn't abandoned at all and such actions can have dire consequences for wildlife.

"Removing animals from the wild can be a death sentence," Pitman said. "At the very least that animal could spend the rest of its life in captivity."

An animal often ends up in captivity as a result of imprinting. That is when an animal is held by a person for a period of time and views a human as its mother. They may also lose their natural fear of humans and will not receive a proper diet.

Bottom line: Wildlife is rarely abandoned. Most often the mother is out foraging or it is simply a protective slight-of-hand trick by animals as a response to a potential threat.

However, the desire to lend a helping hand can be overwhelming.

"The intentions are good, but not the results," Pitman said. "When it comes to a species like deer, the mother will leave the newborn behind while she forages. That newborn knows to stay where it is until mom returns."

Young quail will follow their mothers soon after hatching, but if the mother is frightened, she will fly away or try to distract the perceived predator by acting injured. When the threat is gone, the mother returns.

"It's also important to remember that quail are a ground-based bird and they have not fallen from nests," Pitman said. "Simply put, removing young animals diminishes their chance for survival."

Newborn rabbits separated from the mother have little chance of survival. Recently hatched birds that have fallen from their nest also can be doomed by a common myth.

"Many people still believe that their scent on the bird will result in the mother neglecting the chick," said Peggy Darr, nongame avian biologist at Game and Fish. "The vast majority of birds have a very limited sense of smell, so human scent isn't going to interfere with the chick being cared for."

Darr said the mother will usually continue to care for a chick on the ground as long as humans give mother and chick their space. However, if there is imminent danger to the bird, a person can pick it up and place it back in the nest.

Other methods to help include watching your pets and vehicle speed.

Domestic dogs and cats can negatively impact wildlife, especially in the spring when young are born and hatched. Outdoor cats have a particularly large impact on birds, small mammals, and reptiles. In addition, during spring, wildlife are quite active at times when the roads are busy with traffic: dawn and dusk.

"Keeping a dog on a leash and cats indoors is certainly a benefit to wildlife, especially in the spring," Pitman said. "Young wildlife have not yet developed all their defenses or learned to distinguish a potential threat."

As for human intervention, it's simply best to let nature run its course.

"You wouldn't want someone picking up your child in the front yard and dropping them off at the police station when you simply stepped inside the house for a moment," Pitman said. "There's no reason to remove wildlife, either."

If a young animal is believed to be injured or a safety threat, call Game and Fish.

Reports can be made at offices in Santa Fe (888) 248-6866, Albuquerque (505) 222-4700, Raton (575) 445-2311, Las Cruces (575) 532-2100, and Roswell (575) 624-6135.

Most people are aware of the slogan, 'A fed bear is a dead bear,' but the potential for problems goes well beyond bears.

It really doesn't matter if it's Yogi the Bear, Wile E., Bugs, or Alvin the Chipmunk, feeding wildlife can have dire consequences.

The majority of wildlife conflicts involve a feeding issue, whether it be intentional or not.

Cougars and bears are at the top of the food chain and can pose a threat to humans. Depending on a given situation, a habituated predatory animal displaying no fear of people often must be euthanized.

"There is a public safety aspect that must be considered with predatory animals," Mower said.

"Unfortunately, there are instances when an animal's behavior dictates it be euthanized. It's not a part of the job anyone relishes, but it must be done for public safety.

Some wildlife diseases can be transmitted to humans, such as tuberculosis, brucellosis, or rabies.

Think About Others

There are many cases of one person's passion being another person's pest.

When people feed wildlife, often there's little thought regarding a neighbor or neighborhood. Such cases can lead to conflicts because there's little thought about how others might be impacted.

"And we tend to associate only predatory animals with danger," Mower said. "This really isn't the case. In the last few years several people were gored by elk. Many people just don't understand that a bull elk's behavior, especially during the rut, is quite unpredictable."

Seemingly innocent acts can also create a public nuisance. Leaving pet food outside, for instance, can attract a host of unwanted animals such as skunks, foxes and raccoons, not to mention lions and bears.

"Humans and wildlife rarely interact well together," Mower said.

An example is vehicle collisions, which can impact both humans and wildlife.

What You Can Do

People can help by doing a little research before landscaping.

"Plant native," Mower said. "Many local nurseries and reputable websites can provide direction for a specific area."

By planting native, people are providing wildlife with their natural diet, but the animals will continue to disperse and forage naturally.

Bottom Line

Yogi and Boo-boo know how to survive on their own and if there's a big desire to see wildlife, there's over 20 million acres of public lands in New Mexico to spend a day exploring and viewing.

