

Colorado Parks & Wildlife encourages everyone to use ethical viewing and nature photography techniques. We support the use of long, telephoto lenses and other practices that promote natural resource stewardship.

Thank you to contributing sponsors: The Rocky Mountain Bighorn Society and Rocky Mountain Goats Foundation.



## COLORADO PARKS & WILDLIFE

### Denver Headquarters:

(303) 866-3437  
1313 Sherman Street, #618,  
Denver, CO 80203

### Denver Broadway Office:

(303) 297-1192  
6060 Broadway,  
Denver, CO 80216

### Northeast Region Office:

(303) 291-7227  
6060 Broadway,  
Denver, CO 80216

### Northwest Region Office:

(970) 255-6100  
711 Independent Avenue,  
Grand Junction, CO 81505

### Southeast Region Office:

(719) 227-5200  
4255 Sinton Road  
Colorado Springs, CO 80907

### Southwest Region Office:

(970) 247-0855  
151 East 16th Street,  
Durango, CO 81301

### Camping Reservations for your 42 State Parks:

[cpw.state.co.us](http://cpw.state.co.us)  
1-800-678-CAMP(2267)  
or (303) 470-1144

*Colorado Birding Trail*  
[coloradobirdingtrail.com](http://coloradobirdingtrail.com)  
Explore Colorado's incredible  
diversity of birds, wildlife and  
the habitats they depend on.

*Colorado Tourism Office*  
1-800-COLORADO  
[colorado.com](http://colorado.com)

*Colorado Scenic and Historic  
Byways*  
[coloradobyways.org](http://coloradobyways.org)



Funded in part by Great Outdoors Colorado  
through Colorado Lottery proceeds.



[cpw.state.co.us](http://cpw.state.co.us)

EDU1208-2.5K-6/14

COLORADO PARKS & WILDLIFE

# Bighorn Sheep & Mountain Goats



COLORADO'S MOUNTAIN MONARCHS



[cpw.state.co.us](http://cpw.state.co.us)


# Living on the Edge

They gaze down from rock ledges and mountain slopes, creatures that are at home in the most inaccessible reaches of our state. We stare up at them in awe, wondering how they survive on the steepest cliffs, the harshest tundra, the remote and rugged places we can only dream of reaching.

**They are bighorn sheep and mountain goats and they represent the essence of wilderness and wild.**



Bighorn sheep



Mountain goat

# Bighorn Sheep

*Ovis canadensis*



## A Sheep's Life

The wild beauty of bighorn sheep so captures the spirit of our mountain state that we have chosen them as the state animal of Colorado, as well as the symbol of Colorado Parks & Wildlife.

Named for their massive headgear — the head and horns of a ram may weigh 40 pounds — bighorn are closely related to domestic sheep. The males are called rams, the females are ewes and the young are lambs.



## Two subspecies of bighorn live in Colorado.

Most familiar to viewers, Rocky Mountain bighorn inhabit the foothills and mountains. Smaller in size and slightly lighter-colored, desert bighorn sheep live in the canyon country of western Colorado.





### **Bighorn are social animals, maintaining order through a strict hierarchy.**

Through much of the year, the rams live in bachelor “bands” or groups. The ewes, lambs and immature animals live in nursery bands led by a dominant ewe. During the mating season, late fall through early winter, the groups join each other on a common courtship ground.

### **Bighorn sheep are native to Colorado.**

They live on sunny mountain slopes, usually above 8,000 feet, where there is plenty of grass and a clear uphill escape route. Stocky-bodied with strong legs, bighorn sheep are well-designed for bounding over mountain slopes. Their flexible hooves are equipped with soft, spongy pads to help cling to rocks. Even newborn lambs can follow their mothers over the rugged terrain within a few days of their birth.



### **Bighorn once ranged from the high mountains to the prairie near the foothills, moving downslope in winter.**

Settlement brought fences, roads, ranches and towns that disrupted the sheep’s migration patterns. Fire suppression reduced sheep habitat by allowing forests to expand into mountain grasslands. In addition, unregulated hunting in the 1800s and introduced diseases reduced the number of bighorn in the region.



