

MONTANA'S NATURAL RESOURCES

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Geese

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Wildlife

Montana Department of Commerce



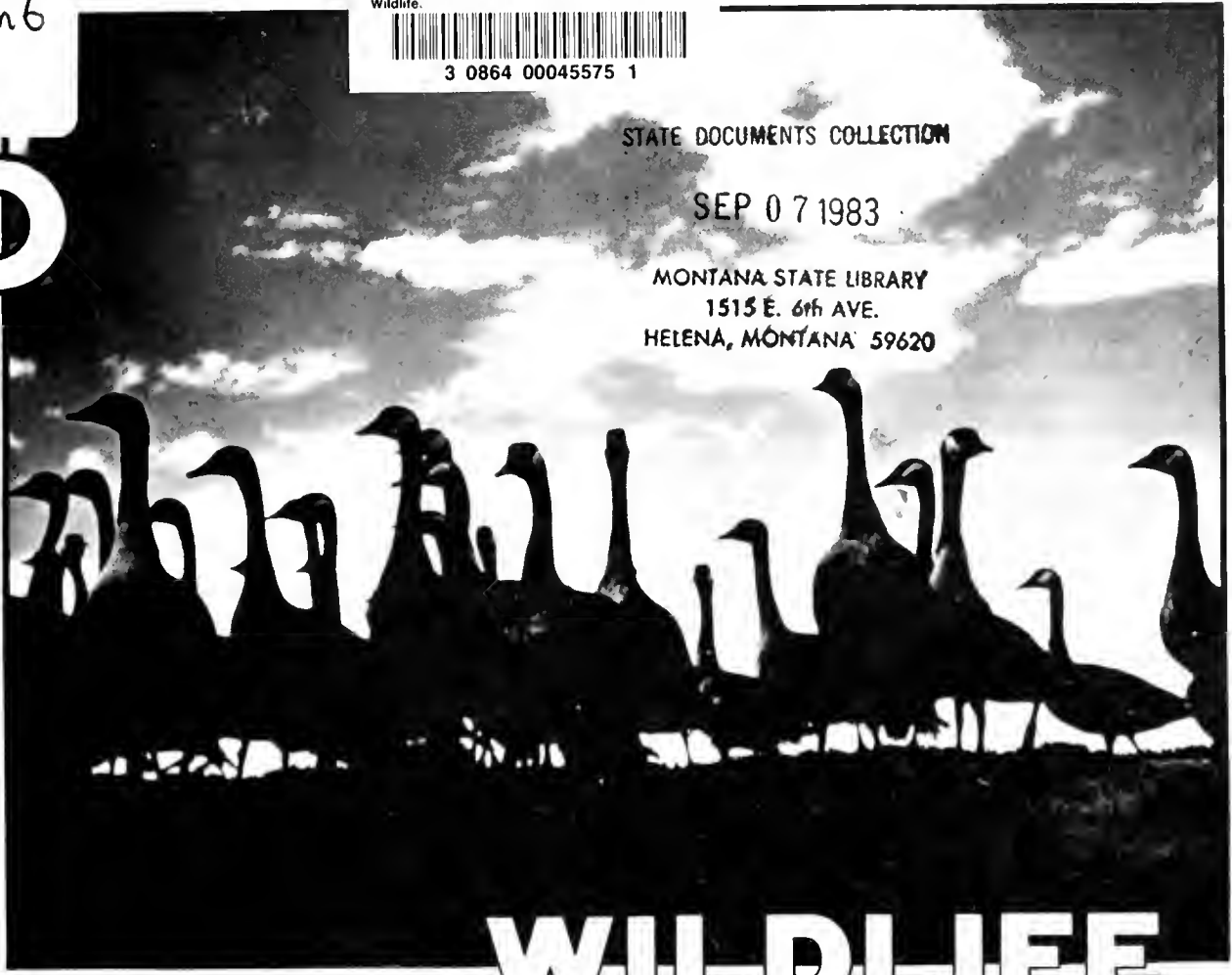
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WILDLIFE

"One swallow does not make a summer, but one skein of geese, cleaving the murk of a March thaw, is the spring."
-Aldo Leopold

PLEASE RETURN

A careful observer can find signs of wildlife in many places in Montana—there's a home here for animals as big as the bison or as small as the shrew. Along some of our waterways, a riffle on the surface may reveal a beaver carrying a willow branch to add to its food store. Blazes on aspen trunks show that a porcupine has enjoyed a meal there. Swirls of flattened grass in a mountain meadow mark where elk have bedded down for an afternoon rest.

Just knowing that a wild thing has been there before you may be enough for most people, but anglers, hunters, and photographers can all bring home the evidence of an abundance of wildlife from Montana's streams, mountains, and plains.

This chapter describes the principal species, their habits and habitats, and some of their unique qualities.

Pronghorn: *Antilocapra americana*

The pronghorn, or antelope, is a plains animal that ranges into grassy mountainous areas, mostly in central and eastern Montana. It depends on sagebrush for winter forage. Some small herds now thrive west of the Continental Divide where they were reintroduced after becoming nearly extinct around the turn of the century. A small number of Montana pronghorns introduced in one of the Hawaiian Islands in the 1950s are well established there. Pronghorns are among the fastest animals on earth, and have been clocked at 70 miles

an hour for short periods; 45 miles an hour is not unusual. Their speed and their excellent eyesight are their defenses against predators. (A pronghorn is pictured in the Grasslands chapter.)

