



Photo: Dan Williams

More otters

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

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Turtle trouble



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 spinifer*), 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.



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.



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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.

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.



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.



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, 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.

