New Mexico wildlife

www.wildlife.state.nm.us

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Turtle trouble

Photo: Dan Williams

More otters

Six more river otters from Washington State find new homes in New Mexico.

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departments

A publication devoted to the enjoyment and appreciation of New Mexico wildlife.

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A Big Bend slider, right, basks in the sun with two painted turtles at Bosque del Apache National Wildlife Refuge. The native Big Bend sliders are threatened by potential hybridization with non-native red-eared sliders.

Released pets threaten New Mexico natives

Story by Leland Pierce
Photos by Jim Stuart

What should we do about that turtle?

The family pet is a red-eared slider and over the years it has outgrown the family aquarium. It now lives in a plastic cattle tank out back. The problem is, Mom and Dad have gotten new jobs in another state and the family is moving to an apartment there. No room for the turtle.

The family wants only the best for its pet, but the zoo won't take it, friends aren't interested and the pet shop doesn't want older turtles. A bit of research shows the red-eared slider is found throughout much of North America, even arid New Mexico. The family has seen turtles like theirs at the Rio Grande Nature Center State Park, the Duck Pond at the University of New Mexico, ponds at New Mexico Tech University in Socorro and at Bosque del Apache National Wildlife Refuge. If the family released its turtle into one of those places, it would be with others of its kind. What could be the harm in that?

Plenty.

While the red-eared slider, species name Trachemys scripta, is native to New Mexico, it is native only to the eastern parts of the state -- in the Pecos and Canadian River drainages. Releasing one anywhere else risks the life of the turtle and other species native to those waters.

The problem is hybridization. Red-eared sliders are not native to the Rio Grande drainage, but the species is similar enough to native turtles that inbreeding could cause the loss of genetic diversity in natives.

Turtles native to the Rio Grande drainage include the painted turtle (Chrysemys picta), the spiny softshell turtle (Apalone spinifera), and a close relative to the red-eared slider, the Big Bend slider (Trachemys gaigeae).

In some instances, closely related turtles will interbreed as readily as some fish, such as trout. Given that the red-eared and Big Bend slider are so closely

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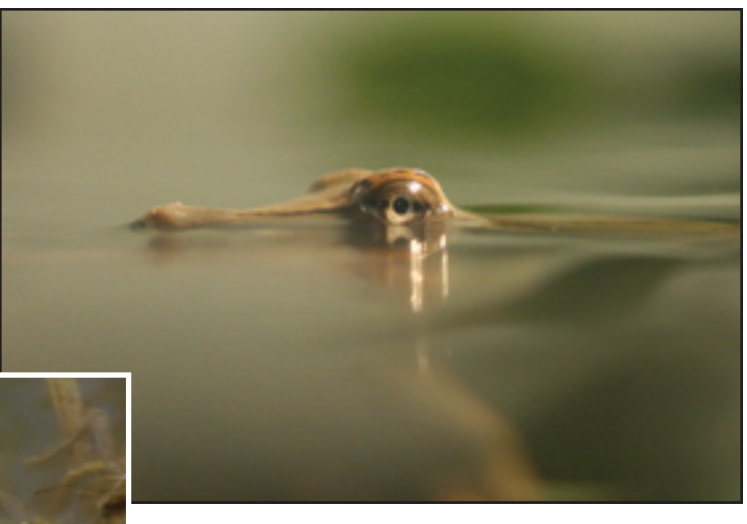

A spiny softshell turtle, above, keeps a wary eye out for predators as it cruises the surface of Elephant Butte Lake. At left a juvenile red-eared slider basks on a log at Bosque del Apache National Wildlife Refuge, where it most likely was introduced as someone's unwanted pet.

Hunter education goes online

Students interested in taking a hunter education course now have the option of preparing for the class by going to the Department of Game and Fish web site and completing an online home-study course before attending an abbreviated hands-on alternative-delivery course.

"The knowledge-based portion of the course covering topics such as wildlife identification, survival, firearms history and wildlife management can be learned before class, allowing us to focus on the necessary skills required to be a safe hunter during the hands-on course," said Mark Birkhauser, hunter education coordinator for the Department.

Students who work online at their own pace before attending a class come into class better prepared and ready to learn, Birkhauser said.

"How a student obtains the knowledge to be a safe, ethical and responsible hunter is not important; what is important is that they know how to transfer that knowledge into the skills necessary to hunt in a safe and responsible manner."

After completing the online portion of the class, a student must register for an alternative-delivery course. Alternative-delivery classes are restricted to students ages 11 and older and consist of eight hours of hands-on instruction and testing, opposed to the 16 hours in a typical class. When the student learns online, the lecture portion of the class is greatly reduced, resulting in a class that is very hands-on and fun for both the student and the volunteer instructor, Birkhauser said.

To access the New Mexico on-line hunter education course, log in to www.wildlife.state.nm.us, click on the education tab and then choose "Hunter Education."

A complete listing of all hunter education classes being offered throughout the state can be found at the Web site.

Fenton Lake events bring family fun

By Dan Williams

More than 200 youths and their families joined New Mexico Lt. Gov. Diane Denish for a day of fishing, shooting and educational activities in celebration of National Hunting and Fishing Day at Fenton Lake State Park.

The Sept. 26 event also was Free Fishing Day in New Mexico, a day when anglers of all ages -- residents and nonresidents -- could fish in public waters statewide without a license.

Events such as the one at Fenton are conducted every year on National Hunting and Fishing Day to celebrate the many contributions hunters and anglers make toward fish and wildlife habitat and conservation. According to the U.S. Shooting Sports Foundation, the nation's 34 million sportsmen and women generate more than $1.75 billion a year for fish, wildlife and habitat programs through licenses, permits and special taxes. In New Mexico, approximately 1.6 million hunters, anglers and wildlife watchers also contribute almost $1 billion a year to the state's economy.

"Many people don't realize how much these traditional outdoor activities benefit our wildlife, our wild places and our communities," said Brian Guzman, youth skills coordinator for the Department of Game and Fish. "We're hoping family oriented events like this will keep those traditions alive."

Photo: Dan Williams

New Mexico Lt. Gov. Diane Denish impressed District Wildlife Supervisor Ken Baca with her air-rifle shooting skills during National Hunting and Fishing Day activities at Fenton Lake State Park.

Lt. Gov. Denish and other participants at Fenton Lake tried their hands at archery, air-rifle shooting and casting -- all offered for free with expert instruction from Department employees and volunteers. The Cast Iron Ranger was on-hand, cooking up hot, gooey cinnamon rolls, fried catfish and other goodies. Educational stations included fly-tying, aquatic bugs, turkey talk and more.

Fenton Lake State Park is 33 miles northwest of San Ysidro via N.M. 4 and N.M. 126 in the Jemez Mountains of northern New Mexico. The area is owned by the State Game Commission and managed by New Mexico State Parks. For more information, please call (505) 231-4375.

Endangered chubs released in San Juan River

More than 3,000 endangered roundtail chubs are swimming in their native waters of the San Juan River following a successful release of the large minnows by the New Mexico Department of Game and Fish.

Roundtail chubs (Gila robusta), grow up to 12 inches long. They historically occurred throughout the Colorado River basin, including the San Juan River and its tributaries in New Mexico, Colorado, and Utah, but have been rare or absent in recent years. The species was listed as threatened under the New Mexico Wildlife Conservation Act in 1975 and uplisted to endangered in 1996.

The chubs released Oct. 21 were two to three inches long, bred from chubs found in the Navajo and La Plata rivers and raised in the Colorado Division of Wildlife Native Species Hatchery. They were stocked in the San Juan River near the confluence with the Animas River, high in the system in the hope that they will disperse downstream into suitable habitat.

Roundtail chub

Loss of roundtail chub populations in New Mexico has been attributed to poisoning that occurred before the impoundment of Navajo Dam, habitat loss and fragmentation, modified thermal regime, and predation by non-native fish.

The recent stocking was part of a cooperative agreement among the New Mexico Department of Game and Fish, the Jicarilla Apache Game and Fish Department, Southern Ute Tribe Division of Wildlife Resource Management, and Colorado Division of Wildlife. Also in 2009, Jicarilla Apache Game and Fish Department and Southern Ute Division of Wildlife Resource Management stocked more than 20,000 fish from the same group in tributaries on tribal land, as well as completing habitat enhancement projects.

Learn more:

- Colorado River Basin Chubs (Roundtail Chub Gila robusta, Gila Chub Gila intermedia, and Headwater Chub Gila nigra) Recovery Plan www.wildlife.state.nm.us/conservation/threatened_endangered_species/documents/ChubsRecoveryPlan.pdf
- Chubs in the Tub, Colorado Division of Wildlife Native Species Hatchery wildlife.state.co.us/Education/TeacherResources/ColoradoWildlifeCompany/ChubsCWCF03.htm
- San Juan River Basin Recovery Implementation Program www.fws.gov/southwest/sjrip

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Commission lifts restrictions on 'quality' hunt applications

Hunters who are successful in public-land drawings for antelope or "high-demand" or "quality" deer and elk licenses can apply for those licenses again the next year, following a rule change by the State Game Commission.

The Commission discarded the 1-year-old rule at its meeting Dec. 3 in Hobbs after hearing many requests from hunters, guides and outfitters. The every-other-year restriction initially was adopted in an effort to increase hunters' odds at drawing one of the highly sought-after pronghorn antelope or deer and elk licenses in popular areas.

In other action Dec. 3, the Commission:

- Approved a new rule that requires trapping license holders to report their harvest results before they can purchase a license for the following year. The new rule also requires trappers to purchase their license only online via the Department Web site or at a Department office so officials can verify a harvest report was filed.

- Approved a request by Sandia Pueblo to transfer 30 state-owned wild turkeys to Pueblo land so the Pueblo can implement a turkey management program. The proposal is in connection with a trapping scheduled to transplant 30 more turkeys onto public lands.

- Discussed several proposed changes to the state's fishing rules, including banning the use of felt-soled waders in waters statewide, allowing anglers to take one tiger muskie, and reducing the bag limit of striped bass at Elephant Butte Lake from three to two. No action was taken on the proposal.

- Declined to take action on a proposal to move the application deadline for deer, elk, antelope, ibex, bighorn sheep, Barbary sheep and javelina licenses from early April to mid-March. The proposal's intent was to allow the Department to conduct the drawing in time for resident hunters to purchase discount licenses such as a general hunting and fishing license for the April1-March 31 license year. No action means the application deadline for the 2010-2011 deer, elk, antelope, ibex, bighorn sheep, Barbary sheep and javelina licenses is April 7, 2010. The application deadline for oryx licenses, bear wildlife management area permits, population management hunts and turkey draw permits is Feb. 3, 2010.

The State Game Commission is composed of seven members who represent the state's diverse interests in wildlife-associated recreation and conservation. Members are appointed by the governor and confirmed by the state Senate. Current members are Chairman Jim McClintic, Albuquerque; Vice-chairwoman Sandy Buffett, Santa Fe; M.H. "Dutch" Salmon, Silver City; Alfredo Montoya, Alcalde; Leo Sims, Hobbs; Tom Arvas, Albuquerque; and Kent Salazar, Albuquerque.

Photo: Dan Williams

Rock Lake Fish Hatchery is 2 miles south of Santa Rosa near the Pecos River.

Education center planned at Rock Lake

New Mexico's Rock Lake Hatchery near Santa Rosa has the potential to incubate much more than catfish, trout and walleye.

It can be an education center for schoolchildren, a training center for young adults entering the work force and a small-business development center for individuals interested in charting their own futures. Those were among the ideas discussed during an early October meeting of the New Mexico Department of Game and Fish and leaders from Luna Community College.

The Department is beginning the second phase of its warmwater hatchery development at Rock Lake, which includes construction of the Pecos Watershed Education Center. To make full use of the education center, the agency is looking for partners.

