

Bison Conservation in Canada



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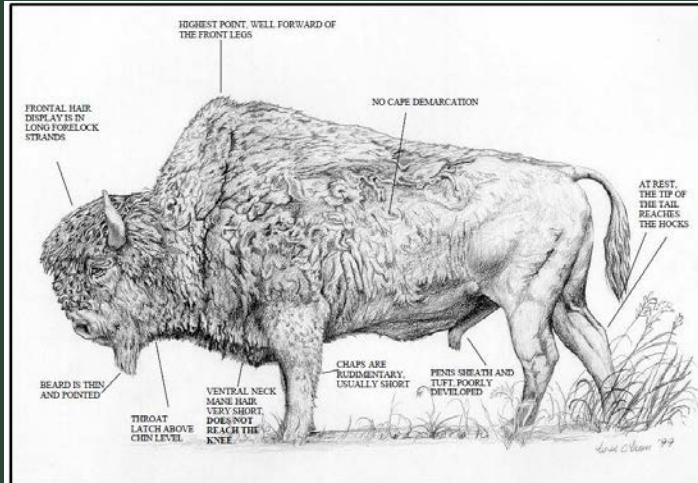




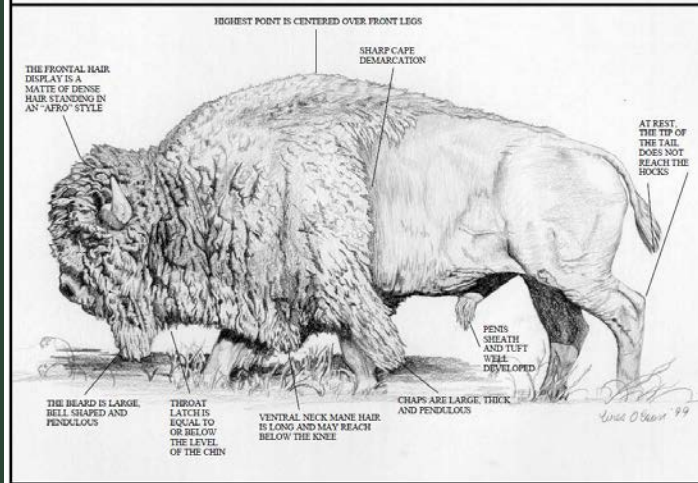
Canada is home to two subspecies of bison

Key morphological differences between

Wood Bison bull (*Bison bison athabasca*)



Plains Bison bulls (*Bison bison bison*)

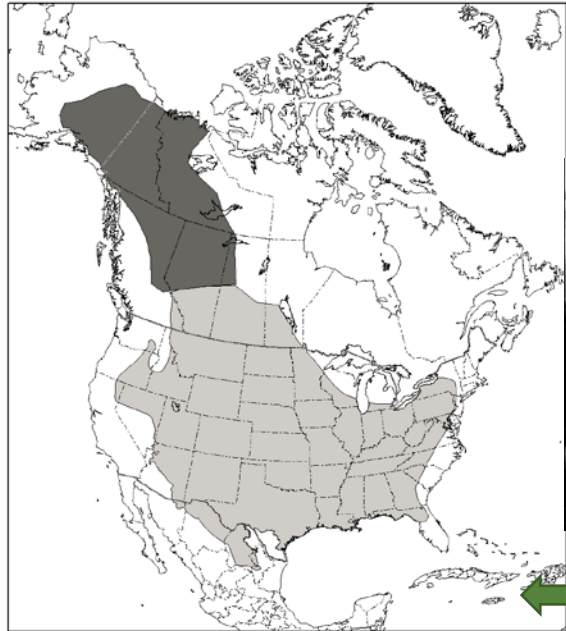


Line drawing courtesy of Wes Olson taken from COSEWIC, 2013. COSEWIC assessment and status report on the Plains Bison (*Bison bison bison*) and the Wood Bison (*Bison bison athabasca*) in Canada.



PLAINS BISON

All wild Plains Bison subpopulations in Canada today are the descendants of approximately 81 ancestors captured in three locations in the 1870s and 1880s, and persist as a tiny fraction of their original numbers (~30 million in North America).



Historical Distribution
■ *Bison bison athabasca*
■ *Bison bison bison*

0 1,000 2,000 Kilometres

WOOD BISON



Historical (pre-settlement) distribution of Wood Bison and Plains Bison in North America. Modified from Gates et al. (2010). Polygons courtesy of Keith Aune, Wildlife Conservation Society (COSEWIC 2013)



The Species at Risk Act

The federal government is responsible for implementing the federal *Species at Risk Act* (SARA)

- Purpose: to prevent species from being extirpated or becoming extinct and to provide for recovery of species at risk

The key provisions of SARA are:

- Prohibitions against killing or harming listed species on federal lands
- Requirement to develop a national recovery strategy and action plan(s) and to identify critical habitat to the extent possible for Extirpated, Endangered, and Threatened species
 - Management plans are developed for species of Special Concern, which do not include the identification of critical habitat
- Recovery strategies are planning documents that include:
 - Identification of the threats to the species and its habitat
 - Population and distribution objectives for survival and recovery
 - Identification of the species' critical habitat, to the extent possible



