

# Earlier ice melt increases predation of common eider eggs by polar bears

Cody Dey, Allison Patterson, Grant Gilchrist, Christina Semeniuk



# Earlier spring melt

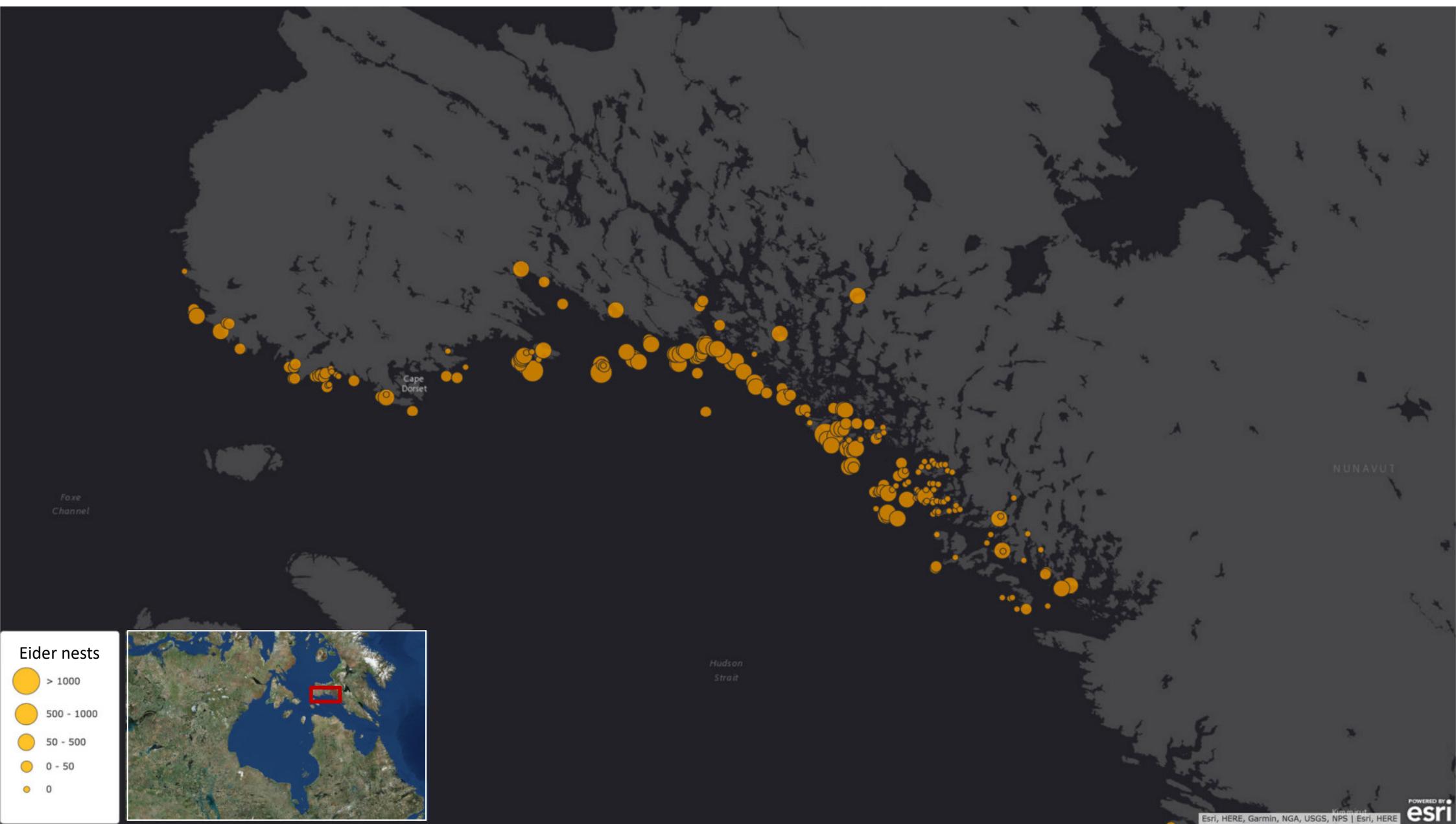


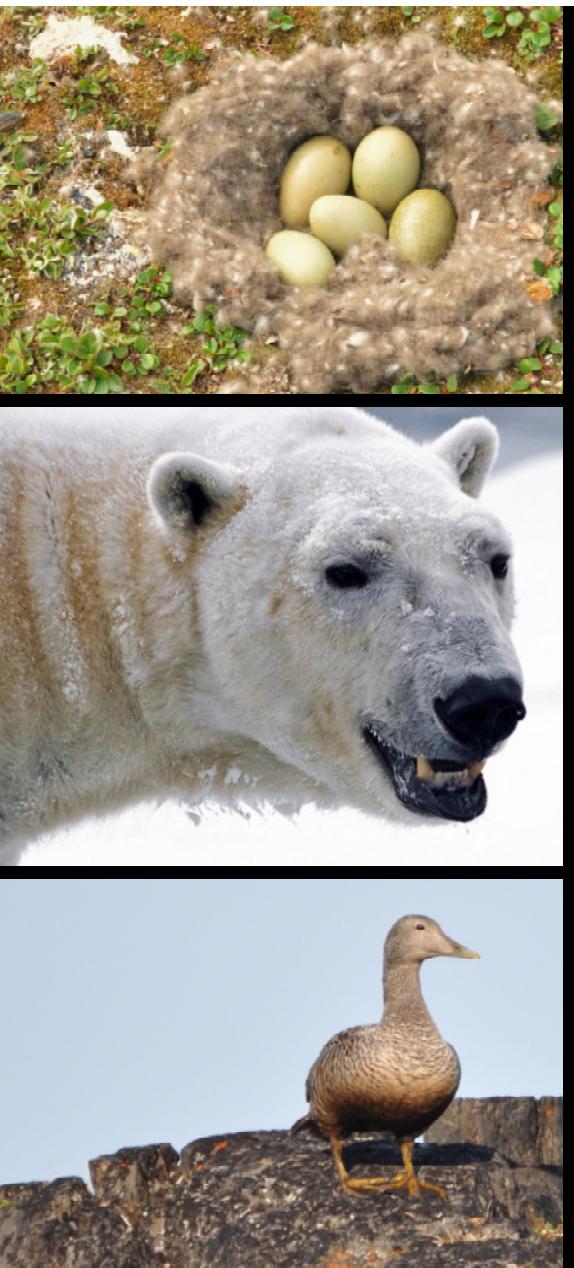


Cody Dey

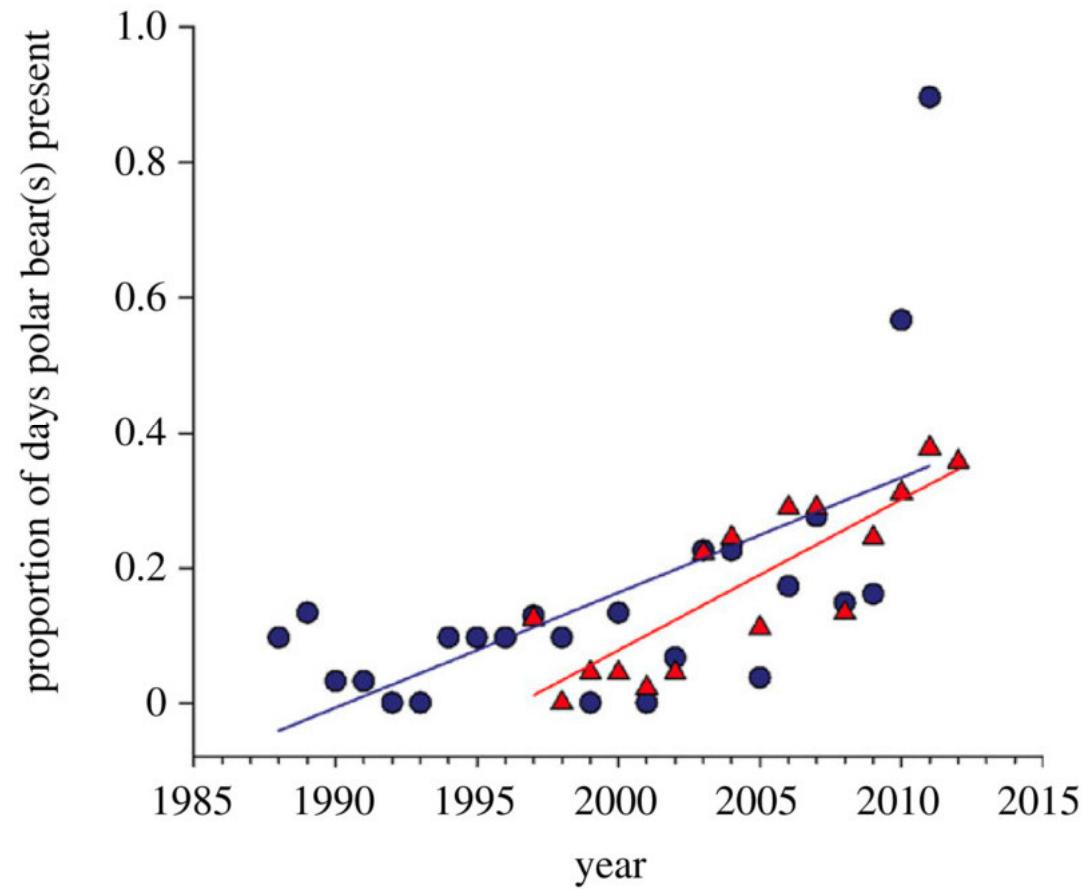


Sjoerd Duijns