Moose: *Alces alces*

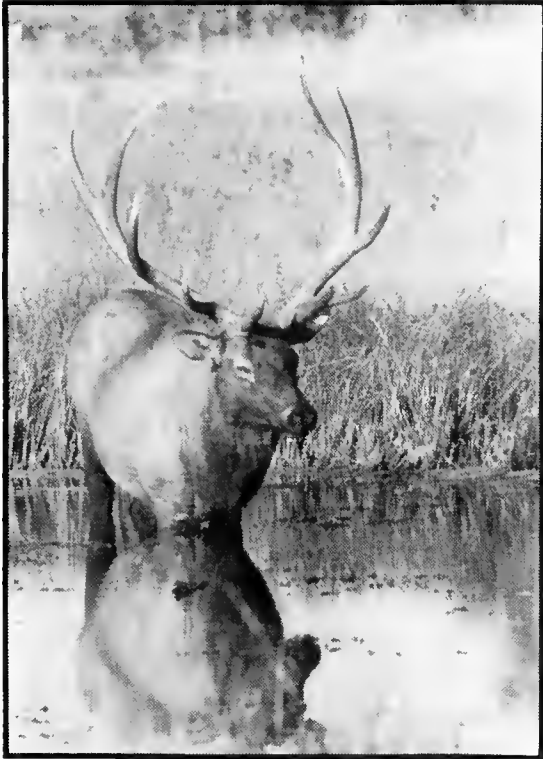
This largest member of the deer family lives mostly in the northern coniferous forests of this continent, and is found along waterways where aspen and willows give shelter and browse. Moose are adaptable, and eat the leaves and tender branches of chokecherry and serviceberry as well as aquatic plants.

Though awkward in appearance, the moose has a fast, easy gait, and is a good swimmer, as well. The young are born every two years, and are often twins. When disturbed or cornered, moose can inflict injury with their sharp-hoofed front feet. The males also use their broad, scoop-like antlers. (For another picture, see the Grasslands chapter.)



Moose

Montana Department of Fish, Wildlife & Parks



Elk

Elk: *Cervus elaphus*

Next largest in size to the moose, elk, whose correct name is wapiti, are numerous in western and central Montana, ranging from grassy benchlands to mountain meadows. The young are born in late April or May, usually singly. Elk move from lower ranges to higher areas as warming weather melts the snow and forage grows again. Elk once ranged throughout Montana but are now found primarily in the western portion of the state.

A full-grown bull elk will weigh 800 pounds; the older males carry a "rack" of antlers that may be five feet across. The

elk's coat is buff-colored, with dark brown on the legs and neck.

White-Tailed Deer:

Odocoileus virginianus

These deer live in all parts of Montana, and usually are seen along brushy creek bottoms and river land. They also range into dense coniferous forests. The white flash of its tail distinguishes this species from the mule deer. The young, often twins, are born in early May.

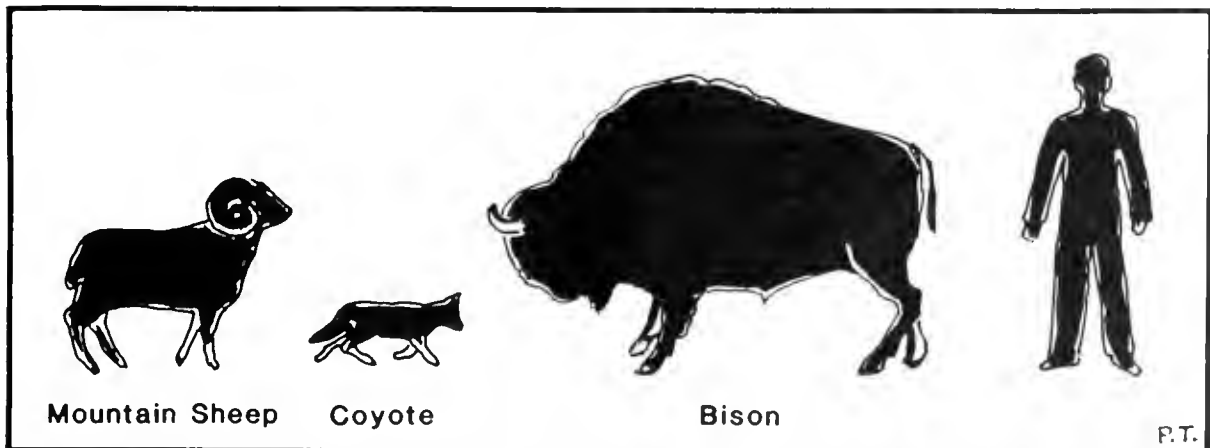
Mule Deer: *Odocoileus hemionus*

Because they like open space, these deer are seen more often in forest clearings, prairie country, and upland benches. They are found at higher elevations than white-tails, and are abundant throughout Montana. They prefer broken terrain like that in eastern Montana, but can be found in almost every habitat.

Bison: *Bison bison*

The northern plains bison or buffalo is now seen in Montana only in Yellowstone Park, and some game refuges such as the National Bison Range in the Flathead Valley and the Fort Peck Game Range in eastern Montana. A few small privately owned herds are also scattered around the state. This huge member of the bovidae (or cattle) family once numbered in the millions and had a range from alpine tundra to eastern U.S. forests.

Adults are dark brown, and the males have a heavy, shaggy mane; the young are a light reddish tan. The bulls weigh between 1,800 to 2,000 pounds and may be five feet high and from 9 to 12 feet from nose to tail.