"It's an exciting opportunity for the Department to garner strong community-based interest in the hatchery, fish management and potential uses of the facility," said Tod Stevenson, director of the New Mexico Department of Game and Fish. "We believe building community partnerships with common goals will enhance our fish management efforts in the future."

Luna Community College, which has branch campuses in Mora, Springer, Las Vegas and Santa Rosa, appears to be a likely candidate as the Department searches for community support. Luna is considering expanding its community education program to include aquaculture and fisheries curricula.

"Educating our youth on aquaculture is extremely important in the desert climate of New Mexico," said state Sen. Pete Campos, president of Luna Community College. "It's the lifeblood of much of our state's economy and we want to be on the cutting edge of educating our students in industries that will help build stronger local economies."

Operating since 1964, Rock Lake Hatchery raises about 300,000 rainbow trout every year. The new warmwater facility is holding about a million catfish and produces about 20 million walleye fry every year, half from eggs collected at Ute and Conchas reservoirs.

Delegates from the college also discussed the future of the City of Santa Rosa embarking on a commercial fisheries operation. Training students in aquaculture would ensure the community has a suitable workforce.

Rock Lake Hatchery is 2 miles south of Santa Rosa near the Pecos River. Hours are 8 a.m. to 5 p.m. every day. Construction of the education center could be completed by next summer, just in time for returning schoolchildren to learn about the fascinating fish, wildlife and other aquatic life forms found up and down the Pecos watershed.

Get involved

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

Quail Unlimited: The national organization has almost 300 members dedicated to the wise management of America's wild quail and restoring quail populations for future generations. John Moen, (575) 526-3571, trophy@zianet.com.

New Mexico Chapter, Wild Sheep Foundation: Formerly the Foundation for North American Wild Sheep, the organization's goal is "Putting more sheep on the mountain." Members work with the Department of Game and Fish to increase populations of desert and Rocky Mountain bighorn sheep in New Mexico. Information: Lanny Rominger, (505) 821-5064.

Ducks Unlimited, New Mexico: More than 1,500 members support the organization's mission to restore and manage wetlands and habitats for North American waterfowl. Cindy Wolfe, cjwolfe@gilanet.com, (575) 854-3365.

New Mexico Wildlife Federation: Founded by Aldo Leopold in 1914, the organization is a strong lobbyist in the New Mexico Legislature, "dedicated to protecting New Mexico's wildlife, habitat and outdoor way of life." (505) 299-5404, www.nmwildlife.org.

Audubon New Mexico: Devoted to the protection, preservation and enjoyment of the environment, with a particular emphasis on birds. The organization has chapters statewide, with headquarters at the Randall Davey Audubon Center in Santa Fe. (505) 983-4609, http://nm.audubon.org.

Rocky Mountain Elk Foundation: A large national organization dedicated to ensuring the future of elk, other wildlife and their habitat. The organization actively supports efforts to protect and enhance elk country, conservation education and to restore elk herds. New Mexico information: (505) 454-9390. National website: www.rmef.org.

Southwest Environmental Center: Works to reverse the accelerating loss of species worldwide by protecting and restoring native wildlife and their habitats in the Southwestern borderlands, through grassroots advocacy, public education and on-the-ground restoration projects. (575) 522-5552, www.wildmesquite.org.

Southwest Consolidated Sportsmen: An organization representing at least 15 sporting and conservation groups of diverse interests. The group's three primary objectives are to "disseminate wildlife and habitat information, participate in habitat maintenance projects, and review and comment on proposals involving wildlife habitat." (575) 526-5056.

Trout Unlimited, New Mexico: Dedicated to the restoration, protection and conservation of all coldwater fisheries, their tributaries and watersheds and the fish that inhabit them. (505) 470-4878, www.newmexicotu.org.

New Mexico Wild Turkey Federation: Supports scientific wildlife management on public, private and corporate lands as well as wild turkey hunting as a traditional North American sport. (505) 869-3837, www.nwtf.org.

New Mexico Trout: Dedicated to the preservation and enhancement of trout fishing in New Mexico's waters through restoration of riparian habitats and through the education of the public about trout fishing and the value of trout habitats. newmexicotrout@gmail.com, www.newmexicotrout.org.

Southwest Muskie Maniacs: This rapidly growing club was formed as the 59th chapter of Muskies Inc. in 2008 by a group of anglers interested in catching tiger muskies stocked in Bluewater and Quemado lakes, and northern pike in northern New Mexico waters. Information: Michael Bishop, mb_tigers@yahoo.com; or Jared Blaschke at jbfshn@comcast.net.

Safari Club International: Promotes wildlife conservation worldwide while protecting the hunting heritage and supporting numerous education and humanitarian projects. Southern New Mexico Chapter: LTC R.A. "Pancho" Maples, pancho1@plateautel.net. Northern New Mexico Chapter: Brian Payne, b_payne10@msn.com.

Ross Morgan

Where do captured bears go?

Animals' fate depends on history, behavior

By Ross Morgan

Every spring, residents of Albuquerque and surrounding communities such as Tijeras, Cedar Crest, Four Hills and even Moriarty see an influx in the number of bears that wander through their neighborhoods. Whether it's a young male that was chased off the mountain by a larger boar or a female with cubs looking for an easy meal, local Department of Game and Fish officers usually end up moving them out of harms way.

The Department gets a lot of questions about bears, often from people who think the animals are euthanized when they venture too close to humans. That is not the case. In fact, very few bears that are captured in the Albuquerque area euthanized.

"We try to give every bear a chance, taking into account what they have done," said Darrell Cole, conservation officer for the Albuquerque area. "After all, we are the ones encroaching into their habitat."

When deciding what to do with a captured bear, officers often place the bear into one of three categories:

- **Wayward bears**. These bears just happen to wander off the mountain in search of new territory or better acorn crops and happen to get treed by dogs in the middle of a quiet neighborhood.
- **Nuisance bears.** These bears are constantly wondering in and out of neighborhoods, getting into trash cans and fruit trees time and time again. They sometimes show little to no fear of humans, which causes some concern.
- **Depredating bears.** These are bears that kill or injure livestock and pets. They often have little fear of humans and can be very dangerous.

So where do these bears go after they have been captured? It depends on what category they fall into, and their behavior at the time of capture.

Photo: Ross Morgan

Department of Game and Fish conservation officers Robert Livingston, right, Mark Olson, center, and intern Onofre Cordova remove a tranquilized bear from an Albuqurque area neighborhood. Most wayward bears are taken back to the mountains before they become nuisances.

Wayward bears are released back into the surrounding mountains or adjoining mountain ranges, depending on the remoteness of the capture site. Sometimes wayward bears are left alone and given the chance to leave on their own.

Nuisance bears usually are relocated to mountain ranges far from the capture site that don't have any rural communities close by. This is done to help prevent the bears from continuing to rummage through neighborhoods. Sometimes nuisance bears can't be released back in to the wild because they are repeat offenders and are starting to show no fear of humans.

Depredation bears are euthanized. Once a bear has killed or injured livestock or someone's pet, the Department can't take the risk of it killing again.

The number of bear complaints received by the Department in the Albuquerque area varies from year to year depending on several factors. Bears could be venturing into neighborhoods because of a lack of food in the mountains, or some years there could be a greater number of young bears out on their own for the first time and looking for a new home.

In the past three years, the number of bear complaints and sightings in the Albuquerque area has fluctuated from nine to 32 bears. As a result, 62 bears have been hazed away or released back into the mountain range near where they were captured, or a range farther away, depending on the circumstances. Only 10 of those bears captured in the past three years have been euthanized.

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

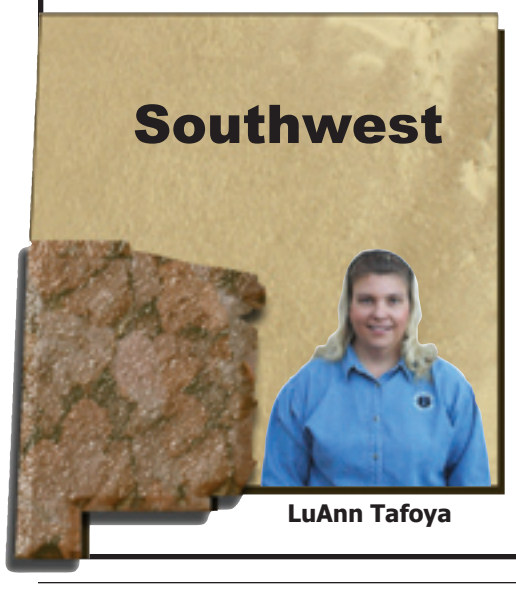
Photo: Scott Brown

Neighborhood dogs often chase wayward bears up trees and power poles.

Gila thinning project improves wildlife habitat

By LuAnn Tafoya

Every year, about 160,000 hunters and anglers purchase more than $870,000 worth of Habitat Improvement Stamps before they go afield to hunt, fish or trap on U.S. Bureau of Land Management or U.S. Forest Service lands in New Mexico.



LuAnn Tafoya

Have you ever wondered where that money goes?

The Sheep Basin Piñon -Juniper Thinning Project in southwestern New Mexico is one good example of how those $5 stamps are used. With the help of that money, 450 acres of the Gila National Forest have been thinned and eventually will be control-burned to improve wildlife habitat.

The New Mexico Habitat Stamp Program spent $34,000 for the initial forest thinnings in 2006 and 2007. Those thinnings were part of an ongoing, multi-year project that encompasses about 4,000 acres of thick piñon-juniper country in the Reserve Ranger District. The U.S. Forest Service also contributes funds to the project.

Planning for the project began as early as 2004. Wildlife surveys, archeological surveys and other biological assessments took years to complete before on-the-ground work could begin.

The purpose of the project was to thin piñon-juniper, gray oak, and ponderosa pine stands to allow low-intensity burns to move through the area and improve wildlife habitat.

"Thinning out the juniper and oak will open up the canopy and let light in," said Kevin Rodden, Southwest Area game manager. "Light shining on the forest floor will promote new growth of grasses and forbs."

After the area is burned, even more growth will result and improve the habitat conditions for the local elk and deer populations. Rodden said diversity is the key to a healthy forest, and thinning accomplishes that.

The Forest Service follows a prescription for removing trees. In this project, the prescription calls for clumping up to five trees in an area. All trees infected with mistletoe were to be removed. The biggest and healthiest trees were left intact.

The next phase of the project includes prescribed burning of slash piles that were left to cure for a year or two. Planning for the final stage is under way and the funds will be allocated for the completion of the project in the next few years.

The Sheep Basin Piñon-Juniper Thinning Project is one of many projects the U.S. Forest Service and Department of Game and Fish are working on throughout the state. A much bigger project is under way on the Quemado Ranger District. The Slaughter Mesa project includes approximately 29,900 acres and would include removal of encroaching ponderosa pine and piñon-juniper from natural grasslands. The planning stage will be completed soon.

LuAnn Tafoya is the Department of Game and Fish public information officer for the Southwest Area. She can be reached in Las Cruces at (575) 532-2106 or luann.tafoya@state.nm.us.

It's cold out there; time to hit the ice

By Clint Henson

Let's go ice fishing!

Tired of being cooped up all winter? Are the kids driving you crazy but a ski trip would break the budget. Here is an alternative to the winter time blues: Pack up the car and head to the lake. Don't forget the sunscreen and sunglasses, and make sure to pack an extra coat!

Ice fishing in New Mexico brings a whole new experience for many anglers. Being out on a frozen lake will change your view of the familiar scene. Beautiful blue skies contrast the pure white ice with snow-covered mountains all around.

Not much special equipment is needed, although a nice warm coat, a folding chair to keep you off the ice, and some hot chocolate come in handy. Ice augers are needed for drilling new holes in the ice, but usually you can find holes drilled by other anglers. Bring along a ladle or big spoon to clean out ice from the hole. A towel is a good idea to dry off your wet hands. The water is cold under all that ice.

