

CONSERVATION
EDUCATION

Threatened & Endangered Species of New Mexico



www.wildlife.state.nm.us

TEACHER'S GUIDE

New Mexico's natural heritage includes the rich variety of wildlife, their habitats, and their larger ecosystems. This includes the living and non-living parts, such as clean air and water. Appreciation and awareness of this heritage is important for every generation. As the fourth largest state in the lower forty-eight states, New Mexico is unsurpassed for the wide diversity of wildlife within its boundaries. Unfortunately, many wildlife species are threatened or endangered in New Mexico. As New Mexico continues to grow, the use and management of wildlife habitat has become increasingly a focus of discussion and debate. An informed understanding of wildlife is an important beginning in any such discussion. Scientists refer to the plentiful variety that exists in ecosystems as diversity. When we lose animals in our ecosystems, the diversity becomes less. This coloring book will hopefully provide students with an awareness of New Mexico's wildlife diversity that is endangered or threatened.

The richness of wildlife in New Mexico is partly a result of the several different bioregions found here. They include the Rocky Mountains, Great Plains, Great Basin and the Chihuahuan Desert. We even have Sierra Madrean and Sonoran Desert components in the southwestern corner of the state. New Mexico has approximately 150 mammal species, 517 bird species, 123 species of reptiles and amphibians, 128 species of land snails, 55 native fish species and approximately 60 species of aquatic mollusks. We have not yet even begun to adequately document the true extent of the number of species of crustaceans (there are at least 260 species) and other invertebrates present in the state.

What does it mean to say that an animal is endangered or threatened? One way of looking at it is that it means the species is in trouble- big trouble. More specifically, a New Mexico endangered species is one that is in grave danger of being unable to survive within the state. That is, wild populations of this species may soon disappear from our state. It is even more serious with federally listed species; these animals are very close to the brink of disappearing from all 50 states. Even though threatened species may still be found in New Mexico, warning signals are beginning to appear. In other words, they could become endangered in the near future, unless they are carefully conserved.

Listing a species as threatened or endangered is the first step in bringing them back. However for some New Mexico species it is already too late. In New Mexico, we have already lost the mink, northern gray wolf, hot springs cotton rat and Merriam's subspecies of elk. As for birds, we have lost sharp-tailed grouse and sage grouse. The sturgeon, phantom shiner, Palomas pupfish, boreal toad and lowland leopard frog are also gone.

The listing of animals as endangered or threatened by the State of New Mexico is the function of the New Mexico Department of Game and Fish and the State Game Commission. State listing of an animal of threatened or endangered is governed by the New Mexico Wildlife Conservation Act. There are currently 118 species listed as threatened or endangered in New Mexico. The Department has biologists and specialists who create recovery plans for threatened and endangered wildlife. So, listing an endangered species is not always a dead end street. Some species

of wildlife, such as peregrine falcon and bald eagle, have been recovered by human actions or taken off the list all together.

A New Mexico state listing is different and separate from the federal listing by the U.S. Fish and Wildlife Service which is governed by the Endangered Species Act. It is important to understand that some of species that are listed as threatened or endangered here in our state may be more common elsewhere outside of New Mexico. For example, the Elegant Trogon is at the very northern extent of its range here in New Mexico but is more common further south in the pine-oak mountains and canyons of Mexico.

Why are some animals threatened or endangered? Unfortunately, human caused habitat loss and degradation is chiefly to blame. The misuse of our natural resources combined with the dramatic growth of our own population has impacted many species of wildlife. Global climate change is increasingly being seen as a potential major threat to wildlife and wildlife habitat. A major concern in New Mexico is that global climate change will increase the severity and length of drought conditions. It also has the potential to increase the frequency and intensity of severe weather events such as damaging thunderstorms.

Why should we care about endangered species? Conserving the many different kinds of wildlife and the habitat they depend on makes sense for the well being and survival of us all. We all depend on clean air, clean water and a livable climate. If certain species of wildlife are in trouble what does that say about our future?

When we unravel one strand in the web of life we may be upsetting ecological relationships that we are not even aware of. For example, the widespread loss of prairie dogs has impacted black-footed ferrets, burrowing owls, ferruginous hawks, golden eagles, mountain plovers, and rattlesnakes. These are all creatures that frequent prairie dog towns and use them for food, shelter and space.

There are practical reasons for conserving wildlife as well. Some species may be able to help people directly by providing food or medicine. Almost 40 percent of all medical prescriptions used each year in the United States come directly or indirectly from nature or naturally occurring compounds. Wildlife is also important to the economy of New Mexico. Wildlife viewing activities annually brings in over \$550 million to the state.

As New Mexico plant and animal communities become degraded and simplified, their ability to withstand global climate change, drought, forest fires, or insect outbreaks is reduced. The ability of plants and animals to grow products and to provide services and recreation for humanity is reduced as well. More importantly, the rich wildlife heritage of New Mexico is diminished. Aldo Leopold, the late author of the Sand County Almanac and New Mexico resident, said it best, "The first rule of intelligent tinkering is to save all the parts".

Range maps indicate where animals can be found in New Mexico within the appropriate habitat.

This coloring book is part of many activities and programs offered through the Conservation Education Section- Project WILD. Project WILD is an award-winning environmental and conservation education program of instructional workshops and supplementary curriculum materials for teachers of K-12. Project WILD helps prepare teachers and students to make responsible, informed decisions for wildlife.

For more information on Project WILD and free workshops and materials on wildlife contact: Project WILD Coordinator, POB 25112, Santa Fe, NM 87504. (505) 476-8000. Or visit our website www.wildlife.state.nm.us





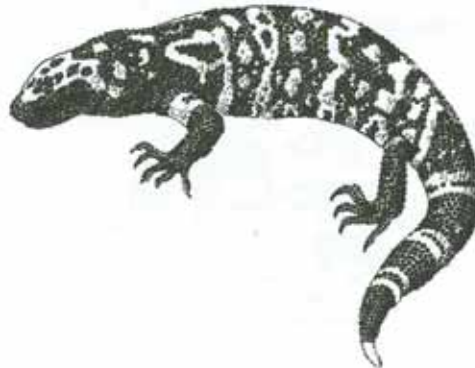
NEW MEXICO ENDANGERED SPECIES



A Coloring Book
by
Kevin W. Holladay,
Project WILD Coordinator
and
Colleen Welch,
Co-Coordinator



Pat Oldham
Illustrator



Special thanks to New Mexico Department of Game and Fish staff, **Charles Painter** and **Jim Stuart,** **Lance Tyson** and **Hira Walker** for their assistance with maps and technical review.

As the state wildlife agency, the Department of Game and Fish provides wildlife education materials and workshops to the public.

Sport Fish Restoration Act

A 10 percent federal excise tax on your purchase of fishing equipment and motor boat fuel helps states sustain sports fisheries. This includes acquiring easements or leases for public fishing, funding hatchery and stocking programs, improving boating facilities for anglers and supporting aquatic education programs and materials like this coloring book.

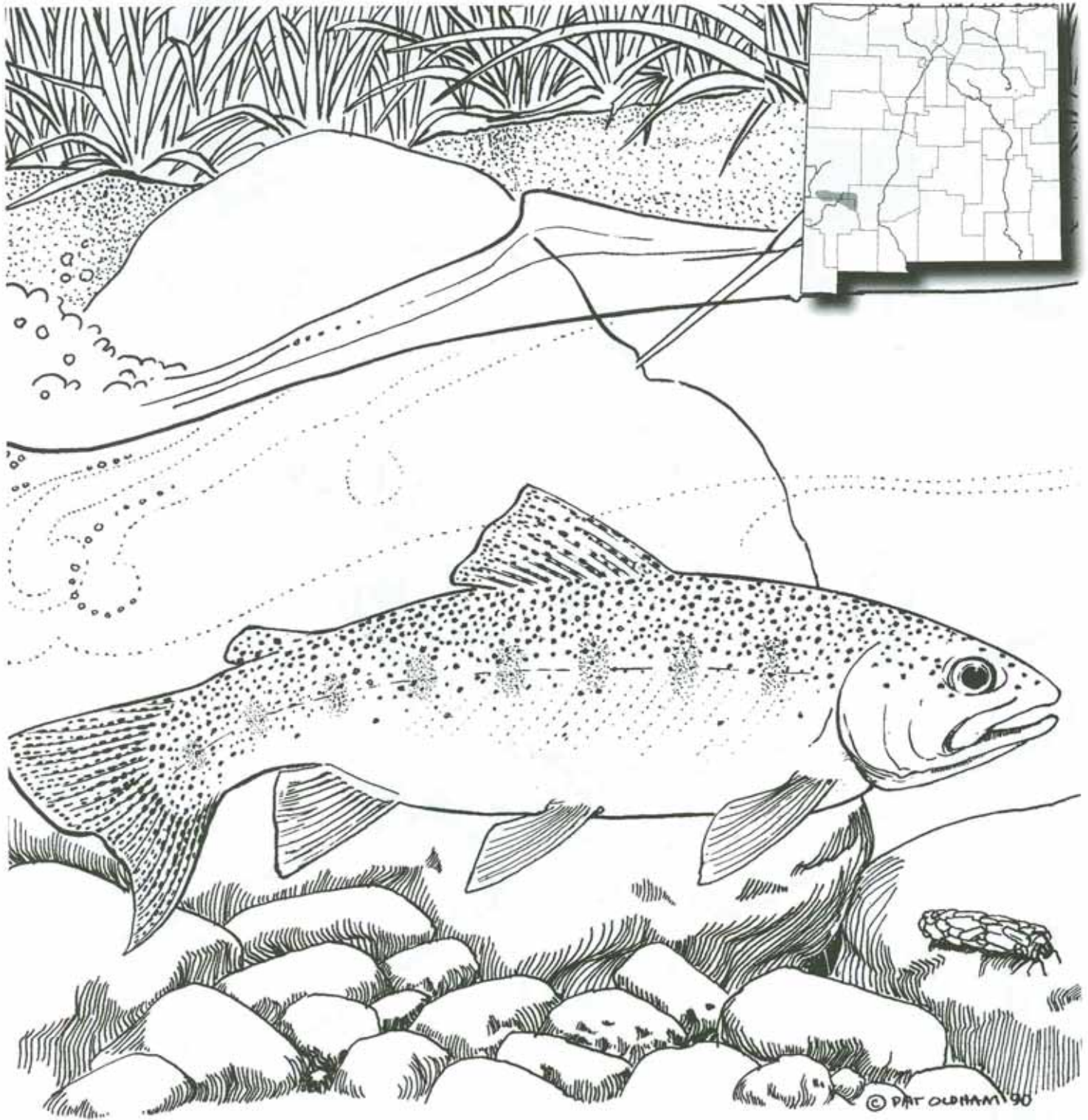
1997 C New Mexico Department of Game and Fish. Revised 2007 by Project WILD Coordinator Kevin W. Holladay, and Co-Coordinator, Colleen Welch. Contact: POB 25112, Santa Fe, NM 87504. This book may be reproduced for educational, non-profit use only.

2007 copyright by New Mexico Department of Game and Fish
Graphic design by **Lance Cherry** and **Leslie Coleman**
Photos by **New Mexico Department of Game and Fish,**
Dan Williams, Martin Frentzel, Lance Cherry & Don McCarter
Contact: POB 25112, Santa Fe, NM 87504
This book may be reproduced for educational, non-profit use only.



Peregrine Falcon

This beautiful falcon with its dark black hood has been admired for centuries as a bird hunter and is favored for use by falconers. It occurs almost worldwide and its name means 'wanderer'. With pointed wings and a streamlined body, it can reach speeds in excess of 100 mph. Peregrines nest on rocky cliffs high above canyon floors. Previous widespread use of DDT and other *pesticides* has greatly reduced the worldwide population of peregrine falcons, but many populations are recovering with the ban of these chemicals. The main threat is still chemical contamination of its habitat as old chemicals are still used in some areas and as new compounds are developed and applied to the land. State-listed as threatened.



Gila Trout

The Gila trout is a handsome cold-water fish that lives in clear mountain streams lined with vegetation. Native populations of Gila trout are found in the upper Gila River, and the San Francisco River basins in New Mexico. They have also been successfully transplanted to Mogollon Creek and to upper Black Canyon. Deep pools are important for the survival of the Gila trout during drought times. Primary foods of the Gila trout are aquatic creatures such as caddisflies, mayflies, and beetles. Loss of habitat and inter-breeding with non-native trout, such as the rainbow trout, are two factors which have led to the elimination of the Gila trout from much of its former territory. To insure its survival, the Gila trout must be introduced to additional streams that are suitable and within its historic *range*. Gila trout is federally protected as a threatened species.



Bald Eagle

The majestic bald eagle is a success story for endangered species. Their spectacular recovery from 417 pairs in 1963 to over 11,000 pairs in 2007 has resulted in its removal from the federal endangered species list. An adult bald eagle can be easily identified by its striking white head and tail. Wintering bald eagles in New Mexico can be found near rivers and lakes, perching in tall trees that provide look-out sites for prey. Since 1988 biologists have been keeping track of two to three pairs that have been breeding in the state. Although bald eagles feed primarily on fish some in New Mexico have been nesting next to and feeding on prairie dogs. They will also feed on *carrion*, waterfowl and an occasional jackrabbit. Both parents bring food to the nest; tearing it into small pieces and feeding it directly to the young. Primary threats to bald eagles include loss of wintering habitat, nest disturbances, poisoning, shooting, and electrocution by power lines.