Mountain Sheep

Coyote

Bison

P.T.

Comparative sizes of wildlife and human



Mountain Sheep

Montana Department of Commerce

Mountain Sheep (“Bighorn”):

Ovis canadensis

These animals have a quite different habitat than the mountain goats—they prefer both lower and more open areas, especially dense grasslands near steep cliffs which they use for escape cover. Their tawny brown coats allow them to blend in with the rocky terrain. In the last part of the 19th century into the first part of the 20th,

they were hunted until their numbers were greatly reduced. The magnificent curled horns of the adult males made them sought after by trophy hunters. This, as well as diseases contracted from domestic sheep that came into their range, lowered their population. Now on the increase, bighorns have been transplanted into several mountainous areas in Montana.



Mountain Goat

Mountain Goat:

Oreamnos americanus

Another member of the bovidae family, this sure-footed animal uses its padded hooves to get the traction it needs to climb and jump in the high rocky country where it lives at elevations between 5,000 and 11,000 feet. It feeds on alpine forbs and grasses on these open areas; in winter the wind keeps its food supply from being covered by snow.

Goats have heavy long fur; their white coats let them blend in with snow patches on the cliffs and slopes. They have short curved horns with sharp points. The young, often twins, are born late in the spring.

Bears: Black and Grizzly:

Family Ursidae

Both black and grizzly bears live in the spruce-fir forests of western Montana; some black bears may be found in the open ponderosa pine woods of the mountains farther east. Grizzlies require isolated terrain; Glacier and Yellowstone national parks, the Bob Marshall Wilderness Area, the Mission Wilderness Area, and the Sun River Game Preserve are their only true refuges in Montana. Other remote areas where they live include the Flathead and Kootenai national forests, the Absaroka and Cabinet mountains, and a few similar

areas. The grizzly is considered a threatened species—its numbers get fewer as its habitat is limited by human intruders.

The grizzly (sometimes called the silver-tip) gets its name from the silver-gray guard hairs of its thick fur. The grizzly has enormously long sharp claws that make it easy to dig for tubers, insects, and burrowing animals. Black bears may be either brown, cinnamon, or black, but lack the shoulder hump and scooped nose of the grizzly.

Bears look for their early spring food (marmots and other rodents) in rockslides. Summer finds them moving to alpine meadows where they eat grasses, forbs, and small animals, and as fall comes, they forage for berries and pine nuts. Although bears have been considered as carnivores, in reality meat makes up only 10 to 15 percent of their diet. All bears seem to keep enough distance between them to allow for an ample food supply; in cases of food shortages, they may range as far as 30 miles from their home territory.

Bears "den" rather than hibernate. Grizzlies usually dig a north-facing burrow at 8,000 to 9,000 feet altitude, where the winter is spent in a light sleep. Body temperature drops slightly, and heartbeat and breathing rate slow. In this way, the animal uses less of its reserves of body fat to survive the winter.

The young are born during the denning period, every 2 or 3 years. A litter of two is usual. The cubs stay with their mother through their second year. Black bears den earlier than grizzlies, and at lower altitudes. They use caves, overhangs, or shelters formed by downed timber, since they lack the grizzlies' ability to dig burrows.

Lynx, Bobcat, and

Mountain Lion: *Family Felidae*

The lynx is slightly bigger than the bobcat, with large, heavily-furred feet that let it travel easily over snow. It has a distinctive square ruff around the jaws, black ear tufts, and a black marking that circles the tip of its tail.

The bobcat has a tawny, random-striped coat, and its tail has only a partial black tip. Both of these animals feed on small mammals, eggs, insects, and carrion.



Mountain Lion

Their larger relative, the mountain lion (or cougar), may reach a length of 8 feet from nose to tail tip. Unlike the smaller cats, it feeds on big game and kills from 14 to 20 deer a year, or 5 to 7 elk, enough to obtain over 2,000 pounds of meat. After eating as much as it can hold, the mountain lion covers the prey to keep it from carrion eaters, saving it for later meals. Some kills of coyotes, porcupines, and small rodents complete the diet.

These cats are all shy, secretive animals who avoid humans, and keep mostly to the high mountain forests.

Coyotes, Wolves, and Foxes:

Family Canidae

Coyotes are the most widely-ranging members of this group, adapting their choice of food and methods of hunting to where they live. They hunt in grasslands for moles, ground squirrels, and gophers, in rock slides and outcrops for marmots, and along forested waterways for beavers, porcupines, and an occasional frog. Several coyotes sometimes work together to surround a deer in the high country, and

they bring down old or crippled domestic sheep and young lambs.

Coyotes are occasionally killed by bears or mountain lions, but their chief enemy, besides humans, is over-population which is followed by malnutrition and disease.

Like wolves, coyotes have only one life-mate. The young are born in April, and are soon out in the world, hunting with their parents from the age of 6 weeks or so.

Wolves are rare in Montana, although a few may occasionally stray into remote parts of the northern mountains from Canada. There is also possibly a remnant population in Yellowstone Park, but this is not certain. They are an endangered species and may not be hunted or trapped. Their food consists mostly of big game—elk, moose, and deer. Social animals, wolves hunt in packs, which enables them to bring down animals much larger than they are. They range 15 to 20 miles in a day, and their home range may be from 50 to 100 miles square.

Mating occurs in March, and the wolf pups are born in May. The mother does not leave the deep den she has dug for several weeks. Food is brought to the den by members of the pack. Later when the pups venture out of the den, the other wolves make them a welcome part of the group. This closeness of the pack members is typical of the social structure of the pack.