Be careful as you walk on the ice. Wind-swept ice can be very slick, so consider picking up a pair of slip-on ice cleats. You will use them more than you think.

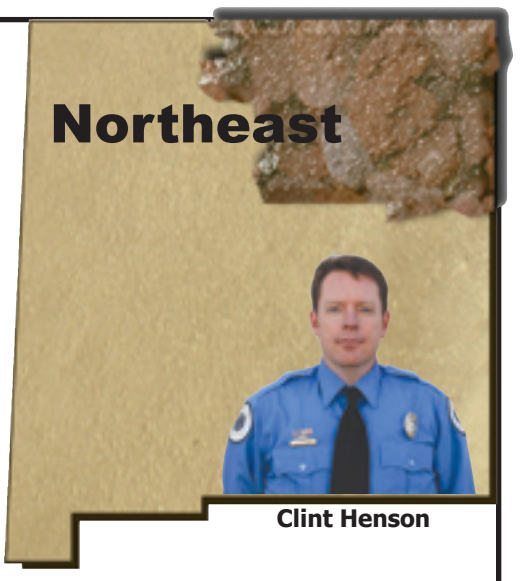
Just like regular warm-weather fishing, you can jig or bait-fish. Jigging is using moving bait that resembles prey for your target fish. There are many special ice fishing jigs that glow in the low light under the ice. Look for jigs called Swedish pimples and the Rapala jigs and try some different colors from natural to bright. Jigging usually is done in an up-and-down motion, but try spinning the line between your fingers to add a different motion to attract more fish.

Photo: Clint Henson

Cody Henson patiently waits for a strike at Lake Maloya.

Bait fishing usually is most successful on the bottom in shallower water along the edge of the lake. Simply weight the bottom of the line and set hooks up a foot or two from the bottom. Use regular baits such as worms and Power Bait. Again, bring several different colors. Corn is actually a poor choice, and of course chumming is illegal and will kill fish if they eat too much.

Now that a second rod stamp can be purchased for any fishing water, many anglers will set a pole with bait and then use a second rod in a nearby hole and jig. Use a bell or a tip-up to watch your second rod from a distance so you don't miss a fish. This doubles the chance of catching with half the effort. Kids ages 11 and younger don't need a fishing license, so bring them along, with extra hot chocolate!



Clint Henson

Popular ice fishing areas in northeastern New Mexico are Eagle Nest Lake and Lake Maloya near Raton. These lakes are managed by New Mexico State Parks and are subject to closure if ice conditions are unsafe. Park Rangers routinely measure the depth of the ice and if the thickness is less than 9 inches, the lake will be closed to ice fishing. Be sure and check if the lake is open for ice fishing before you make the trip.

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Encouragement hunts give 'unlucky' youths 2nd chance

By Mark Madsen

This winter, the Department of Game and Fish began offering some new opportunities for young hunters wanting to experience big-game hunting.

The new Youth Encouragement Hunts were available to young hunters who were unsuccessful in drawing any big-game hunt during the regular draw process. These hunts were available, first-come, first-served, on the Department Web site and were for antlerless elk licenses in game management units throughout New Mexico.

My nephew, Curtis, happened to be one of the unfortunate youth hunters who didn't draw a big-game license for any species during the regular draw. His dad, Eric, helped get Curtis a youth encouragement license for Game Management Unit 36 for Thanksgiving weekend. Calls and e-mails followed to the local wildlife officers to narrow down the "hot spots" where a 12-year-old might have a chance at a shot.

The hunt started the day after Thanksgiving and we were glad to be able to work off some of the huge quantities of turkey, dressing and desserts consumed the day before. I had the pleasure of being invited to tag along with my nephew, his brother, dad, stepmom and "Grumpy."

Photos: Robert Vigil, top; Eric Madsen, right

Curtis Madsen, 12, left, and Zachery Torrez, 14, were among the successful hunters who took advantage of the Game Department's first Youth Encouragement Elk Hunts this year.

The hunt started out like most hunts in New Mexico this time of year -- clear skies and cold. Later in the morning, the proverbial New Mexico "breeze" started up, making it even colder. We tried some of the "hot spots," but had no luck finding the elusive wapiti. In fact, opening day was a total bust as far as elk go; none found up high or in the pinon-juniper low country.

Day two of the hunt started out the same as the first day, with slight overcast skies and again, cold. We decided to try the Hale Lake area south of U.S. 70 in the hopes that elk would be found. That morning, we saw a few deer and lots of turkeys, but no elk. Once again, the elusive wapiti had eluded us. The boys were getting tired and ready to return to camp for a much-needed nap when Curtis spotted a small herd of elk on Dead Horse Hill. Of course, they were on the top -- above a huge patch of scrub oak.

Curtis and his dad decided to try a stalk and were able to close the distance to approximately 300 yards. Unfortunately, the elk spotted them and proceeded to leave the area at a high rate of speed. Curtis and his dad returned to the truck for a bite of lunch. It's amazing how good MREs taste when you're tired, cold, and hungry.

We decided to head toward camp, recoup and figure out the afternoon hunt. As we leisurely drove down the road, my other nephew, Cameron, spotted a couple of elk on a hilltop in Cook Canyon. Curtis and Eric took off again and closed the distance while the rest of us stayed at the trucks and enjoyed a good hot cup of coffee.

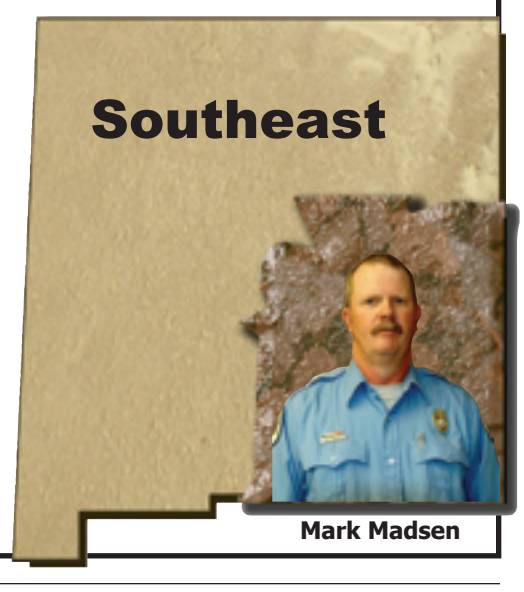
We were watching the elk, now six or seven, through our binoculars when we heard the first shot, followed by a quick second shot. By then, there were elk everywhere on the hillside. We didn't' see anything fall, but there were still elk moving on the hill so we assumed that Curtis must have one down.

Curtis and Eric returned to the trucks, and sure enough, Curtis told us, "The beast was down" -- one of his dad's favorite sayings. And -- you guessed it -- the cow elk that Curtis shot was down on the top of the hill.

After the congratulatory 'high fives' and retelling of the shot, we grabbed our pack frames and proceeded up the hill.

You know it's a good day elk hunting when you reach the downed elk and can still see the trucks. It's even better when it's "all downhill." Curtis had made a long one-shot kill of his mature cow elk. When I asked him what he thought of his hunt, he simply said, "It's great!"

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



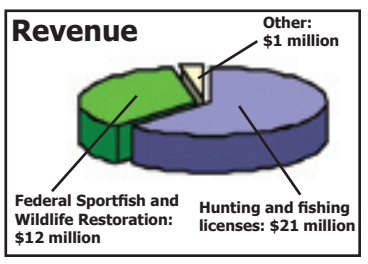
Mark Madsen

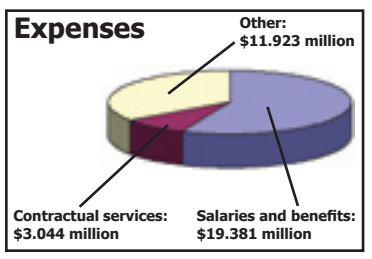
Game Department relies on sportsmen for wildlife funding

By Mark Gruber

Have you ever wondered who pays the bills for New Mexico Department of Game and Fish efforts to protect the state's wildlife and provide recreational opportunities for hunters and anglers? If you thought your tax dollars support the agency, you are mistaken -- unless you spend money on hunting, shooting and fishing equipment or boat fuel.

The Department is considered an "enterprise agency", meaning it generates and collects its own revenues. In fiscal year 2009, it received no money from the state General Fund. Most of the Department's annual funding comes from sales of hunting and fishing licenses, $21 million in 2009. Another $12 million came from the federal Sportfish and Wildlife Restoration Program, the state's share of matching funds from federal excise taxes on hunting, shooting and fishing equipment and boat fuel.





The Department's primary mission is to provide and maintain an adequate supply of wildlife and fish for use as public recreation and food supply. Department operations, however, go far beyond hunting, fishing and law enforcement. Research, habitat improvements, species protection and restoration are among a wide array of activities supported primarily by sportsmen's dollars. In fiscal year 2009, almost $8 million was budgeted for the Conservation Services Division, which has diverse goals that include managing endangered wildlife, maintaining dams and growing crops to feed wildlife in winter.

Other Department divisions are Wildlife Management, Fisheries Management, Law Enforcement and Public Information and Outreach.

The operating budget of the Department of Game and Fish exceeded $34 million in fiscal year 2009. Employee salaries and benefits accounted for $19.38 million or about 56 percent of the total budget. Contractual services made up slightly more than $3 million, or less than 9 percent of the budget. The remaining budget was dedicated to law enforcement, wildlife management activities, conservation work, property maintenance and administrative costs.

In 2009, the state Legislature directed the Department to oversee the state's Off-Highway Vehicle Program, which brought a separate funding source to the agency. The program receives approximately $800,000 a year from the sales of OHV permits and registrations. That money is used for trail maintenance and development, education and law enforcement.

For more information about the Department of Game and Fish and its role in managing and protecting the state's wildlife resources, please visit www.wildlife.state.nm.us.

Six more river otters at home in northern N.M.

Story and photos by Dan Williams

Six more river otters were released into the Rio Pueblo de Taos in October, increasing the population of the popular and playful animals to at least 15 since they were first reintroduced to the upper Rio Grande watershed two years ago.

"And there could be more out there with the young that were born this year," said Darren Bruning, a wildlife biologist with USDA-APHIS Wildlife Services. He trapped the otters in Washington and accompanied them to Taos on a Bureau of Land Management airplane.

The otters, four males and two females, cautiously emerged from their holding boxes and tested the waters of the Rio Pueblo de Taos. Two young siblings explored and frolicked along the stream banks and rocks before disappearing downstream, where they likely will continue to the Rio Grande.

The release was the fourth on Taos Pueblo land in two years, and despite a few fatalities to roadkill and beaver traps, the otters seem to be faring well in their new home. Some have been seen and tracked as far south as Cochiti Lake.

"River otters are remarkably opportunistic when it comes to surviving and adapting to a new environment," said Jim Stuart, mamalogist for the Department of Game and Fish. "We are optimistic that they will reproduce and thrive in this watershed."

The goal is to help build an otter population of 25 to 35 in the Rio Grande and its tributaries. Eventually, the Department hopes to introduce otters to the Gila River, where the last wild otter was documented in New Mexico in the 1950s.

This past October, all the excitement was on Taos Pueblo.

"I've heard stories of otters once being in this area, but I've never seen one until today," said Sam Gomez, 2009 Lieutenant War Chief. "For me, this release was very exciting."

Gomez said most people in the Pueblo have never seen a river otter, so it will be exciting for them to learn about an animal that once made the area their home.

"We'll start by teaching the young ones about the river's history and how the otters play into that," he said. "And we'll be coming out here now and then … checking on them."

Future looks bright for N.M. bighorns

Relocations give desert sheep another boost

Twenty-eight desert bighorn sheep have new homes in three New Mexico mountain ranges following a November trapping and transplanting operation at Red Rock Wildlife Area.

The successful operation boosted the wild population of the state-threatened species to about 500 in six mountain ranges, placing the sheep on the verge of being taken off the state endangered species list. Desert bighorns were downlisted from endangered to threatened in 2008.