© PAT OLDHAM '90

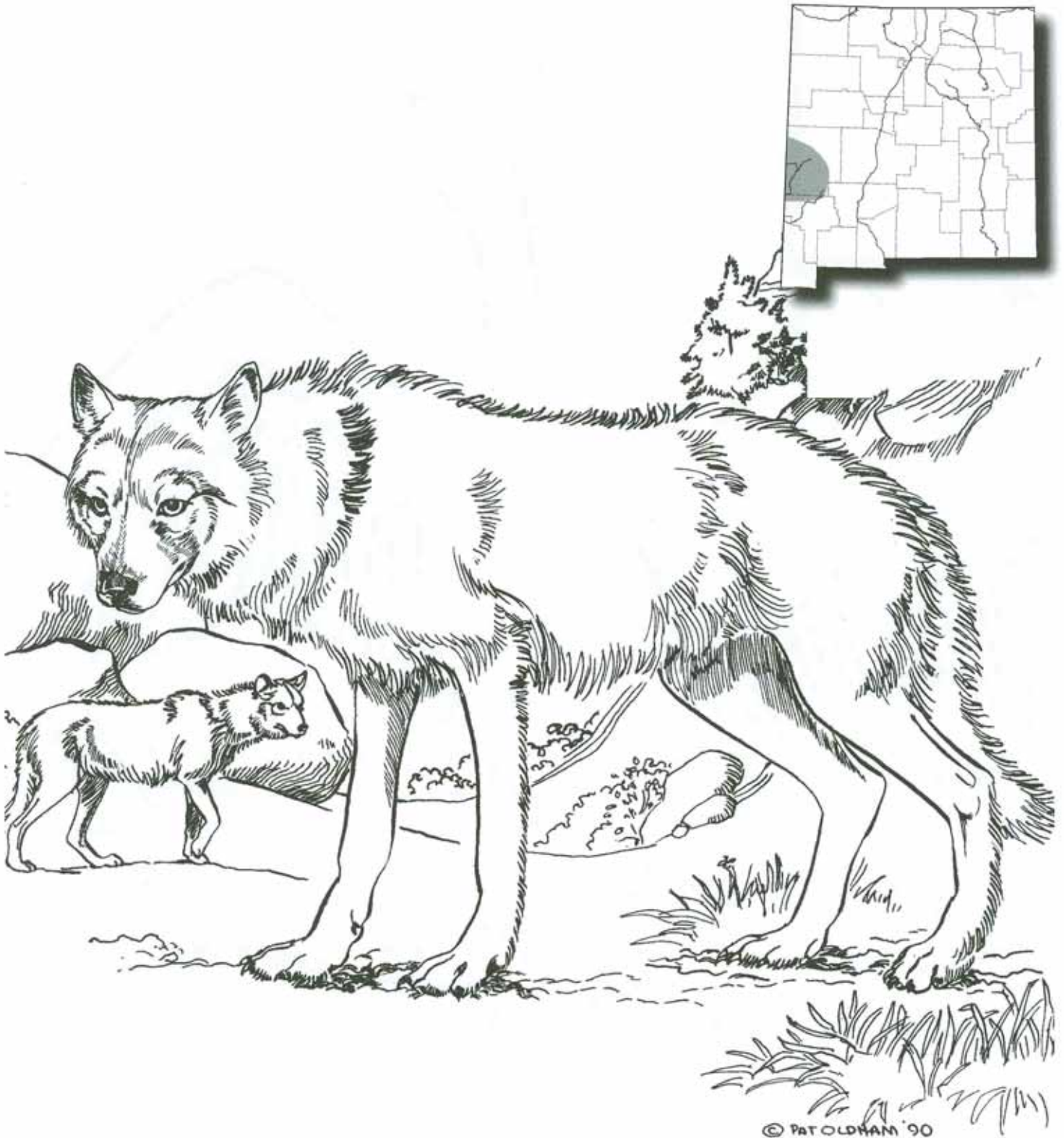
Broad-billed Hummingbird

Tiny, glittering gems of bird magic, hummingbirds are found only in North and South America. The adult male of this species is distinguished by its green plumage, red-orange bill, and a beautiful blue throat, while the female is drab. The female makes a nest of grasses and spider webs, lined with soft plant material and camouflaged on the outside with bits of bark and leaves. Hummingbirds can fly backwards, up and down and hover in one spot with their wings beating 80 times per second! In New Mexico, these hummingbirds live mainly in riparian habitats in Guadalupe Canyon in the extreme southwestern corner of the state. Although much more common in Mexico and southern Arizona they are state-listed as a threatened species.



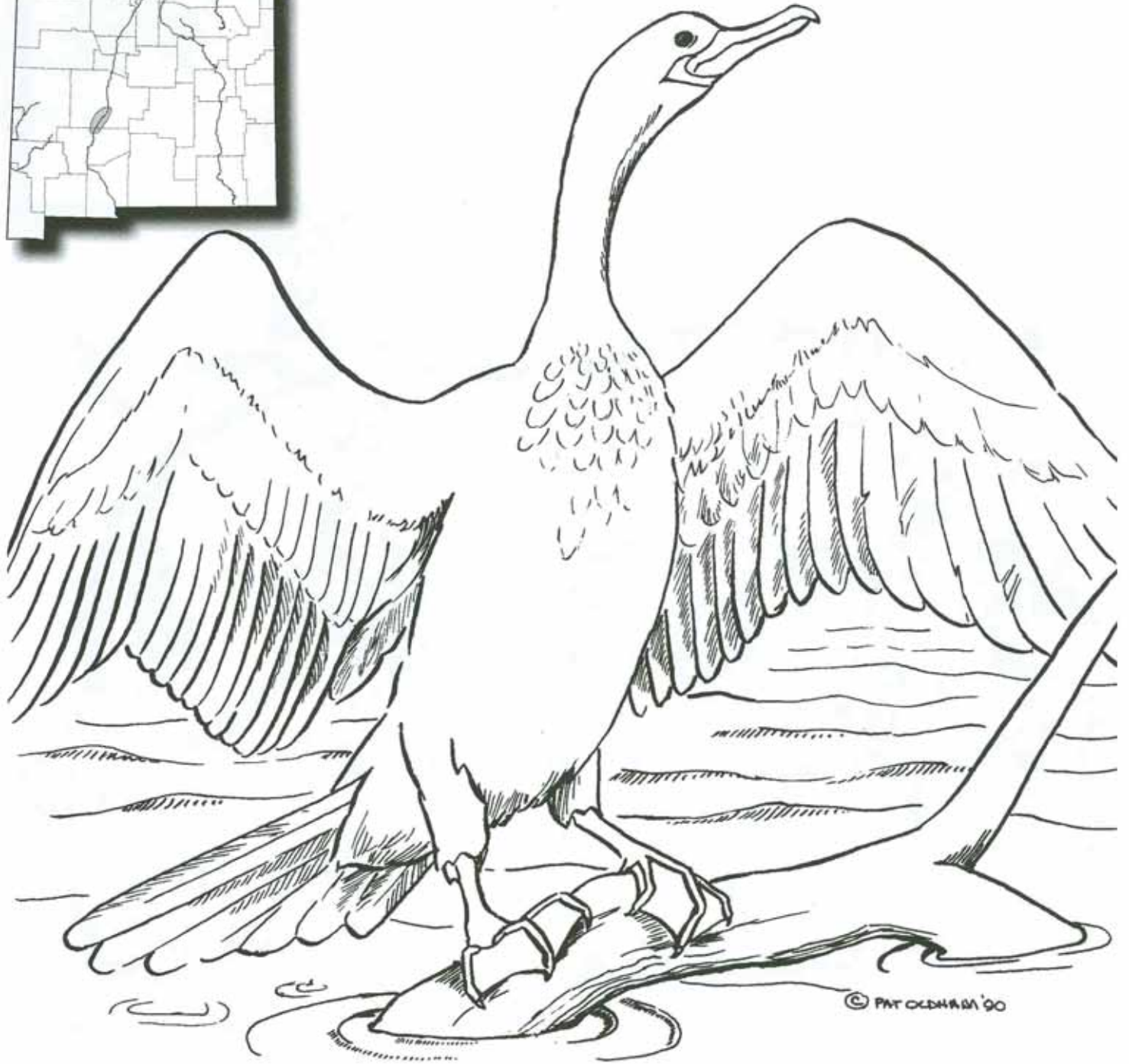
White Sands Pupfish

Found nowhere else in the world, the White Sands pupfish lives in only two springs and a small stream on White Sands Missile Range and Holloman Air Force Base in southern New Mexico. This small fish is light brownish-gray above and silvery-white below, with a short chunky body only 1-3/4 to 2 1/2 inches long. It prefers slightly salty water and feeds on algae and mosquito larvae. The White Sands pupfish has adapted to extreme seasonal temperature changes in its harsh environment. Daily water temperature can vary by as much as 70 degrees F! Threats include trampling of its habitat by a *feral* horse population, military activities, weapons testing and introduction of nonnative fishes that prey upon them. Some improvement has been made in the White Sands pupfish habitat since wild horse populations have been reduced and fencing put up around the ponds. The water quality has improved and the pond edges have more cattails, bulrush plants and sedges. The White Sands pupfish is state-listed as a threatened species.



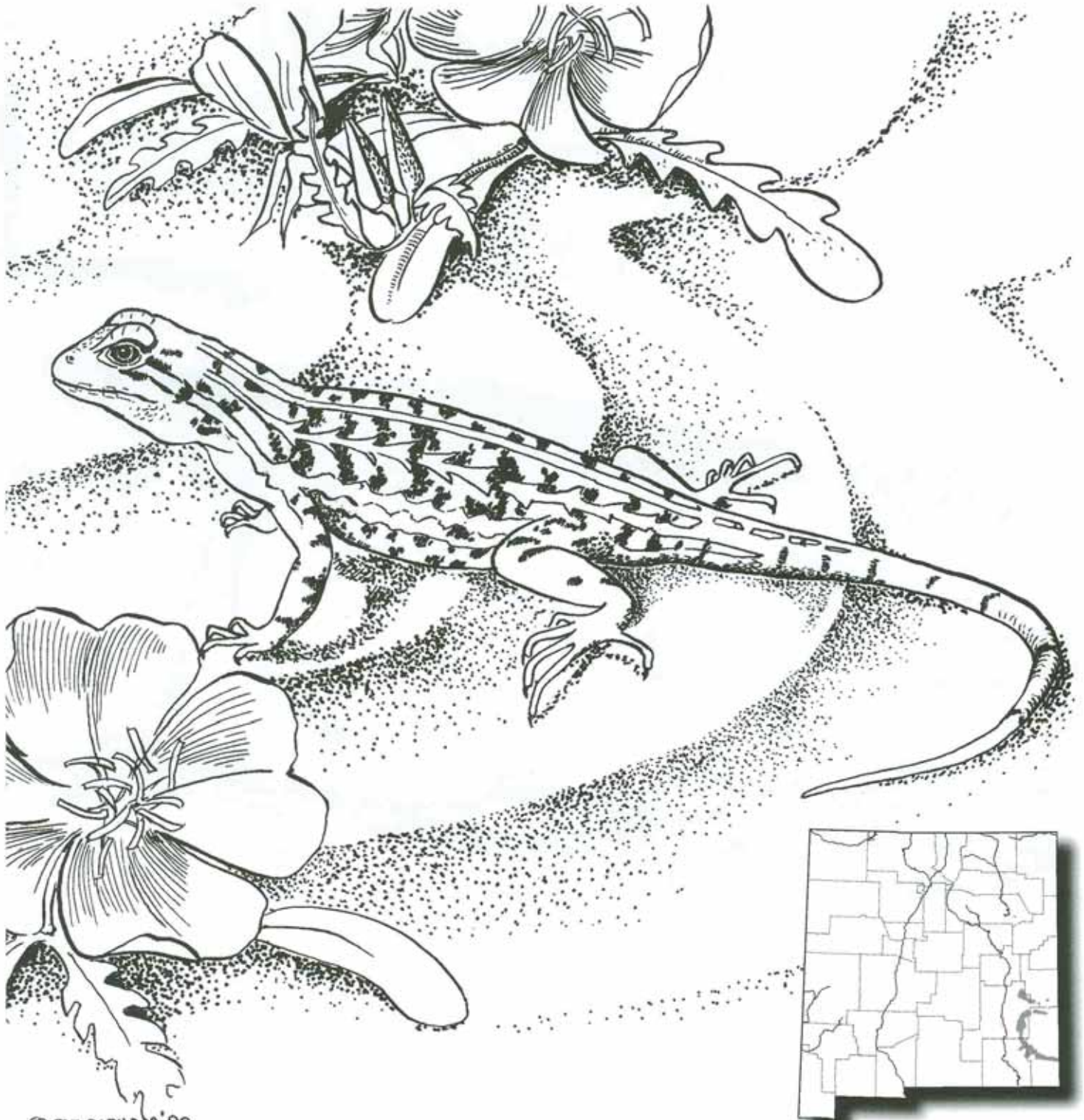
Mexican Gray Wolf

Many decades ago, the gray wolf was found throughout New Mexico with the Mexican subspecies (*Canis lupus baileyi*) occurring in the southern half. Intensive poisoning, trapping and hunting campaigns by government agencies and the livestock industry wiped out the wolf in New Mexico by the 1930's. Like other wolves, the Mexican wolf is a sociable animal which lives in packs that helps them hunt such prey as deer, elk and occasionally livestock. Currently, small numbers of reintroduced Mexican wolves live in the Gila National Forest of southwestern New Mexico. The Mexican wolf is a federally listed endangered species.



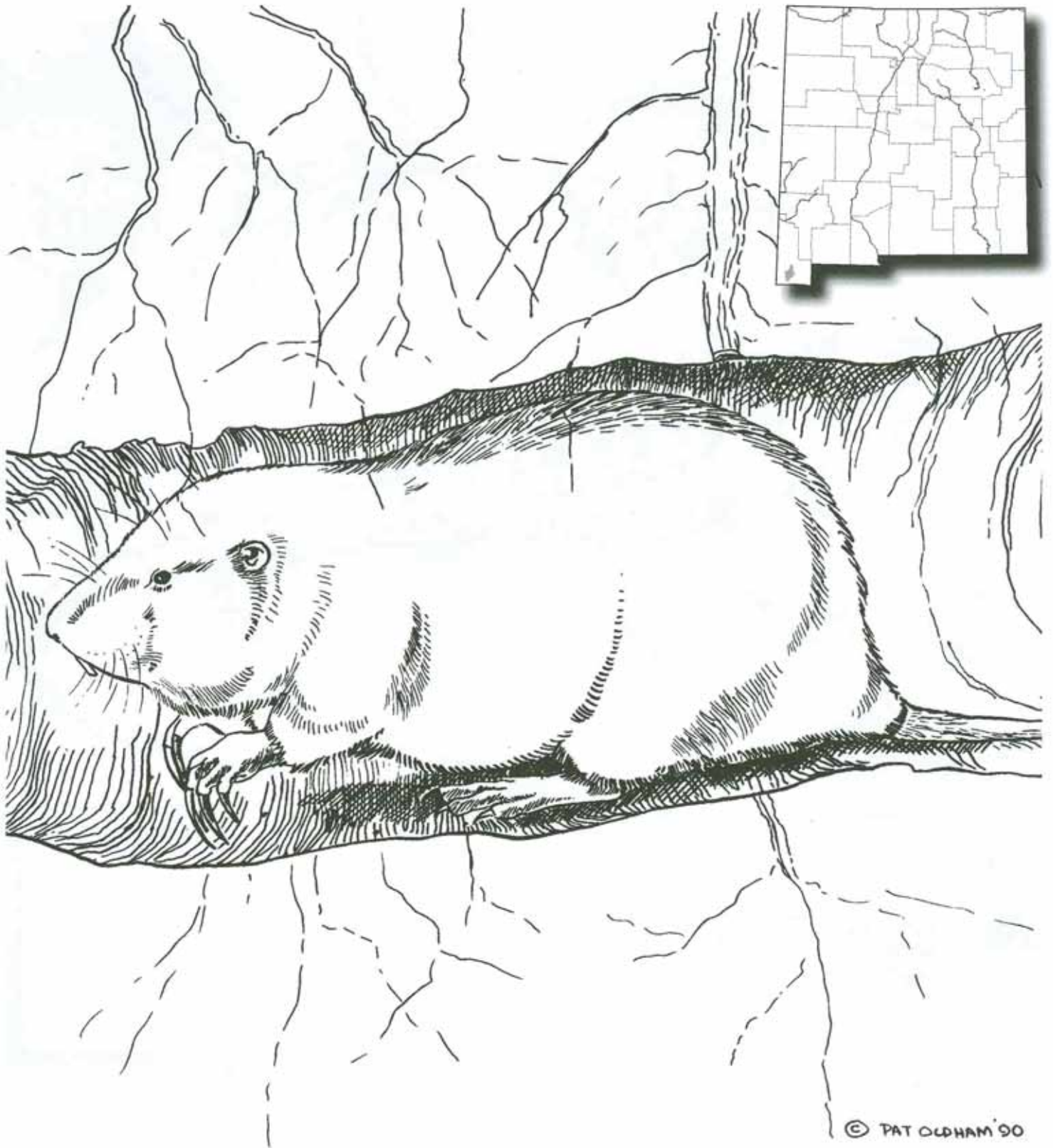
Neotropic Cormorant

This long-necked, dark waterbird has a hooked beak and short legs with webbed feet. They can be seen most readily at Elephant Butte and Caballo State Parks and at Bosque del Apache National Wildlife Refuge. Cormorants are most at home in the water, where they dive for fish. Sometimes they will hunt as a group beating the water with their wings to drive fish into shallow water! They make their stick nests in colonies near the water in live or dead trees. Cormorants may be seen drying their wings in a characteristic 'spread-eagle' posture when perched out of the water. Loss of breeding sites and human disturbances of breeding colonies are the main threats. State-listed as threatened.