The red fox lives throughout Montana; it digs its den in fields or hillsides, where 4 or 5 pups are born in early spring. Insects, frogs, and small mammals make up its diet. Early morning or late evening are the best times to catch sight of this wary hunter.



Coyote

Rabbits, Hares, and Pikas:

Order Lagomorpha

Desert cottontails are found in eastern and southwestern Montana, mountain cottontails in brushy valleys. The jackrabbit, which is really a hare rather than a rabbit, lives in open country, relying on its ability to outdistance almost any of its predators, instead of taking to its burrow. One variety, the black-tailed jackrabbit, has now moved into southwestern Montana. The white-tailed jackrabbit lives in the higher elevations. It turns from its summer gray to almost white in winter. Large feet and powerful hind legs give it the ability to run at speeds of over 30 miles an hour. The snowshoe hare lives in forested country and has broad feet adapted for deep snow.

Although the little pika, or coney, is usually thought of as an alpine animal, its range includes altitudes of under 3,000 feet. It seldom goes far from the protection of the talus slopes where it has a den. The pika does not hibernate, but this small creature has solved the problem of year-round food. It gathers grass, leaves, and flowers, then piles them to dry in the sun. Later this harvest is stored in the den.

Montana Department of Fish, Wildlife & Parks



Snowshoe Hare

Animals that change coat color in fall shed one color in a few weeks' time, and the new winter coat grows back in another color, changing, for instance, from brown to white. Length of the nights, not temperature, is what determines the timing of color change.

Weasels: Family Mustelidae

These extremely active meat eaters require a great amount of food for their size, and spend most of their time hunting. They are nocturnal, and therefore are seldom seen in the daylight hours. The black-footed ferret, an endangered species, is a member of this family.

Among other members of the weasel family are mink, marten (or sable), fisher, otter, skunk, wolverine, and badger. Their fur is valued by trappers, but the rare fisher is a protected species. It is a forest dweller, as are martens, mink, short-tailed weasels, and wolverines. The pine marten is adept at climbing trees, but tree squirrels represent only about 10 percent of its diet, which also includes mice, voles, and pikas, with berries in season. The marten lives in dense coniferous forests. The fisher, a larger relative, was extinct in Montana, but was transplanted from Canadian stock, and apparently is making a comeback. It captures grouse, squirrels, rabbits, and even the sharp-quilled porcupine.

Wherever there is a waterway, mink can make a home, whether in forests, grasslands, or brushy areas. Living in burrows in river or stream banks, this slender agile carnivore eats smaller animals, fish, and crayfish.

The striped skunk lives along willowed waterways, and in fields and rangeland; its spotted relative has a limited range in Montana's extreme southwestern corner. Badgers range throughout the state; these strong, long-clawed burrowers hunt out other smaller ground animals from their dens or rocky lairs. The long-tailed prairie weasel also lives and hunts in the grasslands, forests, and open mountain meadows.

Called by the Indians "carcajou the devil-bear," the wolverine had no friends among

trappers, who accused it of stealing from traps, tearing up cabins, and generally outwitting them. However, the animal is rare in Montana today. It eats carrion and a wide range of prey from mice to porcupines, beavers, and birds. The young are born in a snow cave during the winter.

The otter lives along mountain lakes and streams, where it leads a fairly carefree life, swimming, fishing, and building mudslides. Its webbed feet, supple body, and heavy, flattened tail give it speed and maneuverability as it pursues fish, crayfish, and muskrats. The otter enjoys playing with its family, especially sliding down an incline, winter or summer, and ending in a watery splash.

Rats, Mice, and Other Small Critters

Without these little mammals most of the larger predators would often go hungry. They are the beginning of the carnivores' food chain, turning grasses, seeds, and other plant materials into protein. Many species of mice and rats inhabit Montana's plains, foothills, and mountains.

Among the most interesting rodents are the packrats, or trade rats, who get their name from their habit of taking shiny objects from cabins and campsites and replacing them with twigs or other objects of little value to humans. Their nests of leaves and sticks are sometimes found in old mine mills and other deserted buildings. Unlike most rats, they have a fluffy tail; their ears are large and rounded, and their fur is a silvery gray.

Deer mice are probably the most common and widely-distributed of the small rodents. They eat vegetation and insects, and are in turn pounced on by coyotes, owls, weasels, and other meat-eaters.

Similar in appearance to the mice, but not related to them, the energetic shrew (family *Soricidae*) eats many times its small weight in a week's time. Insects, worms, and grubs make up its diet; it sometimes kills mice as well as other shrews. One type of shrew is the smallest mammal known.

Kangaroo rats (*Dipodomys ordii*) have powerful hind legs, and a long tail for balancing. When frightened they can leap an amazing distance—up to 8 feet. They like to live in sandy areas near water, probably because of the plants available there. Although very tiny, they hibernate, and are active only during the summer months.

Raccoons (*Procyon lotor*), native to eastern Montana, are now fairly common throughout the state. They are as clever as their bright-eyed, masked faces make them appear. Their long, slender paws and sharp claws make them adept at catching crayfish, frogs, and small fish. They also eat berries, nuts, and fruit, and will not hesitate to invade a farmer's cornfield.

Favorite habitat for the raccoon is a river or stream with marshlands close by. They may den high in a hollow tree, and have 3 or 4 young in a litter each year. The raccoon swims and climbs with equal ease, but suspends its activity and hibernates in the cold months.