### **Today bighorn are mostly restricted to foothills, canyons and high mountains.**

Sheep do not pioneer new range or move to new habitats easily, even those adjacent to areas in current use. Limited habitat can lead to overcrowding, stressing the animals and spreading disease. In the last half of the 20th century, sheep management focused on restoring bighorn to their historic range by transplanting some from larger, stronger herds. Today wildlife managers emphasize efforts to maintain healthy populations by enhancing habitat — through methods such as controlled burns — and managing disease. Keeping domestic sheep separate from bighorn populations reduces the risk of transmitting non-native diseases to wild sheep. Hunting is also used as a management tool to maintain healthy herd densities.

# Bighorn Sheep Watching Tips

## When

### **Most of the year, bighorn are active in the morning and late afternoon...**

allowing a more leisurely viewing schedule than the dawn-and-dusk recommendation for other mammals and many birds. During the middle of the day, sheep tend to bed down and are harder to find. Lambs are born in May or June, so summer is the time to spot the new babies. Throughout most of the year, the lambs, yearlings and ewes can be seen in nursery groups; the rams often stay in separate bachelor bands. From late November through January, both groups gather for the annual courtship season, when they are usually active throughout the day.



## Where

### **Look for bighorn sheep in rocky terrain with good visibility and an uphill escape route.**

They tend to avoid wooded areas where their vision is limited because “sight and flight” are their defenses from predators. Bighorn choose grassy south- and west-facing slopes, particularly in winter, where sun and wind keep snow clear from the grasses. This makes both grazing and travel easier. (See the map page of this brochure for specific sites.)

## What

### **Watching lambs is one of the delights of sheep viewing.**

In early summer, watch them playing with each other, nursing and following after their mothers. See if you can spot the lead ewe in a nursery herd. Notice that generally, sheep appear to make little eye contact with each other — a behavior thought to help reduce conflict between individuals. A group lying down may be looking in several directions, making many eyes available to watch for predators. The winter rut or courtship is the time to see the most dramatic behavior, the battle of the rams. Males follow ewes, constantly testing to see if they are ready for breeding. Competing rams display their horns, shove and finally charge at each other, butting heads with tremendous force. The winners of such contests, usually the largest and most experienced rams, are accepted by ewes as mates.

# How

**Because of their grayish color, bighorn sheep blend into their surroundings and can be challenging to see, especially when they are lying down.**

Watch for movement and pale shapes. As you scan a slope, look for their white rump patch. Scan slowly rather than taking a passing glance, searching for anything moving across the slope. Watch for large shapes that seem out of place. Is that a boulder or a resting sheep? Remember, at a distance, sheep often appear smaller than viewers expect. Wild sheep are wary of people on foot, especially of someone between them and their uphill escape route. They are often more tolerant of vehicles, so consider using your car as a viewing blind. Be sure to pull safely to the side of the road and out of traffic.



© JIM BOARDMAN



# Similar but Different...

Bighorn sheep and mountain goats both live in high mountain habitats. They both have hoofs and horns and belong to the large family of grazing mammals. Although it may seem easy to confuse them, bighorn sheep and mountain goats are quite different animals.

**Bighorn Sheep** (*Ovis canadensis*) are related to domestic sheep and to the other wild sheep of western North America, the Dall's and the Stone's sheep.

Bighorn sheep have thick coats of grayish hair. The white of their rump patch stands out from their darker coat.

Bighorn sheep stand 3 to 3½ feet tall at the shoulder and weigh from 110 to 280 pounds.

Bighorn sheep have a level back, only slightly higher at the shoulders, with well-developed hind quarters for springing rock to rock. The heads of the rams appear large and rounded, as if wearing a football helmet.

Sheep are grazers, feeding on grass and flowering plants year-round.

Sheep prefer less steep terrain than goats, often at lower elevations. They are more likely to outrun a threat than to climb to avoid it.

Sheep are social animals. During the rut, competition for dominance between rams can lead to dramatic battles.

Bighorn sheep have heavy, curved horns that are grayish-brown and grow a little each year. The large, ridged horns of older rams eventually curl around the sides of the face. The horns of females are much shorter and more slender than those of males.



**Mountain Goats** (*Oreamnos americanus*) are more closely related to the chamois of the Alps and to some African antelope than to domestic goats.

Mountain goats have thick coats of long, white hair with a woolly undercoat. The shedding wool snags on bushes and rocks and was gathered by native people of the Pacific Northwest to be made into clothing and other items.

Mountain goats stand about 3 feet tall at the shoulder. Males weigh up to 300 pounds, females 80 to 150 pounds.