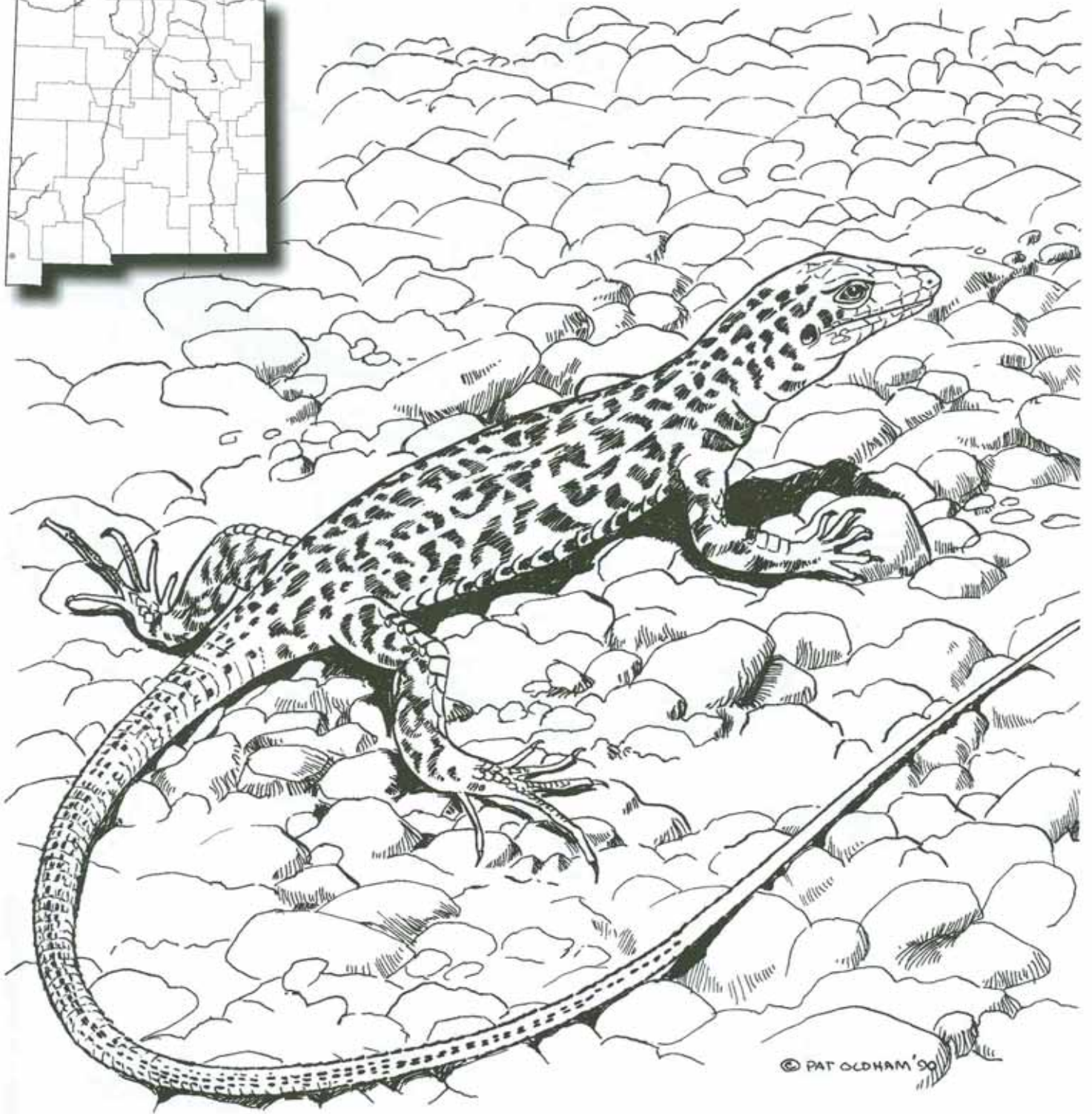
Sand Dune Lizard

This lizard only lives in southeastern New Mexico and a small adjacent area of Texas in habitat of mostly shinnery oak and active sand dunes. If seen they are extremely shy and will quickly burrow in loose sand or beneath leaf litter. The main threats to its survival are removal of shinnery oak by herbicides as well as oil and gas exploration and development. They eat spiders and small insects, including ants, grasshoppers, beetles, and other small insects. State-listed as endangered.



Southern Pocket Gopher

Pocket gophers are unsociable burrowing rodents that have *adapted* to living underground. They have large heads; external, fur-lined cheek pouches; short legs; short nearly hairless tails; tiny ears; and long, curved claws. The presence of pocket gophers is given away by the mounds of dirt that they deposit on the surface. The diet of the pocket gopher consists of plants, especially roots encountered during burrowing activities. The southern pocket gopher is found only in the Animas Mountains in New Mexico and is a state-listed threatened species.



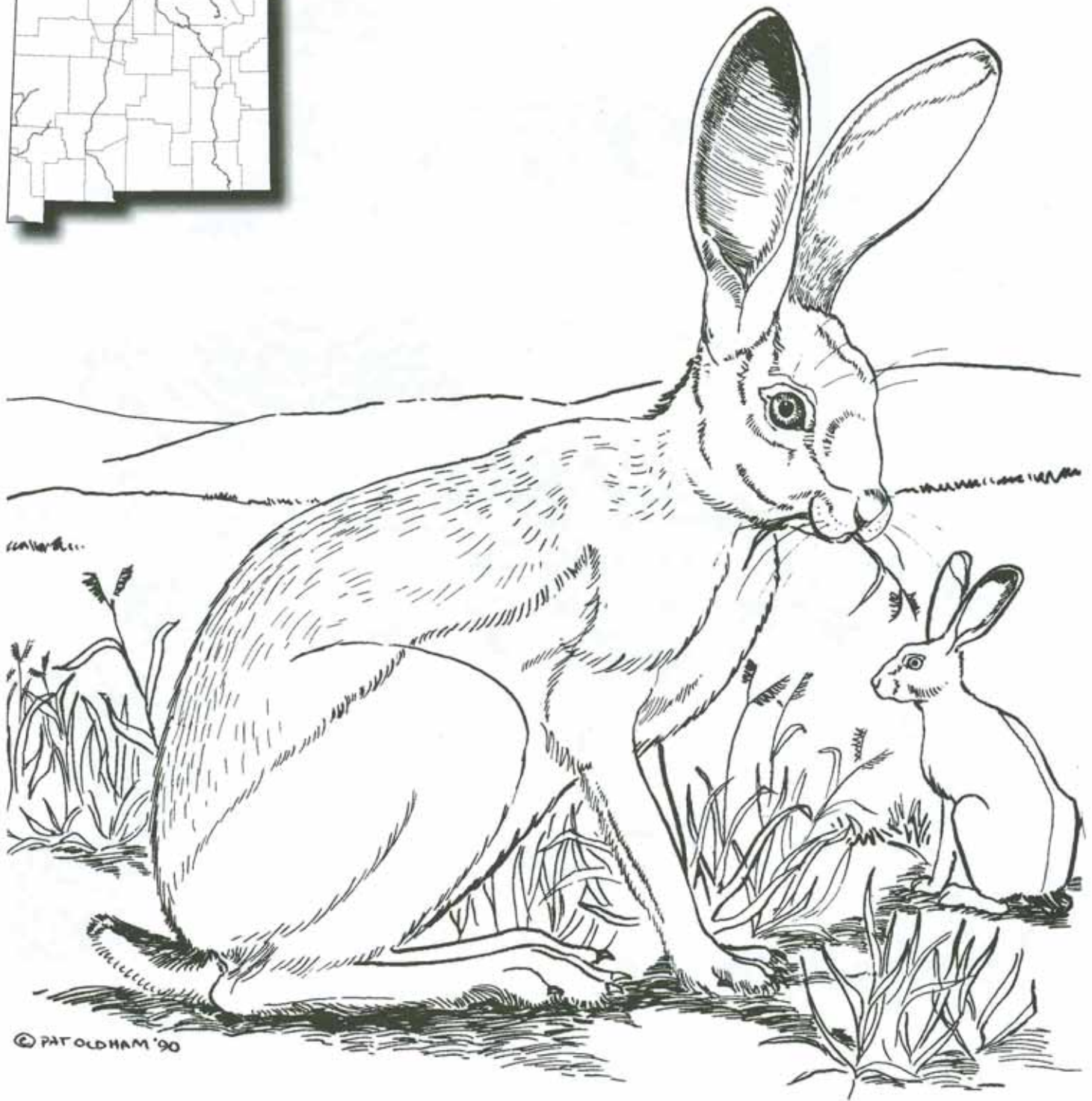
Gray-checked Whiptail

This lizard is found in the foothills of the Peloncillo Mountains of southwestern New Mexico. It is easily recognized by its checkered back pattern and extremely long tail. During the day when it is active, it can move very fast feeding on termites, ants, beetles and spiders. A fascinating discovery about this lizard is that only females exist; there are no known males of this species. The females give birth to *clones* of themselves. State-listed endangered species.



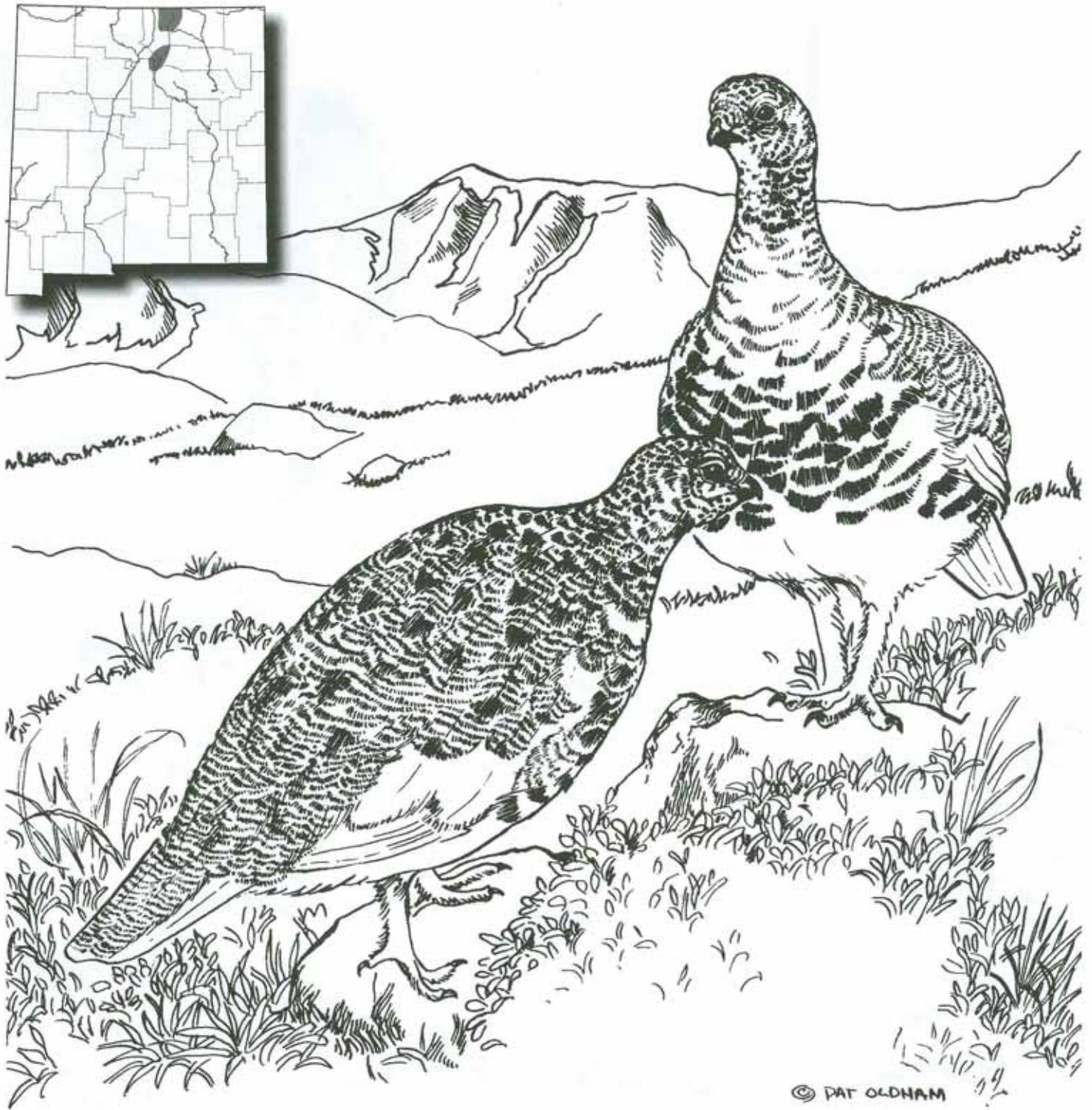
Bell's Vireo

Bell's Vireo is a small, plain looking bird of riparian areas in southern New Mexico in Guadalupe Canyon and the Gila, Rio Grande and Pecos river valleys. It builds a nest of grasses woven together like a cup with its rims woven into the fork of the branches. It feeds on caterpillars, aphids, various *larvae*, and spiders. When winter arrives, they migrate south to the tropics. Using the stars and the earth's magnetic field, they migrate at night. Habitat loss and nest *parasitism* by Brown-headed cowbirds are the main threats. State-listed threatened species.