Raccoon

Montana Department of Fish, Wildlife & Parks

The porcupine is another rodent that is unique in its habits. It stores body fat in its heavy, quill-covered tail, but does not hibernate. The quills, which are barbed and can be painful to an attacker, form its chief protection, although it can also climb trees, using its long, sharp claws. Its food is the bark of many different trees and shrubs, including aspens, willows, and conifers.

Montana Department of Fish, Wildlife & Parks



Beaver

Beavers have some special characteristics. These thick-furred, broad-tailed animals live and work along slow-moving waterways, making dams when they can, and building bankside burrows when the river or stream is too wide or flows too fast. When they have dammed a stream, they build a large house of twigs and branches, with an upper chamber and an underwater entry tunnel. They then store branches of aspen, willow, and cottonwood by sinking them and weighting them down with larger branches.

The beavers' teeth continue to grow throughout their lives, remaining sharp enough to cut down large trees. They have an exceptionally strong jaw, also, which enables them to fell trees in a few minutes. They usually have two young, called kits, who stay with the family until they are 2 years old.

The broad tail of the beaver comes in handy for many uses—a slap of the tail on the water produces a sound of warning; it also can support this 30- to 40-pound animal as the beaver cuts its way through tree trunks. It stores fat, too, to provide body energy during the winter.

Muskrats (*Ondatra zibethicus*) inhabit much the same territory as beavers do, but prefer the quieter waters of marshes rather than rivers. They build a similar sort of house, using cattails and reeds instead of branches. Although they like marshes or shallow water for their homes, they will build bank burrows on waterways. Their food consists of reeds and other water vegetation. Irrigation ditches occasionally provide them with a home; it is not unusual to see them living close to human habitations.

Squirrels: *Family Sciuridae*

The large squirrel family includes tree squirrels, flying squirrels, chipmunks, marmots, prairie dogs, and ground squirrels. Some members of this family have adapted to living in trees, and some are burrowers; a variety of habitats suit them.

The red squirrel lives in Montana's spruce-fir and lodgepole pine forests. It caches stores of pine nuts in holes beneath the trees where it nests. The flying squirrel is found throughout western Montana, but is rarely seen because of its nocturnal habits. It glides between trees, and is not really capable of flight.

Several kinds of chipmunks live in western Montana, among them the least chipmunk, and the northwestern or yellow pine chipmunk. The red-tailed chipmunk occurs in western Montana, and the Uinta chipmunk has a limited range in the Bear-tooth Mountains. These speedy little animals can be seen foraging at campsites, or in the woods with their cheek pouches stuffed full of pine nuts. Both squirrels and chipmunks store winter food, but do not hibernate.

Hibernation is a dormant (or sleeping) period for animals such as the marmot that burrow below the frost line—above this "line" the ground will be frozen; below it the soil will stay unfrozen. The animal's temperature may drop close to the ground temperature at that depth, so it requires less body heat to live. Its breathing and heartbeat slow down, too. The animal literally uses up its stored fat to maintain life during hibernation, and is thinner when spring comes.



Prairie Dog

Montana Department of Fish, Wildlife & Parks

Of the marmot family, the hoary marmot (woodchuck or rockchuck) lives in rock-slides or digs burrows in alpine meadows throughout Montana's Rockies. A larger species, the yellow-bellied marmot, shares habitat with pikas and Richardson's ground squirrel, the same gopher found on the prairies. It may weigh as much as ten pounds and be over two feet long. Marmots usually spend only May to September above ground, and are in their burrows the rest of the year.

Prairie dogs are sociable animals who live in communities, where they seem to spend a lot of time visiting from one large, mounded burrow entrance to another. During the summer, as they fatten for hibernation, they eat constantly, and resemble fat bowling pins as they sit upright. They keep a sharp eye out, however, for their chief predators, the hawks. One Montana prairie dog town, near the Greycliff exit on Interstate 90 east of Big Timber, has been designated a state monument. Another is near Holter Lake north of Helena.

Montana Department of Fish, Wildlife & Parks



Columbian Ground Squirrel

The winter's work of the pocket gopher appears when snow melts. The mound it pushes up in meadows once filled tunnels in the snow. In its search for roots and tubers, the pocket gopher may dig a hundred feet or more across a mountain meadow. The pouches in its cheeks are used to carry food.

Bats: *Order Chiroptera*

Most of Montana's 14 species of bats occur throughout the state, although some are rare. Some hibernate when the insects that are their food supply are not available; others migrate to the southern deserts. Bats roost in caves, attics, deep woods, and other dark places during the day. They can be seen at dusk in swift zigzag flight in pursuit of insects.

The only mammals that fly, bats use a sort of sonar to locate insects. They send out a series of high-frequency sounds and then locate the echoes, finding swarms of moths, mosquitoes, and other small prey.

Young bats are born in June, and can fly at 6 weeks. Each female usually has only one offspring. Bats return to the same summer roosting spot each spring, usually in April.

Birds

Waterfowl

The western third of Montana is on the Pacific Flyway; the rest is part of the Central Flyway; both are migration routes for hundreds of thousands of waterfowl each year. Montana is home, at least during the summer months, to over 30 species of ducks, and four species of geese. Some are "fair weather friends"—wild tourists that head for warmer places when autumn comes. The Canada goose (shown on the cover) winters on lakes and open water throughout the state. Mallards, golden-eyes, and redheads also are year-round residents.