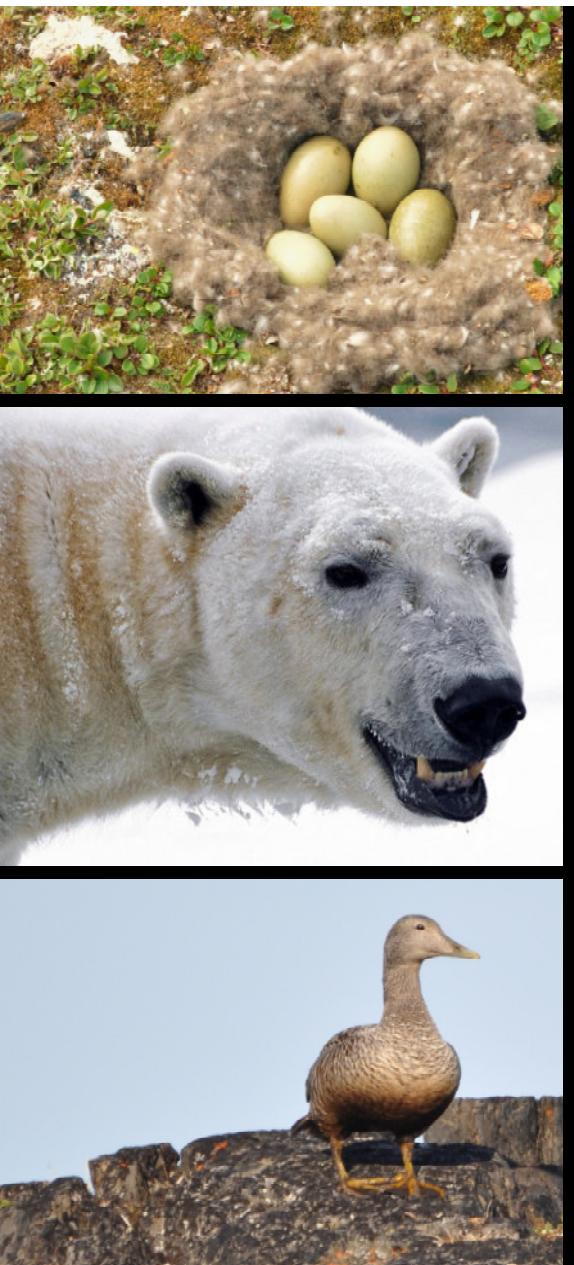




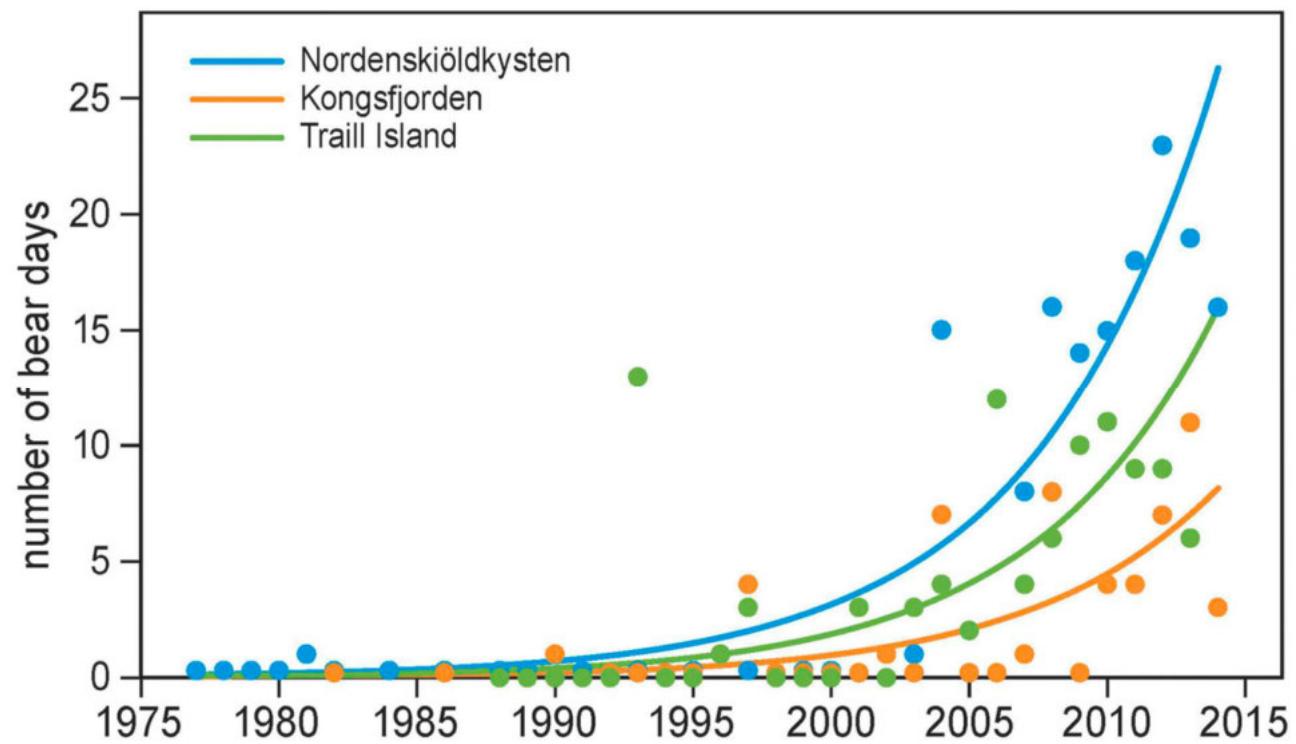
# Increasing nest depredation



Iverson et al. 2014. *Proc B*; Prop et al. 2015. *Front Ecol Evol*



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Iverson et al. 2014. *Proc B*; Prop et al. 2015. *Front Ecol Evol*