Just remember to keep food off the ground and don't forget to secure that picnic basket.

Above: Food on the ground is the biggest culprit in human-wildlife conflicts. Feed one animal and a person is potentially feeding many. Deer are the favorite food of cougars, and black bears become quickly habituated to people when provided an easy food source.

Photo by Zen Mocarski.

Feeding and the food chain You can't feed just the cute ones

"When the Department of Game and Fish needs to respond to a call regarding bears, lions, raccoons or any other animal, it isn't generally hard to figure out why there's a problem," said Kerry Mower, special projects and disease specialist with Game and Fish.

The biggest culprit is food on the ground, such as block bird seed or pet food.

The intention might be to simply attract birds, but there are many animals that will take bird seed.

"You can't feed just one animal," Mower said.

"There's an entire food chain out there and if you attract one, you are likely attracting many, and some of those may not be as welcome."

While an individual may indeed attract the targeted animal such as a cottontail, squirrel, deer or elk, there are predators that will view this situation as an opportunity for an easy meal.

"People often like to believe they are helping wildlife by putting out food," Mower said. "But the practice of feeding wildlife isn't helping."

Dangers to Wildlife

The desire to see wildlife outside a house window can lead to an escalating issue.

"It might not happen at the start, but when people attract prey animals, predators can certainly follow," Mower said.

"And it's important to remember many of these situations could have been avoided if not for food being placed out to attract wildlife."

Some may consider this a calculated risk to see their favorite species providing photographic or video opportunities, but the dangers extend well beyond the possibility of a predator landing at the front door.

"Wildlife have specific nutritional needs and the majority of people don't meet those needs with the attractants they use," Mower said. "People may use hay for animals like deer and elk, but some types of hay provide little nutritional value.

"Furthermore, high-quality hay is costly and many well-intentioned feeders abruptly stop feeding when the cost mounts. It's an unreliable food source.

"The passion people have for wildlife is admirable, but the desire to 'help' them can be misguided."

Diet is just the tip of the iceberg. Few probably consider disease when placing out food, but it is a concern for biologists.

Food sources can bring wildlife into close quarters where they are forced to congregate and they no longer naturally disperse and forage. This means many animals are feeding from the same food source and one diseased animal might then transmit disease quickly to others.

"In a case like this, those putting out the food may have sentenced a number of animals to death," Mower said.



Warmer weather will bring out your fears

By Zen Mocarski

Everyone's heard of the famed "lions and tigers and bears, oh my" line in the movie *The Wizard of Oz* as they walked gingerly down the Yellow Brick Road.

But what about "spiders and scorpions and snakes?" Could the movie have had it all wrong?

Well, not to diminish the fears of Dorothy and her entourage, but it might've been more appropriate considering snakes and spiders rank among the public's top five fears. Now, with spring approaching, many of those creatures we fear most will begin to emerge from a winter of inactivity.

"As the weather warms, those creatures that have been relatively dormant through the winter months are going to become increasingly visible, especially after rains when their prey base begins to move around" said Leland Pierce, amphibian and reptile biologist with the New Mexico Department of Game and Fish. "When this will happen depends on where you live."

Regardless of when they become more active, Pierce said the best way to stay safe is to know where you are placing your hands and feet.

"That simple rule will help people avoid the majority of potentially dangerous encounters," he said.

Snakes

Of the snakes that reside in New Mexico, those that pose the biggest threat to humans will have a rattle at the end of the tail. Even newborns will have a non-functioning button on the end.

"Simply put, there is no such thing as an ordinary rattlesnake bite," he said. "If bitten, forget everything you've ever seen in old movies about sucking out venom and certainly do not try to capture the rattlesnake. Identification is not necessary for treatment and you put yourself in a position to get bit again.

"Instead, calm yourself down and get to a medical facility as quickly as possible. The only real treatment is with anti-venom."

He said that while most rattlesnake bites are quite painful, individuals should never use ice or a tourniquet. Those actions will restrict blood flow and allow venom to act aggressively at the site of the bite.



About 30 percent of rattlesnake bites are considered dry bites, which does not mean no venom was injected, but that not enough was injected to require treatment.

"However," he said, "let a medical professional make that decision."

There are approximately nine rattlesnake species in New Mexico. The largest and most common of these pit vipers is the western diamondback.

"Rattlesnakes might be the most feared snake in the country," Pierce said. "That fear has led to many myths."

Among those is how aggressive specific species can be. But, as it relates to humans, there is no such thing as an aggressive rattlesnake.