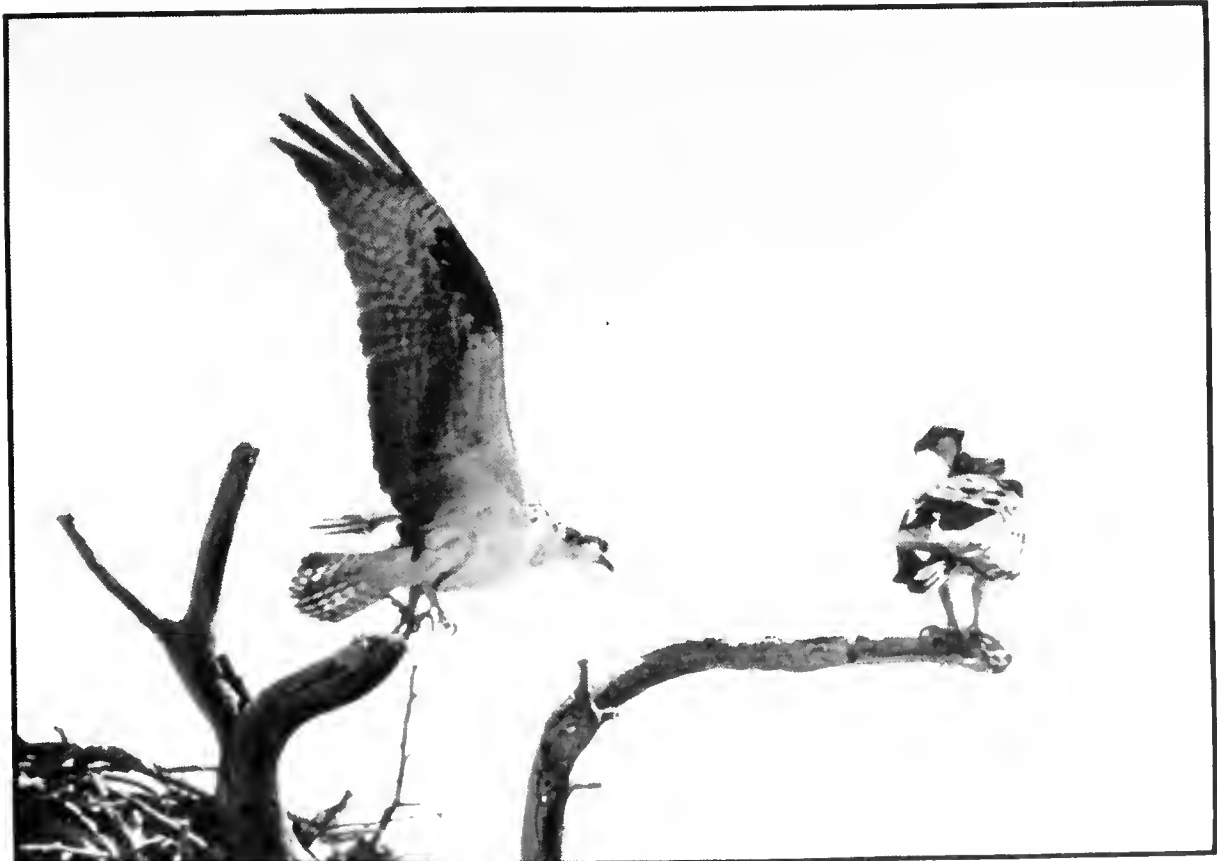
Good places to watch these and other waterfowl are the waterfowl management

areas—Fox Lake, Warm Springs, Pablo, Ninepipe, and Freezeout, and the federal waterfowl refuges, including Medicine Lake, Benton Lake, Bowdoin, and Red Rock Lakes. Many farm ponds and reservoirs also provide homes and resting places for these birds, often with grain fields nearby.

Among the migratory birds, pelicans, swans, and sandhill cranes are the largest. Smaller waterfowl include grebes, teal, and wading birds such as sandpipers, killdeer, rails, and snipe.

Often seen near bridges, the gray-blue, crested kingfisher is a solitary watcher over trout streams. This water bird has a most unusual nest—a burrow in the creek bank, where the young are hatched and are fed partly-digested fish. Later they graduate to minnows and frogs.

Probably the most unique water bird is the lively ouzel, a year-round resident easily identified by its bobbing walk as it forages under rushing water to feed along the bottoms of mountain streams. Smaller than a robin, this slate-gray, short-tailed bird often builds its nest near or behind waterfalls.



Osprey

Montana Department of Fish, Wildlife & Parks

Eagles

These powerful predators combine excellent eyesight with noiseless flight and death-dealing talons to dispatch their prey. All eat small mammals as the major part of their diet.

Golden eagles build their bulky nests on mountain cliffs, adding to them over the years. Usually two eggs are laid early in the spring. Both parents brood (or keep the eggs warm), taking turns at hunting. Rabbits, birds, and occasionally a fawn deer are their principal foods. The golden eagle and the bald eagle can be distinguished by the striking white head plumage of the bald eagle. Both have wingspreads of up to 7 feet. Each fall, Glacier Park is the scene of a gathering of bald eagles when spawning salmon draw them for a feast. (See the photograph in the Water chapter.)

Hawks: *Falconiformes*

Hawks most frequently seen in Montana are the red-tailed hawk, with a wingspread of 4 feet, and the smaller northern harrier, or marsh hawk. The first is more apt to be seen at high elevations, hunting for gophers, marmots, and other rodents, and dropping from great heights in a dazzling power dive. The marsh hawk flies at a more leisurely pace at lower levels, preying on field mice and other inhabitants of moist meadows.