# Eider colony monitoring



*Sjoerd Duijns*

# Eider colony monitoring



# Polar bear bioenergetics



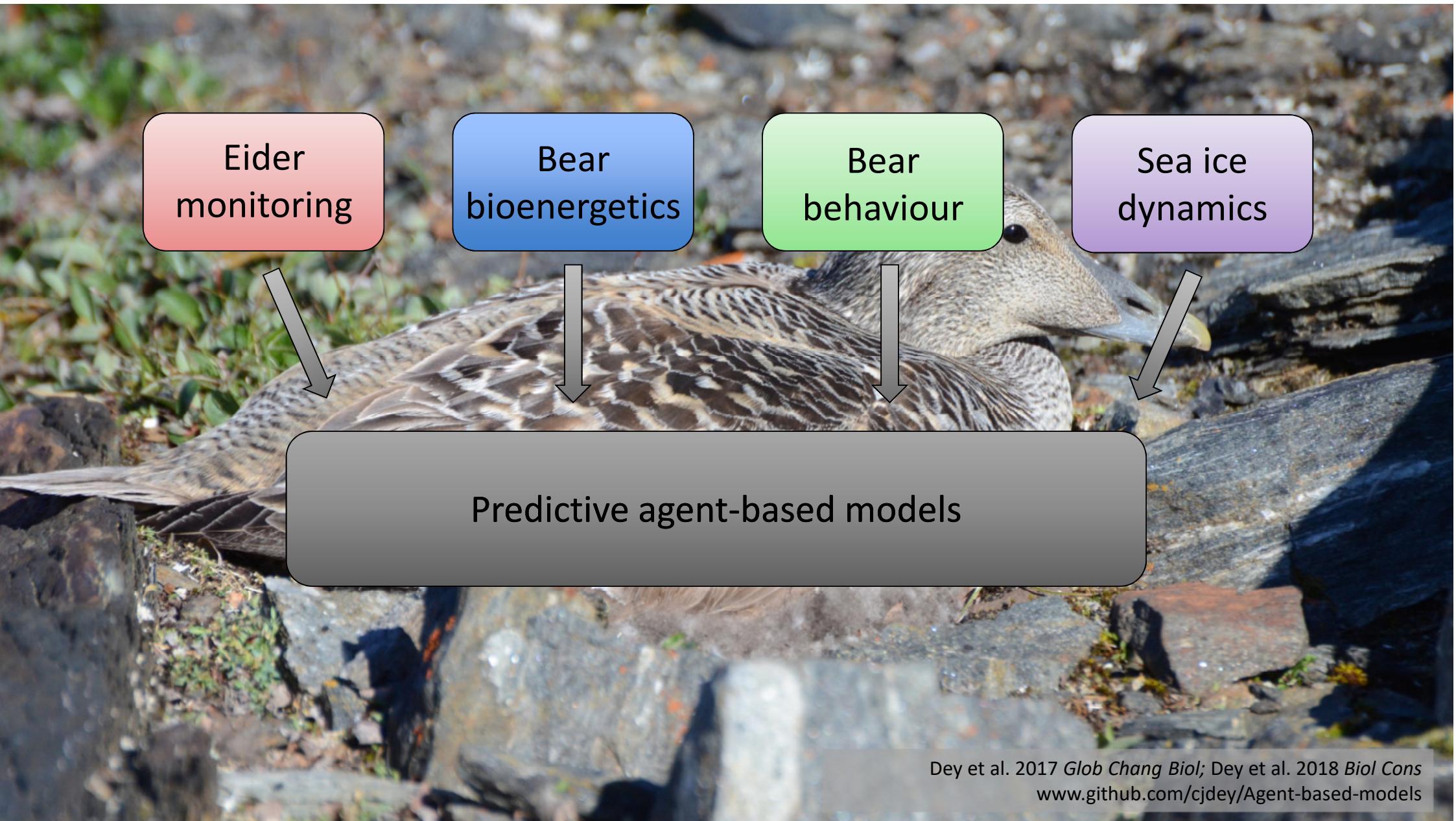
# Polar bear bioenergetics



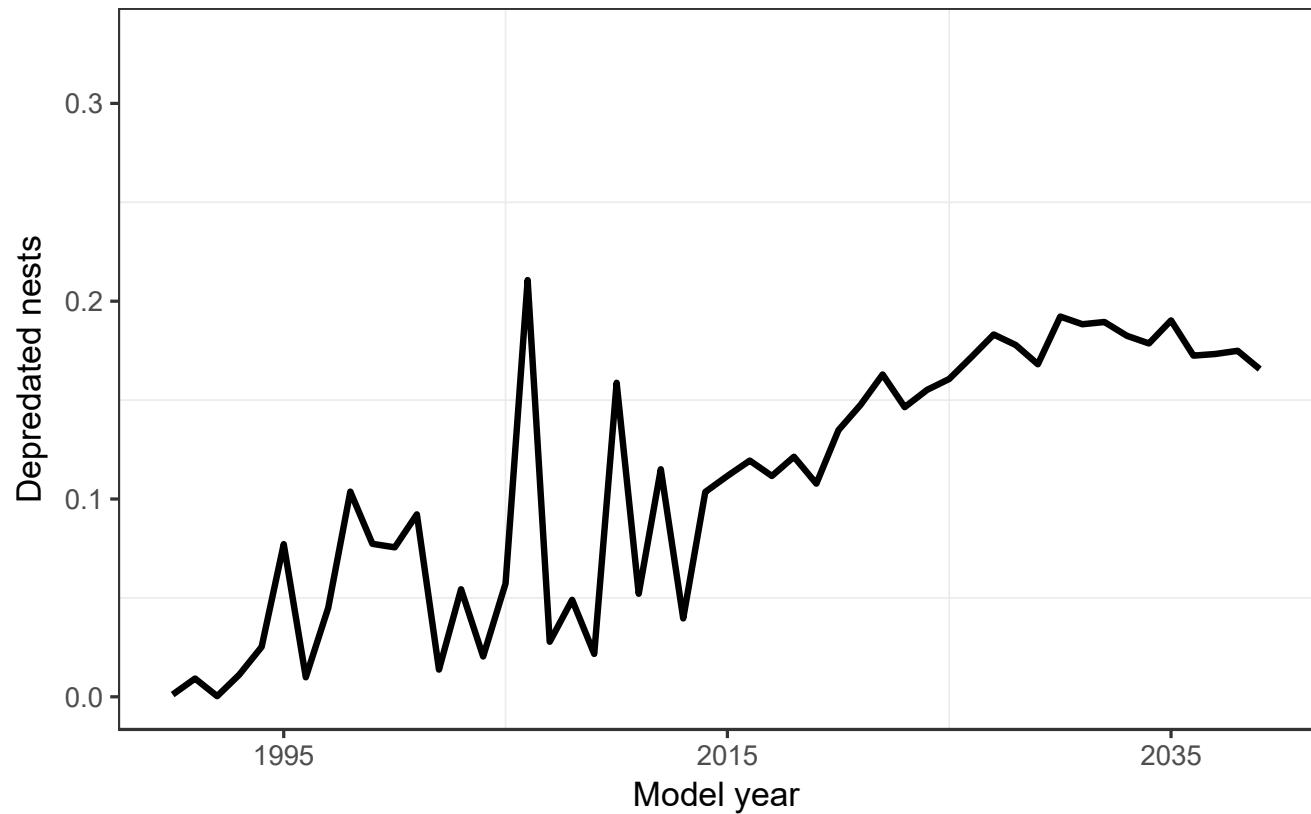
David McGeachy

An aerial photograph of a terrain covered in small, greyish-blue stones and patches of