### DETROIT ZOOLOGICAL SOCIETY®

Impacts of climate change on polar bears/grizzly bears /wolves

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DETROIT ZOO • BELLE ISLE NATURE CENTER

### Polar Bears/Grizzly Bears at Kaktovik, AK



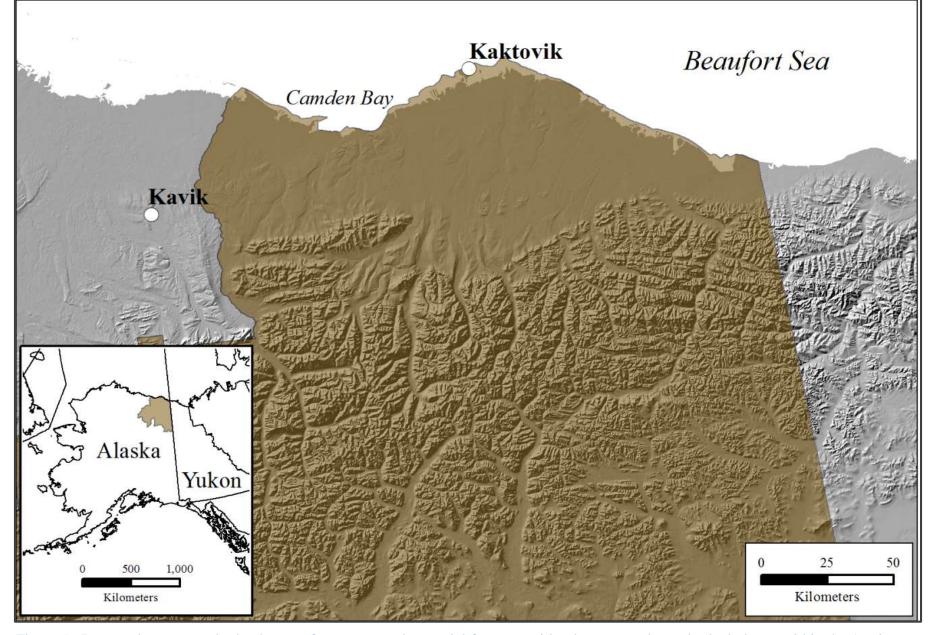
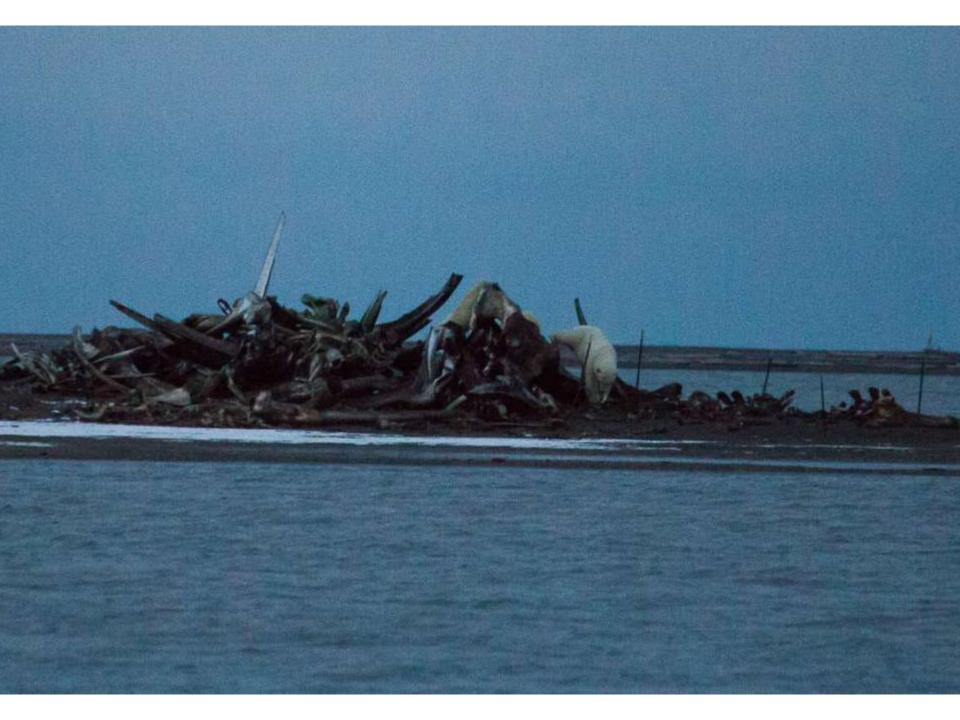


Figure 1. Proposed area to study the degree of sympatry and potential for competition between polar and grizzly bears within the Arctic National Wildlife Refuge (brown area), North Slope of Alaska, 2015-18.