Falcons (*Falconidae*) are not common in Montana. The peregrine falcon is widely distributed globally, but rarely seen in the western mountains. Among these slender, swift predators is the kestrel. Prairie falcons also inhabit the eastern parts of Montana.

The osprey or fish hawk can be seen perching along waterways on dead trees. When it sights a fish, it plunges into the water and seizes the fish with its talons. These big birds nest in cottonwoods and other tall trees, as well as building on the crosspieces of power poles.

Owls: *Order Strigiformes*

Owls cover somewhat the same territory as the hawks, but their prey are the nocturnal rodents. Their downy plumage makes their flight almost soundless. The owls may vary in size from the huge horned owl, which resembles a lynx when perched in a tree, to the tiny pygmy and saw-whet owls.

The eyes of these night hunters are adapted for darkness by many "rod cells" that are extremely sensitive to light. The eyes do not move in their sockets, so the head must turn instead—in some species the angle of rotation can be as much as 280 degrees.



Horned Owl

Peggy Todd

Woodpeckers: *Family Picidae*

Several kinds of woodpeckers are common in Montana. Of these the flicker is at home in town and country, tapping noisily on shingle roofs for grubs and competing with robins for worms on lawns. Its rosy underwings and a black shield on its chest make it easily recognized. The small downy woodpecker is identified by its black and white plumage and the red cap of the male. Lewis' woodpecker has a gray back and pinkish underparts. All these birds have stiff tail feathers to support them as they drill holes into bark with their heavy bills.

Woodpeckers keep larval infestations down as well as providing many tree trunk homes for small birds. Montana's wood duck uses the larger holes left by the flicker for its nesting place.



Magpies

Montana Department of Fish, Wildlife & Parks

Crows, Ravens, and Magpies:

Family Corvidae

These bold, noisy birds can be seen scavenging along highways for road kills. They will eat practically anything. Crows are smaller than ravens and have a different flight pattern—the raven hops like a vulture before takeoff. Both make nests that look like bundles of twigs in tall deciduous trees. The magpie nests along waterways. This extremely wary bird has a unique tail that can rotate in a half-circle for maneuverability.

Another member of the numerous crow family is the gray jay. These trim birds inhabit the subalpine forests of western Montana. Also called the camp robber, the gray jay is a year-round resident, nesting in carefully concealed places. Jays have an unusual way of storing food by rolling it in their beaks into a saliva-covered wad. They then hide this mass under the bark of trees for later use.

Clark's crow or nutcracker is a jay whose plumage has an eye-catching black and white banding on the wings. It feeds on pine nuts or may come into more open areas after insects, berries, and carrion. Its eggs are laid while the weather is still cold, but the nest is well insulated with lichen and feathers.

Songbirds

Most songbirds spend only the spring and summer in Montana after wintering in the southern United States or Central America. Bluebirds nest and feed in the sagebrush-covered benchlands and grasslands as well as near houses. They usually lay four to six pale blue eggs.

Meadowlarks, Montana's state bird, inhabit much the same terrain, and, like the bluebirds, also live close to farms and towns. Meadowlarks are among the "early birds." They often arrive from the south during late spring snows, when they can be seen picking up bits of sand or gravel and the grain dropped from trucks along the highways. (Like domestic birds, they need grit for their gizzards.) Easily recognized by the black shields on their yellow breasts, the meadowlarks "stake out" their territories by singing from fence posts or shrubs along the boundaries.

Robins sometimes winter in juniper groves in the Rockies, but usually spend only the warmer months here. They eat insects of many kinds, as well as snails, berries, and worms. The three to four eggs are a light blue, laid in nests built high in trees. Robins like to live near people because food is more plentiful on irrigated lawns and fields.

Upland Game Birds:

Family Tetraonidae

The blue grouse lives in the foothills and open forests, feeding on seeds, buds, plants, and berries. It nests on the ground and produces one clutch of eggs each summer. Spruce or Franklin's grouse ranges in much the same habitat. It is sometimes called the fool hen because it often seems unaware of danger. The ruffed grouse tends to occupy lower elevations, living in mountain valleys and along streams.

The white-tailed ptarmigan's mottled plumage serves as camouflage in summer when it resembles the mossy rocks of its habitat. Its feathers molt (drop out) and come in white when the snows of winter require a different blend for protection against its predators. Its winter wear includes extra feathers on legs and feet for comfort in bitter cold. The ptarmigan burrows into snow drifts for warmth and for protection from foxes and bobcats.

Three other species among the most popular game birds in Montana are not native to the state. They are the ring-necked pheasant, the Hungarian partridge, and the chukar, a type of quail. The wild (or Merriam's) turkey, which is gaining favor as a game bird, has also been introduced into the prairies of eastern Montana. It lives in open forests of Douglas fir and ponderosa pine, roosting in trees at night.

Montana Department of Fish, Wildlife & Parks



Ruffed Grouse

Montana Department of Commerce



Paddlefish

Fish

Of the 80 species of fish in Montana's streams, only a few inhabit the cold waters of the Rockies. These are of the salmonidae family—trout, whitefish, salmon, and grayling, considered by some anglers to be the top game fish in the state. No single species is found in all drainages.

Most of the other families of fish occupy the warmer waters of the central and eastern Montana plains. Many members of the minnow family live in the Missouri, Yellowstone, and Little Missouri rivers; chubs, dace, shiners, and suckers are among them.