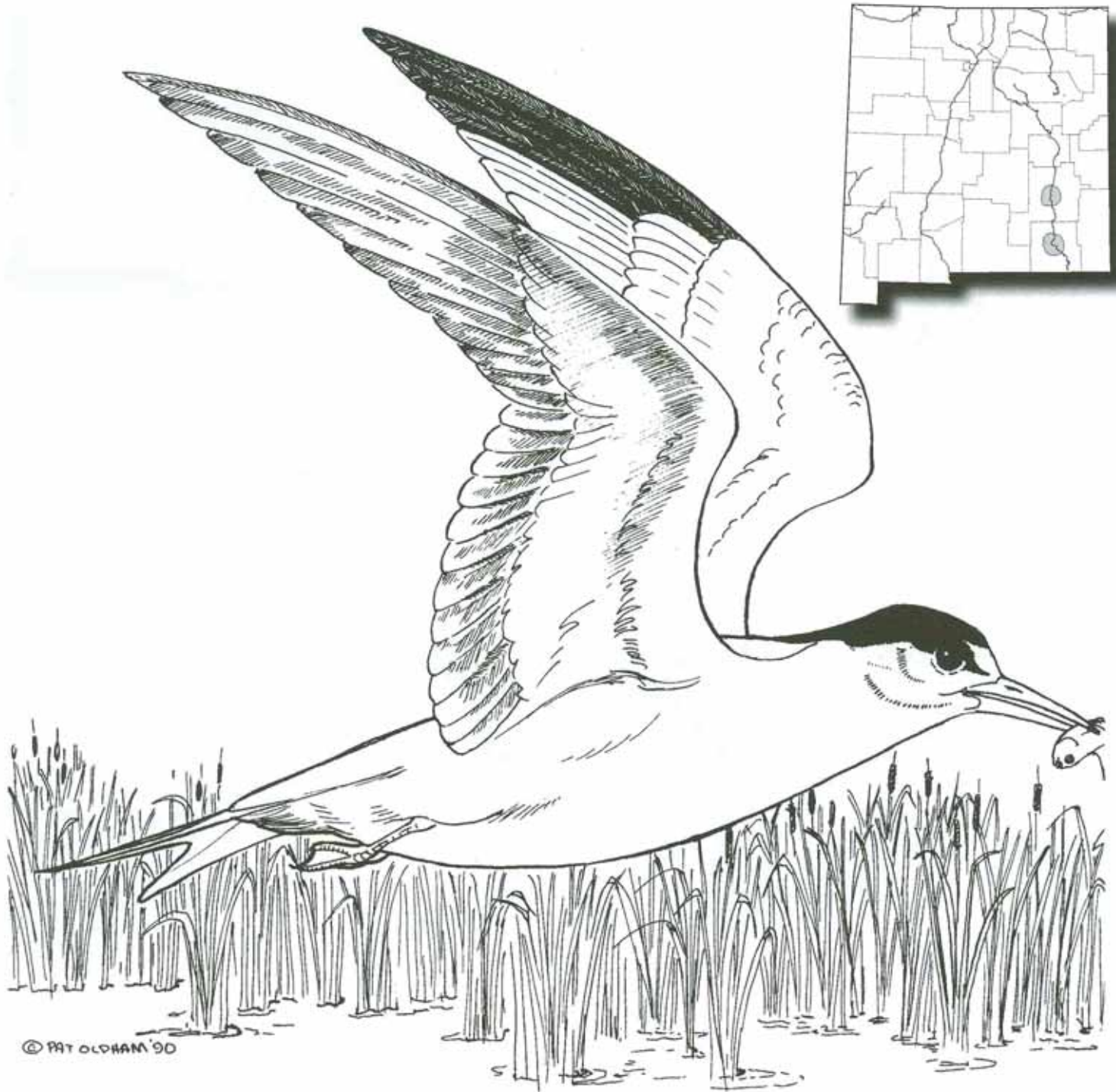
White-sided Jackrabbit

Jackrabbits are really hares, which differ from rabbits in that they have longer legs and ears and their young are born ready to move around within a few hours. Most active after dark, the white-sided jackrabbit is found only in pure desert grasslands of the extreme southwestern part of the state. New Mexico is the only place in the United States where it occurs. State-listed as threatened.



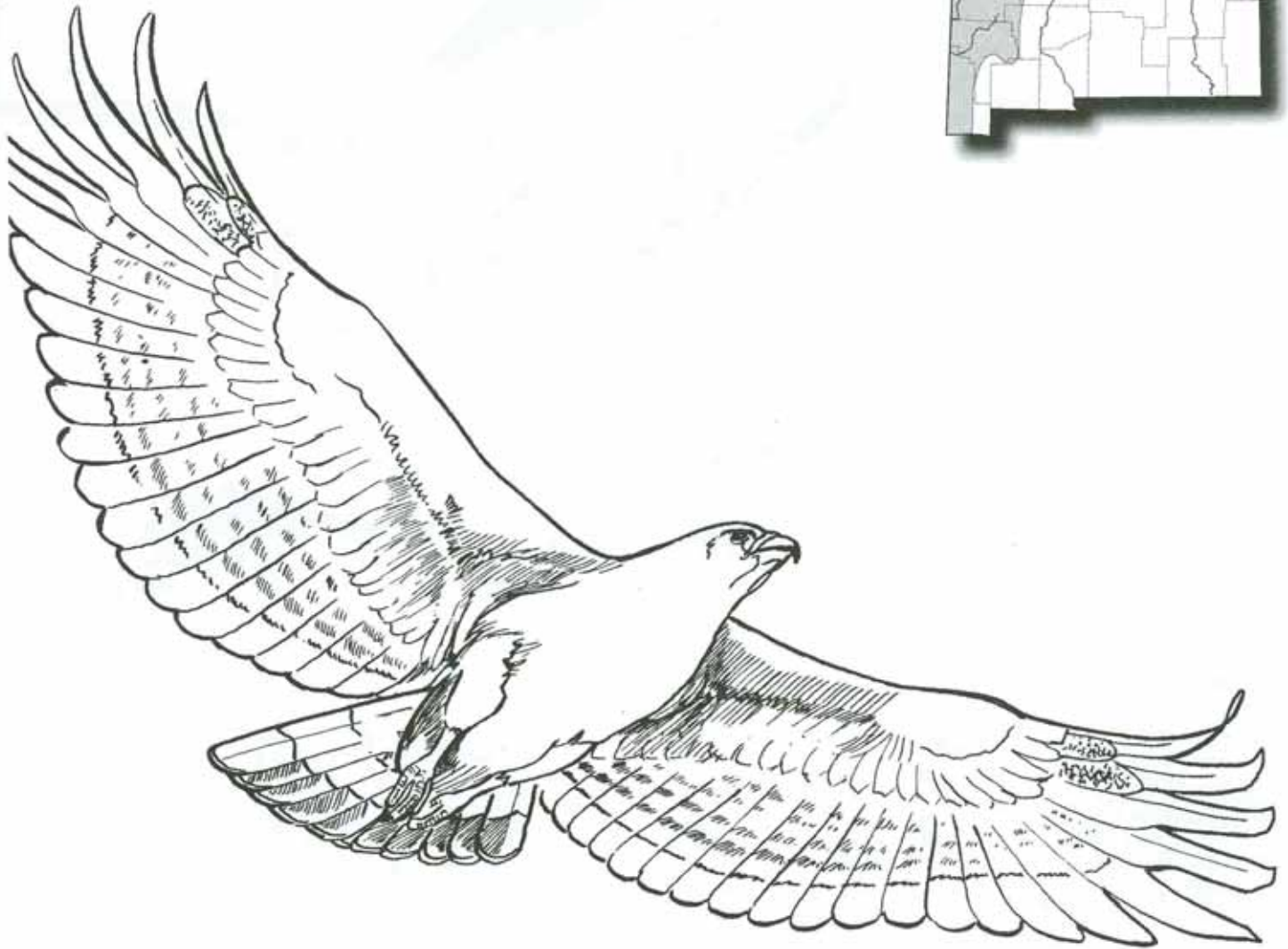
White-tailed Ptarmigan

The white-tailed ptarmigan is a chicken-like bird in the grouse family and lives in the alpine *tundra* of the Sangre de Cristo Mountains in New Mexico. During the winter, its brownish plumage turns white for greater concealment from predators. Its feather color blends with the vegetation during the rest of the year. Ptarmigan feed on tender buds, leaves, flowers, and insects. This handsome bird, once fairly common in New Mexico's alpine tundra, was reduced in number and even locally exterminated by humans during the twentieth century. However, a small *population* has been successfully reintroduced into the Pecos Wilderness. Main threats include loss of their alpine habitat through warming of the climate and inappropriate human activity. State-listed as endangered



Least Tern

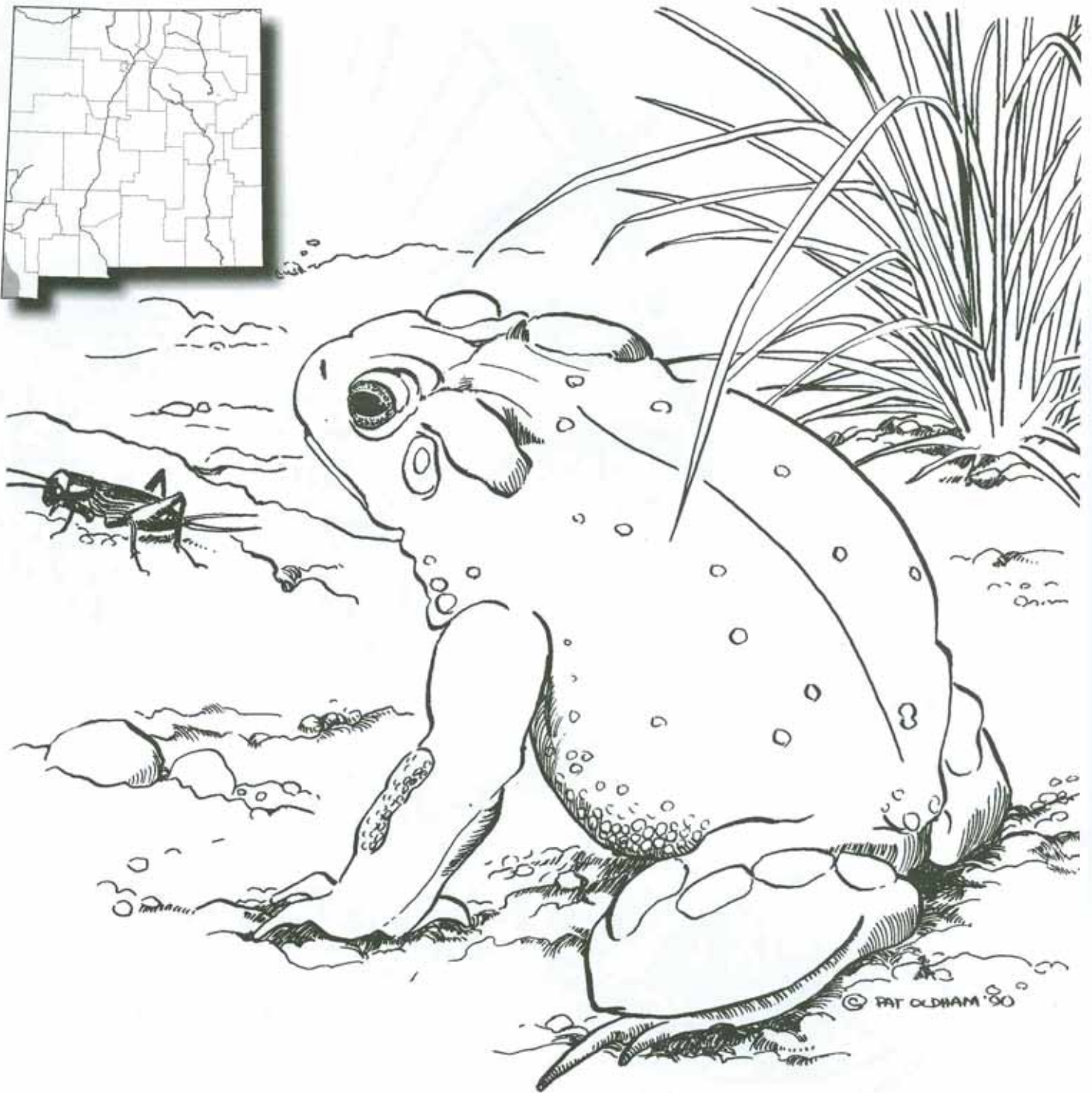
A black crown and white forehead identify this small, graceful water bird. The least tern spends much of its time on the wing above water. It nests in colonies, laying its eggs on bare ground. Swift and graceful in flight, they can snatch fish, crustaceans and insect food from the water's surface without missing a beat. The least tern was first recorded nesting at Bitter Lake National Wildlife Refuge in 1949, and has been found there every year since then in small numbers. In 2002 it was found nesting at Brantley Lake. Threats include loss of riparian habitats due to the construction of dams and reservoirs, altered river flows, human disturbance of nesting beaches and flats and chemical contamination of their food sources. Federally listed as endangered.



© PAT OLPHAM '90

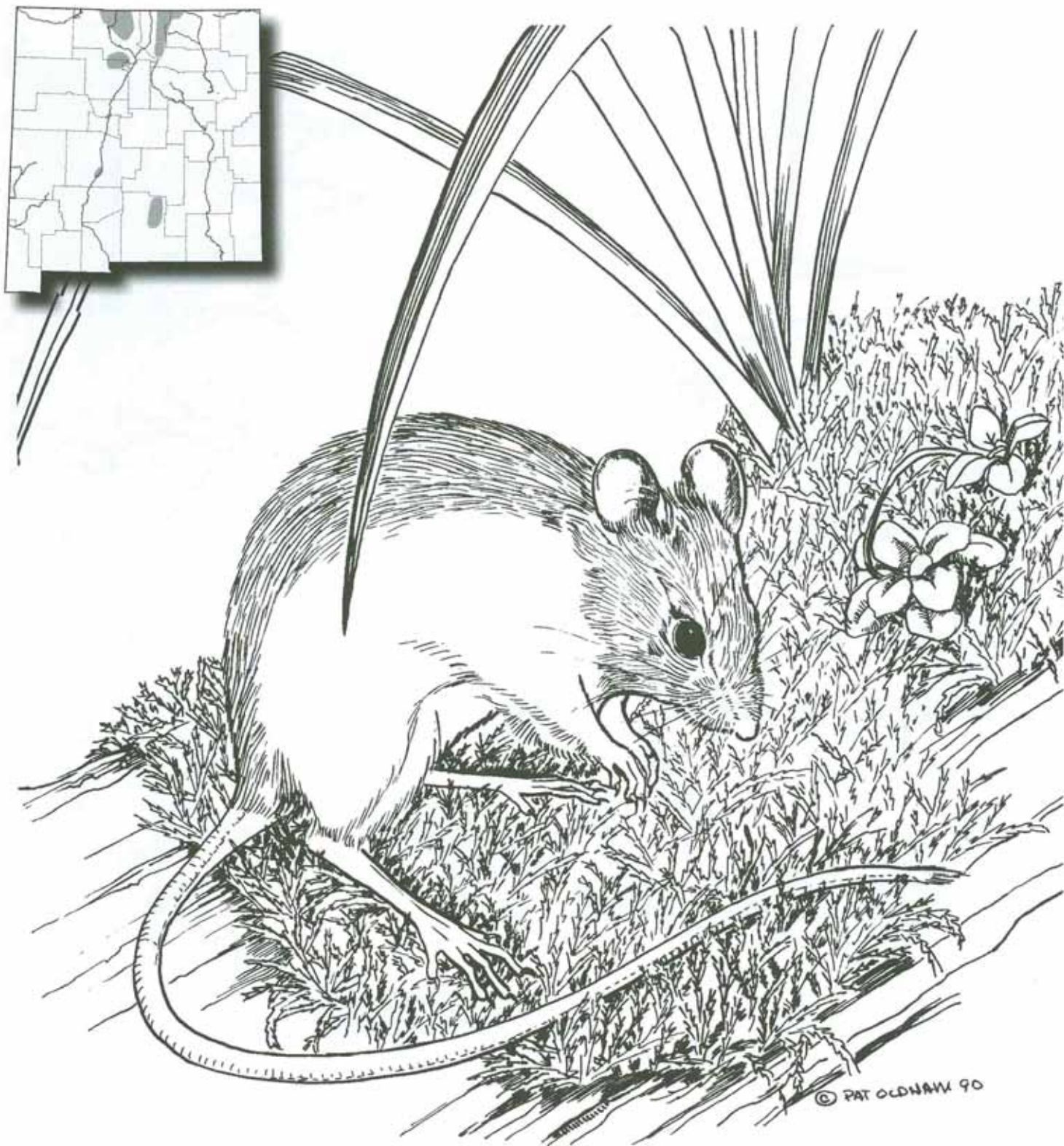
Common Black-hawk

Black in color, as its name implies, this hawk requires woodlands of well-developed, mature cottonwoods and other trees along permanent streams. In New Mexico they are found in the Gila, San Francisco and Mimbres river country. It is rare but they are moving into the middle Rio Grande Valley and lower Pecos Valley. Situated high in a tree, their large, sturdy nest is constructed of sticks. It will call out loudly in alarm if people approach the nest. The common black-hawk feeds on many kinds of *prey*, including reptiles, amphibians, and fish. Loss of their riparian habitat is the main threat to this state-listed threatened species.