"It's defensive," Pierce said. "When they strike at a human it is because they feel threatened. They'd much rather use their venom on something they can consume. Once spotted, leave plenty of room between yourself and the snake."



Pierce added that many people have different views on the most dangerous rattlesnake.

"That's easy," he said, "the one that just bit you."



"But let's be careful not to exaggerate the risk. A person is three times more likely to die from a domestic dog attack than from a venomous snake-bite."

But rattlers aren't the only creature with fangs to deliver venom.

Spiders

All spiders are venomous, but that does not mean they all pose a threat to humans. The two factors that must exist for a spider to be considered dangerous to humans is whether its fangs are strong enough to break human skin and whether their venom is strong enough to do damage.

With those factors in mind, the spiders considered dangerous to humans in New Mexico are the western black widow and several, but not all, species of brown spider. The "real" brown recluse may occur along the extreme eastern border of New Mexico and Texas, but does not occur statewide.

Spider bites may feel like a pin prick and a person may not know they've been bitten and a reaction

may not be seen for up to 36 hours. If a person is aware they've suffered a bite, wash the area with soap and water if it is available.

"It's important for people to know how their body is reacting. If they have any fears they should contact a health professional or their physician's office for advice," said Dr. Carol Sutherland, extension entomologist at New Mexico State University.

"If the spider is still present, collect the spider for identification," Sutherland said. "If you can't collect the spider, continue to evaluate the bite area for any extreme developments. If you begin to see a visible reaction on your skin, have feelings of pain, flu-like symptoms, or nausea, it's time to seek professional medical attention."

Distant relatives to spiders are scorpions.

Some simple steps to avoid stings are wearing leather outdoor gloves when working around wood or rock piles and to shake out shoes that have been left outdoors. Also use caution when working around boxes, in storage sheds or barns, and around landscaping materials.

Because scorpions can climb, when it comes to infants, the legs of a crib can be placed in a smooth glass jar (no ridges or paper).

And there's more.

Gila Monster

The only lizard considered dangerous to humans in the United States lives in southwestern New Mexico: the Gila monster.

"As far as advice goes, this is the easiest of them all," Pierce said, "leave them alone and they leave

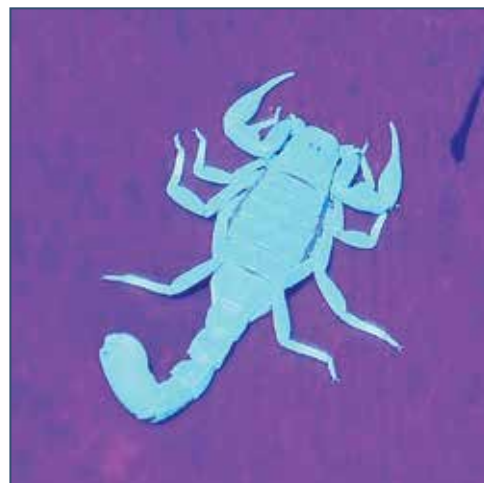
What about children and pets?

Children are of particular concern to Dr. Carol Sutherland, extension entomologist at New Mexico State University. She said their natural curiosity can place them in harm's way.

Sutherland said it is important to begin educating children at a young age and to continually reinforce the message.

"And it needs to be simple," she said. "Something like: 'Don't pick up or touch anything you see moving around the house. Come tell mommy or daddy.' If the message is too complex they'll get lost."

Pets are certainly susceptible to bites and stings, but the primary concern is with rattlesnakes.



Scorpions

Instead of fangs, a scorpion's venom delivery system is through a fish-hook shaped stinger at the end of the tail. Most stings are considered a bit more painful than that of a bee. However, a sting from a bark scorpion can be more severe for a segment of the population.

"The bark scorpion is the most dangerous scorpion in the United States," Sutherland said. "Young children, the elderly and people in poor health are at the highest risk of complications following a sting."

These scorpions are located primarily in the south-central and southwestern parts of New Mexico.

Following a sting, if a person begins to slur their speech, develop a swollen tongue, drooling, respiratory problems, or difficulty in swallowing, contact a medical professional for advice. If stung on the hand, an individual should remove any jewelry immediately to avoid potential loss of circulation as a result of swelling.

you alone. It really is that simple. Accidental Gila monster bites just don't happen."

State-listed as endangered, this heavy-bodied lizard is protected and it is against the law to harass, disturb, or kill a Gila monster.

Regardless of whether it is a spider, snake, scorpion or lizard, it is important to understand that no two bites or stings are created equal.