The goat's muscular shoulders give it a hump-shouldered silhouette – higher and bulkier at the shoulders, sloping down to the hips. The head and long face are angular.

Goats graze on grasses and flowering plants, but take advantage of a wide variety of plants.

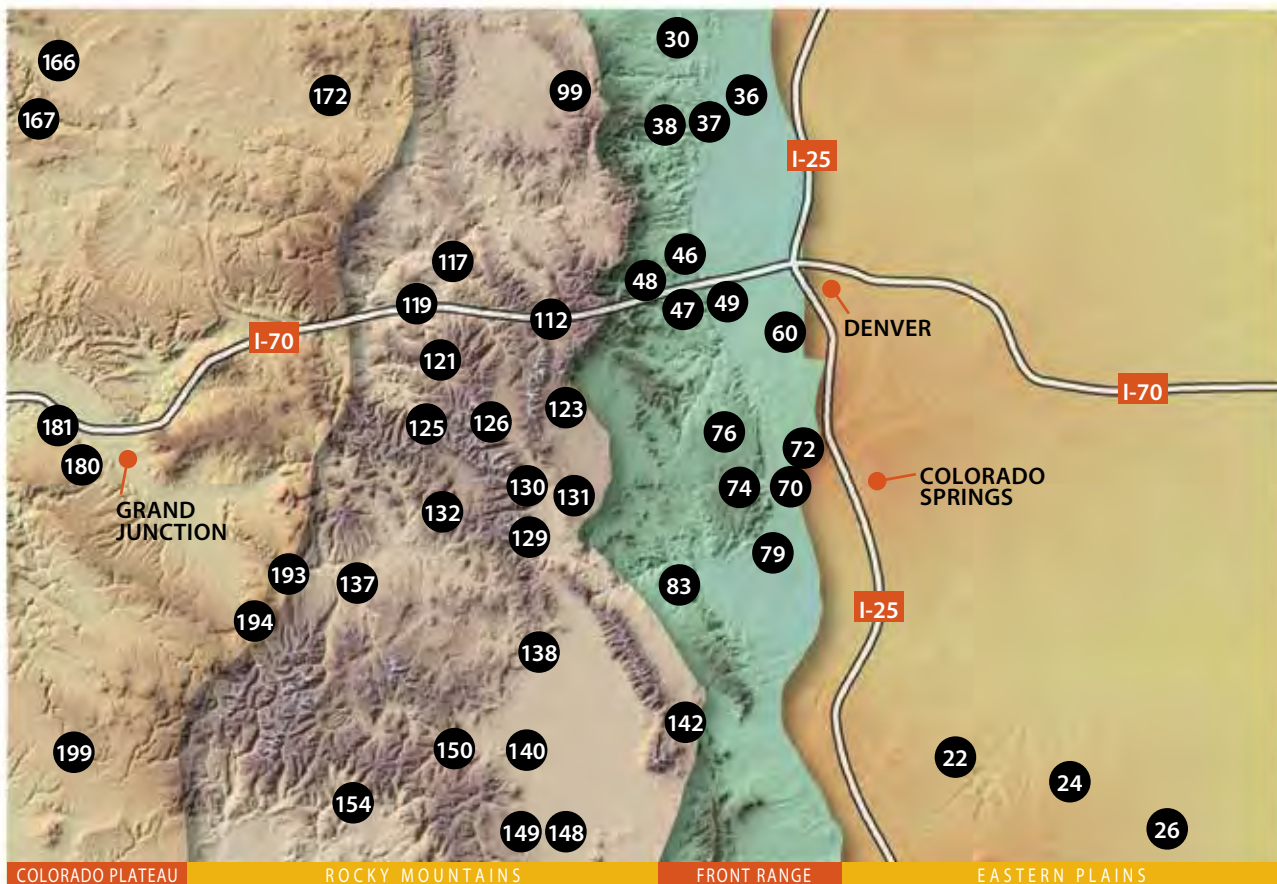
Goats prefer steeper, higher terrain and are more likely than sheep to climb upward. They use topography as a defense, going where their predators cannot follow.

Goats live in herds, but individuals tend to maintain a "personal space." Fighting is rare and can result in serious injury.

The horns of mountain goats are shiny-black and slender, angling backward from the top of the head. They grow a little each year, up to 8 or 9 inches long. Males and females have similar horns.



