The Polar Bears of Churchill

Summary at end.
Enjoy the lecture!

Ursus Maritimus
Nanook  Sea Bear  Ice Bear

Special thanks to UCSB students Jake Norcross, Amanda Shoemaker, Luz Solis, Andrew Tran, Olivia Vigna, Alexi Williford, and Marit Wyatt.
Photos by Terrie Strom, Drew Hamilton, Norbert Rosing and myself
Topics

Introduction to Polar Bears

Where Polar Bears Live

Churchill on Hudson Bay –
“Polar Bear Capital of the World”

The Polar Bears of Churchill on Hudson Bay

The Future of Polar Bears
Polar Bear Size

Largest Land Carnivores

Boars (M)
660-1320 lbs
(record 2,209 lbs)
Up to 11 ft tall

Sows (F)
350-550 lbs

15-18 yr lifespan
Adaptations

Huge web paws
Camouflage
Double coat
Hollow clear hair
Water repellent
4” blubber
Long necks, small ears and tails
Fast Runners and Swimmers[

Humans

Running: 
World rec. in 100m 
27 mph

Polar Bears

Running: 25 mph

Humans

Swimming: 
World rec in 100 m 
4.5 mph

Polar Bear

Swimming: 6 mph
Opportunistic carnivore

Apex predator in food web

Seals, walruses, geese, caribou (fat diet is key)

Ice floes needed for hunting prey
Stealthy Polar Bear Predator Video
Arctic Foxes Follow Bears for Scraps

Even seen prodding bears to hunt
Behaviors

Typically solitary, but exceptions like in Churchill. Groups of 2-6 or more. Play and communicate like dogs, but smell sense is much better than dogs.
Polar bears are typically solitary, but exceptions like in Churchill. Video by Norbert Rosing of dogs in Churchill owned by Brian Ladoon in 1992.
Mating

Males spar for dominance

Females may mate with more than one male
(Apr-May)

Boars beg. at ~ 6yrs, succeed at 8-10 yrs

Sows beg. at 4-5yrs

Delayed implantation

Can give birth to cubs with different fathers
(in Dec. and Jan.)
Polar Bear Cubs

- Females have 1-3 cubs starting at 3-4 yrs
- Gestation 3 months
- Have cubs at 2 yr intervals (Dec-Jan)
- Cubs weigh <2 lbs at birth
- Moms nurse 18-30 months
- Cubs stay with mom until 2-3 yr olds
Polar Bear Mother’s Den

Mothers stay in den April-October

Polar bears do not hibernate

Slow their metabolism and heart rates to conserve energy
Polar bears still in original habitat from 50N to near North Pole

Now 25,000-30,000 polar bears worldwide

15,000 are located in Canada

Classified as Vulnerable — at risk of dying out
Churchill

Northern Inland Sea

650 X 850 mi
300 ft deep
Churchill
Meeting place for diverse peoples

800 people; 1000 bears

Accessible year-round only by train, plane

Port for shipping (NW Passage?)

Old milit. base, rocket testing

CNS Centre

Ecotourism
Welcome to The Town of Churchill
Polar Bear Capital of the World

Bird Watchers Paradise
Late May through September

Beluga Whale capital of the World
Late June to Late August

Nature’s Lightshow - Aurora Borealis
Late November through Late March

Arctic Explorer Street Names
Churchill Weather – Duration of ice cover important for bears

Some estimates of 2½ weeks earlier break up than in 80’s

- Best Hunting Period
- Ring Seal Births
- Bears on Ice
- Mating
- Ice Break Up - Bears return
- Bears on land again. Lose ½ their weight
- Freeze up (6 wks) - Time to leave
- Bears return on land again.
- Lose ½ their weight
- Cubs Born
- Freezing (6 wks) - Time to leave
- Bears on Ice
- Mating
- Ice Break Up - Bears return
- Bears on land again. Lose ½ their weight
- Cubs Born
- Freezing (6 wks) - Time to leave
Why so many bears in Churchill?

Cape setting, Churchill River freshwater, winds, currents cause ice buildup near Churchill
Bears may migrate 1000 in a year

Figure 27. Movements of 41 adult female polar bears through a total of 46 bear years, between 1991 and 1998 (modified from Stirling et al. 1999:298). Management boundaries for the Western Hudson Bay (WH) and Southern Hudson Bay (SH) populations, and part of the Foxe Basin (FB) population are shown.

Figure 28. Denning habitats, summer retreats, and winter concentration areas of polar bears in the Hudson Bay and James Bay areas. Composite based on Jonkel et al. 1976; Urquhart and Schweinsberg 1984; Kolenosky and Prevett 1983; OMNR 1985; Lynch 1993; McDonald et al. 1997).
Living with Polar Bears

~1000 bears pass thru region
300 thru Churchill

Keys left in cars

Polar bear patrol (use cracker shells)

Polar Bear Jail
Wapusk (White Bear) National Park

18 Tundra Buggies Roam Wapusk Oct. - Nov.
Sun Dog Sunrise on the Tundra
Polar Bears Meet Tundra Buggy People
Nesting in Wapusk
Waking up!
Checking out folks on Tundra Buggy
Saying Hello!
Polar Bears on Ice in Hudson Bay off Churchill

Polar Bear Moving onto Hudson Bay Ice as Viewed from a Helicopter
Mom and Cub Moving onto Ice Field of Hudson Bay
Future of Polar Bears?

Huge uncertainties and controversies about status and trends of populations

USGS says 2/3 World polar bears will be gone by 2050

Others totally dispute this

Limited observations and data (esp. Russia)

Poster Animal for Climate Change

What are Biggest Threats to Polar Bears?

Habitat loss  Hunting  Pollution  Human intrusion  Oil and gas prod.

US has listed Polar Bears as “Threatened Species” with restrictions
Polar Bear Summary

Adapted to harsh arctic, marine environment (cold and wet)/related to Grizzlies

Boars ~1000 lb  Sows ~500 lbs (variable) – birth 1-3 cubs

Largest land carnivores

Swim and run faster than humans

Apex predators – ring seals are primary prey; need fatty foods

Some migrate to ice through Churchill region and back to shore when ice melts

Behavior similar to Pyrs; but dangerous to humans

Some bears jailed and released to ice floes

25,000-30,000 in world – classified as “Vulnerable” [Controversial counts]

Threats - Loss of ice; Hunting; Pollution; Shipping via Northwest Passage; Humans
Some Inuit believed that the spirits of their ancestors could be seen in the Aurora Borealis (Northern Lights) shown here with an Inuksuk in Churchill.

Photo by Drew Hamilton, Bear Guide Extraordinaire