Desert bighorn sheep were placed on the state endangered species list in 1980 when the statewide population plummeted to fewer than 70, mostly due to disease and mountain lion predation.

Photo: Aimee Arellanes

Two desert bighorn rams are lowered to the ground after they were captured at Red Rock Wildlife Area.

A helicopter and net-gun crew were used in the Nov. 13-14 operation. Once they were captured, the sheep were carried by helicopter to crews on the ground, where they were examined by a veterinarian and radio-collared. They were then loaded into trailers for trips to their new home ranges.

Thirteen ewes and five rams were taken to the Caballo Mountains to augment an existing herd of about 30 sheep. Five rams joined a herd of about 80 sheep in the Peloncillo Mountains and five rams were taken to the Ladron Mountains to augment a herd of about 30.

The operation left 30 to 35 sheep at the Red Rock Wildlife Area, the state's captive breeding ground for desert bighorns. They will be allowed to reproduce for another two years before the next capture operation.

Photo: Dan Williams

With a little encouragement from its mother, a Rocky Mountain bighorn lamb jumps from a basalt boulder along the jagged cliffs of the Rio Grande Gorge. The sheep are among a herd of about 85 that were reintroduced to the area in 2006 and 2007 by Taos Pueblo and the Department of Game and Fish.

Rocky Mountain herds expanding

New Mexico's two newest herds of Rocky Mountain bighorn sheep -- the Rio Grande Gorge herd and the Dry Cimarron herd -- appear to be thriving and expanding since the bighorns were reintroduced to those ranges from 2006-2008.

The bighorns in the Rio Grande Gorge are faring exceptionally well in their new environment, having grown from 48 sheep in 2007 to about 85 today. Taos Pueblo first reintroduced the bighorns to the Gorge with 23 sheep in 2006. The Department of Game and Fish followed with the release of 25 bighorns on Bureau of Land Management property in 2007.

A recent survey of the Gorge herd indicated the sheep were very healthy, with a good number of lambs born last spring.

"They're doing extremely well," said Elise Goldstein, a Department bighorn sheep biologist. "The habitat in the Rio Grande Gorge appears to suit them."

The Dry Cimarron herd in the far northeastern corner of the state has grown to about 75 bighorns since they were first reintroduced to the area in 2007. The Department released 34 sheep in the Dry Cimarron in 2007 and another 27 sheep in 2008.

The bighorns that went to the Gorge and the Dry Cimarron were captured from large herds in the Pecos and Wheeler Peak wilderness areas, to help prevent the sheep from stressing available habitat. The statewide population of Rocky Mountain bighorns is now estimated at between 900 and 1,000 in eight mountain ranges.

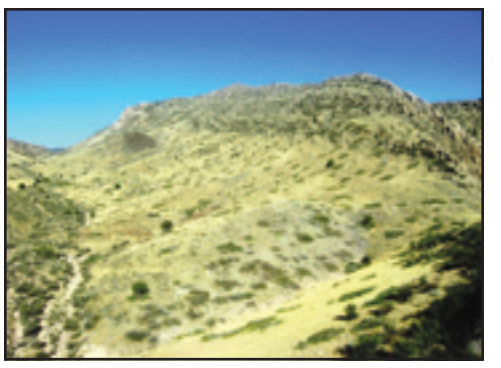
Projects improve southern habitat in Manzano Mountains

By Mark Olson

Rocky Mountain bighorn sheep are continuing to hold their own in the southern Manzano Mountains, thanks to habitat improvement efforts involving private landowners and government agencies.

The Department of Game and Fish estimates there are now about 25 bighorns in the Manzanos, the southern extent of their range in New Mexico. In early 1998 the population had dropped to only 15. In July 1998, the Department transplanted 23 bighorns from the Pecos Wilderness to augment the herd. The population suffered mortalities from mountain lion predation and strikes from Burlington Northern Santa Fe Railroad trains that travel through the area.

Since that transplant, the Department has contributed to efforts to improve habitat and reduce mortality of the Manzano herd. One project -- a 160-acre juniper-thinning project on private land in Sand Canyon -- was designed to reduce the tree density and create wide-open areas bighorns need to avoid predators.



A juniper-thinning project was completed in 2008 in Sand Canyon in the southern Manzano Mountains to improve habitat for bighorn sheep. The photos at left show the range before and after thinning.

Photos: Mark Olson

The Department assisted the Tierra Grande Improvement Association, which owns the canyon, in securing a federal grant through the Natural Resource Conservation Service Wildlife Habitat Improvement Project. Potential future projects include more tree removal on adjacent U.S. Forest Service and Bureau of Land Management lands, prescribed burns and constructing water sources for wildlife.

Burlington Northern and the Los Lunas Soil and Water Conservation District joined the Department, private landowners, the Forest Service and BLM on other wildlife habitat projects in the Manzanos. Those include fencing along the railroad tracks to help prevent bighorns from being struck as they make their way toward water sources. Others include projects to thin trees and provide water sources on public lands with the help of the Department's Habitat Stamp Program.

When completed, the habitat projects may open opportunities for more bighorn transplants in the Manzanos.

Mark Olson, a conservation officer and wildlife habitat specialist with the Department of Game and Fish, died unexpectedly March 5, 2009, not long after he wrote this article. He was 46.

A legacy of houndmen

By M.H. "Dutch" Salmon

The pursuit of bears and cougars with hounds often has been termed "the toughest sport in the woods," and no region of North America matches New Mexico's history, lore and accompanying literary tradition of hunting big game with hounds.

Photo: John Stickrott, M.H. Salmon collection

Legendary houndman Ben Lilly (1856-1936) spent more than 20 years hunting bears and lions with hounds in the Gila country of southwestern New Mexico.

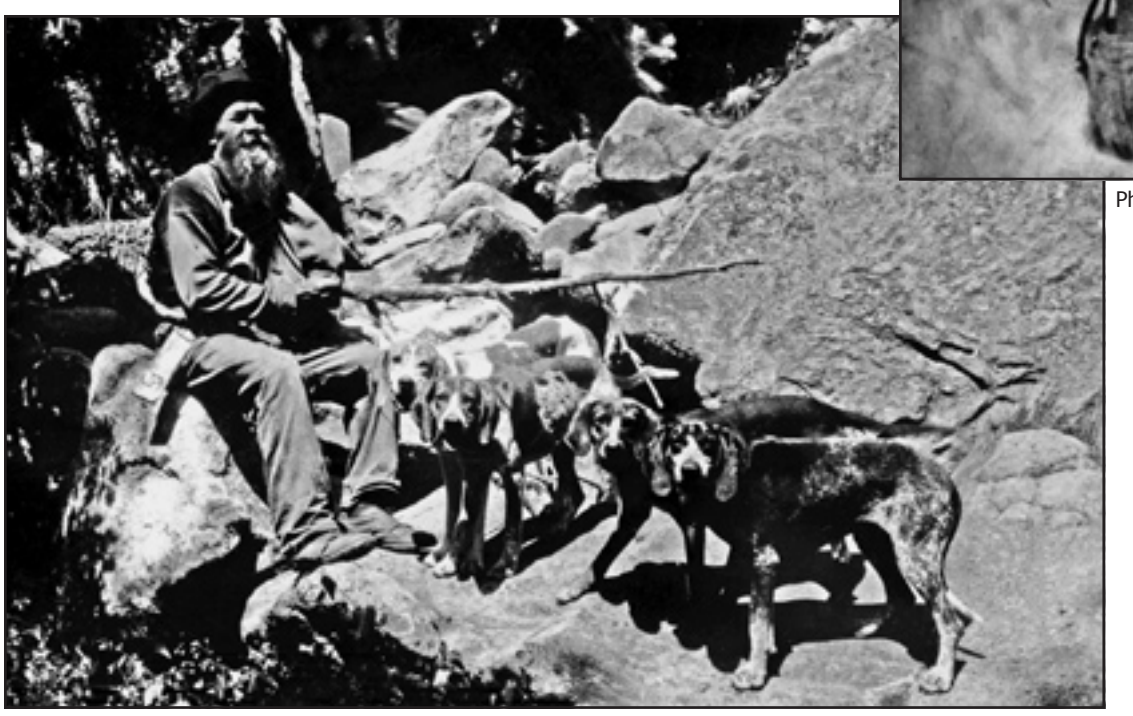


Photo: J. Stokley Ligon, M.H. Salmon collection

While other regions of North America have produced great dogs and the hunters who work them, most are lost to time and history and garner only regional notice, if that. New Mexico's houndmen are known to a much wider audience -- indeed coast-to-coast among nimrods and cultural historians -- because they not only were great hunters, they also were great characters. By a combination of design and chance, their oddities, exploits and adventures have surfaced and garnered a legacy within enduring books.

Chief among our hounds and hunting icons is the man who would no doubt get the nod as the most famous houndman in American history: Benjamin Vernon Lilly (1856-1936). A product of the deep South, Lilly guided then-President Theodore Roosevelt on a bear hunt in Louisiana in the fall of 1907. Roosevelt wrote of Lilly and his dogs' prowess with admiration, and recorded his toughness with some incredulity:

"The morning after we reached camp," Roosevelt wrote in "Scribner's Magazine" in 1908, "we were joined by Ben Lilly, the hunter, a spare, full-bearded man with mild, gentle blue eyes and a frame of steel and whipcord. I never met any other man so indifferent to fatigue and hardship. The morning he joined us in camp, he had come on foot through the thick woods, followed by his two dogs, and had neither eaten or drunk for more than 24 hours; for he did not like to drink the swamp water … He could run through the woods like a buck, was far more enduring, and quite as indifferent to weather though he was over 50 years old …

"He was particularly fond of the chase of the bear, which he followed by himself, with one or two dogs; often he would be on the trail of his quarry for days at a time, lying to sleep wherever night overtook him; and he had killed over 120 bears."

As author/editor Neil Carmony points out in "Ben Lilly's Tales," a collection of writings by and about the most famous of houndmen, the legend of Ben Lilly was established by the personal narratives of none other than the President of the United States.

But bears and panthers soon were extirpated from the deep South, and Ben Lilly went west with his dogs, arriving in southwest New Mexico early in 1911. For the next 20-plus years, he would expand his reputation as a pursuer of bears and lions, his endeavors immortalized by a chance meeting with, and subsequent book penned by, the best-known Western author of his time, J. Frank Dobie. It was a fortuitous meeting for both.

The Texas author, a hunter himself, was drawn again and again to the mysterious mountains of the Gila National Forest and its characters. He also wrote about Nat Straw and James "Bear" Moore, among other Gila mountain men. Dobie's book, "The Ben Lilly Legend," while the story of a legendary figure, is not fanciful but a solid biography. No one before or since has equaled Dobie's intuitive understanding of Lilly's relationship with his hounds.

"To watch his dogs work," Dobie wrote, "was a lively pleasure to him. They had an understanding with each other that was both personal and technical … he detailed their trailing techniques and accomplishments with a kind of solemn glee, a pride transcending any egoism, and the plain dignity that belongs only to elemental life."

"The Ben Lilly Legend" was my introduction to this singular mountain man. But I wanted more than the book. Arriving in New Mexico in 1980, I became obsessed with finding someone who had actually known and hunted with Lilly -- who could give the truth or lie to the hunter's notoriety. Was the legend spawned by history or folklore? By 1980, few were left who could say from experience. I found one, Jack Hooker, and interviewed him for the Silver City "Enterprise." An octogenarian, but still lucid and lively, Hooker was my link to this man out of time:

"Yeah, I hunted with him; I knew Ben Lilly pretty good. I'd ride and he'd walk alongside as fast as any horse and talk faster then that. Talk all day, whether you answered back or not. He'd have half a dozen hounds anyway, and he didn't tie his dogs; they obeyed him. When the race would start and go to rough country, you couldn't keep up with him. The first time I went with Ben Lilly, I went afoot, like him. That was a mistake. I was in my twenties then and he was past sixty, but when the race started and the dogs went over the mountain, Lilly walked me down. After that I rode a horse when I hunted with Ben Lilly."

