

## **Looking at Nature** **Ungulates – Its All in the Toes**

It is always memorable to see elk, deer, bighorn sheep and the other large mammals who make up a group referred to as ungulates. The key to the name is found in the prints they leave behind: they have hoofs. All of our ungulates have an even number of toes; most actually have four toes, but generally only two show in the prints, while the smaller dew claws located higher on the foot rarely show. Ungulates are adapted to cover large distances quickly so they can exploit food resources over wide areas. They also have complex stomachs that contain several chambers, allowing them to gather large quantities of food rapidly and then retreat to the safety of cover for more complete digestion. One other characteristic shared by the deer family of ungulates (deer, elk, moose), is the annual growth and shedding of antlers by males.

Elk, sometimes called wapiti, are probably our most common ungulate. You may see them in the spring on the meadows of the Arapaho Ranch, while on a walk to Jasper Lake during the summer, or maybe while visiting someone who lives along Magnolia Road in the winter. And, it is likely that all three of these sightings will be of members from the same herd. In 1983, while living at Walker Ranch Open Space, located 7 miles up Flagstaff Drive just west of the Boulder Mountain Parks, Diane and I would regularly see elk in the winter; we suspected they were part of the same herd. I got the opportunity to track a dozen of them, who were equipped with radio-collars, on a weekly basis from 1988 through 1991. The findings helped piece together their movement patterns.

County-wide there are 6-7 major elk herds totaling over 2,000 animals. It should be noted that elk were virtually wiped out of Boulder County by 1900 due to over-hunting. They were reintroduced between 1913 - 1917, as animals from Yellowstone National Park were brought down and let loose near Lyons, Boulder and Tolland. I tend to view the presence and movement of elk as a positive indicator of the ecological health of our mountain landscape. As human development progresses, wide-ranging mammals tend to be eliminated. This has happened, for example, on the plains portion of the county; bison and pronghorn are no longer present and cannot be reintroduced as free-ranging animals due to the amount of development and the high fragmentation of the land by roads and fences. But in the mountains we still have elk herds that make a 20+ mile movement between summer and winter range. Some of them still make it to the plains, particularly between Boulder and Lyons on the east side of North Foothills Highway.

During typical winters, our elk will locate along Magnolia Road, all the way east to the west slope of the Boulder Mountain Park. Winiger Ridge is a major winter concentration area, and often they are referred to as the Winiger Ridge herd. Actually, two herds, totaling about 300 animals, winter in that area. In spring, they separate as they move to higher ground; one herd heads toward Tolland while the other comes to the Arapaho Ranch. They normally make this movement around the middle to later part of April, but heavy April snows, such as during the past 4 years, may postpone the movement until May or even early June. Also, this movement is a fairly rapid, long-distance movement, often occurring over one to two days. Once on the Arapaho Ranch, they can be seen foraging and playing in the meadows and wetlands at dusk and dawn. Starting in late May, the herd starts to break up as the pregnant cows head toward suitable calving areas. This occurs from late May through the end of June. Most of the animals then move up into the Indian Peaks for summer range, feeding on the tundra and in subalpine meadows at dusk and dawn. Some groups make a downward movement in the fall; after rutting some groups return to the high country. Snow depth appears to be the main cause of the final movement to

winter range east of the Peak-to-Peak Highway. Compared to the rapid spring migration, the migration to winter range is very protracted and generally tied to weather events.

Mule deer are present throughout the snow-free periods of spring, summer and fall, but never plentiful. They seem to prefer habitat in shrublands on rough, broken terrain, so are more abundant in the foothills. In winter, our local deer descend to lower elevations. Though we generally don't see white-tailed deer, keep your eye out. They are plentiful in the river bottoms on the plains, and becoming more common in the foothills; additionally there is a population found above timberline in Rocky Mountain National Park.

The new animal in the neighborhood, with much excitement and fanfare, is moose. Two years ago there was a single moose wandering the Nederland area; last summer there were two. Historically, they were considered occasional visitors to Colorado, with no documented breeding populations. They were introduced by the Division of Wildlife in 1978. The nucleus of the introduced population is found in Middle Park, south of Fraser, just a hop-skip-and-a-jump over the Continental Divide from us. Now the moose is a character in George Blevens' weekly cartoons in *The Mountain-Ear*. In Boulder County, they have wandered as far east as Hygiene.

Bighorn sheep were once common in our neck of the woods. Along with elk, they were considered to be the main species hunted by prehistoric people who utilized the communal game-drive systems found in the Indian Peaks. In the 1870s bighorn sheep were regularly seen on excursions in Boulder Canyon. They succumbed to disease and over-hunting and were wiped out of the county. Herbert Newell Wheeler, the first Forest Supervisor in Boulder County, writes in his autobiography that the last few sheep of the Mt. Audubon area were taken by Stapp of Stapp's Lake fame. Bighorn sheep were reintroduced in 1980, with 19 being placed in the North St. Vrain Canyon. Occasionally, they are seen at other locations in the county. Two young rams were seen just above Eldora on the road to Caribou several years ago.

Finally, mountain goats need a mention. Though rarely sighted, a few have been seen along the Continental Divide, probably wandering north from their closest hangout near Mount Evans. They are a species of the tundra, rarely venturing below treeline. They are an introduced species, having been brought to the state in 1948.

Seeing any of the above animals can be the highlight of a day. Keeping them around for future generations to see will tell a lot about how well we took care of this place.

Dave Hallock

