

Bison Identification Guide and Quiz



Alaska Department of Fish and Game
Division of Wildlife Conservation

2009

All winter photos by Mike Taras.
All summer photos by Steve DuBois.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write:

- ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526
- U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042, Arlington, VA 22203
- Office of Equal Opportunity, U.S. Department of the Interior, 1849 C Street NW MS 5230, Washington DC 20240.

The department's ADA Coordinator can be reached via phone at the following numbers:

- (VOICE) 907-465-6077
- (Statewide Telecommunication Device for the Deaf) 1-800-478-3648
- (Juneau TDD) 907-465-3646
- (FAX) 907-465-6078

For information on alternative formats and questions on this publication, please contact the following: Publications Specialist, ADF&G/Division of Wildlife Conservation, P.O. Box 115526, Juneau, AK 99811-5526, or call 907-465-4176.

Bison Identification Guide

Hunting bison is more difficult than most hunters realize. Every year the hunt of a lifetime is ruined for someone because they shoot the wrong animal. This is not intentional, it is because they were not prepared. After all, how much time do most people spend observing or hunting bison?

Unless you have an either-sex harvest permit, the ability to identify the correct sex of a bison is critical to your hunting success. Many people believe that distinguishing a male bison from a female is easy, but that is not the case. Many of the characteristics are subtle and must be studied. Our bison grow long hair in the winter time so even a penis sheath may be obscured, and sometimes females may look like they have a penis sheath. Do not use a single characteristic to make your decision. Instead, rely on several characteristics reviewed in this booklet.

Read this booklet, take the quiz, and bring it into the field to review. With practice, distinguishing between male and female bison can be a rewarding challenge. As a hunter, the more you know about the species you hunt, the more successful your hunt will be.

Good luck!



Thanks to Scott Hollembaek, owner of Alaska Interior Game Ranch, Inc. in Delta, AK for allowing us to photograph and videotape his bison, and also for providing input on sex and age determinations.

Male Bison Characteristics

Penis Sheath:

- Males have a penis sheath.
- Penis sheath is smaller in young animals.
- May be difficult to see in yearling bulls.
- May not be visible in mid to late winter!



Urination: Urine stream comes out well in front of hind legs

Head Shape:

- Generally larger head than cows in mature animals.
- Broader forehead.
- Head tends to be “V” shaped.
- Less distinctive in young bulls.



Horn Bases:

- Larger bases than cows.
- Yearling bases about 2¾” diameter.
- Mature bases about 3½” diameter.
- Overlap between yearling bulls and older cows.



Yearling bull.



Yearling bull. Notice upside down “ice cream cone” shaped horns. Early in the hunting season horns stick out at 45° and later in the season start to curve upwards as in the picture above.

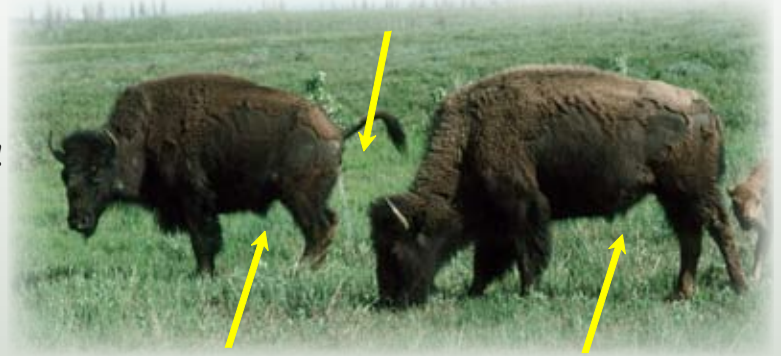


Middle-aged bull. Big horn bases and horns are starting to turn in.

Female Bison Characteristics

Penis Sheath:

- Females do not have one.
- Can appear to have one with long winter hair!



Two cows with hair tufts resembling penis sheaths. Front female is also urinating to the rear.

Urination:

- Stream comes out behind hind legs.

Head Shape:

- Generally smaller head than mature bulls.
- Narrow forehead.
- Head tends to be “0” shaped.
- Can be confused with young bull.

* Older cows have wider heads than younger cows, but the head remains narrow relative to a bull.



Horn Bases:

- Smaller bases than bulls.
- Yearling bases about 2” diameter.
- Mature bases about 2 to 2-1/2” diameter.
- Overlap between yearling bulls and older cows.



Yearling cow with narrow bases and no upside down “ice cream cone” shape. Early in the hunting season horns stick out at 45° and later in the season start to curve upwards as in the picture above.



Older cow with narrow bases and “C” shaped horns.



Calf

Age Characteristics - based on horns



Calf horns are 1-3 inches long and stick straight out and up from the head. This applies to both sexes. You cannot tell the sex of calves from horns.



Yearling horns are at 45° early in hunting season and start turning upward later in season.



Mid-aged horns are "L" shaped.



Older horns develop into a "C" shape on both cows and bulls. *

* In the Delta bison herd you don't see many bulls with "C" shaped horns because the bigger bulls tend to get harvested. If you do see a bull with "C" shaped horns it will be noticeably larger than any other animals around.

Tracks and Sign



Tracks can range from about 4.5 to 6 inches. Front tracks are wider than hind. Tracks are very rounded in appearance and can be confused with cattle and even caribou. They can also be confused with horses on very hard substrate where only the hoof walls show.



Scats vary with diet and time of year. They range from compressed “chips” in the winter to amorphous patties in the summertime. They look exactly like cattle scats.



Bison like to wallow, or roll around on the ground. Unlike other hoofed animals, bison will do this at any time of year.



What can go wrong? Real stories.

- A bull hunter watched a herd of bison for about an hour using 10X binoculars from a distance of 50 yards. Even though he saw no penis sheath on the largest bodied animal in the herd, he assumed it was a bull because of its large size. He shot a large cow.
- A cow hunter watched a herd of 6 large bulls from a distance of 100 yards. He shot the smallest animal in the group assuming it was a cow. It was a bull.
- A cow hunter crawled up on a group of 300-400 bison and concentrated on a bison that did not appear to have a penis sheath. The bison squatted to urinate like a cow and the hunter shot it. The bison was actually a yearling bull that had squatted to defecate instead of urinate.
- A bull hunter and his partner were watching about 30 bison. The hunter was using binoculars and the partner was using a spotting scope. The partner identified a bull in the spotting scope and described it to the hunter who was looking at a cow through his binoculars. They thought they were looking at the same bison. The partner convinced the hunter that they were looking at the same bull. The hunter shot the cow he was watching!
- A cow hunter had been hunting for several days and was in a hurry to get home. A herd of about 50 bison came running out of the trees toward him. He had heard that cow bison always lead the herd. After watching the lead animal for about 10 seconds as it ran past him, he shot it. It was a bull.
- A cow hunter saw a bison with curved horns. Assuming it was a cow, he shot without looking at the other sex characteristics. He actually shot a large mature bull with curved horns.
- A bull hunter watched a herd of bison for several hours. He thought he had selected a yearling bull based on a penis sheath and bull-like horns. He actually shot a yearling cow with small horns and a tuft of hair on its belly that he thought was a penis sheath.
- A cow hunter watched a lone bison for about 10 minutes through a spotting scope from a distance of about 125 yards. After deciding the bison was a cow, he shot it. He did not see the penis sheath on the young bull until he was butchering the bison.



Females

- Smaller head.
- Narrow forehead.
- Head tends to be oval "O" shaped.
- Can be confused with young bulls.
- Smaller horn bases.
- Yearling bases approx. 2" diameter.
- Mature bases approx. 2-2½" diameter.



Males

- Larger head.
- Broader forehead.
- Head tends to be "V" shaped.
- Less distinctive "V" in young bulls.
- Larger horn bases.
- Yearling bases approx. 2¾" diameter.
- Mature bases approx. 3½" + diameter.

* Overlap between yearling bulls and older cows.

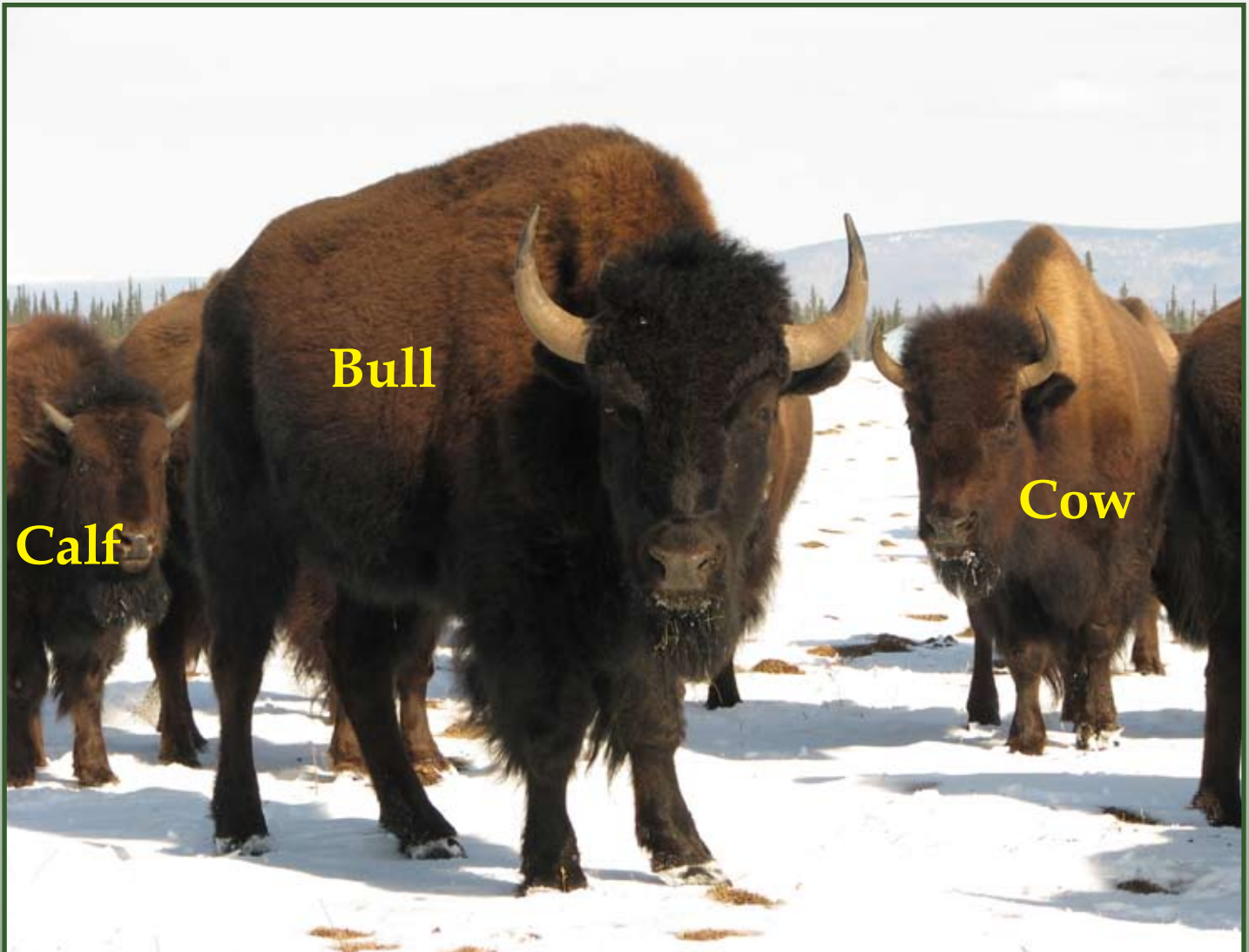
Bison sex and age quiz



No. 1

Cows or Bulls? How Old?

Bison sex and age quiz



Calf (? sex)

- Small size.
- Small horns.
- Small horn bases.

Bull, Middle-aged

- Large horn bases.
- Large “V-”shaped head.
- “L” shaped horns only slightly curving inward.

Cow, Older-aged

- Small horn bases.
- Narrow head.
- Horns curving into older ‘C’ shape.

Bison sex and age quiz



No. 2

Cow or Bull? How Old?

Bison sex and age quiz



Yearling Bull (at end of winter)

- Large horn bases.
- Large head.
- Horns starting to develop “L” shape.

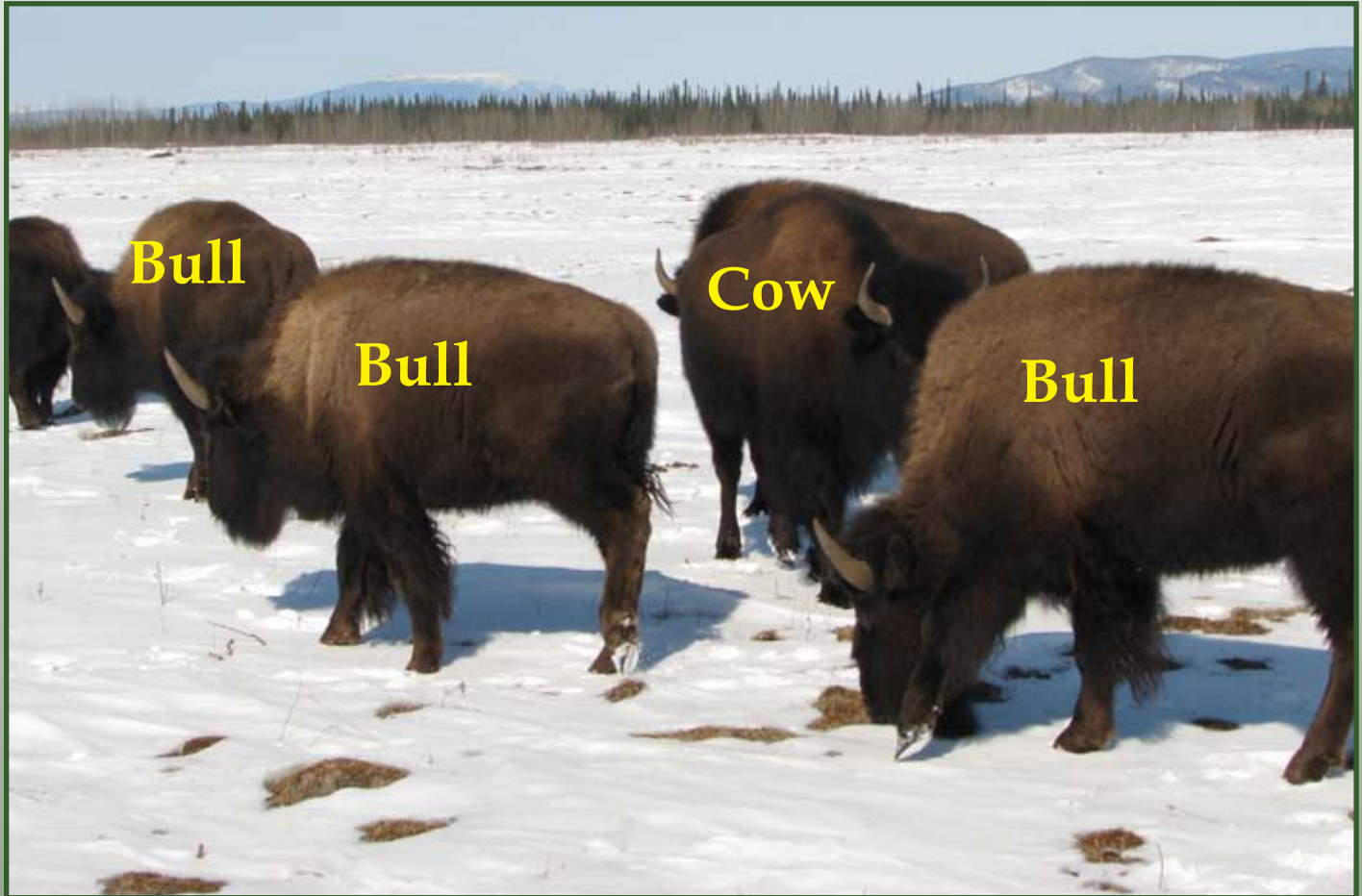
Bison sex and age quiz



No. 3

Cows or Bulls? How Old?

Bison sex and age quiz



Yearling Bull

- Large horn bases.
- Horns at 45° angle.

Older-aged Cow

- Small horn bases.
- Horns “C” shape.

Yearling Bull

- Large horn bases.
- Horns at 45° angle.

Yearling Bull

- Large horn bases.
- Horns at 45° angle.

* Notice that no penis sheath is visible on any of the bulls due to winter coat.

Bison sex and age quiz



No. 4

Cows or Bulls? How Old?
Would you shoot?

Bison sex and age quiz



Yearling Bull

- Large horn bases.
- Horns coming out of head at 45° angle.

Middle-aged Bull

- Large horn bases.
- Horns appear to be in an “L” shape.
- There may be a slight penis sheath showing.

No, Don't Shoot

Never shoot into a group of animals. You are likely to hit more than one animal. Wait for animal to separate from herd.

Bison sex and age quiz



No. 5

Cows or Bulls? How Old?

Bison sex and age quiz



Old Cow

- Small horn bases.
- Horns “C” shape.
- Head is not as large as a bulls.

Old Cow

- Small horn bases.
- Horns “C” shape.

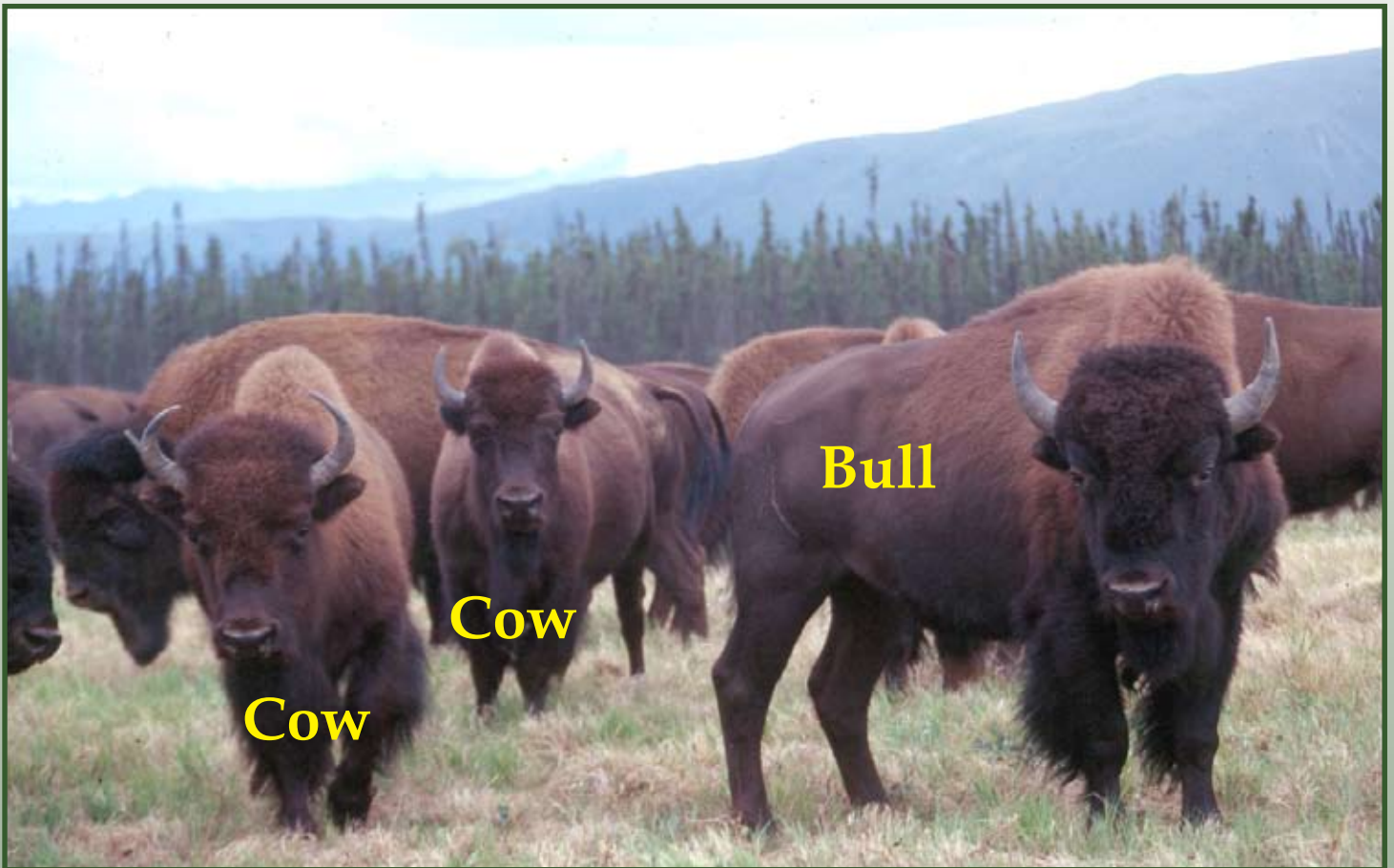
Bison sex and age quiz



No. 6

Cows or Bulls? How Old?

Bison sex and age quiz



Middle-Aged Cow

- Small horn bases.
- Horns are “L” shaped.
- Very narrow head.

Old Cow

- Small horn bases
- Horns “C” shape.
- Head small relative to a bulls head.

Middle-Aged Bull

- Large horn bases.
- Horns have developed into an “L” shape.
- Broad forehead, “V” shaped head.

Bison sex and age quiz



No. 7

Cow or Bull? How Old?

Bison sex and age quiz



Yearling bull with late season horns and winter coat with no visible penis sheath.

- Large horn bases.
- Horns starting to develop into an “L” shape.
- Broad forehead, “V” shaped head.

Bison sex and age quiz



No. 8

Cows or Bulls? How Old?

Bison sex and age quiz



1. Middle-aged Cow

- Small horn bases.
- Horns have developed into a “C” shape.
- Narrow head compared to a bull.

2. Middle-aged Cow

- Small horn bases.
- Horns have developed into a “C” shape.
- Narrow head compared to a bull.

3. Yearling Bull

- Large horn bases.
- Horns starting into the upward “L” shape.

4. Calf (? sex)

- Small size.
- Small horns.
- Small horn bases.

5. Old Cow

- Small horn bases.
- Horns “C” shape.
- Head small relative to a bulls head.

6. Yearling Bull

- Large horn bases.
- Horns starting into the upward “L” shape.

7. ?

This bison looks like it has bull characteristics but it is tough to call.

8. Middle-aged Cow

- Small horn bases.
- Horns have developed into a “C” shape.
- Narrow head compared to bull.

9. ?

When viewed from the side it can be difficult to determine the size of the horn base. Wait for a better view to determine the sex of this animal.

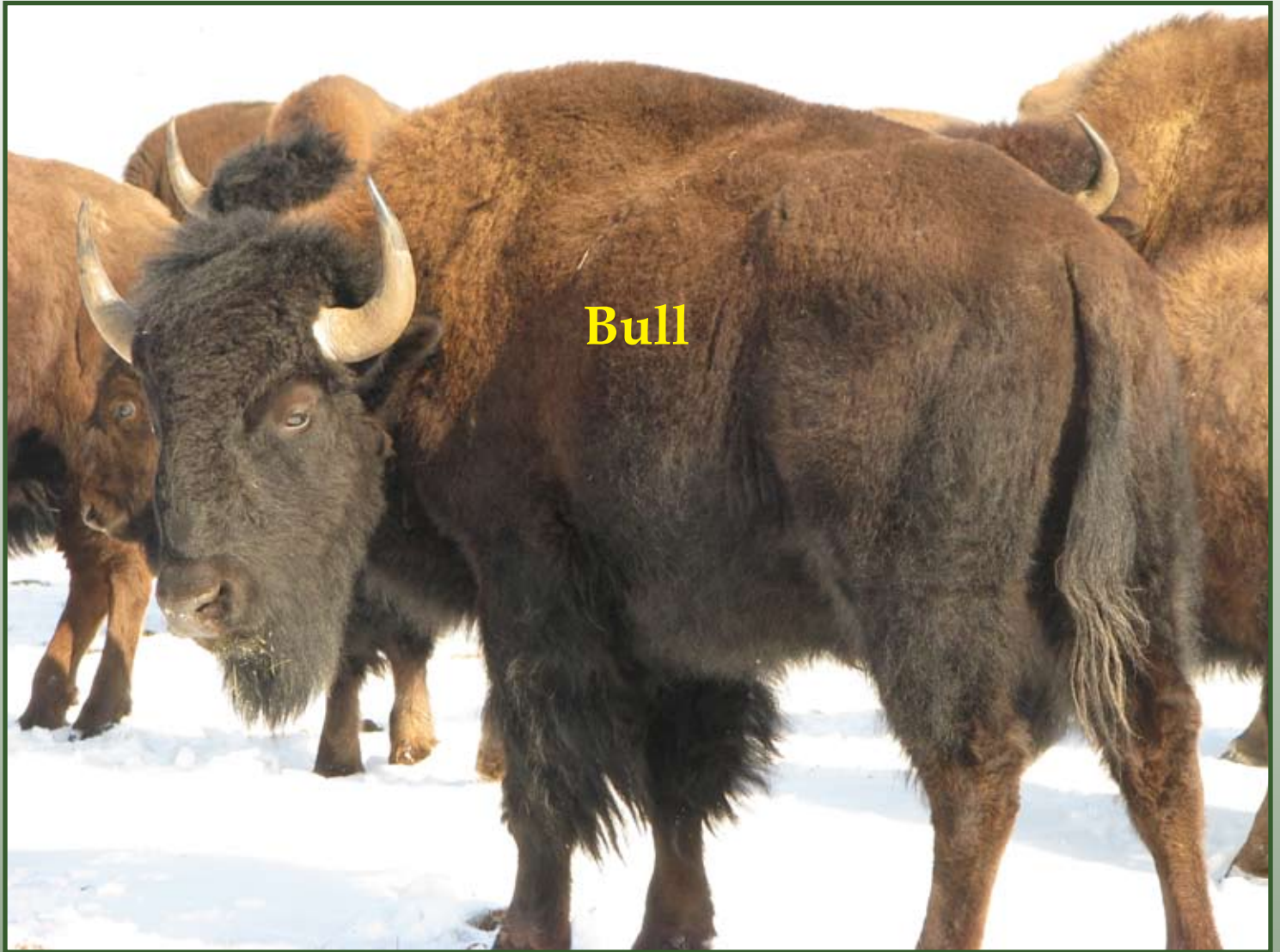
Bison sex and age quiz



No. 9

Cow or Bull? How Old?

Bison sex and age quiz



Middle-aged Bull

- Large horn bases.
- Horns “L” shaped.

Bison sex and age quiz



Sometimes it is just not realistic to determine the sex of a bison. Take your time, be patient, get into a better position, and utilize all the characteristics.

Sometimes bison will gather in single sex groups. You will then lose your ability to compare relative characteristics between sexes. Don't assume that because an animal is the largest out of the group that it is a bull, or that the smallest is a cow. Many bison of the wrong sex have been shot this way.