# Bone pile video



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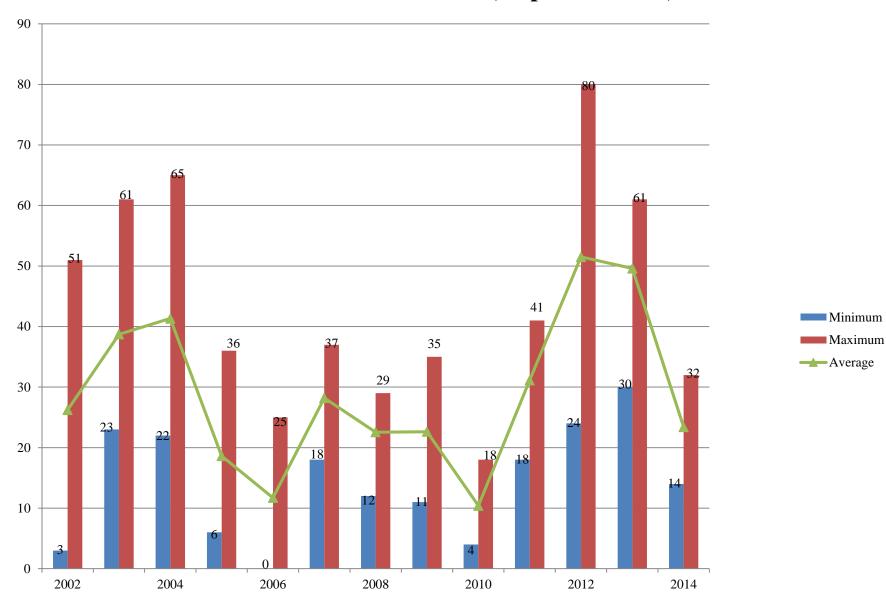




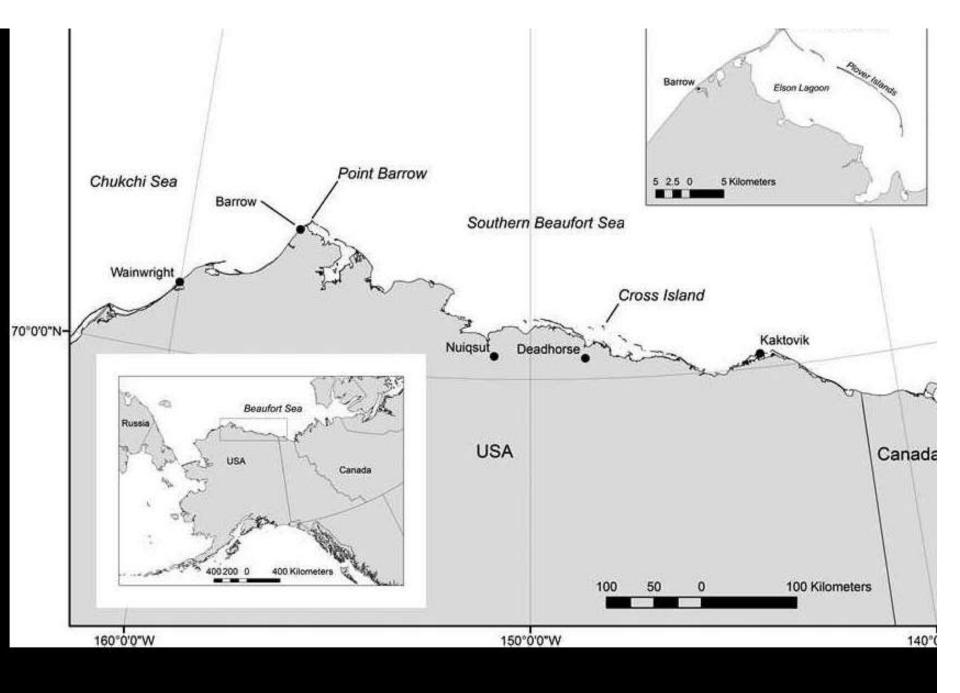
## Kaktovik, AK and Barter Island



#### Polar Bear Numbers at Barter Island, September 7-26, 2002-2014







### Other prey switching by Polar Bears



Musk ox, walrus, geese eggs (88 eggs equals a seal), etc.