# Sheep and Goat Viewing Sites



Watch for bighorn sheep and mountain goats in mountain and canyon areas throughout the state. The following is a list of recommended viewing sites for bighorn sheep. Sites where goats also may be seen are noted. These sites were selected from the *Colorado Wildlife Viewing Guide*, and the numbers correspond to sites in the book. Location descriptions are general, and you may need additional information.

## EASTERN PLAINS

- 22 Apishapa State Wildlife Area
- 24 Picket Wire Canyonlands (Comanche Nat'l Grasslands)
- 26 Cottonwood Canyon (Comanche Nat'l Grasslands)

## FRONT RANGE

- 30 Big Bend Campground (Poudre Canyon)
- 36 Big Thompson Canyon
- 37 Estes Valley
- 38 Rocky Mountain National Park
- 46 Georgetown Wildlife Viewing Area
- 47 Guanella Pass
- 48 Grays and Torreys Peaks – GOATS
- 49 Mount Evans Highway – GOATS

- 60 Waterton Canyon (Kassler)

- 70 Garden of the Gods
- 72 Pikes Peak Highway
- 74 Dome Rock (Mueller State Park)
- 76 Tarryall Creek Road (South Park)
- 79 Beaver Creek State Wildlife Area
- 83 Bighorn Sheep Canyon (Arkansas Headwaters Recreation Area)

## ROCKY MOUNTAINS

- 99 Colorado State Forest State Park
- 112 Booth Creek (East Vail)
- 117 Colorado River Road (Dotsero to Burns)
- 119 Glenwood Canyon Trail (Glenwood Springs)

- 121 Fryingpan River Road (Basalt)
- 123 Weston Pass
- 125 Maroon Lake (Aspen)
- 126 Independence Pass – GOATS
- 129 Love Ranch (Nathrop)
- 130 Cottonwood Lake (off Cottonwood Pass) – GOATS
- 131 Browns Canyon River Trip (Arkansas River)
- 132 Almont Triangle (Almont)
- 137 Blue Mesa Reservoir
- 138 Trickle Mountain (Saguache)
- 140 Natural Arch Watchable Wildlife Route (Del Norte)
- 142 Great Sand Dunes National Park
- 148 La Jara and Hot Creek State Wildlife Areas

- 149 Alamosa River Canyon (Rio Grande Nat'l Forest)
- 150 Silver Thread Scenic Byway
- 154 Williams Creek Reservoir

## COLORADO PLATEAU

- 166/167 Gates of Lodore/ Dinosaur National Monument
- 172 Yampa River Corridor (Hayden)
- 180 Colorado National Monument
- 181 Horsethief Canyon State Wildlife Area
- 193 Black Canyon of the Gunnison National Park
- 194 Montrose-Oouray Drive
- 199 Dolores River Canyon



To purchase a Habitat Stamp:

- cpw.state.co.us • 800-244-5613
- Colorado Parks & Wildlife Service Centers
- Most sporting goods stores

Order the *Colorado Wildlife Viewing Guide* — which features over 200 places to see Colorado wildlife. Visit the CPW online store at [cpw.state.co.us/wildlifestore](http://cpw.state.co.us/wildlifestore). You can buy a copy online for \$14.95 or send a check/money order to Colorado Parks & Wildlife, 6060 Broadway, Denver, CO 80216.



# Mountain Goat

*Oreamnos americanus*

## A Goat's Life

Looking at a distance like patches of snow, mountain goats live their lives on the steep slopes and rugged cliff faces of Colorado's highest mountains.

Mountain goats are not true goats. But when explorers and settlers first came west, the white, horned animals scampering about the mountains reminded them of farm goats.

As with domestic goats, males are billies, females are nannies and the young are kids.



**Whether feeding, resting or playing, a mountain goat's choice of habitat is governed by topography.**

On steep, rugged terrain, few predators can reach them. The many cliff ledges and terraces hold just enough soil to grow the grasses, sedges and flowering plants that make up the goat's diet.

**Mountain goats are native to the high country of the Pacific Northwest and Rocky Mountains.**

From the 1940s to the 1960s, mountain goats were brought to Colorado as game animals. Populations have become well established in the regions of the state where appropriate habitat is available.