"People react differently to venom," Sutherland said. "Where venom is involved, a lot of factors come into play, such as a person's health, weight and overall size."

For those concerned about the potential for a housecat to be bitten, the only true solution is to keep them indoors, where they should be anyway.

Dogs, like children, are quite curious. As a result, many of dogs are bitten each year and a rattlesnake bite can be costly, fatal, or both.

Pierce said those concerned can contact local veterinary offices to inquire about snake avoidance classes that may be available and pre-bite vaccines.

However, if bitten, anti-venom treatment at a local veterinary clinic is still advised.

Opposite top: While smaller centipedes generally can't penetrate human skin, the bite from a large centipede can be dangerous to small children and cause pain, swelling and fever for an adult. Photo by Jim Stuart.

Left to right: Rattlesnakes pose a most significant threat to humans in New Mexico and anyone bitten should immediately seek medical attention. The black widow possesses a potent venom. Those experiencing an adverse reaction should consult a medical professional; The sting of a scorpion, which glow in the dark under black light, is generally considered a bit more severe than that of a bee. Those experiencing adverse affects should consult a medical professional. Bites from a state-endangered Gila monster are very rare. Leave them alone and they leave you alone. Photos by Zen Mocarski.

Rattlesnakes Did you know . . .

By Zen Mocarski

So, your basic working knowledge of a rattlesnake is: They bite, they're venomous, and poking them with a finger is a really, really bad idea. But there's a lot more to these fascinating reptiles.

There are two different genera of rattlesnakes: *Crotalus* and *Sistrurus*, of the subfamily *Crotalinae*, which includes cottonmouths, copperheads, ferdelances, bushmasters and many other venomous snakes.

Rattlesnakes are found exclusively in the Americas, existing from the southern parts of Canada south to central Argentina. There are approximately 32 species of rattlesnakes and 65 or so subspecies. The largest diversity of these snakes in the United States occurs in Arizona and Texas. The United States alone serves as home to 20 species, with approximately nine of those occurring in New Mexico.

It can be difficult not to marvel at rattlesnakes, which have adapted well to many harsh environments. Possibly the most significant is that baby rattlesnakes are born alive and fully functioning, complete with fangs and venom.

You're wondering why these reptiles aren't hatched from eggs? Well, they are. The female does have eggs, but the eggs hatch inside her body and the newborns hit the ground running in a form of reproduction called ovoviviparity. While this

certainly aids in survival as opposed to laying eggs on the ground, many other creatures will still feast on the newborns.

You already know they got their name from the rattles on the end of the tail, but did you know the rattles are made of keratin and they'll grow a new button each time the snake sheds its skin? However, because they can shed more than once a year and often break off rattles, it is not an accurate means of aging a rattler. Although the snake will move with the rattles pointing upward to avoid breaking them off, it is not always effective.

As for the purpose, it is widely accepted that the rattles exist as a means to warn other creatures of the snake's presence. The rattle sound is the result of the different segments hitting together. Specialized muscles shake the rattle at an incredible rate, producing that ominous buzzing sound. These muscles are powered by extra-large mitochondria (the power plants for the cell), which allows sustained activity for hours without tiring. A rattlesnake may shake its tail 50 times per second.

While commonly known as rattlesnakes, they are in a group of snakes known as pit vipers. These (loreal) pits, located in their muzzles between the nose and eye, are another amazing adaptation for survival and serve multiple purposes. While their eyesight is good at detecting movement, it is the pits that will allow a rattlesnake to detect prey

in total darkness. These pits are so sensitive they can detect temperature changes of .003 degrees C or less in the snake's direct vicinity.

Not impressed? These heat-sensing pits tie into the optic nerve and produce an image in the snake's brain. They are like another set of eyes that lack lenses for refined vision. A snake with heat-sensing pits sees the world in both infrared and through normal vision. It would be like us wearing a clear visor that displayed the world in infrared over our eyes.

While you know they are venomous, did you know rattlesnakes possess a hemotoxin, which destroys tissue and causes swelling, internal bleeding and often extreme pain? A number of rattlesnakes also possess neurotoxins in their venom, which attacks the central nervous system. But, while caution and a healthy respect is always prudent, the risk levels are not high and bites are rare unless the rattler is provoked or threatened. People who have been consuming alcohol have the highest risk of being bitten.

While every rattlesnake bite should be considered potentially life threatening and anyone bitten should seek medical treatment immediately, you are approximately three times more likely to die from a domestic dog attack than a venomous snakebite.

Below: Prairie rattlesnake. Photo by Charlie Painter.