# 04-16-2016

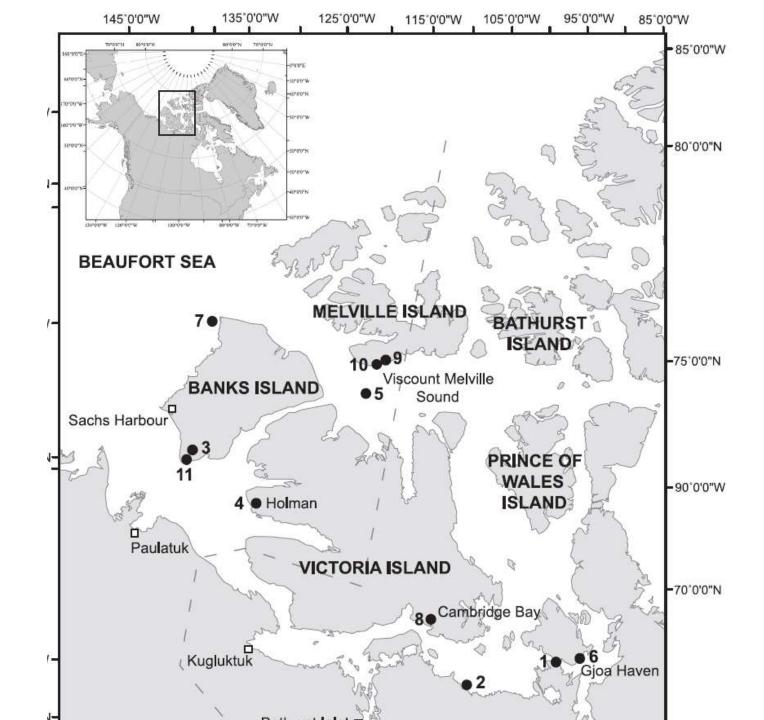
# 04-16-2017



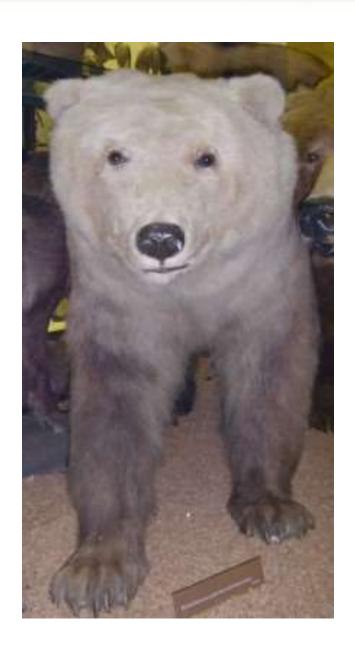


# **Grizzly bear at Kaktovik bone pile**





### Pizzlies / Grolar Hybrid Bears



3 confirmed cases, many suspected; normally male grizzly and female polar; in one case father grizzly mother was grizzly-polar hybrid