Jack Hooker also had insight into Ben Lilly's life with his hounds:

"At times, Lilly used to hood-up in a cave along

Renowned western artist Frederick Remington hunted bears with Catron County rancher and author Montague Stevens in the 1890s. Stevens (1859-1953) wrote "Meet Mr. Grizzly," which was published in 1948 and now is back in print.

Sapillo Creek. I knew he had buried something outside the mouth of that cave. I always wondered what it was … a knife maybe; money? I was down there one time and dug it up. It was the grave of one of his best hounds ever. He buried Crook there and on the lid of a shoebox in pencil he wrote this out."

Jack Hooker handed me the cover of the shoe box. In longhand, more elegant than grammatical, Lilly had written:

"Here lies Crook, a bear and lion dog that helped kill 210 bear and 426 lion since 1914 owned by B.V. Lilly. He died here the first Tuesday night in February 1925. He was owned and raised in camp and died in camp here. B.V. Lilly February 1925."

As talented a houndman as Ben Lilly, and as literate and articulate as Dobie, one-armed Catron County rancher Montague Stevens (1859-1953) left us a monumental work of history, hounds and hunting in "Meet Mr. Grizzly." A lost classic for decades, this 1943 publication is now back in print. Upon reading it, Larry Mueller, longtime hunting dogs editor at "Outdoor Life," wrote to me: "Montague Stevens was a brilliantly innovative 1890s houndman whose training methods and hunting techniques were so far ahead of his time they are still new and fresh today."

The late Bill Tarrant, longtime hunting dog columnist for "Field & Stream," also wrote me a letter: "I have determined that "Meet Mr. Grizzly" is the greatest dog-training book ever written," he said.

One example will serve to illuminate Stevens' innovations as a dog man: As long as man has followed trailing hounds, there has been the essential problem of keeping track of the race. Even with good hearing, the cry of the pack can soon get out of range. Stevens' principal game, the grizzly, won't tree but must be worn down over many miles. Stevens crossed trailing hounds with English sheep dogs (a very biddable, stay-with-the-master breed) to create "slow-trail" dogs that kept him connected to the trail, the pack, and thereby the bear.

"It is only fair to say," Stevens wrote, "that the credit for the change in catching grizzlies from the "hit or miss" principal to one of "reasonable certainty" goes to these slow-trail dogs."

Among the other fine books on hounds and hunting with a strong New Mexico focus are: "Slash Ranch Hounds" by Dub Evans; "Hunting Grizzly, Black Bear and Lion on the Old Ranches" by Will Evans; "Life of the Greatest Guide" (about Dale and Clell Lee) by Robert McCurdy; "Lyon Hunts and Humor" by Shorty Lyon, and the works of four more authors which deserve a paragraph or two apiece.

Anthropologist Frank C. Hibben, Ph.D. (1910-2002), a former chairman of the State Game Commission, hardly owned a hound in his lifetime. But he joined in the chase with the best hunters of his time, including Ben Lilly, Frank Colcord, Giles Goswick, the Lee Brothers and Homer Pickens. His sequential volumes on hounds and houndmen, "Hunting American Lions" and "Hunting American Bears" show wide experience and a great enthusiasm for the chase.

Photo: New Mexico Department of Game and Fish

Elliott S. Barker, left, New Mexico's "Chief Game Warden" from 1931-1953, hunted lions in the Pecos Widerness with Gov. Thomas Mabry, center, and Department of Game and Fish lion hunter Roy Snyder in the late 1940s. Above, they are shown with their hounds at Beatty's Cabin.

> "Whatever you do, save the dogs!"
>
> -- Wade Hampton III, legendary bear hunter, circa 1857

Sometimes accused of "drawing the long bow" in some of his stories, Hibben in other recollections hits the mark. His captivating horseback chase into Mexico in pursuit of a spotted cat – "Moonlight Jaguar" – is among the most compelling hunting tales ever penned, though the pursuit does not result in the take of any game.

Elliott Barker served as director (then termed "Chief Game Warden") of the New Mexico Department of Game and Fish from 1931 to 1953. Before that he was a forest ranger, a rancher and a houndman. Pursuit of bears and lions inspired him to write "When the Dogs Bark 'Treed" and "Western Life and Adventures." The latter book contains the narrative, "Three Days on the Trail of a Longtail," the best true account I know of that captures the peculiar thrall and tenacity that hounds and houndmen share in pursuit of dangerous game.

Homer Pickens (1904-1995) also became Department director, but he started out as a predator hunter. His 1980 memoir, "Tracks Across New Mexico," has a cover photo of the author with as fine looking a long-eared, cold-nosed black and tan hound as you'll ever see. In the first edition, the book sells for $200 and up … when you can find one!

Today, the pursuit of bears and lions in New Mexico has changed. Depredating animals are taken individually, but no longer are these upper echelon predators classed as unprotected "varmints." Rather, they are considered valued game animals whose harvest is carefully monitored and controlled for sustainable populations. Hounds are still legal for bears and lions, but many houndmen increasingly hunt tracks and follow the hounds with trucks, ATVs or snowmobiles. Locater collars are in common use on the hounds.

And then there are the throwbacks, like Warner Glenn.

An Arizona rancher, Glenn follows his hounds with mules, the finest looking pack of treeing walkers I've ever seen. He frequently crosses the state line and works his dogs in the nearby New Mexico Bootheel. His hounds can work a track on dry ground in desert mountains, an increasingly rare talent. Along with numerous lions, in the past dozen years his hounds have brought to bay (and he released) two Bootheel jaguars. Glenn even produced a slim but best-selling book on the subject, "Eyes of Fire," complete with stunning photos of the spotted cat standing off the dogs.

The legacy of hounds and hunting in New Mexico lives on.

M.H. "Dutch" Salmon of Silver City is an accomplished outdoor writer, book author and editor, and a member of the State Game Commission.

Photo: M.H. Salmon collection

Catron County rancher and houndman Montague Stevens , left, posed with three of his hounds near Horse Springs in 1895. At right, Homer Pickens, director of the Department of Game and Fish from 1953-58, poses with his prized hound Yankee Dan.

Photo: Courtesy, Homer Pickens Jr.

Bottomless beauty

Wetlands project restores habitat at historic park

By Marti Niman

Legend has it that Bottomless Lakes got their name in the 1860s from cowboys on the Goodnight-Loving cattle trail, who tied their lariats together, tossed them in the lakes and never hit bottom.

In all likelihood, the lariats drifted with the underwater currents fed by numerous seeps and springs of the Roswell Artesian Wetlands. This circulating groundwater, traveling eastward from the Sacramento Mountains, dissolved the gypsum and limestone deposits into subterranean caverns that ultimately collapsed to form small lakes. Sometimes the water overflows its borders.

Lea Lake normally overflows with swimmers seeking respite from the desert heat every summer. In 2002, its banks flooded because the two existing culverts were inadequate. Park Superintendent Steve Patterson contacted the Army Corps of Engineers for help with a problem that became an opportunity to do more than simply plug the dike.

"We could restore the wetland, enhance the flow from Lea Lake and alleviate the flooding problem all at once by applying for the Corps' Aquatic Ecosystem Restoration Project 206," Patterson said.

At first glance, the recently restored wetlands area across the highway from Lea Lake appears unremarkable. Upstaged by the Civilian Conservation Corps' meticulous rockwork at the historic Lea Lake pavilion and water tower, the newly carved ponds still show muddy ruts left by heavy equipment. The current view, however, is a promise of a revitalized landscape to come. It is one that will offer home to a wealth of species diversity and associated economic, educational and environmental benefits for the local community and beyond.

Photos: Marti Niman

Overflow from Lea Lake, the largest of several spring-fed lakes that comprise Bottomless Lakes State Park, has been diverted to form a wetland area that benefits native wildlife and plants.

Photo: Dan Williams

Wetlands are vital habitat for waterfowl and shore birds such as the great blue heron.

"You have to imagine this area as a solid wall of salt cedar and a bone yard of old pickup trucks and picnic tables," said Patterson, the driving force behind the restoration project. "We started the project in 2002 when sheet flooding was threatening the historic pavilion, water tower, the day use area and parts of the campground."

The Army Corps of Engineers contractor built ponds, straightened the channel, placed a culvert under the highway between Lea Lake and the wetland area and constructed three ponds during the first phase of the project. The water flows through the enlarged culvert under the highway, into the ponds and eastward to the Lea Lake Overflow Wetlands, ultimately joining the Pecos River.

"There is less water loss through evaporation, transpiration and infiltration," Patterson said. "Cutting the salt cedar cut down on transpiration loss."

"The big success of the project is the Pecos sunflower, which now is growing in great abundance in places where it wasn't before," Phillips said. "It needs full sunlight to germinate and the salt cedar was blocking that."

The Pecos sunflower is a more delicate and lacy-looking version of its stout cousin, with lanceolate leaves and multiple small flower heads that dance in the ever-present prairie breezes. A threatened species listed under the Endangered Species Act, this showy plant survives in fewer than two dozen known locations in desert wetlands of New Mexico and West Texas.

"It's great news that the population at Bottomless Lakes State Park is expanding," said Dr. Patricia Zenone, lead biologist for the Pecos sunflower for the U.S. Fish and Wildlife Service. "There are few wetlands where this species still occurs, and this location is important for the conservation of the Pecos sunflower, both regionally and range-wide."

In 2008, the Fish and Wildlife Service designated critical habitat for the Pecos sunflower at Lea Lake, because it was recognized to be an important habitat area that could contribute to the recovery of the species. Under the Endangered Species Act, critical habitat refers to specific geographic areas that contain elements essential for the conservation of a protected species.

The Pecos sunflower can survive a variety of salinity concentrations and water inundation. According to Joel Lusk, U.S. Fish and Wildlife Service biologist, the flower's genome could prove useful for agriculture because of its unique survival capabilities. The wetlands at Bottomless enhance the area for much more than sunflowers. The newly-restored wetlands at Bottomless Lakes State Park form part of the Roswell Artesian Wetlands, along with nearby Bitter Lakes National Wildlife Refuge.

"Wetlands clean waters and make them useable

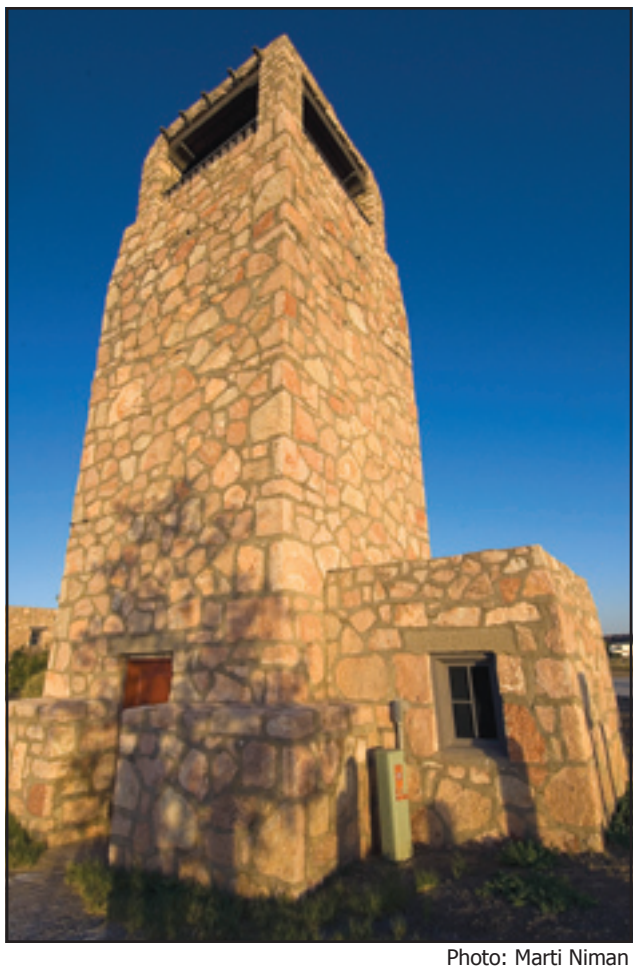


Photo: Marti Niman

The stone tower and bathhouse at Bottomless Lakes State Park were built by the Civilian Conservation Corps in the 1930s.

for agriculture – the water is oxygenated and more life-giving downstream," Lusk said. "The Roswell Artesian Wetlands provide habitat for more than 100 species of dragonflies and damselflies that fly from as far south as the equator as well as numerous rare and unusual species, some of which are found nowhere else in the world."

