

# NATURE DETECTIVES

Winter 2012



## Bison Are Not Boring

When you view a bunch of bison grazing beyond a ranch fence, they look pretty much like big, shaggy, lumpy cattle. But looks are deceiving.

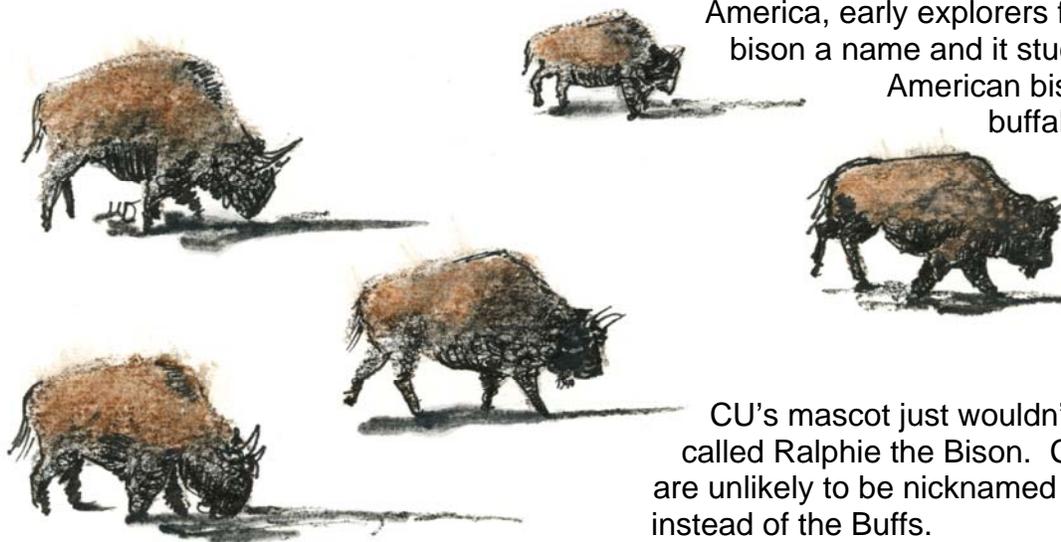
Bison are rugged, untamed survivors. 10,000 years ago, bison and their enemies the gray wolves survived when bigger animals, the mastodons, woolly mammoths, saber-toothed cats and dire wolves, died out. Just 200 years ago, 30,000,000 bison roamed the vast Great Plains, including Colorado's grasslands. Now, wolves are gone from here and bison live on ranches. Although these days Colorado bison are livestock, they retain a lot of wild spunk.

Pull Out and Save

Regular cattle fencing is easily pushed over by bison bulls. Each bull can weigh a ton (2000 pounds!). Even the females weigh half a ton. A bull can jump six feet from the bottom of a gully onto higher ground and land on all four hooves. Ranchers must build their bison fences 8 feet tall. Bulls can broad jump 14 feet over objects on the ground so an 8 foot wide cattle guard in a roadway is a mere hop. And, bison can run faster than 30 miles per hour.

With ancient survival instincts, today's bison cows and bulls still fight grizzly bears and gray wolves in Yellowstone National Park. Bison bulls engage in tough battles with other strong bulls to see who gets to father new calves in the herd. In a cloud of dust, they paw the dirt, whirl and charge each other. Their bellowing and roaring sounds can be heard miles away.

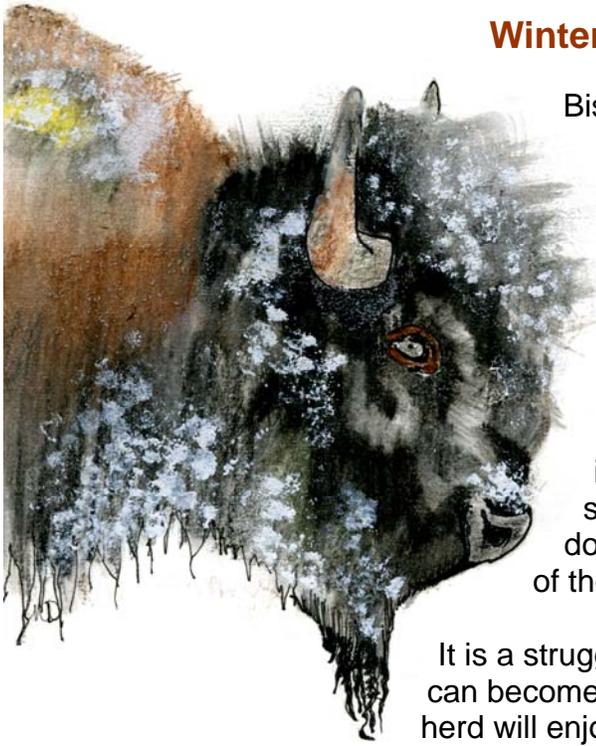
## Bison or Buffalo



As with many animals and plants in North America, early explorers from Europe gave bison a name and it stuck. Although American bison aren't true buffalo (those are in

Asia and Africa), buffalo is a cool-sounding name and lots of people use it.

CU's mascot just wouldn't sound the same called Ralphie the Bison. CU sports teams are unlikely to be nicknamed the "Bises" instead of the Buffs.



## Winter Survivors

Bison are well equipped to deal with the worst that winter can bring. The grasses and other plants that bison eat become increasingly scarce over the winter. Luckily, bison need less food in winter. Bison use their heavy heads to push away snow so they can graze on the brown grasses beneath.