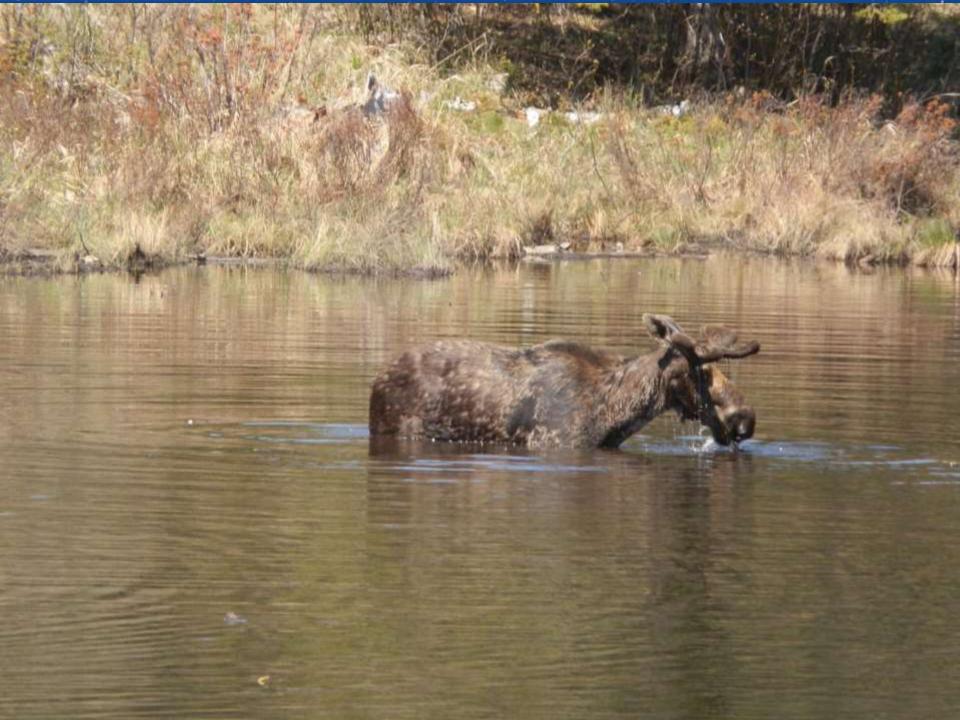
### Wolves at Isle Royale



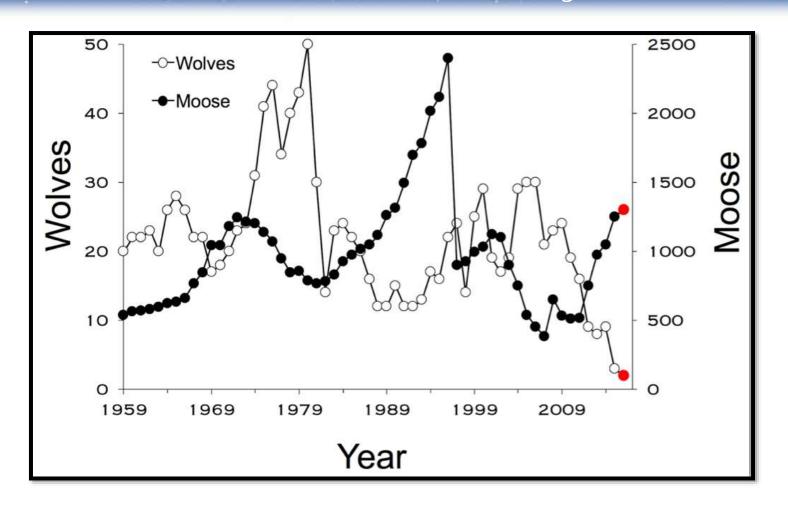
2015: Opening of the Cotton Family Wolf habitat, support for the wolf-moose project





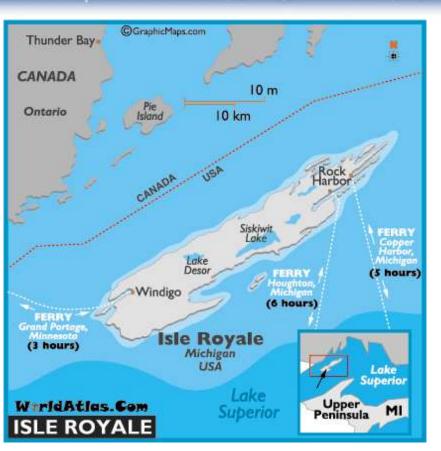


#### Wolves and Moose at Isle Royale



Wolf Reintroductions: 1952, 2018?

#### Wolves and Moose at Isle Royale





DZS staff at Isle Royale May 2016/2017 to meet with Profs. Peterson and Vucetich; look for wolf sign; and monitor moose.



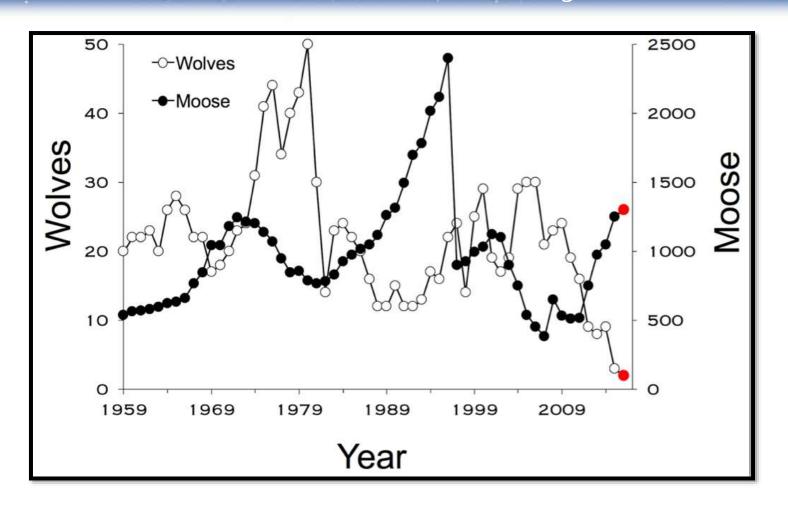








#### Wolves and Moose at Isle Royale



Wolf Reintroductions: National Park Service to decide late 2017