"Wetlands are one of those habitats that are increasingly rare," Phillips said. "It will be interesting to see what happens with the biological diversity. Plant diversity is rare due to the brackish water; but it is very rich with species of animals."

The brackishness contributes to the wetlands unique character. Some of the distinctive wetland species of the area include a colorful parade of plants and creatures such as the velvet-furred least shrew that thrives in salt grass, the vivid pink-hued Wright's marsh thistle, Pecos muskrat and the exotic-sounding Mexican tetra. The Pecos pupfish is so-named because the male's mating habits resemble puppies at play – and it turns a brilliant neon blue color to lure a mate while making a nest in the shallows.

Photo: Charlie Painter

Terrestrial barking frog

Not to be outdone, the terrestrial barking frog is a sulfurous yellow tropical frog of the family Leptodactylidae that lives underground, emerges after rain and barks like a dog for a mate.

"There also is a very old relict marine specimen of algae there that survives in the sinkholes when drought wipes out populations elsewhere," Lusk said.

The wetlands support all life stages of two springsnail species and an amphipod that are federally listed as endangered and found nowhere else in the world. The arid land ribbon snake, Pecos bluntnose shiner, greenthroat darter and Pecos Gambusia and numerous other rare species call these wetlands home.

"We don't know what their value is yet in terms of economic or medical uses but these wetlands are literally an oasis in the desert," Lusk said.

Wetlands help with flood control, groundwater recharge and capture greenhouse gases. Migratory birds and birdwatchers alike will benefit from this oasis, with numerous species using the area as a stopover.

"East and west from there is a long way from water and the value of wetlands increases with its scarcity," said Steve Cary, natural resources planner for State Parks. "It's important in that part of the state for animals that need aquatic environments and the degree of brackishness adds another variable."

Adjacent to the park the wetlands support thousands of ducks, geese and cranes that start arriving in the wetlands in mid-October, Patterson said.

"I can hear the cranes all the way to the visitor center," he said.

The wetlands also will be good for herons, especially night herons that like thick vegetation, said Rob Yaksich, instructional coordinator for State Parks. "I would expect to see songbirds as well – yellow-breasted chats, blue grosbeaks, indigo buntings in the warmer months, and year-round there likely will be mockingbirds, red-winged blackbirds, spotted towhees and black phoebes."

The impact of birding on local economies is potentially enormous, according to a 2006 survey by the U.S. Fish and Wildlife Service called "Birding in the United States: a Demographic and Economic Analysis." Nationally, birders spent an estimated $12 billion on travel expenses, including food, lodging and transportation, and twice that much on birding-related equipment.

Interestingly, New Mexico ranks with three other states (Hawaii, Vermont and Montana) where more than 45 percent of its birders travel here from out-of-state. The higher the income and educational level, the more likely a person is to be a birder – 29 percent of people from households that earn more than $75,000 annually are birders. While most hunters and fishermen are male, most birdwatchers are female, according to the survey. The wetlands development at Bottomless Lakes includes enhancements for bird watching.

The second phase of the project includes the construction of boardwalks and viewing blinds that allow visitors to walk through the wetlands and observe wildlife and birds close-up. "We get a pretty substantial community of people who are not here for splashing in the lake, they are here for nature," Patterson said. "I can envision them sitting out in the blinds with a book, relaxing."

"The public will walk on the boardwalk through the wetlands that hooks up to an aggregate trail to form a loop," Phillips said. "It should be completed by early 2010."

The viewing blinds are made of salt cedar cut and removed from the site, with a framework of latillas and coyote fencing. The boardwalk ties the blinds together on an elevated deck overlooking the ponds and the Lea Lake Overflow Wetlands beyond. The boardwalk, manufactured in Wisconsin, is shipped down in pieces with parts that snap together like Lego blocks. Made of a composite with an epoxy coating on galvanized steel to deal with the brackish water, the boardwalk is guaranteed to last for life.

"It sits on pads; we didn't want to use concrete," Phillips said. "It will float and as the flow of water changes, it can be adjusted."

The wetlands, boardwalk

... continued on Page 12

Photos: Marti Niman

Native species such as redwinged blackbirds, the Pecos sunflower and the terrestrial barking frog benefit from a wetlands restoration project at Bottomless Lakes State Park in southeastern New Mexico.

... continued from Page 11

and viewing blinds will provide an excellent educational venue for students of all ages, providing real-life access to an outdoor laboratory like few others in the state.

"One major unforeseen benefit of the wetlands restoration is that it will fit nicely into the Outdoor Classroom Program," Patterson said. "The wetlands will make an excellent outdoor classroom for water-related activities such as chemistry, habitat and hydrology."

A curriculum is in place for use at the wetlands, developed by State Parks and Roswell area teachers as primarily a 4th- and 5th-grade curriculum to address several science standards and benchmarks. Entitled "Bitter Water, Bottomless Lakes: an Outdoor Classroom Program for the Pecos River Basin of Southeastern New Mexico," the curriculum covers five specific areas: "Geology Rocks," "Habitats on the Edge," "Water Ways," "Amazing Adaptations," and "Know Your Place."

"It will give students an opportunity to look at wildlife in the park and understand more about the unique habitat there," Yaksich said. "It also shows the importance of wetlands in a dry state such as ours."

Students study biomes, environmental issues, animals and adaptations and other earth science topics, with lessons in the curriculum designed for classroom work before and after the field trips. Some activities have a more specific concentration on the geology, sinkholes and the unique hydrogeology of that part of the Pecos River Basin. State Parks purchased materials and stocked the park with skulls, nets, microscopes, bug boxes and other items to help students do aquatic ecology exploration, including a salinity gauge to measure salinity of soils.

Students who visit the park on a field trip are excited to bring their parents and show them what they have learned, often teaching their parents about stewardship, Yaksich said.

Photo: Charlie Painter

Arid land ribbon snake

The curriculum has some crossover with the Bosque Education Guide designed for the Rio Grande region, but highlights the unique habitat of the lower areas next to the Pecos River, the sinkholes and the fact that there is lots of salt, Yaksich said. "There are lots of halophytes – salt loving organisms such as salt grass, salt bush and salt cedar," he said.

"It's worth mentioning that Steve Patterson is very dedicated to having field trips at the park and he and his staff have long been champions of the Outdoor Classroom Program long before it was a formalized part of State Parks," Yaksich said.

Sandhill cranes, dragonflies and terrestrial ribbon snakes are among many species of wildlife seen at Bottomless Lakes State Park east of Roswell.

Photos: Dan Williams, top and below; Marti Niman, left.

"We are very grateful for their support."

Audubon New Mexico has found a supportive educational environment at the park. In spring 2009, the organization took its popular "Birds of a Feather Explore Together" program into 5th-grade classrooms at Roswell's Washington Avenue Elementary School, said Dana Vackar Strang, environmental education manager.
"This program was in partnership with New Mexico Department of Game and Fish's Share with Wildlife program and Bottomless Lakes State Park," she said.

After classroom work, students participated in a field trip to Bottomless Lakes, where they learned how the study of birds helps scientists understand the relationships between species as an indication of change in an area and overall health of an ecosystem.

Bottomless State Parks was honored this year by colleagues across the state, who voted it as State Park of the Year. The award was well-deserved, as noted by Phillips.

"It has been a pleasure working with the staff at Bottomless Lakes and State Parks in general," she said. "State Parks rocks! They do a lot with a little – with very few resources available in staff or funding."

Excitement over the Bottomless Lakes wetlands project has flowed across national borders as well. The Roswell Artesian Wetlands was nominated as an International Wetlands of Importance under the Convention on Wetlands of International Importance and, at press time, awaits confirmation from headquarters in Gland, Switzerland. The designation is not regulatory and carries no authority, but benefits local communities through heightened scientific awareness, enhanced tourism and ability to secure funding for future projects. If approved, the Roswell Artesian Wetlands would join fewer than 30 in the United States with the designation of International Wetland of Importance.

Marti Niman is public information officer for the New Mexico State Parks Division. She can be reached at (505) 827-1474 or marti.niman@state.nm.us.

Celebrate World Wetlands Day at Mesilla Valley Bosque State Park

Mesilla Valley Bosque State Park will host its inaugural event, "Wetlands, Biodiversity and Climate Change," from 8 a.m. to 4 p.m. Feb. 6 in recognition of World Wetlands Day, which is Feb. 2.

Sponsored by the New Mexico State Parks Foundation and the Friends of Mesilla Valley Bosque State Park, the program includes bird tours, a jaguar presentation, live raptors and programs on insects and reptiles by area experts. The keynote speaker is Kevin Bixby, director of the Southwest Environmental Center – a Las Cruces organization that spearheaded the drive to make Mesilla Valley Bosque State Park a reality.

Booths with representatives from numerous organizations including the Audubon Society, Chihuahuan Wildlife Rescue, New Mexico Department of Game and Fish and the Las Cruces Natural History Museum will offer education and information. For more information, call the park at (575) 523-4398 or (877) NMPARKS, or visit www.nmparks.com.

Photo: Dan Williams

Interpretive programs are popular with visitors to Mesilla Valley Bosque State Park.