Bison Listing

- Wood Bison is currently listed under SARA as Threatened
 - Plains bison are not listed under SARA
- Proposed Wood Bison recovery strategy was posted May 6, 2016
- COSEWIC re-assessed Wood Bison as Special Concern and Plains Bison as Threatened in November 2013
 - Assessment received by the Minister of the Environment and Climate Change in October, 2014
 - Wood bison will continue to have Threatened status until Governor in Council decision on status change
 - Plains Bison will continue to have no status until Governor in Council decision
 - Currently scheduled to be brought to Governor in Council for decision in 2017



Wood Bison Recovery Strategy

- Proposed Wood Bison recovery strategy was posted May 6, 2016
- Does not identify critical habitat, but outlines a schedule of studies required to identify critical habitat, to be completed by 2021
- Population and distribution objectives defined at two times scales:
 - Short-term: maintain the disease-free status, population size and range of all disease-free Wood Bison local populations within the original range of Wood Bison in Canada. If future work shows that some of these local populations are not self-sustaining, population size and/or range size should be increased so that self-sustaining status can be attained
 - Long-term: ensure the existence of at least five disease-free, genetically diverse, connected, self-sustaining, free-ranging local populations distributed throughout their original Canadian range, with a minimum size for each local population of 1,000 animals
- Competent Minister will propose population and distribution objectives for diseased local populations, informed by the work of a collaborative process to be established to explore management options for these local populations and their impact on Wood Bison recovery





Parks Canada: Reintroduction and Translocation Examples





1) RESTORATION OF ECOLOGICAL INTEGRITY

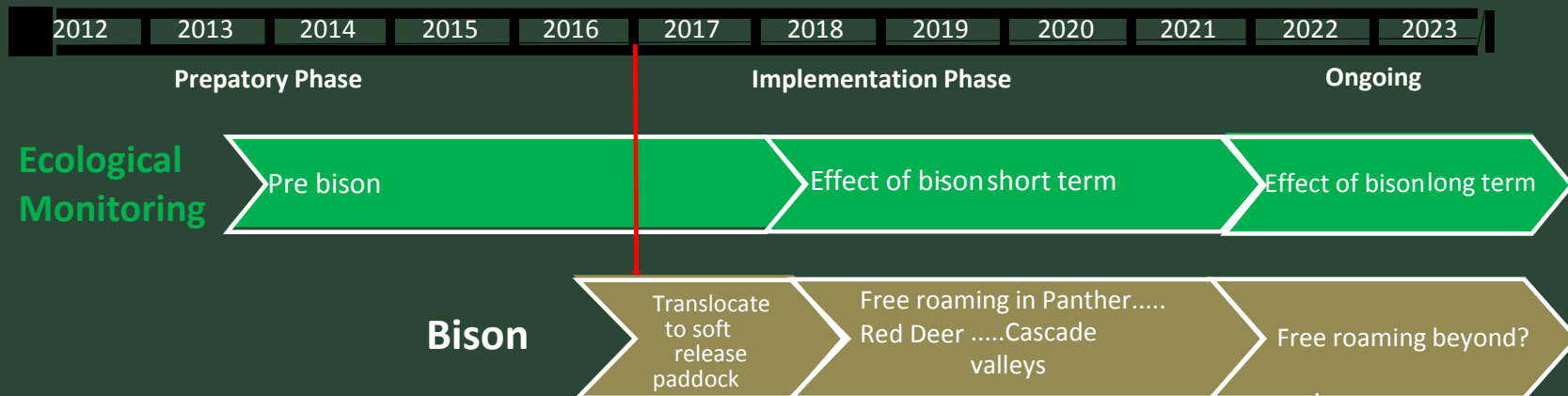
Grasslands National Park, Saskatchewan Plains Bison Reintroduction 2006





1) RESTORATION OF ECOLOGICAL INTEGRITY

Reintroduction of Plains Bison in Banff National Park, Alberta, Canada anticipated for 2017





2) SPECIES SPECIFIC RESTORATION

ALASKA 2015 : Wood Bison brought from Elk Island National Park (EINP) and reintroduced to Alaska, where in 2016 they celebrate the first wild-born Wood Bison calves in a century



A Wood Bison calf travels with the herd in remote Alaska. (photo credit Alaska Department of Fish and Game)



RUSSIA 2006 and 2011 : 60 Wood Bison from EINP translocated to the Sakha Republic (Yakutia) in Russia