Three members of the sturgeon family live in Montana streams, as well as sunfish, perch, sculpin, and catfish. The most unusual fish in the state is the paddlefish, unchanged from prehistoric times. This large fish weighs 50 to 60 pounds or more, has a smooth, tough hide, and a unique upper jaw shaped like a paddle. Because its growth can be measured by rings of cartilage in its skeleton, scientists have discovered these fish may live as long as 30 years.

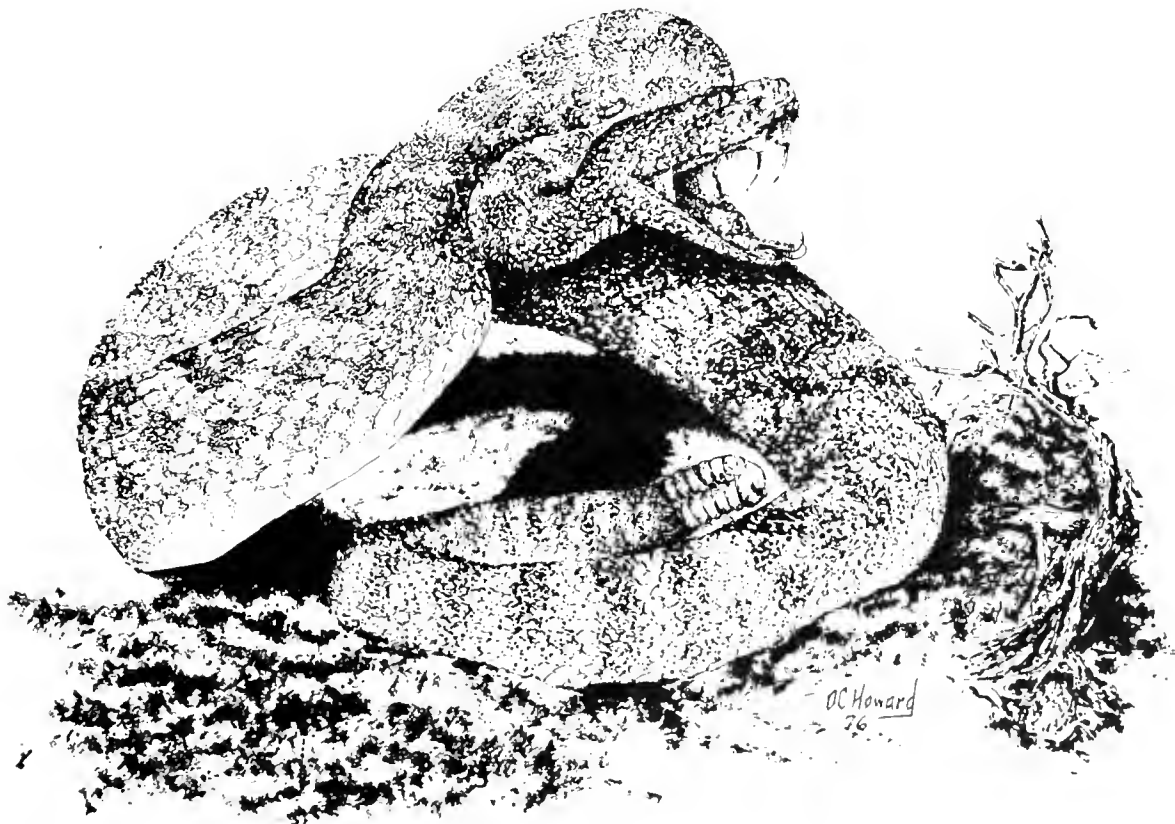
Reptiles and Amphibians

Although Montana's reptile and amphibian population is small and has few species, one, at least, is quite remarkable. The axolotl, an amphibian, is a tiger salamander that uses a gill-like structure to breathe during its early weeks of life. It develops lungs as it matures into a land-dwelling adult. It is also unusual because it reproduces while still in the larval stage. Found around some mountain lakes, it hibernates through the long winter, burrowing into the mud.

Montana has one variety of rattlesnake, as well as garter snakes, bull snakes, and rubber boas. Other amphibians and reptiles, found mostly near waterways, are toads, bullfrogs, and turtles.

Suggested Activities

1. Using Olaus Murie's *Field Guide to Animal Tracks*, try to identify tracks in mud along creek banks, or in snowy woods. This book gives instructions for making casts of tracks, so you could make a collection of casts for your area.
2. You can learn how to observe wildlife in your area. Many animals (such as deer) come to drink early in the morning or at dusk, so timing is important. If you learn to recognize the trails or burrows of small animals, you should be able to sight the inhabitants. Patience and the ability to move quietly or stay still will help you to observe wildlife.



Rattlesnake

Further Reading

The Audubon Society Field Guide to North American Mammals. 1980. Whitaker, John O., Jr. Alfred A. Knopf, New York.

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Montana's Upland Birds. 1979. Montana Department of Fish, Wildlife, and Parks. Helena, MT.

* *Rocky Mountain Wildlife.* 1976. Blood, Donald A. Hall, Tom W. and Baumgarten, Susan, illus. Saanichton, B.C., Canada.

* *Wild Animals of North America.* 1979. National Geographic Society. Washington, D.C.

* Student reading; ask your librarian for books by Ernest Thompson Seton, Jim Kelgard, Aldo Leopold, and the Craigheads.

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