Red Rock thrives on diversity

Birds, bighorns await visitors at wildlife area

By Dan Williams

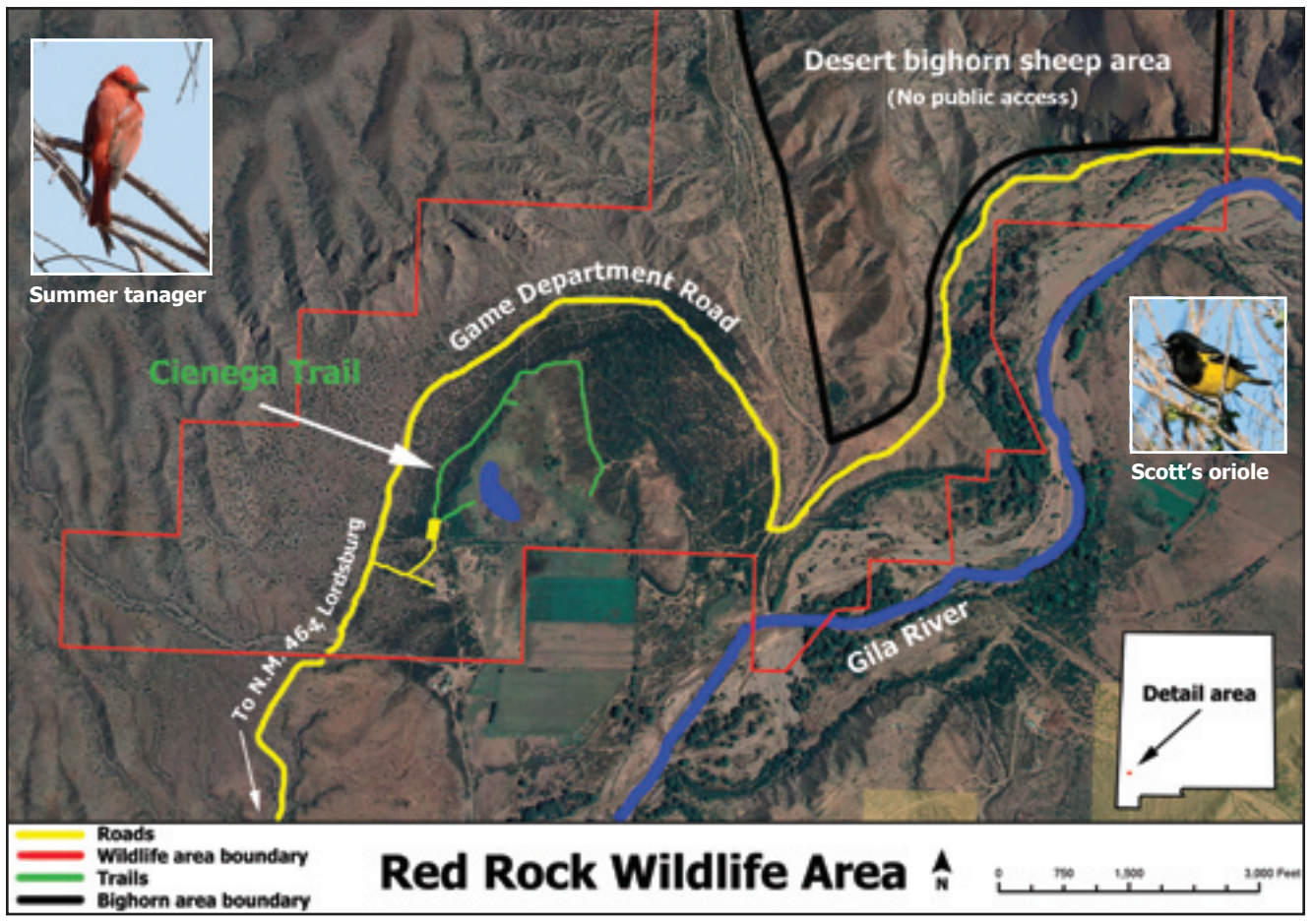
From its ironic beginning as a test site of sorts for non-native exotic big game, to its current role as a breeding ground for native desert bighorn sheep, the Red Rock Wildlife Area has been one of New Mexico's most intriguing havens for wildlife.

"If you enjoy a wide diversity of wildlife and some of the most spectacular scenery New Mexico has to offer, you don't want to miss Red Rock," said Mike Gustin, assistant chief of the Department of Game and Fish Conservation Services Division. "It's a bit off the beaten path, but the trip is well worth the effort."

Purchased for $83,680 in 1960, the area 26 miles north of Lordsburg was mostly off-limits to the public until recently. Its original purpose was as a holding environment for exotic animals before release into the wild. The area once held such exotic species as Persian gazelles, Persian ibex, Siberian ibex, oryx, kudu and Elberz red sheep as biologists evaluated their suitability for release. Only oryx and Persian ibex thrived in New Mexico's habitat, and both species continue to provide hunting opportunities.

Today, the fenced area at Red Rock is devoted exclusively to captive breeding of native desert bighorn sheep for eventual release into suitable habitat in southern mountain ranges. The sheep are held in 1,500 acres of deeded land, leased State Trust land and Bureau of Land Management property withdrawn from development through 2023.

The desert bighorn breeding and transplant efforts have been so successful at Red Rock that the statewide population increased from fewer than 170 to more than 500 in the past eight years. That enabled the State Game Commission to remove desert bighorns from the state endangered species list in 2008, reclassifying them as "threatened." Today, visitors are welcome at Red Rock.



Although the sheep paddocks are still off-limits to the public, visitors might catch a glimpse of the bighorn sheep from the road outside the fence. And there are plenty of other wildlife-viewing opportunities.

The Department recently constructed hiking trails and restored a pond in the area's lowland cienega to improve habitat, restore native fish and give visitors a chance to experience the native plants and wildlife of the Chihuahuan desert.

The portions of the area outside the bighorn paddocks recently were opened to wildlife-associated recreation other than hunting or fishing through the Department's Gaining Access Into Nature, or GAIN, program. All visitors of the area ages 18 or older must have either a GAIN permit or a current hunting or fishing license, and a Habitat Management and Access Validation. Costs for the GAIN permits, including the validation, are $19 for a full year, $8 for five days.

A 1-mile hike around the Cienega Trail may give visitors a look at javelinas, mule deer, jackrabbits, coyotes and a variety of songbirds and raptors. The area also is home to rattlesnakes and the rarely seen Gila monster. Interpretive signs are placed along the trail to explain some of the special natural history and cultural history of the area.

Photo: Mark Watson

Desert bighorn sheep are raised at the Red Rock Wildlife Area and eventually captured and transplanted in southern New Mexico mountain ranges.

"Birders will especially appreciate the trail because there are so many different species to see and photograph at different times of the year," Gustin said. "And it's only going to get better now that we've restored the cienega pond."

A trip around the Cienega Trail may reward birders with sightings of a Bendire's thrasher, a Gila woodpecker, Abert's towhee or a vermillion flycatcher. Summer tanagers, phainopeplas and blue grosbeaks also are occasionally spotted in the general area.

The quarter-acre pond also will help restore natives to the cienega with the stocking of two imperiled fish species, the Gila topminnow and the Gila chub. The Department and the Desert Fish Habitat Partnership restored the Red Rock cienega using a variety of state and federal funding, including $60,000 from the U.S. Fish and Wildlife Service National Fish Habitat Partnership Demonstration Project.

To learn more about the Red Rock Wildlife Area and GAIN, please visit the Department Web site, www.wildlife.state.nm.us and click on "Wildlife Adventures."

The cienega pond at Red Rock Wildlife Area soon will be home to two imperiled native fish, the Gila Chub, below, and the Gila topminnow. The pond and a 1-mile nature trail also will be popular with wildlife watchers.

Turtles in trouble

Rio Grande Nature Center State Park in Albuquerque is a good place to see turtles, including native painted turtles, left, and non-native and unwanted red-eared sliders, inset.

... continued from Page 1

related that they once were considered subspecies of the same species, the potential of hybridization is great. That is not much of a conservation issue for a common, wide-ranging species like the red-eared slider, but with its restricted range, hybridization can be a serious threat to the Big Bend slider.

Unlike the red-eared slider, the Big Bend slider has a very limited range, being known in New Mexico only from the Bosque del Apache National Wildlife Refuge south to Caballo Lake, primarily in the refuge and Elephant Butte Reservoir. One specimen was found at the Department of Game and Fish's La Joya Waterfowl Management Area in the 1970s, but the species has not been seen there since.

Department herpetologist Charlie Painter, who traps turtles annually at Elephant Butte Reservoir to monitor the status of the two sliders, said very few turtles have shown outward indications of hybridization, such as a mix of coloration between the two species. However, he said, "Hybridization may still be low, but I expect it is growing more evident each year as populations of T. scripta increase in Elephant Butte and Bosque del Apache."

The red-eared sliders seen at the Rio Grande Nature Center and Bosque del Apache were introduced by humans, more often than not as pets no longer wanted by their owners. When conducting surveys for the Big Bend slider, U.S. Bureau of Reclamation biologist David Moore found several very large red-eared sliders near Los Lunas -- almost certainly turtles released by humans. As of 1996, the introduced red-eared sliders had not established a breeding population at Bosque del Apache, but that may have changed.

In June 2009, Department of Game and Fish mammalogist Jim Stuart, who has an extensive background in North American turtles, photographed a juvenile red-eared slider at Bosque del Apache. That was not good news for the Big Bend slider.

Moore said the Big Bend slider population at Bosque del Apache doesn't receive many new individuals from outside of the refuge because of the topography of the region, and that makes the population even more vulnerable. He and his associates are examining samples for genetic signs of hybridization in the Big Bend sliders they monitored during radio-tracking under a Bureau of Reclamation grant.

Stuart found red-eared sliders and red-eared/Big Bend slider hybrids in the 1990s at Bosque del Apache, although the vast number of sliders caught at that time were Big Bend sliders.

The Department plans to conduct more surveys to investigate the extent of the hybridization, especially in the lower portion of Elephant Butte where red-eared slider populations appear to be growing. Trapping for Big Bend sliders will include LaJoya Waterfowl Management Area, the river between Elephant Butte and Caballo lakes, and in Caballo Lake itself.

Trapping turtles involves large mesh nets baited with a food item such as canned sardines. The traps are set at the surface of the water so any turtle that ventures into trap won't drown. Turtles are removed from the trap, measured, and returned to the wild.

Hybridization isn't the only problem posed by releasing non-native or even native pet turtles into the wild. Released turtles might not survive the winter if released in the northern part of the state, or they might starve from lack of food. Most, if not all pet-store red-eared sliders are raised in southeastern United States and don't have the same genetic lineage as those native to eastern New Mexico.

Released pets also might bring parasites or diseases to new waters. Because they are so large and adaptable, red-eared sliders can displace native turtles. Humans have introduced the species worldwide, where they compete with native turtles in places as disparate as Hawaii and Europe. It is illegal to release turtles in many places, including Bosque del Apache.

"Bosque del Apache National Wildlife Refuge is not a safe haven for unwanted pets," refuge wildlife biologist Colin Lee said. "Not only is it illegal to release animals on national wildlife refuges, but for those that survive, we also will treat them as other introduced, exotic species and remove them if found."

Keeping turtles is a big responsibility, requiring large amounts of space, plenty of filtration, proper food and proper lighting. Turtles and other reptiles also are known carriers of salmonella, which led to a 1975 U.S. Food and Drug Association ban on the sale of turtles with shells less than four inches wide.

"A pet turtle must not be an impulse buy," said Lisa Frankland, Education Chairwoman with the Rio Grande Turtle and Tortoise Club. "Red-eared Sliders are wonderful pets, but too many people purchase them as cute little hatchlings or juveniles with little or no thought to their long-term care requirements. I always warn people that owning any turtle is a long-term commitment. Red-eared sliders, for example, can live 40 to 50 years and grow to the size of a dinner plate."

For details about what is necessary to responsibly keep a red-eared slider, visit the Web site produced by the Rio Grande Turtle and Tortoise Club, www.rgttc.org.

So what can we do with that unwanted turtle? Frankland suggests that if the turtle was recently purchased, take it back to the pet store. If that's not an option, contact a reptile interest group such as the Rio Grande Turtle and Tortoise Club. The club works hard to rescue unwanted turtles and tortoises but, as Frankland notes, the club is overwhelmed with requests to place red-eared sliders.

Preventing the release of pet turtles is important to native species' survival. The best prevention, Frankland says, is for people to only bring an animal into their family if they are willing to accept the responsibility for the care of that animal, now and in the future.

Turtle traps, often baited with sardines, are set so part of the trap is above water to prevent turtles from drowning. Wildlife biologists use the traps to assess turtle populations, health and distribution.

Leland Pierce is terrestrial species recovery coordinator for the New Mexico Department of Game and Fish. He can be contacted at (505) 476-8094 or leland.pierce@state.nm.us.

Turtles of New Mexico

Photo: Jim Stuart

Big Bend slider
(Trachemys gaigeae)

Description: Medium-sized turtle, with adults averaging 5 to 9 inches. Females are larger than males. Skin is green to olive green skin with light stripes, with a prominent yellow or orange spot on back of head with black borders. The carapace is olive-brown with many orange curved lines.

Habitat: Rivers, side channels and adjacent ponds with substantial vegetation.

Distribution: In New Mexico, found only in the southern half of the Rio Grande.

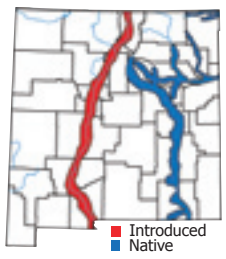
Behavior: Diurnal from April through October, often seen basking on logs and mud banks.

Food: Omnivorous and opportunistic, with juveniles appearing to be more carnivorous than adults.

Status: Uncommon, restricted range.