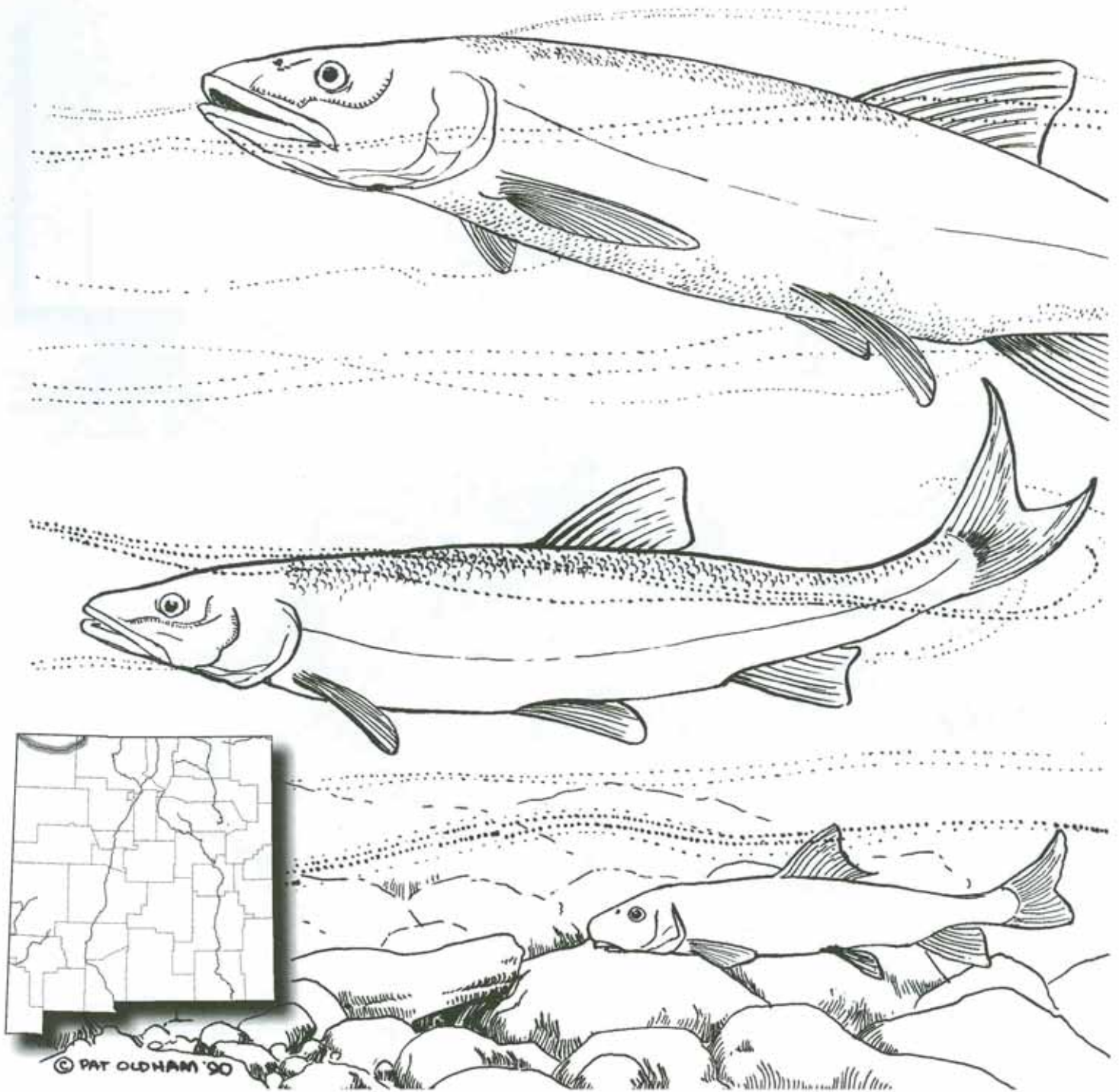
Colorado River Toad

Found in Hidalgo County in the 'boot-heel' of New Mexico, the Colorado River toad lives in desert terrain. The *breeding* success of this toad depends on the amount of spring and summer rains. Like other toads, the Colorado River toad has the typical 'warty' skin with especially large warts on its hind legs and puffed-up glands on the side of the head. This toad's color is dark brown, olive, brownish-green, or grayish, and the belly is cream or light-colored. The Colorado River toad's critical habitat requirement, water, can be lost through diversions, rapid runoff, pollution from roadside silt and runoff, and from draining or filling in of cattle watering tanks. Protecting its habitat such as ponds and continued prevention of collecting can help *conserve* populations of this toad. The Colorado River toad is state- listed as threatened.



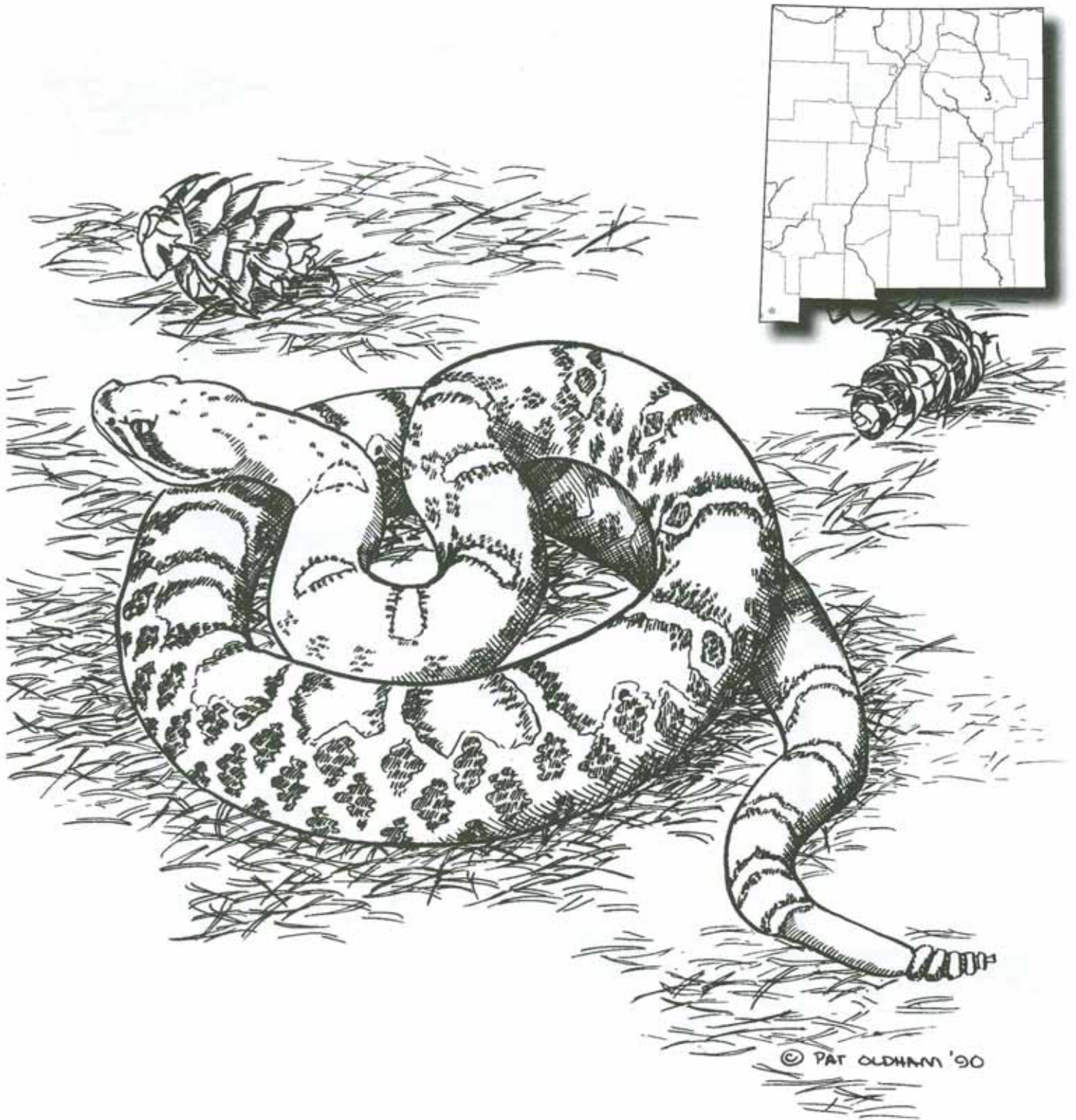
Meadow Jumping Mouse

This *nocturnal* mouse differs from most other mice in having well-developed hind legs that allow it to jump as far as four feet. This little animal lives in the San Juan, Jemez, and Sacramento mountains and in the central Rio Grande Valley, where it occupies dense weedy and marshy areas. It maybe more common than previously thought. They may *hibernate* for as long as seven months of the year. State-listed as threatened.



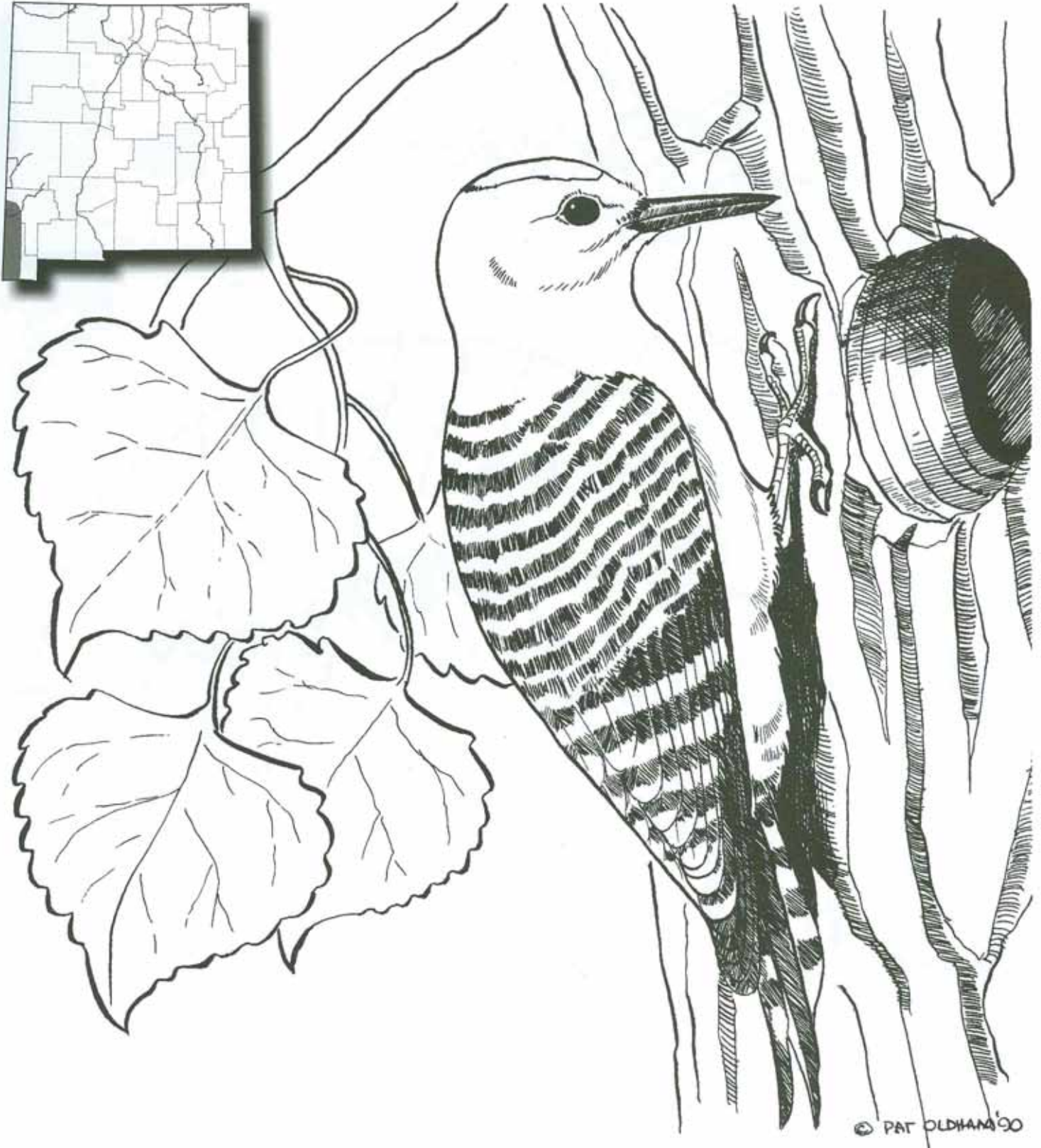
Colorado Pikeminnow

This Colorado River Basin native was once abundant in the Colorado River system but is now very rare throughout its range. A small population persists in the muddy, deep, fast-flowing waters of the San Juan River in New Mexico. The largest member of the minnow family, the Colorado pikeminnow grows up to 71 inches long and up to 15 pounds. The olive-green, gold back side and its silvery-white belly help camouflage this fish. The Colorado pikeminnow may migrate more than 125 miles, up or downstream, to reach spawning areas. Construction of dams and reservoirs has hindered the traditional migration routes of this fish and changed the temperature and amount of sediment in the water. Other threats to this minnow include predation by nonnative fishes. Federally listed as endangered.