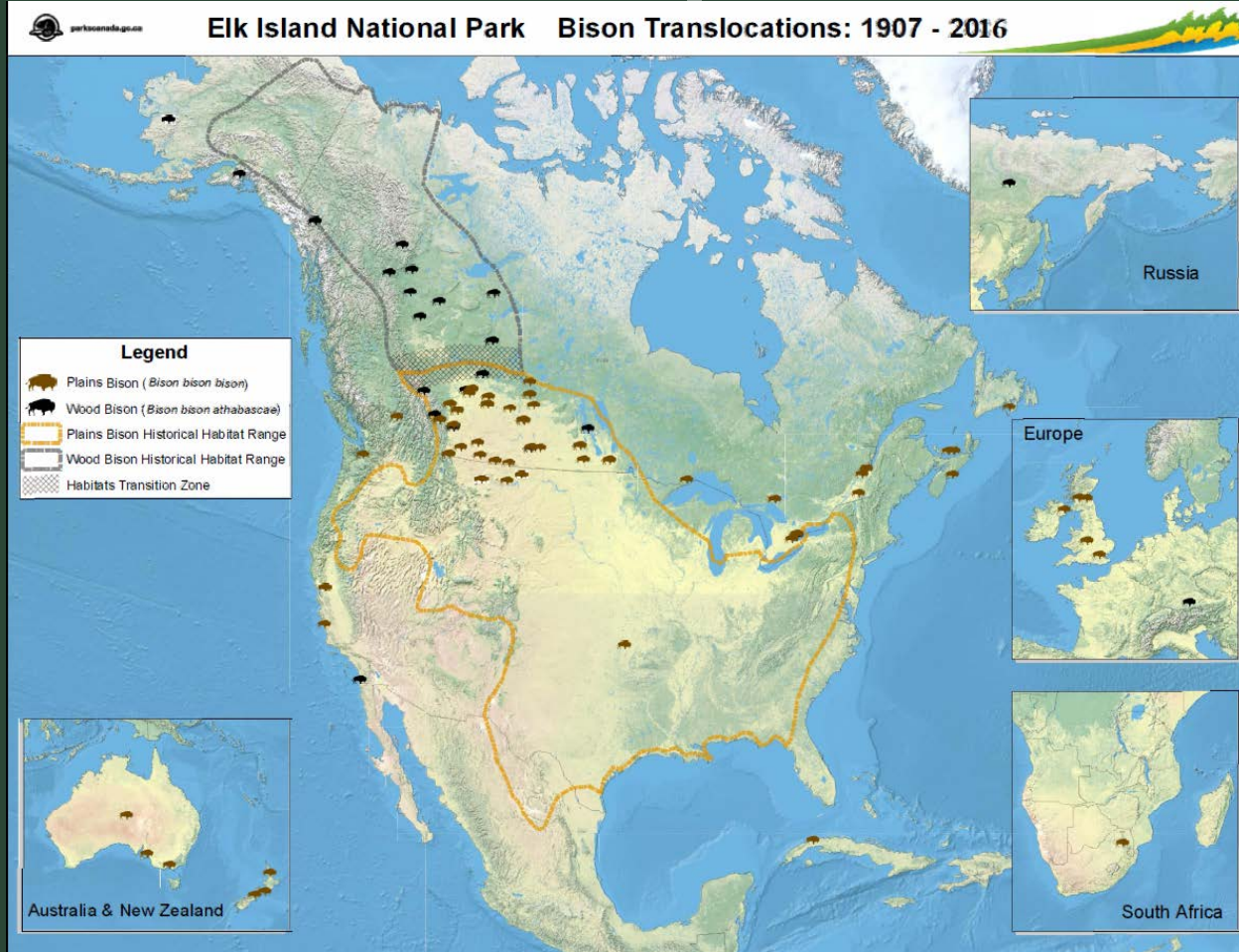


3) CULTURAL RESTORATION: Indigenous partnerships. Plains Bison transfer from Elk Island National Park to Blackfeet Nation in Montana 04 April 2016





Elk Island National Park – epicentre of bison conservation





The Way Forward: Committee on the Status of Endangered Wildlife in Canada (COSEWIC) designations of Conservation Herds and “Wild by Nature”

Factors in “wild by nature” assessment

Population structure	Typical “wild” sex ratio is maintained, culling emulates natural mortality
Supplemental feeding and disease treatment	No supplemental feeding, interventions re: introduced disease do not affect ecological/evolutionary processes
Movement and habitat heterogeneity	Not confined to areas $<200 \text{ km}^2$, densities are suitable for social interactions, and space allows for seasonal movements
Predation	Predators are present as a selective force



“Wild by nature” : Canadian herds deemed by COSEWIC to function as wild subpopulations

WOOD BISON

Aishihik (YK)

Nordquist (BC/YK)

Nahanni (NWT/BC/YK)

Etthithun (BC/AB)

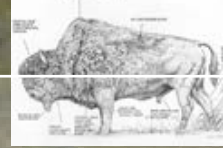
Hay-Zama (AB)

Mackenzie (NWT)

Greater Wood Buffalo NP (AB/NWT)

Elk Island NP (AB)

Chitek Lake (MB)



PLAINS BISON

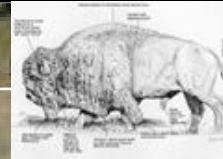
Pink Mountain (BC)

Elk Island NP (AB)

McCusker River (SK)

Sturgeon River (SK)

Grasslands NP (SK)





QUESTIONS?