Photo: Jim Stuart

Red-eared slider
(Trachemys scripta)



Description: Medium to large turtle, with males measuring 5 to 9 inches and large females up to almost 12 inches. Skin is green to olive with light stripes, with a borderless red, orange, or yellow stripe behind the eye.

Habitat: Permanent wetlands with plenty of aquatic vegetation in still or slow water.

Distribution: Most common in the Canadian and Pecos river systems of eastern New Mexico. Also present in the Rio Grande, where it was introduced.

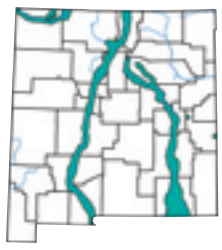
Behavior: Diurnal from April through October. Shy, often seen basking on logs away.

Food: Omnivorous, with juveniles more carnivorous and adults more herbivorous in nature.

Status: Common.

Photo: Jim Stuart

Painted turtle
(Chrysemys picta)



Description: Adults grow to 3 to 7 inches, although females can be larger. The skin is olive with yellow stripes and the carapace is brownish to olive. Males have slightly elongated claws on their forefeet.

Habitat: Prefers permanent, slow-moving waters of rivers, lakes, marshes and ponds, and some semi-permanent waters such as irrigation ditches and ponds.

Distribution: In New Mexico, primarily the Pecos, Rio Grande and San Juan river systems and some lakes and ponds.

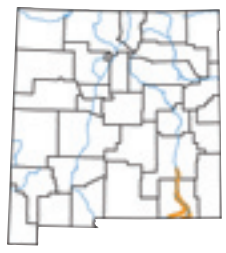
Behavior: Active during the day from March through October, spending much time basking in the sun.

Food: Omnivorous, eating fish, invertebrates, plants and carrion.

Status: Common.

Photo: Charlie Painter

Western river cooter
(Pseudemys gorzugi)



Description: A large turtle with females averaging 8 inches and males 6 inches. Yellowish green stripes on the head and neck. Legs and exposed skin marked with red, yellow and black. Shell is ornately marked with yellow and black lines and blotches.

Habitat: Prefers large, deep pools of rivers with aquatic vegetation and muddy, sandy or rocky bottoms.

Distribution: In southeastern New Mexico, found in the Pecos, Black and Delaware rivers.

Behavior: Semi-aquatic, often seen basking on logs or muddy banks.

Food: Omnivorous, feeding on aquatic plants, invertebrates and vertebrates.

Status: State threatened.

Photo: Charlie Painter

Sonoran mud turtle
(Kinosternon sonoriense)

Description: A small turtle ranging in size from 2 to 6 inches. Skin is dark gray with cream-colored mottling on the head and neck. Shell is brown to olive.

Habitat: Permanent streams, springs and ponds with rocky or sandy bottoms and aquatic vegetation.

Distribution: In New Mexico, found only in southern Catron, western Grant, and Hidalgo counties in the southwestern corner of the state.

Behavior: Secretive. Spends most of its time on the bottom except for basking. Terrestrial activity is rare.

Food: Carnivorous, preferring insect larvae and snails, but also may eat fish, frogs, tadpoles and plant material.

Status: Uncommon.

Photo: Charlie Painter

Yellow mud turtle
(Kinosternon flavescens)

Description: New Mexico's smallest turtle, with adults ranging from 3 to 6 inches. Skin is gray or grayish olive, usually with a bright yellow or cream colored throat and lower jaw. Shell is olive.

Habitat: Grasslands and woodlands near quiet waters with muddy or sandy bottoms.

Distribution: In New Mexico, common in the eastern third of the state and some populations in the southwest.

Behavior: Secretive and shy, feeding and mating in water, but spending more time on land as it is a poor swimmer.

Food: Omnivorous, feeding on living and dead animal matter and vegetation.

Status: Common.

Photo: Charlie Painter

Smooth softshell turtle
(Apalone mutica)

Description: The smallest softshell turtle, ranging in size from 8 to 14 inches, with females larger than males. The leathery shell is olive to orange-brown with darker spots, streaks or blotches. Males have long, thick tails.

Habitat: Primarily rivers, but sometimes found in lakes or ditches with soft, sandy or silty bottoms.

Distribution: In New Mexico, only in the Canadian River drainage in the eastern part of the state.

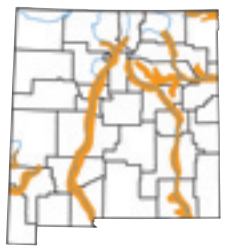
Behavior: Aquatic, spending very little time on land. A very strong swimmer, it can easily maneuver upstream against strong currents.

Food: Carnivorous, eating mostly a variety of invertebrates, fish and amphibians.

Status: Uncommon.

Photo: Jim Stuart

Spiny softshell turtle
(Apalone spinifera)



Description: Medium-sized turtle ranging from 14 to 19 inches. The rough surface of the shell is olive or tan, with a pattern of white or dark spots. Males have a long, thick tail.

Habitat: Virtually any form of permanent water with soft bottoms.

Distribution: In New Mexico, native to the Cimarron, Canadian, Pecos and Rio Grande river systems. A population in the Gila River most likely was introduced.

Behavior: Highly aquatic, powerful swimmers and extremely agile on land. Seldom seen and often un-noticed because of their extreme wariness and speed.

Food: Carnivorous, feeding on invertebrates, fish and amphibians.

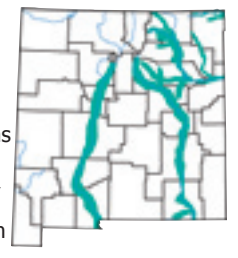
Status: Common.

Photo: Jim Stuart

Snapping turtle
(Chelydra serpentina)

Description: Large and heavy-bodied, growing to 9 to 19 inches with a long tail. Powerful jaws used to feed and for defense.

Habitat: Prefers quiet, permanent waters with aquatic vegetation.



Distribution: In New Mexico, drainage systems of the Pecos, Canadian and Dry Cimarron rivers, and a small, possibly introduced, population in the central Rio Grande.

Behavior: Aquatic, spending most of its time on the bottoms of rivers and lakes.

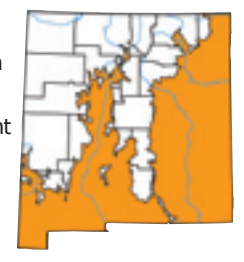
Food: Omnivorous, feeding mostly on invertebrates, plants and carrion.

Status: Common.

Photo: Jim Stuart

Ornate box turtle
(Terrapene ornata)

Description: Most adults reach 4 to 5 inches. Skin color is dark brown to reddish brown with yellow to orange spotting and yellow jaws. The eye color is bright red in males and yellowish-brown to reddish-brown in females.



Habitat: Most abundant in grasslands with soils suitable for burrowing.

Distribution: Below 7,000 feet, except the northwest.

Behavior: Terrestrial, most active in early mornings and late evenings, and in cloudy or rainy weather.

Food: Omnivorous, eating a wide variety of insects, animals, carrion, fruits and vegetation.

Status: Common.

Big brown bats often find barns, houses or other buildings suitable spots to hibernate for the winter.

Photo: Merlin Tuttle, Bat Conservation International

Bats snooze or fly south when weather gets cold

By Rob Yaksich

For most of us, winter means wearing heavier clothes, staying inside our heated houses or traveling to warm places until spring arrives. For New Mexico's bats, it means migrating, hibernating, or even both.

It makes sense when you think about it. In winter, food becomes scarce for many animals. That means they have to find food somewhere else or take a long nap until food becomes available again. Almost all of New Mexico's 29 kinds of bats eat insects, which aren't around much in winter. Thus, bats have to move to food or move to snooze.

Bats on the move

Most of our bats migrate to hibernate. Unlike most migratory birds, like snow geese, bats usually travel shorter distances. Some, like the silver-haired bat, may simply fly downhill from the mountains to warmer valleys. On the way down, they may stop to rest in stacked firewood or in lumber yards. When they reach their wintering grounds, they find a sheltered place, like a hollow tree, to hibernate.

A few bats, like the Mexican free-tailed bat, migrate to warmer places where they can find food. Most Mexican free-tails migrate to Mexico, where flying insects are always active. The lesser long-nosed bat also spends the winter in Mexico, but it's not looking for insects. Instead, this bat is like a big furry hummingbird. It eats nectar. In fall, long-nosed bats leave southern Arizona and New Mexico for Baja, Mexico, where cactus and other flowers bloom all winter.

Photo: Bat Conservation International

Hoary bat

Free-tails and long-nosed bats may migrate several hundred miles. They are strong fliers and will travel many miles each night. Free-tails may even fly two miles above ground where strong tailwinds help push them south. When spring returns, these bats head back to the United States to the caves where they raise their young.

Staying alive while staying put

Hibernating bats live off body fat until spring. While bears are eating acorns to pack on fat for their winter naps, bats are flying above them eating insects. A single bat may eat more than a thousand small flying insects each night! Because bears are large and don't fly, they can pack on more than a hundred pounds of fat. Bats need enough fat to get through the winter, but they can't get too fat to fly.

Photo: Michael Roedel

Townsend's big-eared bats huddle together to conserve heat when roosting or hibernating.

Many kinds of bats roost in caves in summer and winter. They often huddle together for warmth. Caves that stay above 32 degrees and below 50 degrees are ideal for hibernating. As it hibernates, a bat's body temperature and heartbeat drop. In fact, a bat's body will be nearly the same chilly temperature as the cave it's in. Its heartbeat goes from 400 beats per minute down to about 25. It practically shuts down and turns into a bat-cicle!

Some bats have huge ears that can lose a lot of body heat. Like those bats, we lose heat from our ears, too. Have your ears ever been so cold that it hurts to touch them? We can fix that by putting on a hat or earmuffs. But because bats can't do that, they have tricks of their own. For example, the Townsend's big-eared bat curls up its gigantic furless ears like a pair of ram's horns. They often huddle in tight clusters with others of their kind, sharing body warmth.

Other bats hibernate in tree cavities, rock crevices, under bridges and even in buildings. Colorful hoary bats live in trees all year. During winter, they may find a hollow tree or old woodpecker hole. We like to wrap up in a warm blanket on a cold day, and so do hoary bats. But a hoary's blanket is its furry tail membrane. It wraps its "blanket" around its belly, helping it stay warm in very cold conditions.

Every so often, a hibernating bat needs to wake up. It takes about an hour for it to fully wake up (like you on a school Monday). When it does, it may move to a new spot, or fly out for a quick drink of water. This burns a lot of fat, so bats don't wake up that often. In fact, waking up and moving around just once may burn two month's worth of bat fat! This can be a very big deal to a bat. But why would bats have to keep waking up?

Helping wintering bats

Would you stay in your house if your heater quit working? What if strangers kept walking through your house while you and your family are sleeping? Most caves just aren't good places for bats to hibernate. They may be too cold or too warm, or predators can easily reach bats. A good hibernating cave can be easily ruined if people visit even once. Bats don't know if people are predators or watchers; they just sense danger and want to get away. They have to wake up to escape, which burns precious fat. If bothered too much, bats will burn all their fat before spring and starve to death. If you find bats in a cave or rock crevice or hollow tree, the best thing you can do is to leave them alone.

Some bats, like the big brown bat, may end up in houses, barns or other buildings. If you can, leave them alone until spring. Try to find where they got inside, then tape netting over the entry. This will let them leave but not let them back in.

Our bats are important predators of flying insects, so please do what you can to help them get through the winter. And the next time you snuggle into a warm blanket or protect your ears from the cold, remember that somewhere in New Mexico, a bat is doing the same.

Rob Yaksich is instructional coordinator for the New Mexico State Parks Division's Outdoor Classroom Program. He can be reached at (505) 476-3394 or rob.yaksich@state.nm.us.

Photo: Bat Conservation International

Mexican free-tailed bats migrate long distances to find food during the winter.