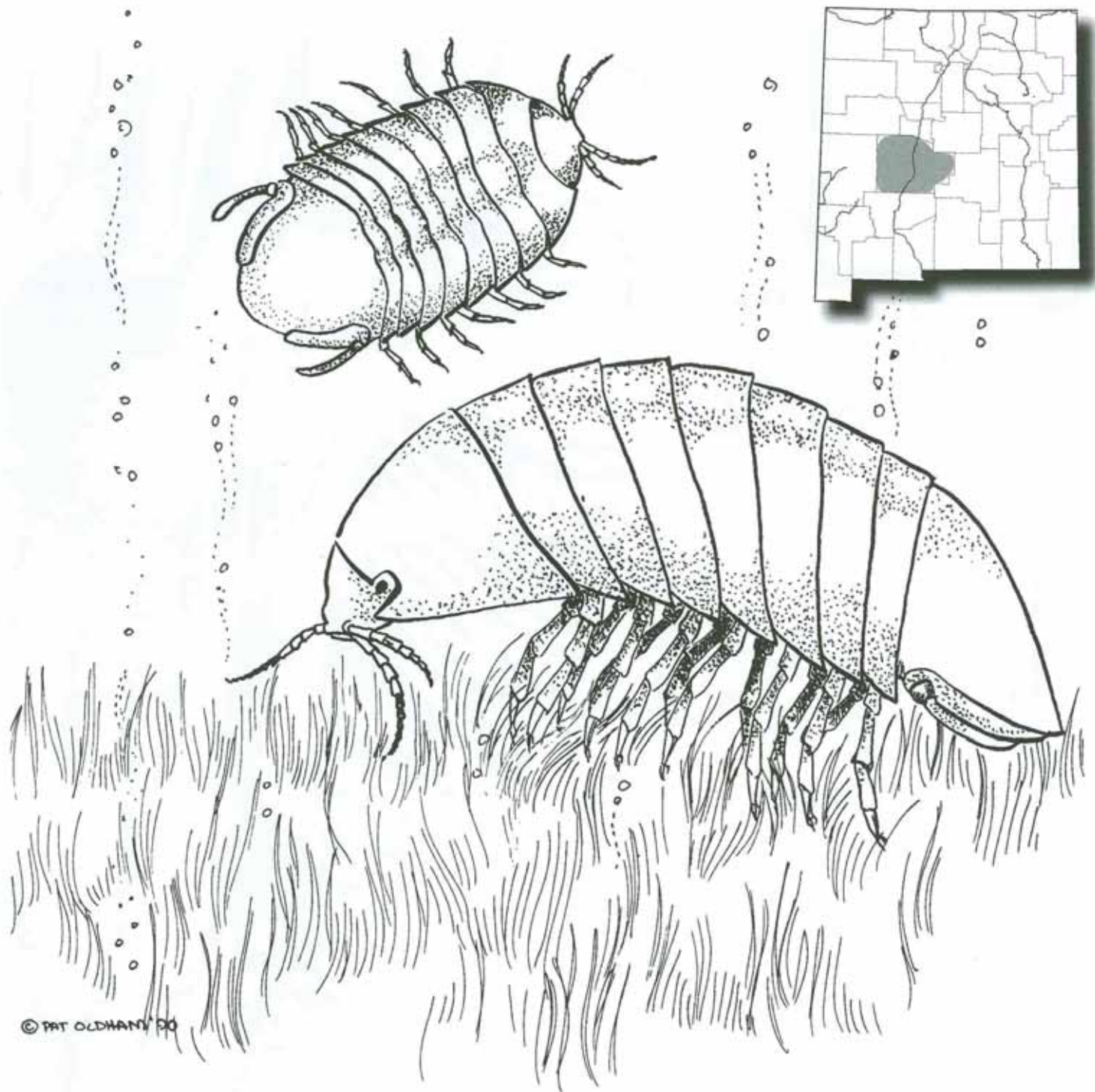
New Mexico Ridgenose Rattlesnake

The New Mexico ridgenose rattlesnake is one of seven species of rattlesnakes in New Mexico. The triangular-shaped head, rattle at the end of the tail, bright white facial stripes and little turned-up nose makes this snake easy to identify. In New Mexico, the ridgenose rattlesnake is found only in the Animas and Peloncillo Mountains amongst pine, oak and juniper. The ridgenose likes to eat lizards, mice, and other small creatures that live in the leaf litter on canyon floors. They are usually secretive and when found are more likely to rattle and try to escape than to coil and strike. The biggest problem it faces is from unregulated wildfires and illegal collection for the pet trade. Federally listed as a threatened species.



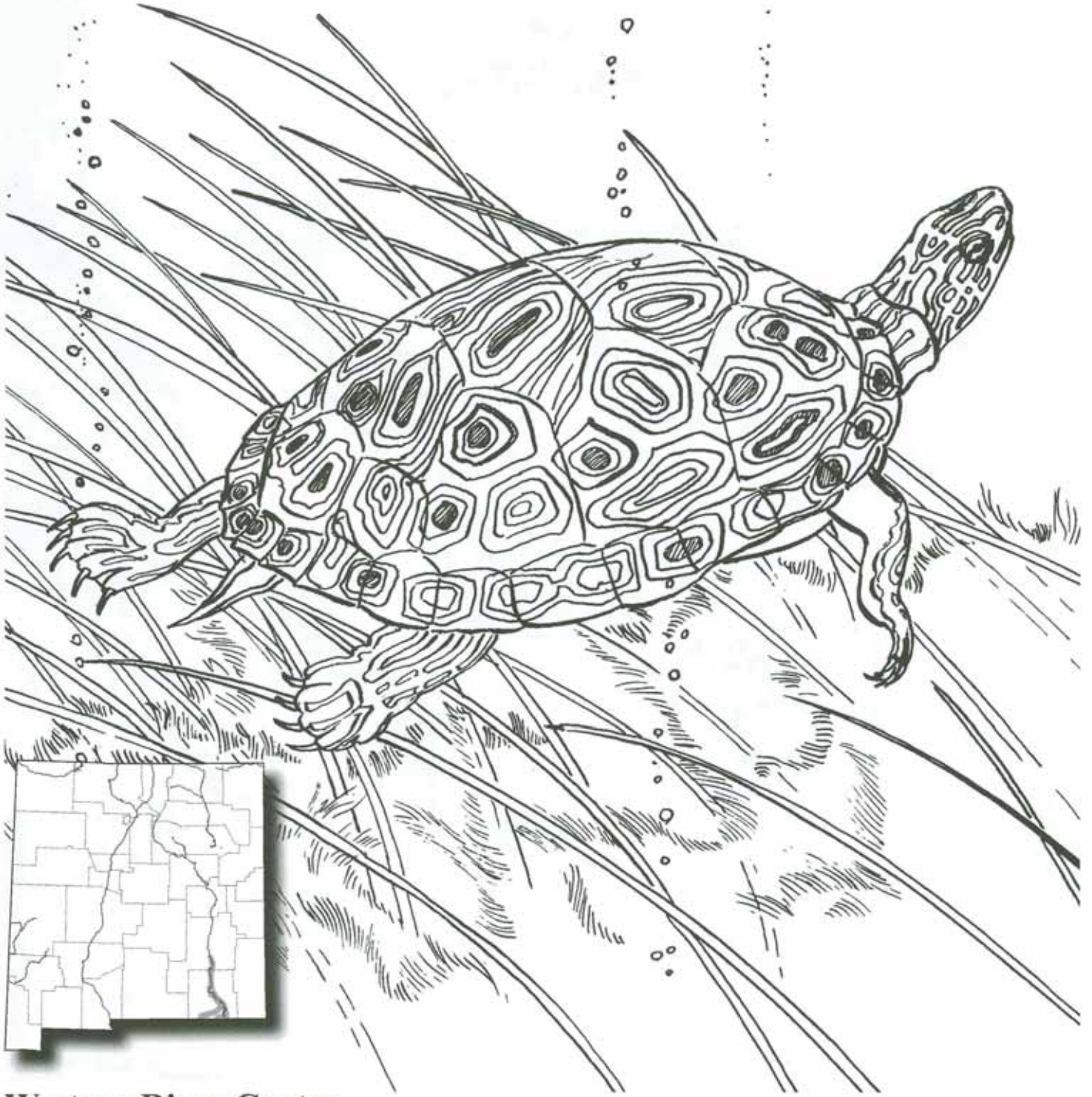
Gila Woodpecker

This handsome, boldly colored woodpecker lives in cottonwood and other trees in the Gila River Valley and Guadalupe Canyon in southwestern New Mexico. The bird is easily identified by its black-and-white 'zebra back,' white wing patches and medium size. The Gila woodpecker usually nests in a hole it excavates in a tree, high above the ground. An *omnivore*, it feeds upon insects, fruits, nectar, lizards, and eggs and young of small birds. The main threat is loss of its habitat of cottonwoods and sycamores. State-listed as threatened.



Socorro Isopod

The Socorro isopod is a rare aquatic cousin to sowbugs and pillbugs that live on land. The Socorro isopod lives in hot springs where it swims and crawls about. Socorro isopods get their food from the algae-covered rocks in the hot springs. This rare isopod is confined to a single spring west of Socorro, the only natural habitat area for this species in the state. Primary threat is any change to the amount or quality of hot groundwater coming into the spring. Federally listed as endangered.



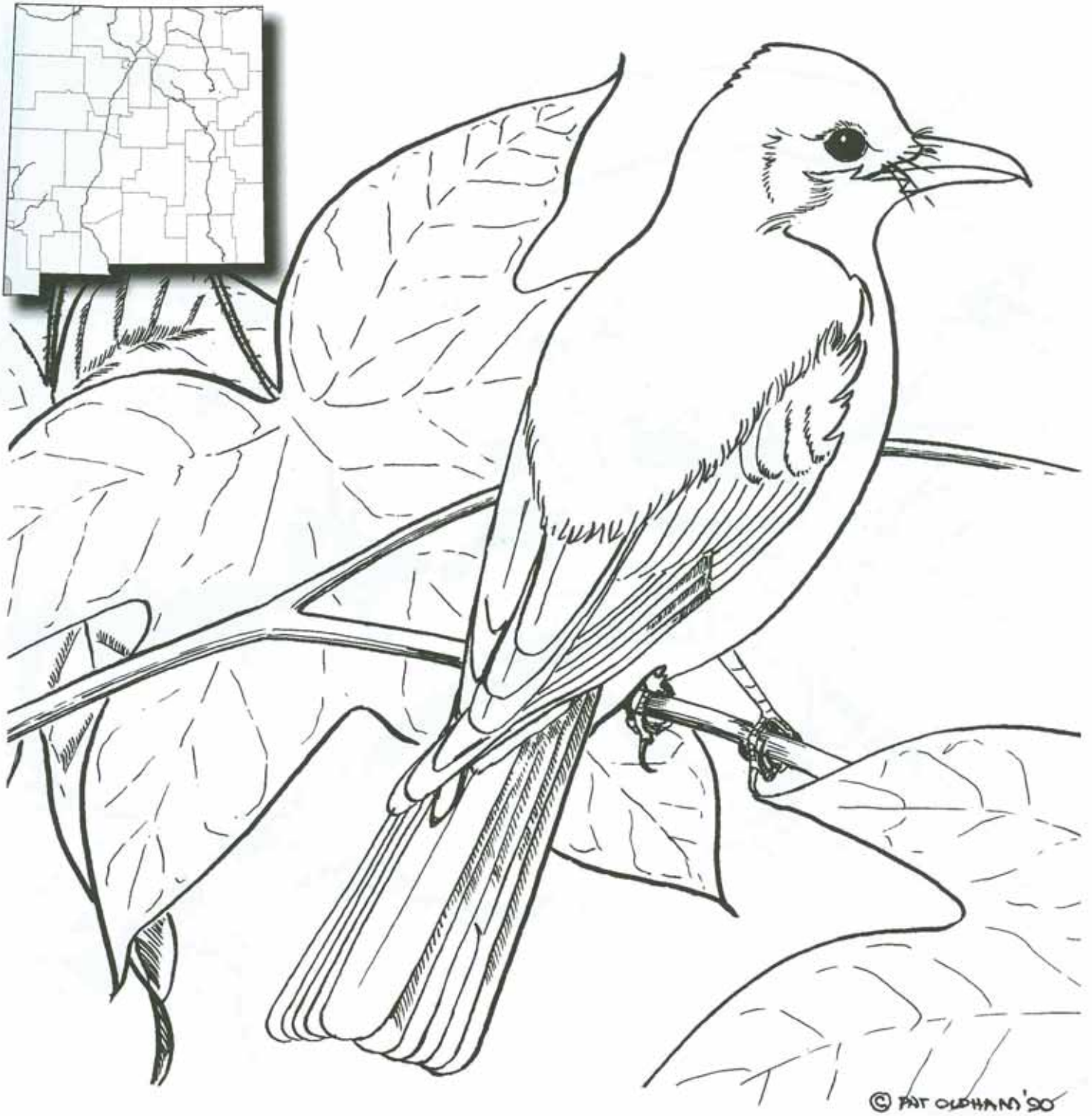
Western River Cooter

The western river cooter, one of the least-known turtles in North America, lives in the lower Pecos River drainage. The upper shell of the adult is olive to brown with whorls, circles, and long furrows of yellowish or light brown on each of the plates. The head, neck, legs, and tail are greenish with yellow lines and scrawls. There is usually a broad, yellow blotch behind their yellow eye. It can reach lengths of up to sixteen inches. It prefers streams with deep pools, clear water and a rocky or sandy bottom. Eating primarily plants, it will add small aquatic insects and crayfish to its diet. Females lay seven to nineteen eggs in sandy soil; the eggs hatch in August or September. Under favorable conditions, the western river cooter can sometimes live as long as 40 years. Its primary threats are recreationists and some anglers who use it for target practice. This species is also illegally taken by anglers. State-listed as threatened.