Bison have 10x more hair than cattle and shorter eyelashes that don't collect ice. Unlike cattle, bison face into blizzards so winds don't drive them into drifts where they could suffocate as cattle sometimes do. Little body heat is lost through their double-layer winter coat of hair, and snow lies on top of the long outer guard hairs without melting.

It is a struggle for bison to travel through deep snow so wolves can become a bigger threat. But soon it will be spring and the herd will enjoy tender new plants and comfortable days.

## Spring Brings New Life

Nutritious spring grasses grow fast. Bison eat, rest, and eat lots more to replace fat lost over the winter. As they graze, they swallow without chewing. While they rest, they bring up wads of grass from the front part of their stomachs and chew and chew. After re-swallowing, the vegetation moves on to the main part of the stomach to finish digestion.

Calves are born in this season of good grass. Newborns struggle to stand up in a few short minutes. Within an hour, after their first milk meal, the frisky calves are ready to move with the herd.

Calves depend on the safety of being part of the herd for protection from wolves and bad weather. Instinctively they will follow anything big so moms have to keep close track. If they do get separated, their grunting calls will bring mom and calf back together. Moms and babies recognize each other by smell.

## Summer Changes

At three months, calves taste their first grass and by six months, they no longer need any milk from their moms. At six months, young bulls are spending most of their time with other bull calves, but daughters stick closer to their moms for a year or two or until they have their first calf. All the calves practice chasing and butting each other. Soft buds on their heads will become future horns.

The mature bulls have wandered and grazed alone or in all-male groups since last fall. Now they rejoin the herd of cows and calves in hopes of fathering some of the calves to be born next spring.

## Wallows

Bison use their horns and hooves to dig up the prairie sod. The sun-baked soil churned by horns and hooves turns to powdery dust. That is just the way bison like it. The big shaggy animals roll and roll in these wallows to cover themselves with dust. Dust fends off biting insects and may help bison keep cool in summer. Bison also roll in the dirt mounds at the top of prairie dog tunnels.



## The Fight is On

When the bulls start competing to be dads, they wallow a lot. They even urinate in the wallow and roll in the urine-soaked dirt. It makes them smell tough and look strong to other bulls.

The bulls stomp toward each other making grunting sounds with every step. Dust spills from long hair on their legs and chins and beard. The swaying hair on their legs accents their grand size. Weaker bulls will retreat without a fight. Challengers will butt heads and horns. Long hair cushions their foreheads and often gets sheared off between ramming horns. Hair and dust fly through the air as the bulls clash.

Bulls try to dig their horns into the side of an opponent, but bison are built big and heavy over their front legs and slender over their rear legs. This shape allows them to spin around on their front feet to quickly maneuver against the attack of wolves and grizzlies. Bulls use this same ability to turn quickly to protect their flanks and keep their strong heads and horns toward their opponents.



## Fall Food Frenzy

As soon as mating season is over in early fall, the bulls' long hairs on their beards and front legs fall out. It is a signal to stop fighting and focus on eating. Cows, bulls and calves try to put on as much body fat as possible to help them get through the winter of scarce food, cold temperatures and strong winds.

**In Colorado bison once wandered seasonally from the plains to the mountains. They prospered in great herds despite drought, fire, wolves and blizzards.**



### “Buffalo-birds” **Never Nest** – It Makes Sense

Brown-headed **cowbirds** evolved as “buffalo birds,” hopping around at the feet of bison herds to eat the bugs that leaped away from bison hooves. They lay their eggs in the nests of other kinds of birds. A grazing bison herd travels miles every day. Cowbirds could not tend nests miles away from their food. They bet their babies' futures on the willingness of other birds to raise baby cowbirds as their own.

## Bison Doom

For generations, Native American tribes hunted bison on foot and later on horseback. Spears were replaced with bows and arrows and finally guns. Bison supplied the tribes with most of their food and almost everything else they needed. Nearly every part of the bison was used. Tribes who depended most on the bison lived in tents. Tent (tipi) camps were easy to move as the people followed the migrating herds.

Eventually roads and train tracks were built on trails that the millions of bison had worn in the grasses over years of grazing and migrating across the Great Plains. Visitors came by train to marvel at the vast herds. Others came with guns and considered it sport to kill as many bison as possible. Men shot bison by the thousands to make money from selling just the hides. The bison meat was left to rot.

Some people wanted all bison gone to force the Arapaho, the Cheyenne and other tribes to go away and live on reservations. The great herds went from millions of animals to scarce groups scattered in remote areas. **Bison were almost extinct.** A few people captured bison calves to start small herds. They guessed that again some day, all people would value seeing bison herds run wild.

### Match Some Bison Parts to a Few Tribal Uses

- 1 Hide with hair on it
- 2 Hoof
- 3 Tiny thin bones
- 4 Hide without hair
- 5 Dried bison manure (chips)
- 6 Stomach
- 7 Rib bones
- 8 Sinew (muscle fibers)
- 9 Bison hair
- 10 Horns

- A Sewing needles
- B Burned for fuel
- C Cooking pot
- D Clothes or tipi cover
- E Sewing thread or bow strings
- F Paint brushes or rope
- G Tipi floor or blanket or robe
- H Spoons or cups
- I Runners on kids' sleds
- J Glue



Good read aloud: THE RETURN OF THE BUFFALOES by Paul Goble

1 G, 2 J, 3 A, 4 D, 5 B, 6 C, 7 I, 8 E, 9 F, 10 H

Answers to Matching Game: