

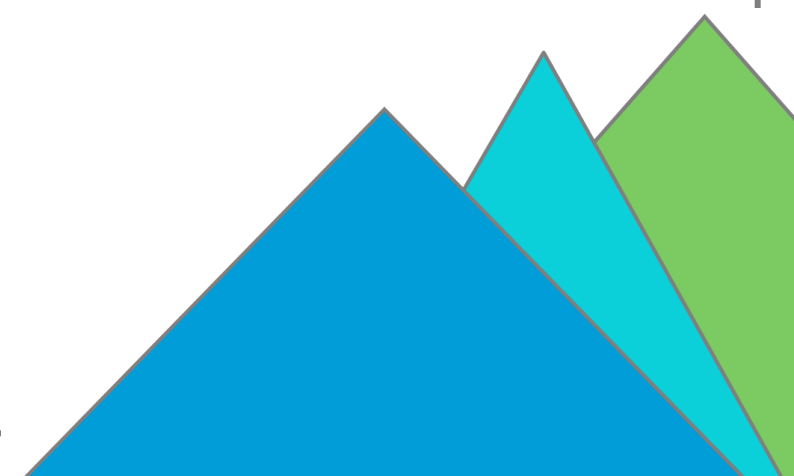


Source: Melanie Watt (2017)



# BISON (BUFFALO) IN ALBERTA

SPECIES: *Bison bison*





Source: Canadian Geographic Society

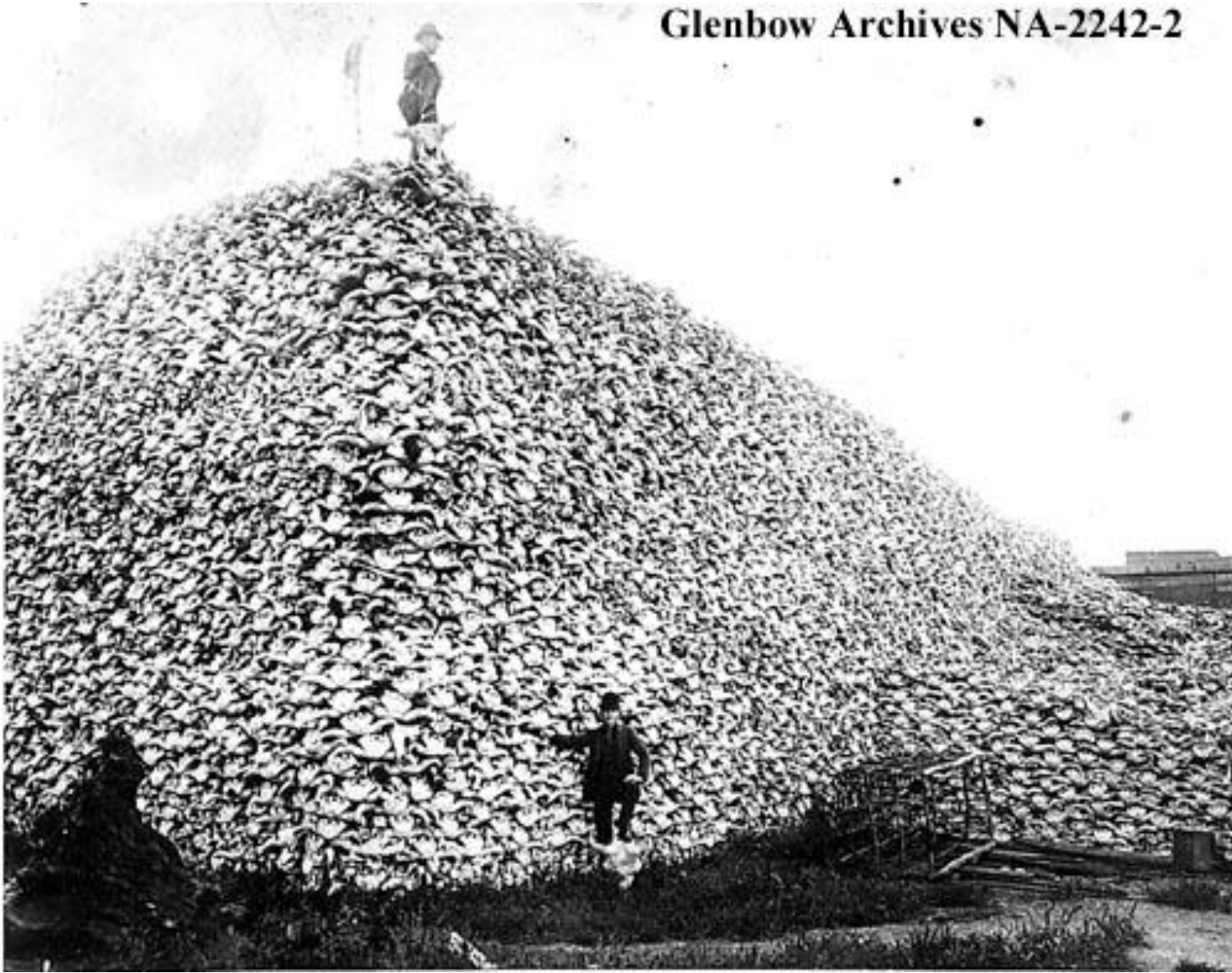


For thousands of years, 30,000,000 – 60,000,000 million bison roamed the great plains of North America, until European settlers came...

*Source: Glenbow Archives*



Glenbow Archives NA-2242-2



Source: Glenbow Archives

Overhunting led to the near-extinction of bison

Why?

Bison meat (pemmican) powered the early explorers, hides were made into conveyor belts powering the industrial revolution, etc.

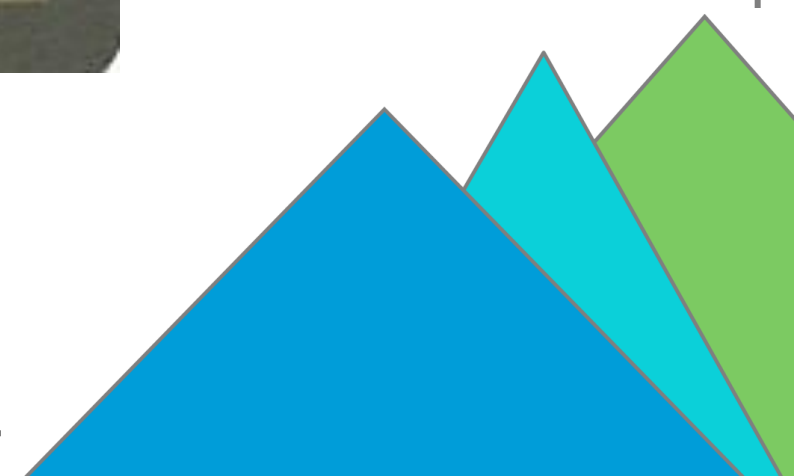
Many hides and bones were shipped to Europe (fertilizer, gun powder and fine bone china)



Source: Glenbow Archives

In the early 1900's, Canada bought some of the last remaining wild bison that were rounded up in Montana

Plains bison from Elk Island have been transferred to Parks all over the world, including Banff National Park in 2017







Which weighs more?



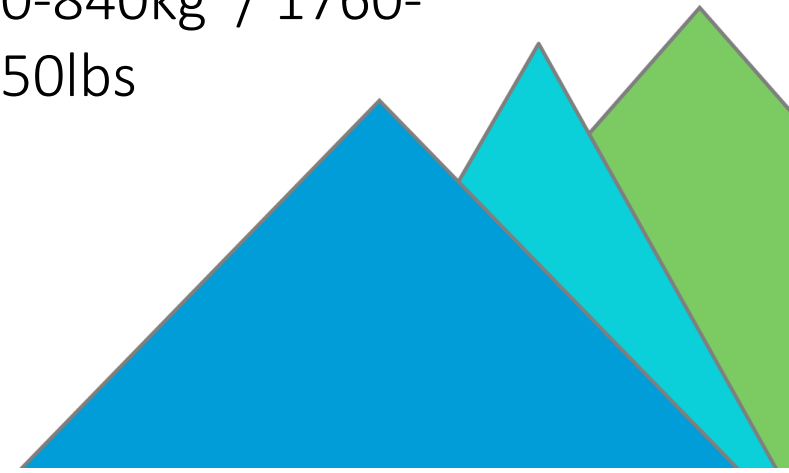
## Male bison

Weights up to  
900 kg / 2000lbs

Average height:  
170 cm / 5ft 6"

Average length: 350  
cm / 11ft 5"

A vintage Volkswagen  
Beetle weighs between  
800-840kg / 1760-  
1850lbs





*Source: Wes Olson*

## Female Bison

Approximately  $\frac{3}{4}$  the size of male bison

Gestation period is the same length as a human

Commonly give birth: late April – mid June





*Source: Parks Canada*

## Bison Calves

Weigh 15-25 kg (33 – 55 lbs)

Stand within 20 minutes of being born and can run within an hour

Are born without visible horns

Drink mother's milk until they start eating grass at 6 months





*Source: Parks Canada*

Bison can eat 12 kg / 26 lbs of grass per day



Guess how many heads of lettuce that is equivalent to?

Approximately 26!







*Source: Johane Janelle*



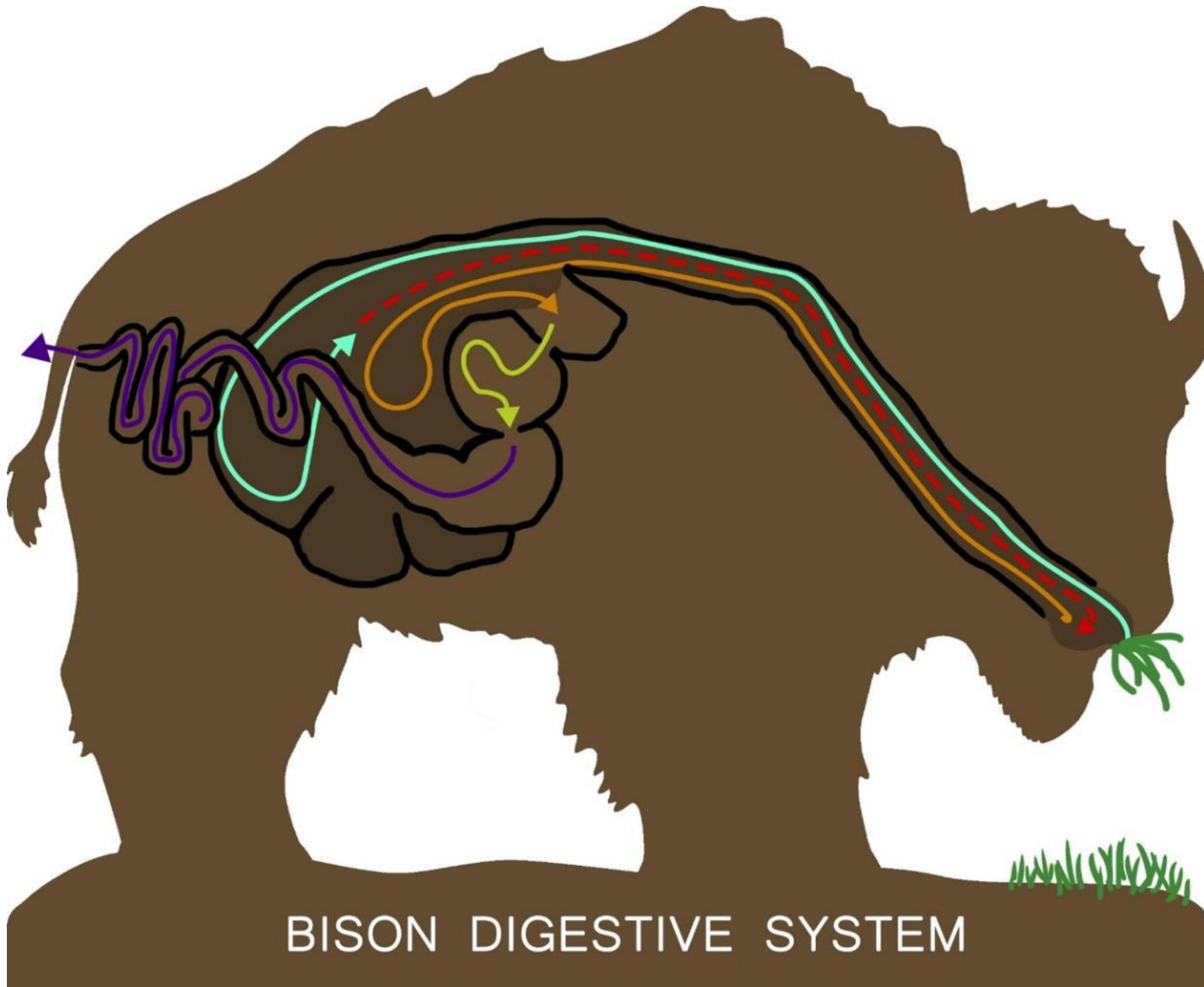
*Source: Johane Janelle*

Bison inhale microbes when grazing

Bacteria and other microbes are caught by the mucosal lining in the nasal passages

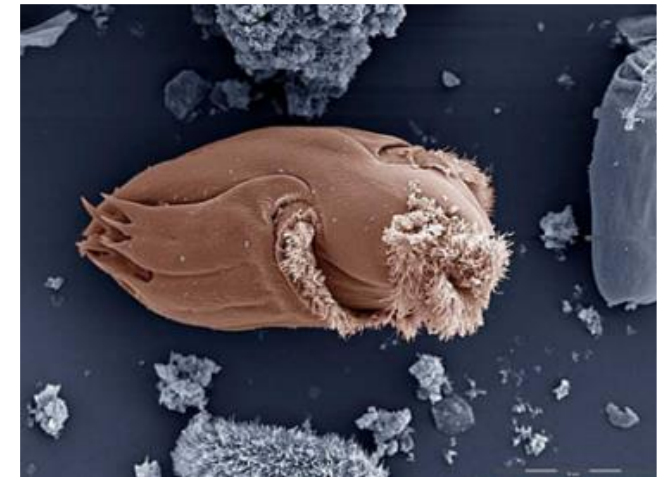
Bison frequently clean their nostrils, ingesting bacteria, fungi and microbes





Bison have four stomachs

Bison have a complex micro-faunal ecosystem, including protozoa



## Bison Patties

Fungi, bacteria and protozoa that are not digested are excreted

One manure patty can host over 100 invertebrate species

One patty can have over 1,000 individual insects



*Source: Johane Janelle*





*Source: Johane Janelle*

Dung Beetles can completely scatter a fresh bison patty in just a few days, fertilizing grasses bison eat

Dung beetles swim through dung, hunting protozoa and bacteria



## Bison play a major role in shaping landscapes



*Source: Parks Canada*



*Source: Parks Canada*

Grazing = keeps grasslands open, rubbing on trees pushes the forest back

Wool = line bird's nests and ground squirrel burrows

Wallowing = habitat for frogs and amphibians

Dung = food for insects, fertilizer for plants





*Source: Cliff White*

Historic Bison Wallows on Ya Ha Tinda Ranch, AB

Bison thrash and wallow in the dust creating a whole new environment for other creatures like insects, toads and birds





During summer, bison hardly have any hair from the shoulders to the hips

Bison cannot sweat, so heat can be released through this “thermal window”, or by panting with an open mouth





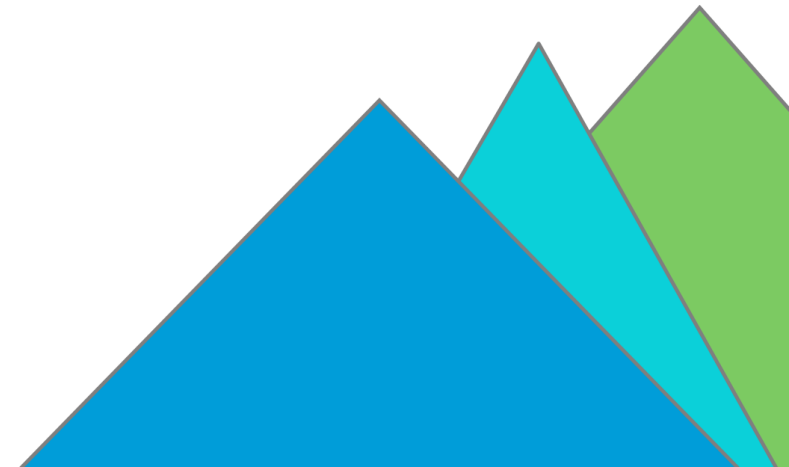


*Source: Parks Canada*

How do bison find food in the winter?

They use their head as a snow shovel to find grass under the snow

A bison's hump, made up of bone and muscle, allows them to do this





*Source: Johane Janelle*

Bison hides are so thick that snow and frost does not melt on their bodies

Bison decrease their breaths in harsh winter conditions







*Source: Melanie Watt*

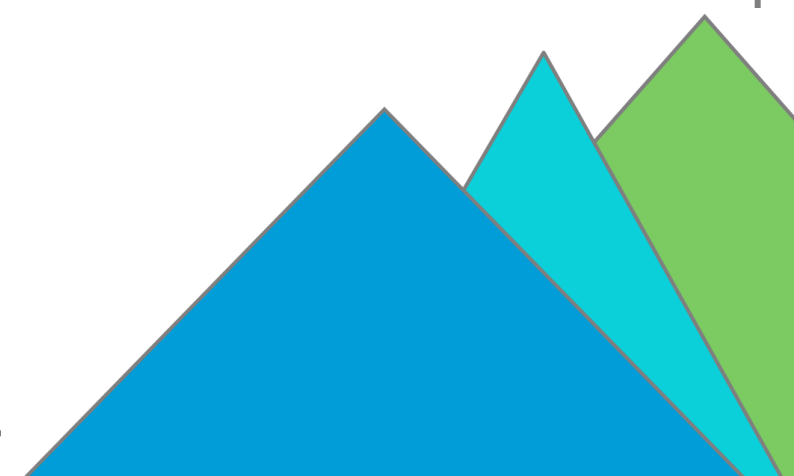
Avoid close encounters - Wild bison and other wildlife need space!

## Can you outrun a bison?

Bison have the largest trachea (wind pipe) of all North American mammals

They can intake a huge volume of air and outrun predators

Bison can run up to 60km/hr

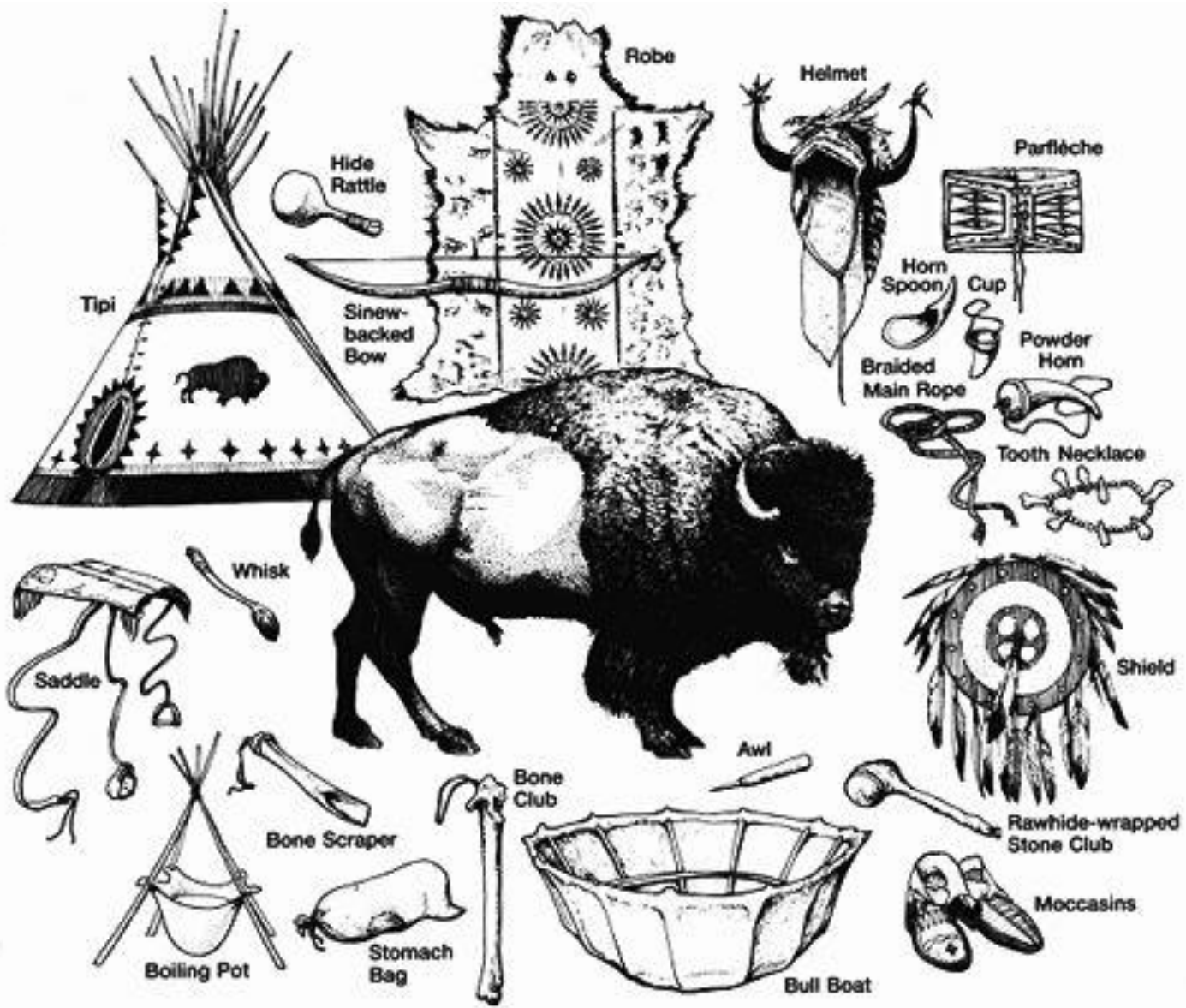


The herd provides  
protection

Isolated or weak animals  
are hunted







Indigenous peoples  
relied on the bison  
physically, culturally  
and spiritually

Source: Gordon Miller

# Buffalo Treaty: Tribes from Canada and the USA signed a treaty to restore bison, the first treaty signed amongst the Tribes for over 150 years



*Source: Harvey Locke*

Ernest Wesley (Wesley band of the Stoney Nakoda) signing the Buffalo Treaty with Chief Kurt Buffalo (Samson Cree) behind on the left who just signed the Treaty and Chief Aaron Young (Chiniki band of the Stoney Nakoda) waiting to sign on the right. Leroy Little Bear (Blood Tribe) witnessing the signatures.



*Source: Craig Richards*

Buffalo Treaty - 2nd year anniversary ceremony in Banff, September 29, 2016  
L to R: Melissa Weatherwax, Helen Augare-Carlson, Delores Weasel Moccasin, Elsie Ground, and Lee Little Mustache signing the five resolutions.





## THE BUFFALO: A TREATY OF COOPERATION, RENEWAL AND RESTORATION

2014

### RELATIONSHIP TO BUFFALO

Since time immemorial, hundreds of generations of the first peoples of the FIRST NATIONS of North America have come and gone since before and after the melting of the glaciers that covered North America. For all those generations BUFFALO has been our relative. BUFFALO is part of us and WE are part of BUFFALO culturally, materially, and spiritually. Our on-going relationship is so close and so embodied in us that BUFFALO is the essence of our holistic eco-cultural life-ways.

### PURPOSE AND OBJECTIVE OF THE TREATY

To honor, recognize, and revitalize the time immemorial relationship we have with BUFFALO, it is the collective intention of WE, the undersigned NATIONS, to welcome BUFFALO to once again live among us as CREATOR intended by doing everything within our means so WE and BUFFALO will once again live together to nurture each other culturally and spiritually. It is our collective intention to recognize BUFFALO as a wild free-ranging animal and as an important part of the ecological system; to provide a safe space and environment across our historic homelands, on both sides of the United States and the Canadian border, so together WE can have our brother, the BUFFALO, lead us in nurturing our land, plants and other animals to once again realize THE BUFFALO WAYS for our future generations.

### PARTIES TO THE TREATY

WE, the undersigned, include but not limited to BLACKFEET NATION, BLOOD TRIBE, SIKSIKA NATION, PIKANI NATION, THE ASSINIBOINE AND GROS VENTRE TRIBES OF FORT BELNAP INDIAN RESERVATION, THE ASSINIBOINE AND SIOUX TRIBES OF FORT PECK INDIAN RESERVATION, THE SALISH AND KOOTENAI TRIBES OF THE CONFEDERATED SALISH AND KOOTENAI INDIAN RESERVATION, TSUU T'INA NATION along with other nations.

### ARTICLE I - CONSERVATION

Recognizing BUFFALO as a practitioner of conservation, We, collectively, agree to: perpetuate conservation by respecting the interrelationships between us and 'all our relations' including animals, plants, and mother earth; to perpetuate and continue our spiritual ceremonies, sacred societies, sacred languages, and sacred bundles to perpetuate and practice as a means to embody the thoughts and beliefs of ecological balance.

### ARTICLE II - CULTURE

Realizing BUFFALO Ways as a foundation of our ways of life, We, collectively, agree to perpetuate all aspects of our respective cultures related to BUFFALO including customs, practices, harvesting, beliefs, songs, and ceremonies.

### ARTICLE III - ECONOMICS

Recognizing BUFFALO as the centerpiece of our traditional and modern economies, We, collectively, agree to perpetuate economic development revolving around BUFFALO in an environmentally responsible manner including food, crafts, eco-tourism, and other beneficial by-products arising out of BUFFALO's gifts to us.

### ARTICLE IV - HEALTH

Taking into consideration all the social and health benefits of BUFFALO ecology, We, collectively, agree to perpetuate the health benefits of BUFFALO.

### ARTICLE V - EDUCATION

Recognizing and continuing to embody all the teachings we have received from Buffalo, We, collectively, agree to develop programs revolving around BUFFALO as a means of transferring intergenerational knowledge to the younger and future generations and sharing knowledge amongst our respective NATIONS.

### ARTICLE VI - RESEARCH

Realizing that learning is a life-long process, We, collectively, agree to perpetuate knowledge-gathering and knowledge-sharing according to our customs and inherent authorities revolving around BUFFALO that do not violate our traditional ethical standards as a means to expand our knowledge base regarding the environment, wildlife, plant life, water, and the role BUFFALO played in the history, spiritual, economic, and social life of our NATIONS.

### ARTICLE VII - ADHESIONS

North American Tribes and First Nations, and NATIONS, STATES, AND PROVINCES may become signatories to this treaty providing they agree to the terms of this treaty.

### ARTICLE VIII - PARTNERSHIPS AND SUPPORTERS

WE, collectively, invited Non-Governmental organizations, Corporations and others of the business and commercial community, to form partnerships with the signatories to bring about the manifestation of the intent of this treaty. Organizations and Individuals may become signatories to this treaty as partners and supporters providing they perpetuate the spirit and intent of this treaty.

### ARTICLE VIII - AMENDMENTS

This treaty may be amended from time-to-time by a simple majority of the signatories.





Bow Valley students, businesses and community members volunteered countless hours to help to bring the bison back!



Source: Julia LvnX





Where in Alberta do bison live now?

- Ranches
- Elk Island National Park
- Wood Buffalo National Park
- Waterton National Park

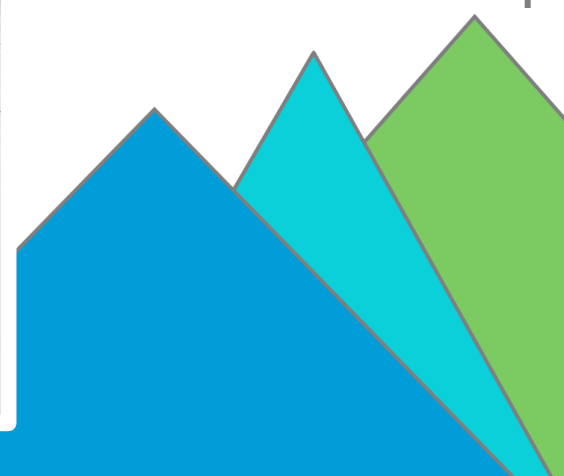
AND BANFF NATIONAL PARK!



*Source: Parks Canada*



*Source: Julia Lynx*



# February 1, 2017 Banff Bison Reintroduction



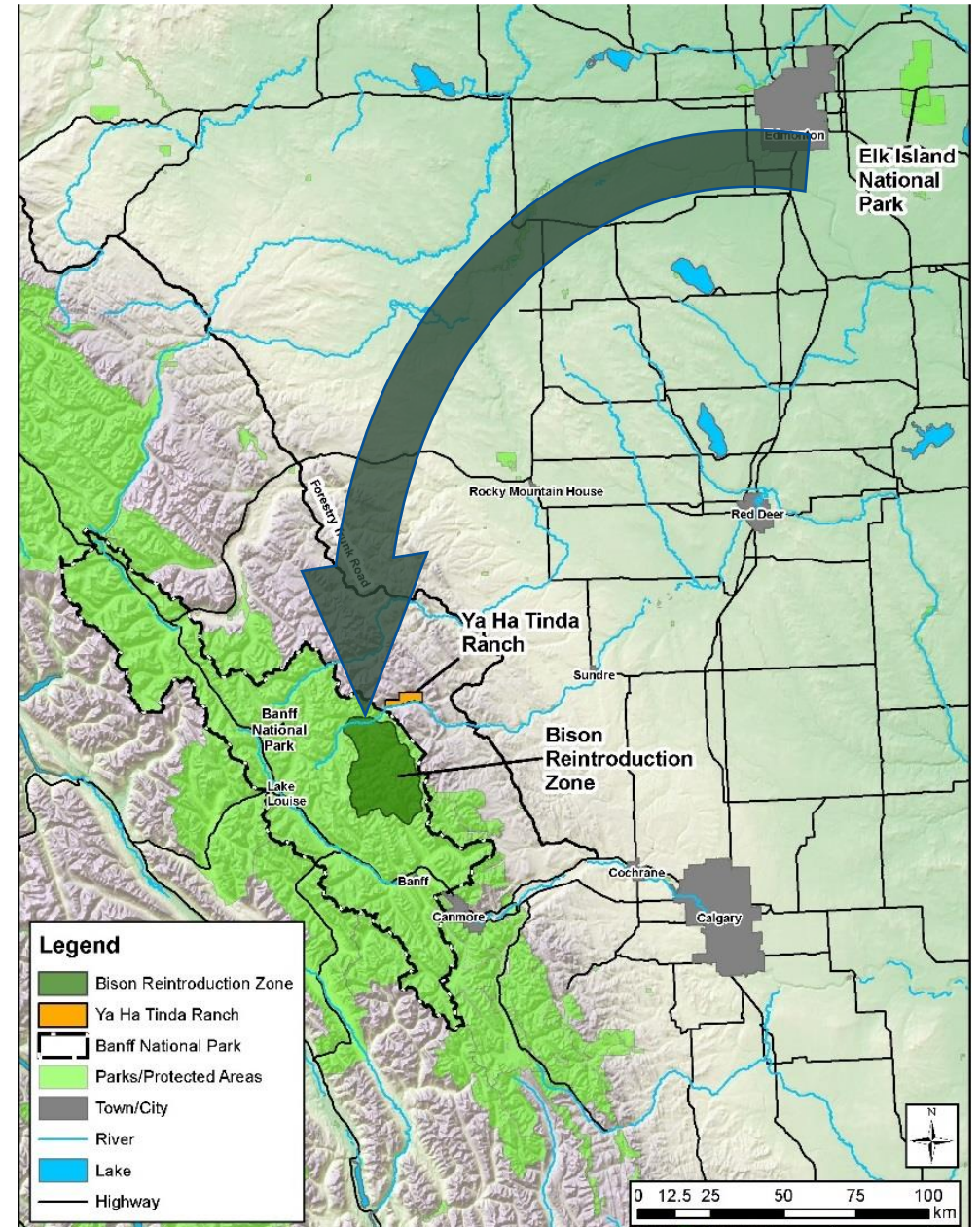
Source: Parks Canada



# Bison return to Panther Valley Banff National Park



Source: Parks Canada







*Source: Parks Canada*

Parks Canada reintroduced 16 plains bison to Banff National Park in 2017



What a way to celebrate Canada's 150<sup>th</sup> year of Confederation!





*Source: Parks Canada*

## Reintroducing bison:

Supports ecological integrity

Supports conservation of the species

Reconnects indigenous peoples and bison

Connects visitors and Canadians with bison  
and their ecological and cultural importance



# The Latest and Greatest Bison Update:

There are currently 40 bison in the herd!

Bison are now protected outside the park within a “Special Bison Area”

Biologists and Parks staff are learning as this 5 Year Pilot Project continues...



*Source: Parks Canada*



Wildlife EduKits available through:



Biosphere Institute of the Bow  
Valley

201, 600a 9<sup>th</sup> Street

Canmore, AB T1W 2T2

403-678-3445

[www.biosphereinstitute.org](http://www.biosphereinstitute.org)

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**Parks  
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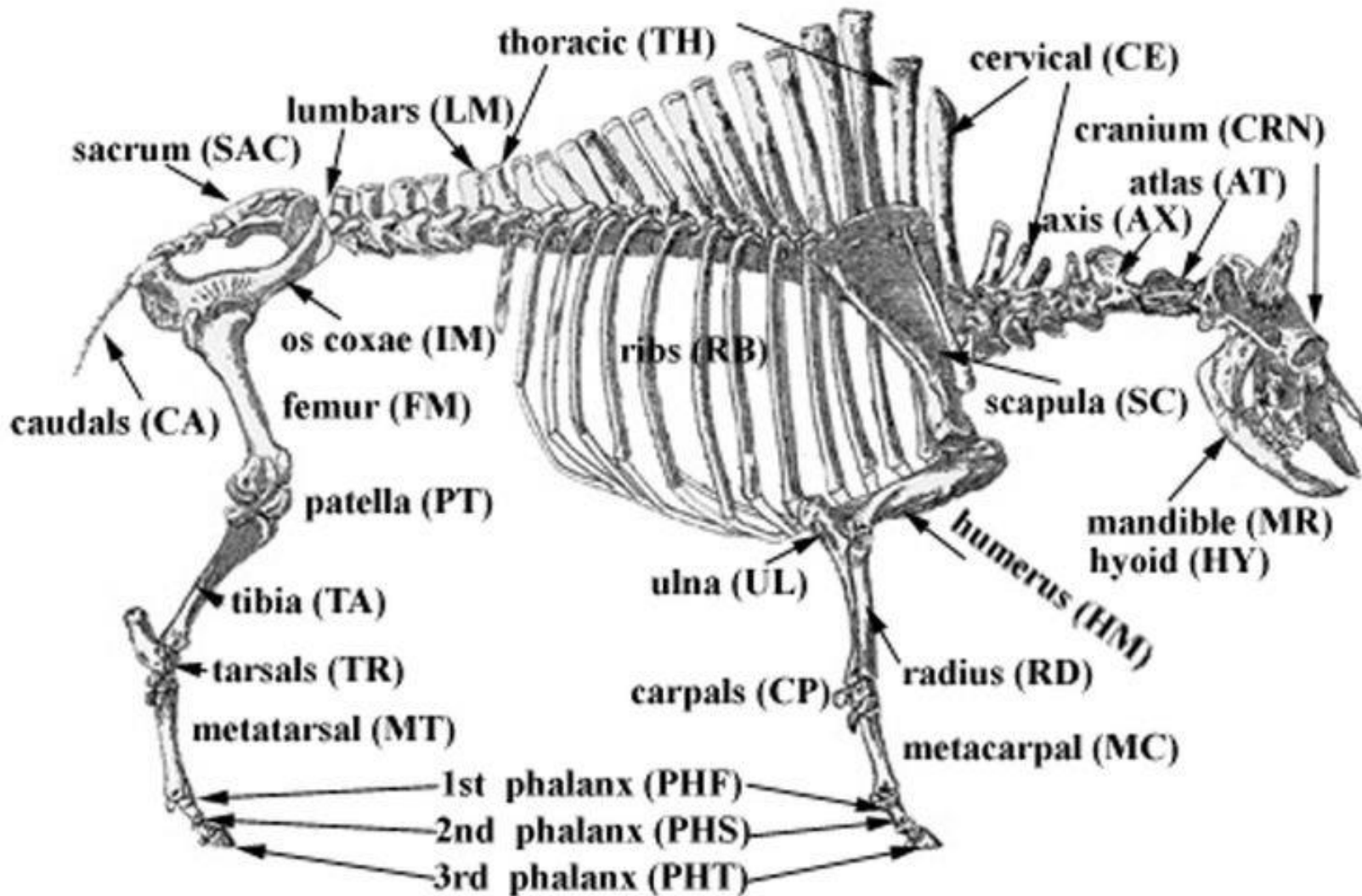
**Parcs  
Canada**



Thanks to everyone who kindly donated use of their  
photos.







Bison Skeletal System



Designed for long distance travel:  
 long limbs, flat shoulder blades,  
 and centre of gravity placed over  
 front legs



Nakota - Tatanga

Blackfoot - Inni

Lakota - Tatanka

Dakota - Tatanka

Michif - Bueflo

Tlingit – Xaas



*Source: Melanie Watt*