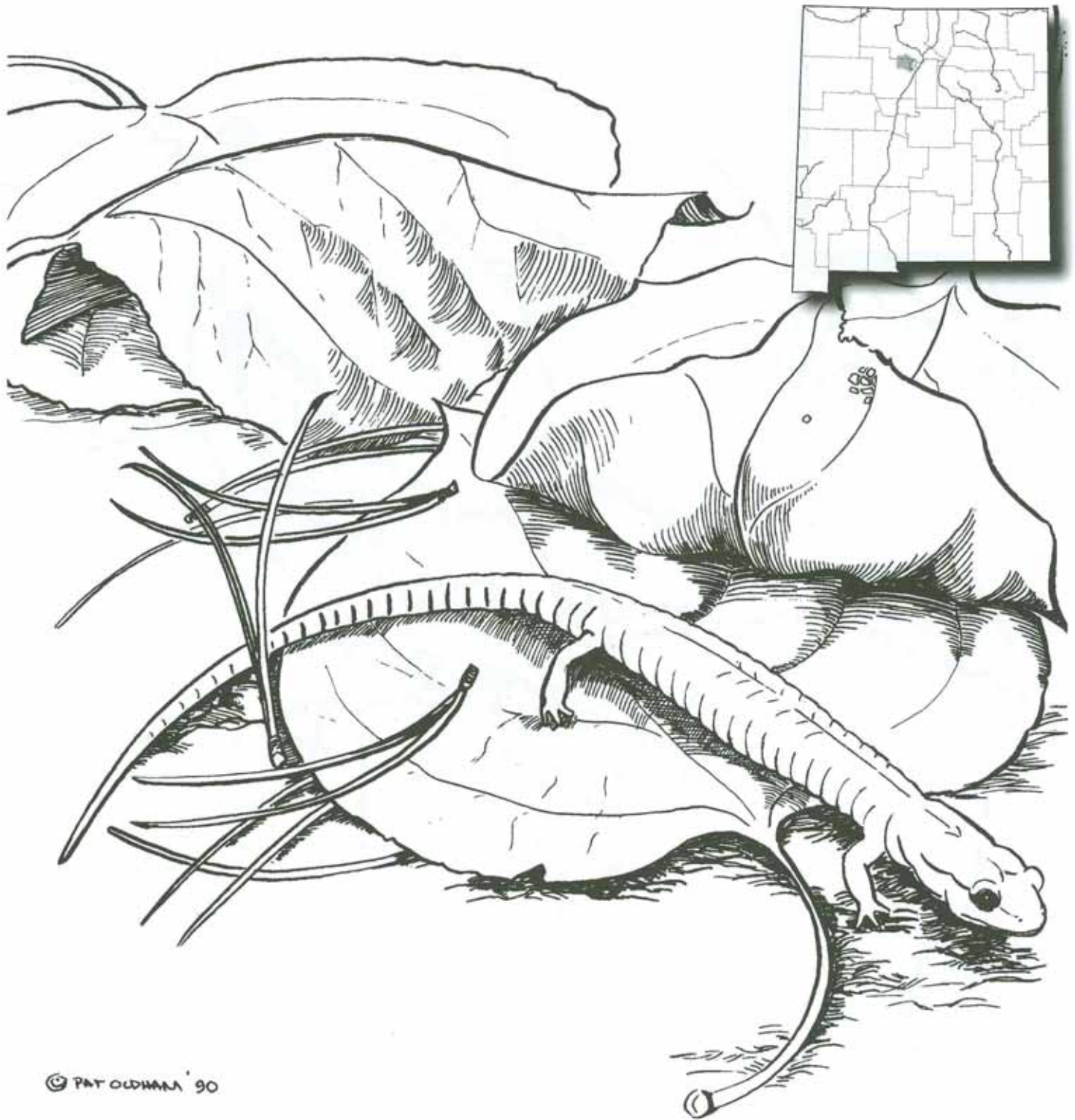
Least Chipmunk

Least chipmunks are very active during the day, retreating to snug underground burrows for the night. Acorns, seeds, fruits, and grasses are important foods for these small mammals. In the winter they *hibernate* in underground burrows lined with dried grass, feathers and fur. These chipmunks have bushy tails and striped backs and faces, and live in wooded habitats of the mountains of northern and central New Mexico. One subspecies, the 'Penasco least' chipmunk, is a state-threatened form that is confined to the Sierra Blanca mountains of the southeastern part of the state. This population lives in a small glacial cirque surrounded by Engelmann spruce, aspen, Douglas fir and corkbark fir. Its main threat is a warming of the climate and subsequent loss of its habitat.



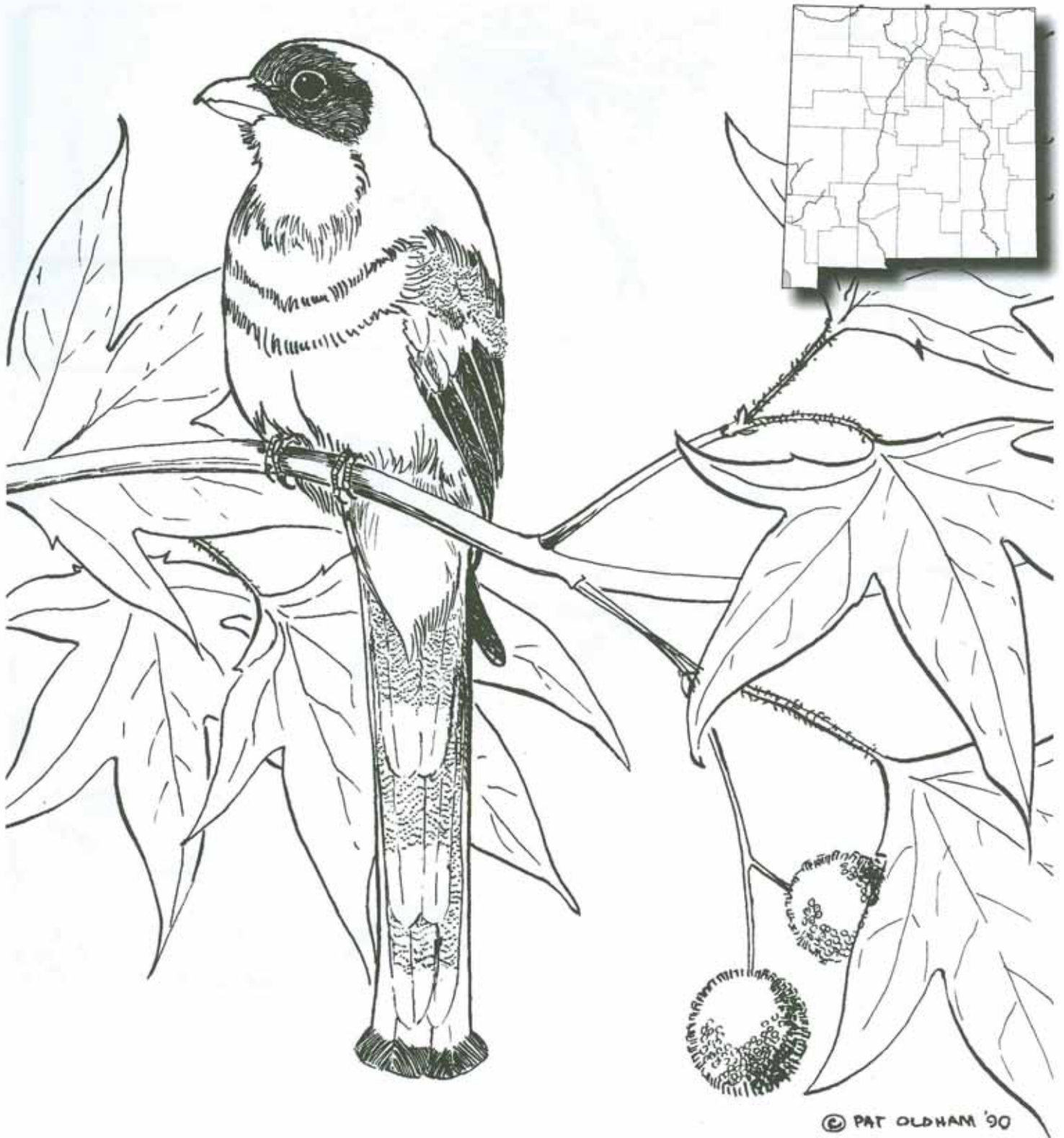
Thick-billed Kingbird

This noisy, insect-eating bird spends its summer in streamside woodlands in New Mexico in Guadalupe Canyon near Cloverdale in the extreme southern corner of Hidalgo County. It is more common further south in Mexico and reaches the northern extent of its range in New Mexico and Arizona. It builds a nest of twigs and grasses situated high above the ground. Kingbirds are so-named because they fearlessly attack hawks and other large birds that intrude on their nesting *territories*.



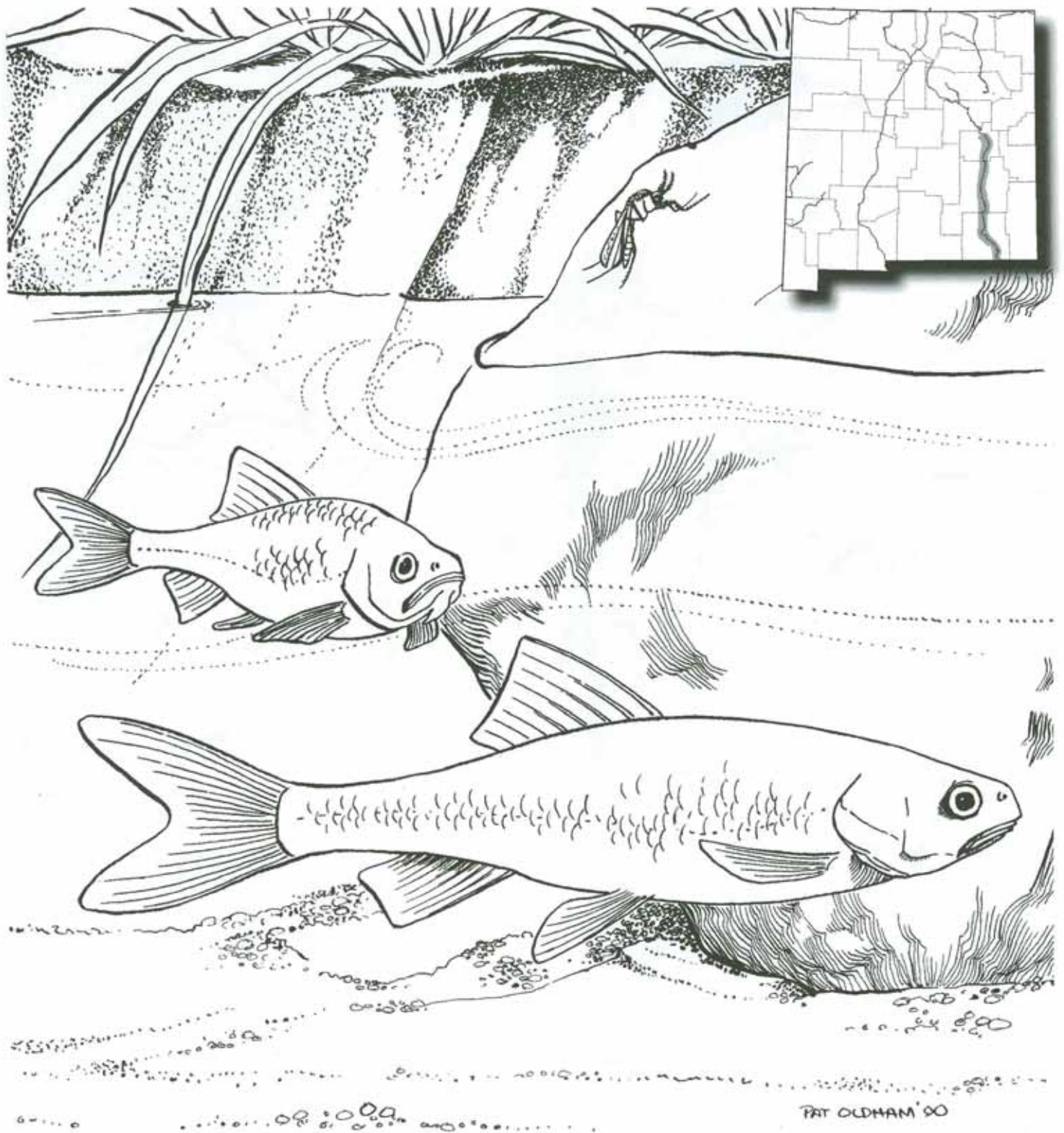
Jemez Mountains Salamander

The Jemez Mountains salamander is a small, slender amphibian found only on moist slopes of wooded canyons in the Jemez Mountains. This salamander spends most of its time under rocks and fallen logs. Insects, ants and other small invertebrates are its primary foods. Jemez Mountains salamanders do not have lungs, instead they breathe directly through their skin, which is very thin and must be moist in order to take in oxygen. Threats to this tiny *amphibian* include any activity that creates drier conditions, such as timber harvesting, and forest fires. Spraying of toxic chemicals on trees could damage salamander habitat. State-listed as endangered.



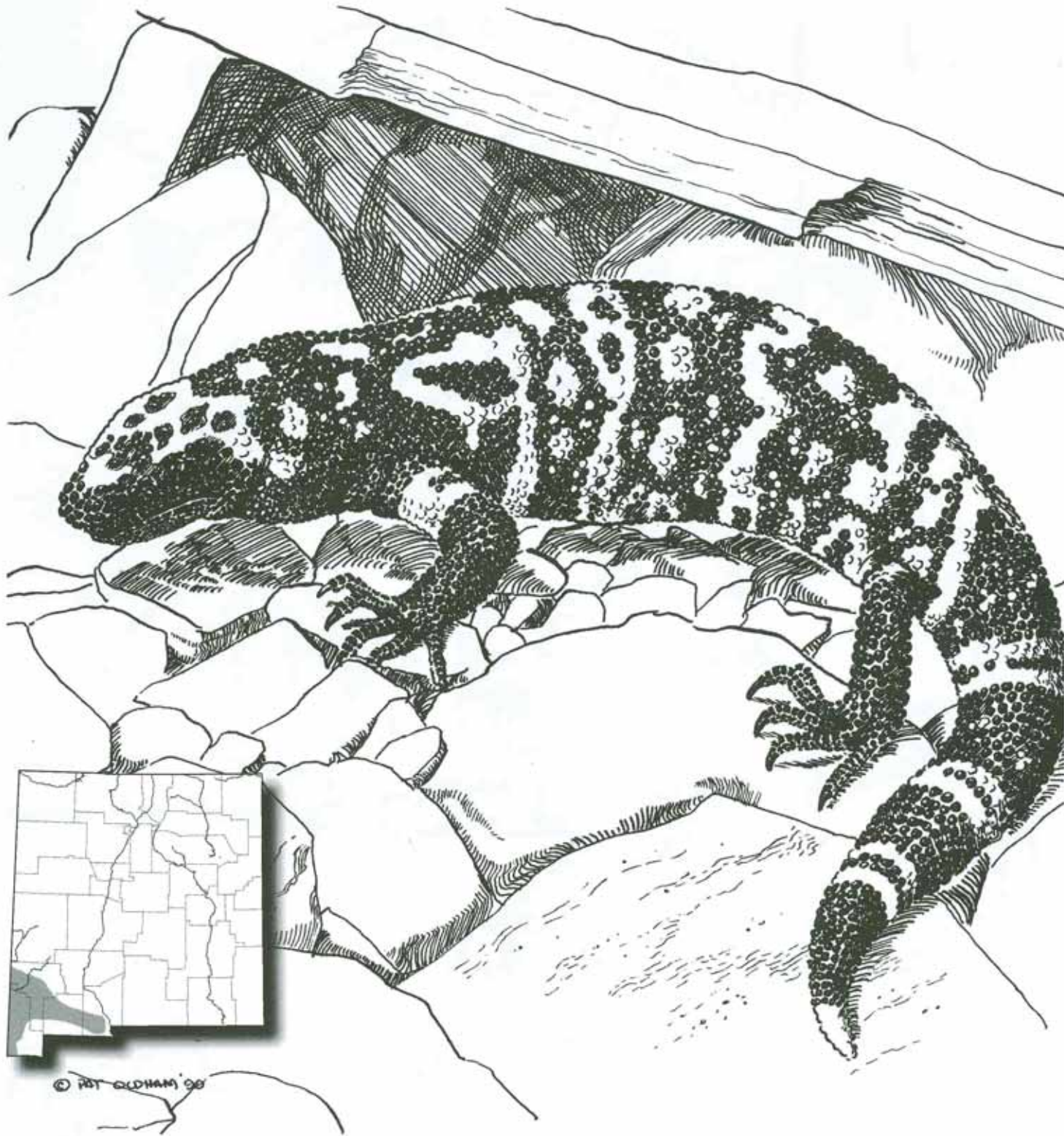
Elegant Trogon

These beautiful, metallic green-and-red colored birds with their long, copper-colored tail are really a tropical species that are much more common in Mexico. It occurs in very low numbers in extreme southwestern New Mexico in pine-oak woodlands and sycamore *riparian* areas. They nest in woodpecker holes or other cavities, laying three to four eggs. Its primary diet in the summer consists of big insects like katydids, cicadas, and caterpillars. They also eat many small fruits and berries. It is state-listed as endangered with its main threats being loss of habitat and disturbance of nesting by humans.