**Goats have evolved certain characteristics that help them take advantage of their rugged...**

and remote habitat where they have little competition from other animals. Spongy pads on their hooves grip the slippery rock surfaces. Their flexible toes spread to help them get traction on uneven terrain. Vertical climbing is almost impossible for most four-legged animals, but mountain goats make use of their strong hind legs to spring up steep slopes. If, in its climb, a goat finds itself trapped on a cliff, it can pull itself upward to a higher ledge using its forelegs and muscular shoulders. The goat's thick coat of long, white hair is essential to its survival through severe winters at high altitude. Even with their many adaptations to mountain life, goats die each year from starvation, falls, rock slides and avalanches.



**Mountain goats have less restrictive habitat needs than bighorn sheep.**

They eat a broader range of plants, browsing on lichens, shrubs and conifers as well as grazing on grass. Goats are better able to move through, and find food under, deep snow. While sheep require open terrain with good visibility, goats occasionally move into forest edges for shelter. This greater tolerance of varying terrain and conditions allows goats to make use of larger winter ranges than sheep.



# Mountain Goat Watching Tips



## When

**Goats are active from dawn through late morning.**

They rest at mid-day, then forage again during late afternoon and evening. Seasonally, the warm months are the best time to watch goats.

Kids are born in late May and early June. In late spring and summer, billies are solitary but nannies, kids and yearlings group together into small bands. The billies join the nannies in late summer and early fall.

The November to early December breeding season, when billies wander from one band of nannies to another, offers a chance to observe courting behavior and competition between males. Winter is the most challenging time to see goats, when weather makes the high country almost inaccessible.

## How

**The goat's white coat blends into snowy terrain but can stand out against a darker background.**

Remember to look up a slope for goats. Avoid getting above goats on a slope, since escaping uphill is their defense. When disturbed, goats may move away slowly at first, not showing obvious signs of distress. This behavior likely offers protection from predators such as mountain lions, but can be misinterpreted by human watchers. Though they appear undisturbed, be sure not to approach the goats too closely. Many animals will tolerate a car better than the physical presence of people. Consider viewing from your car with binoculars or spotting scope, being sure to pull safely to the side of the road.



## Where

**Mountain goats wander some of the most inaccessible terrain in the state —**

steep mountain slopes and rocky cliffs at or above timberline. Scan cliffsides for ledges where grass and flowering plants grow. Trails that lead hikers above timberline, and roads through the high country and across mountain passes, allow good access for goat watching. In winter, some herds remain on high, wind-blown slopes while others migrate to more sheltered habitats at timberline or below.





## What

### In spring, notice the goats' scruffy appearance as they shed their coats.

Males shed earlier so a shaggy goat still trailing hair in July is likely a female. If you are hiking in goat country, watch for hair snagged on shrubs and rocks. In spring and summer watch for small groups of nannies with young kids and yearlings. Summer is the time to watch the playful kids running, bounding and butting.

Notice how even the youngest kids can follow their mothers over rugged terrain. When a kid is very young, the nanny keeps it on her uphill side so she can block any falls.

In summer, watch for goats rolling in the dust, which helps reduce parasites in their coats. On hot days they may lie on patches of snow. During the fall mating season, watch how billies compete with each other, using threatening postures and displaying their horns. At this time, males approach females slowly and cautiously, drawing closer over time to overcome the female's natural defense of her "personal space." You may even see a billy crawling on its belly once it is close to a nanny.

Throughout the year, nannies jostle and compete with each other to establish the "pecking order" within the group. Watch how bigger and older goats crowd out smaller, younger animals for prime feeding and bedding spots. Note how a nanny protects her kid and may allow other kids or juveniles to stay close by her.

- Both for your safety and theirs, **keep your distance** when watching sheep and goats. They won't always show obvious signs of distress when watchers are too close.
- For a close-up view, **use binoculars or spotting scopes**, and use a telephoto lens on your camera.
- The behavior of any wild animal can be unpredictable, **so never approach them**. If they approach you, back away slowly, keeping the animal in your view. Never turn your back to a goat or sheep, as butting is a natural behavior.
- **Resist the urge to feed sheep and goats**. They can be attracted to places with salty residues such as roadsides and around restrooms. In some places, such as on Mount Evans, they have become tolerant of people and will go about their business even with humans close by. A few animals have learned to beg for handouts and may approach your car.
- **Feeding human foods to wildlife can be harmful to them**, cause them to alter their natural behavior and become tolerant of humans. It can also be dangerous for people. In Colorado, feeding bighorn sheep or mountain goats is against state law.
- **Safely pull off the road** and use your car as a viewing blind.
- **Leave pets at home**. Dogs and sheep/goats don't mix.