Pecos Bluntnose Shiner

The bluntnose shiner is a small minnow that lives in groups in the Pecos River drainage from Fort Sumner southward to Artesia. These shiners feed on microscopic animals, small *invertebrates*, and plants. The primary threats are large, extended releases of water from reservoirs during the summer reproductive season. Other threats include low river flows and loss of habitat. Federally listed as threatened.



Gila Monster

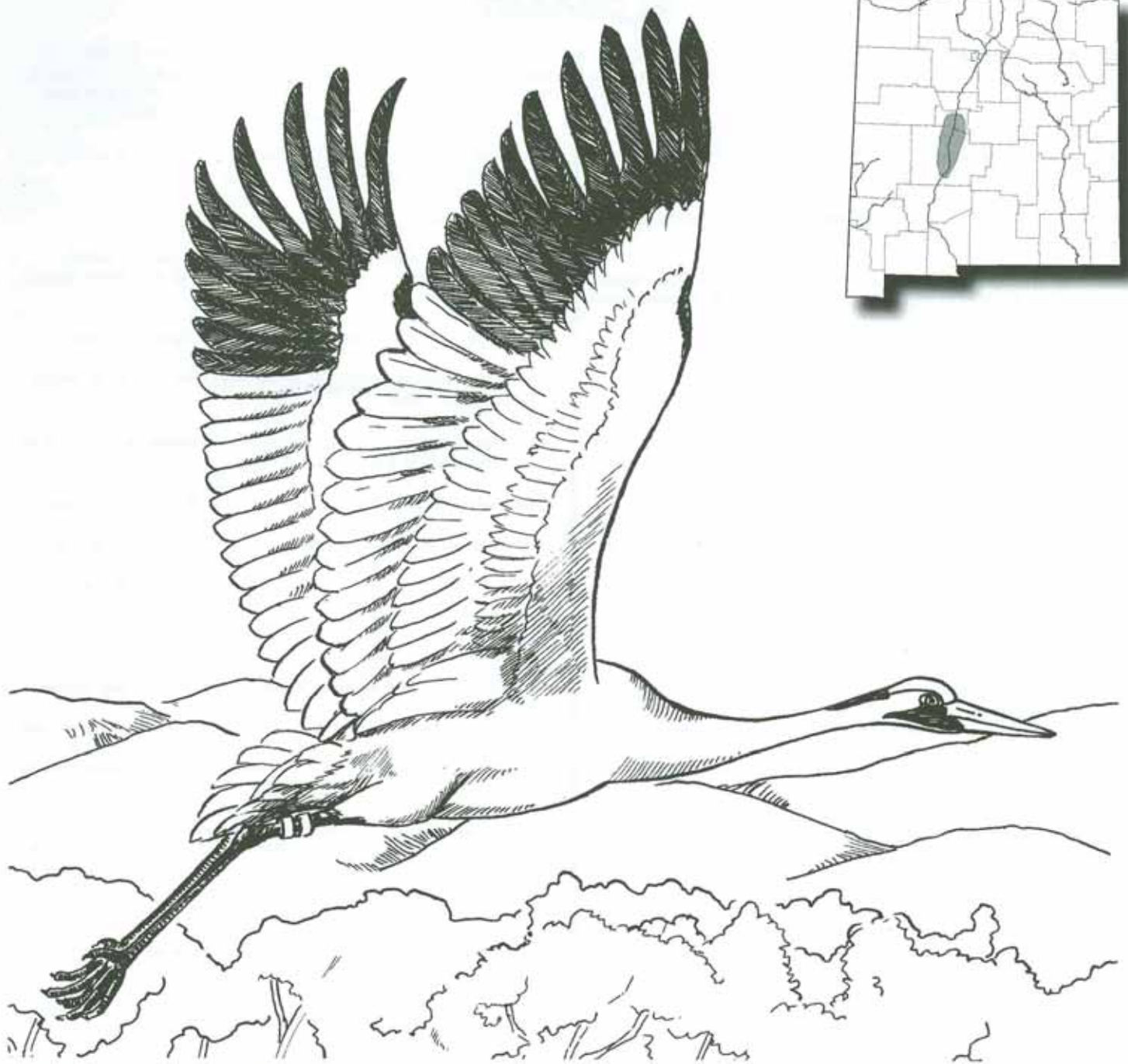
The Gila monster is the largest native lizard and is the only poisonous lizard found in the United States. This orange-and-black lizard can be found in the Gila River Valley and Peloncillo Mountains of southwestern New Mexico. It lives in desert scrub, and rocky canyons and spend over 90 percent of their time underground in rock crevices and abandoned burrows. Gila monsters feed on nestling rabbits, rodents, and bird and reptile eggs. As sluggish as these creatures look, they can move surprisingly fast and should not be handled. State-listed as endangered.



© PAT OLDHAM '90

American Marten

Related to minks and weasels, the American marten occurs as a rare resident of spruce and fir forests of the San Juan and Sangre de Cristo mountains. Their preferred habitat has lots of large fallen logs and stumps with plenty of *canopy cover*. About the size of a house cat, American martens are skillful *predators*, feeding on mice, squirrels, rabbits, and birds. In early spring, female martens give birth to two to four young, which are born blind and hairless. Loss of *habitat* and timber harvesting in high elevation old-growth forests, in New Mexico and elsewhere, poses a problem for the *species*. State-listed as *threatened*.



Whooping Crane

The whooping crane is one of the rarest birds in North America. It is a tall white bird with black wing-tips, long neck and legs, and a bright red 'forehead.' Commonly known as 'whoopers' they have a vibrant trumpet call. Adults are almost 5 feet high and have a wingspan of up to 7 feet! *Wild* birds are known to live nearly 30 years and form life-long pair bonds. The main flock of whooping cranes lives in the Northwest Territories in Canada and migrates to Aransas National Wildlife Refuge in Texas for the winter. In the late 1990's an attempt was made to establish an experimental flock of cranes that would *migrate* from Idaho to Bosque del Apache National Wildlife Refuge near Socorro. This experiment failed and there are no current efforts to establish whooping cranes in New Mexico. There is another similar experimental flock that has been established in central Wisconsin. Biologists are using ultralight aircraft to teach them a migration route to the west coast of Florida. Loss of *wetland habitat*, persecution by humans, diseases, and collisions with power lines are major reasons for the decline of these magnificent birds. Federally listed as *endangered*.

GLOSSARY

Adaptation: an alteration or adjustment in structure or habits by which a species or individual improves its condition in relationship to its environment.

Amphibian: an animal that typically lives in an aquatic habitat breathing by gills as young, and primarily in a terrestrial habitat breathing by lungs and through moist glandular skin as an adult (e.g., frog).

Bioregion: a large geographic area with somewhat the same climate, vegetation and animal communities.

Breeding: a series of complex behavioral interactive patterns from courtship to rearing of young that are necessary for the continuation of a species.

Canopy cover: layer formed by the leaves and branches of the forest's tallest trees.

Carrion: the bodies of dead animals, usually found in nature in the process of decay.

Clone: organisms produced asexually from one ancestor with matching genetic material.

Competition: the simultaneous demand by two or more organisms for limited environmental resource such as nutrients, living space, or light.

Conservation: the use of natural resources in a way that ensures their continuing availability to future generations; the wise and intelligent use or protection of natural resources.

Cover: the vegetation, debris, and irregularities of the land that provide concealment, sleeping, feeding, and breeding areas for wildlife.

Diversity: a term used to represent the variety of life forms in a given area.

Ecosystem: a natural unit that includes living and nonliving parts interacting to produce a stable system in which the exchange of materials between the living and nonliving parts follows closed paths.

Endangered: a species that is in danger of extinction throughout all or a significant portion of its range.

Feral: referring to domesticated animals that are now living in the wild.

Global climate change: the variation in the Earth's global climate or in regional climates over time. It describes changes in the variability or average state of the atmosphere over time scales ranging from decades to millions of years. These changes can be caused by processes internal to the Earth, external forces (e.g. variations in sunlight intensity) or, more recently, human activities. In recent usage, the term "climate change" often refers to changes in modern climate which according to the Intergovernmental Panel on Climate Change (IPCC) are 90-95 percent likely to have been in part caused by human action. This phenomenon is also referred to in the media as global warming.

Habitat: the arrangement of food, water, shelter or cover, and space suitable to animals' needs.

Heritage: something that is passed from one generation to another.

Hibernation: the act of passing the winter or a portion of it, in a state of sleep; a torpid or resting state.

Home range: the area where an animal travels in the scope of its normal activities.

Invertebrate: animals without backbones.

Larva: stage of development of a newly hatched animal that is devoted to growth; larva is between the egg and pupa stages in insects with complete metamorphosis and between egg and adult in other invertebrates or vertebrates such as amphibians. (plural = larvae)

Migratory: birds or other animals that make annual or seasonal moves from one region or country to another to settle.

Nocturnal: active by night.

Nongame: all wildlife species that are not commonly hunted, killed, or consumed by humans, such as songbirds, raptors, lizards, snakes etc.

Omnivore: an animal that eats both plant and animal matter.

Parasitism: two organisms living together, one benefitting at the expense of the other.

Pesticide: any chemical preparation used to control populations of organisms, usually insects e.g. DDT.

Population: the number of a particular species in a defined area.

Predator: an animal that hunts and kills other animals for food.

Prey: an animal hunted or seized as food by another animal.

Range: the geographic region where a plant or animal normally lives and grows; an area grazed by livestock, wildlife, or both.

Riparian: located or living along or near a stream, river, or body of water.

Species: a population of individuals that are more or less alike and that are able to breed and produce fertile offspring under natural conditions; category of biological classification immediately below the genus or subgenus.

State Wildlife Agency: the state agency that has the legal responsibility for management of some or all wildlife, including habitat protection, restoration, and alteration; planning; land acquisition; research; education; information; endangered species; consumptive uses; nonconsumptive programs; and regulations and usually law enforcement.

Territory: dominance over a unit of habitat; an area defended by an animal against others of the same species.

Threatened: in wildlife terms, a species present in its range but in danger because of a decline in numbers.

Tundra: treeless vegetation in regions with long winters and low annual temperatures.

Wetlands: any land area that tends to be regularly wet or a lowland area that is saturated with moisture; includes wet meadows, marshes, sloughs, ponds and small lakes.

Wild: not tamed or domesticated, living in a basically free condition (A wild animal provides for its own food, shelter, and other needs in an environment that serves as a suitable habitat).

Wildlife: animals that are not tamed or domesticated and includes insects, spiders, birds, reptiles, fish, amphibians, and mammals etc., if nondomesticated.

Wildlife Management: the application of scientific knowledge and technical skills to protect, preserve, conserve, limit, enhance, or extend the value of wildlife and its habitat.

Make a Difference with **SHARE WITH WILDLIFE** by Helping New Mexico Species in Need



In the rugged beauty of the Chihuahuan Desert... the windswept alpine heights of the Pecos Wilderness...even in your own backyard... many wildlife species call New Mexico home.

Now, through **Share with Wildlife (SwW)**, you can help many wild species, especially those currently receiving little or no funding.

Endangered species research and recovery, wildlife education, wildlife rehabilitation, species surveys, wildlife field studies and other projects are all made possible by voluntary contributions, like yours, to **SwW**.

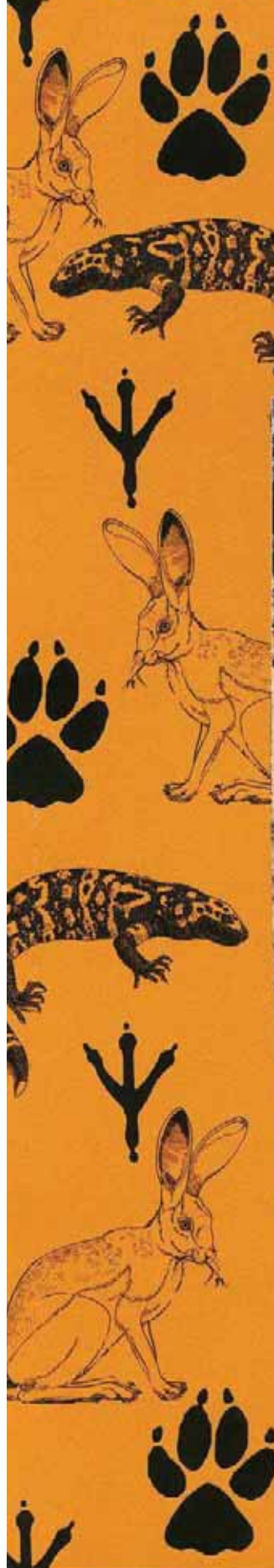
Donations may be made by ordering the New Mexico wildlife license plate, via the PIT-D State Tax Refund Donation Form (designating all or a portion of your state tax refund to SwW); or by mailing contributions to:

Share with Wildlife

Chuck Hayes, Coordinator
New Mexico Department of Game and Fish
P.O. Box 25112
Santa Fe, NM 87504-5112
(505) 476-8111



**CONSERVATION
EDUCATION**



Project **WILD**[®]



Attend a free professional development workshop offered by certified Project WILD leaders and learn how to help your students learn how to think, not what to think about wildlife and the environment. Project WILD's core curricular materials; the Project WILD K-12 Curriculum and Activity Guide, the Project WILD Aquatic K-12 Curriculum and Activity Guide, and Science and Civics: Sustaining Wildlife are distributed free of cost to participants. For more information, visit us online, www.wildlife.state.nm.us or contact us:

Project WILD Coordinator

New Mexico Department of Game and Fish
1 Wildlife Way
Santa Fe, NM 87507
(505) 476-8000