green moss or low-lying vegetation. Several small, white, irregularly shaped markers are scattered across the surface, notably one near the center and another towards the top right.

# Bear foraging behaviour



# Increasing nest depredation



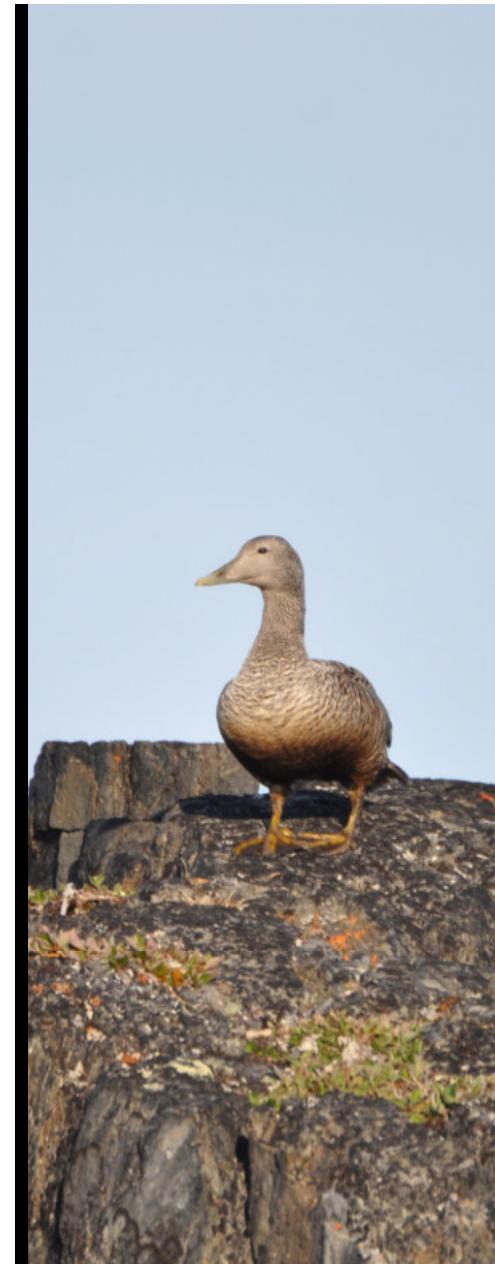
Dey et al. 2017 *Glob Chang Biol*



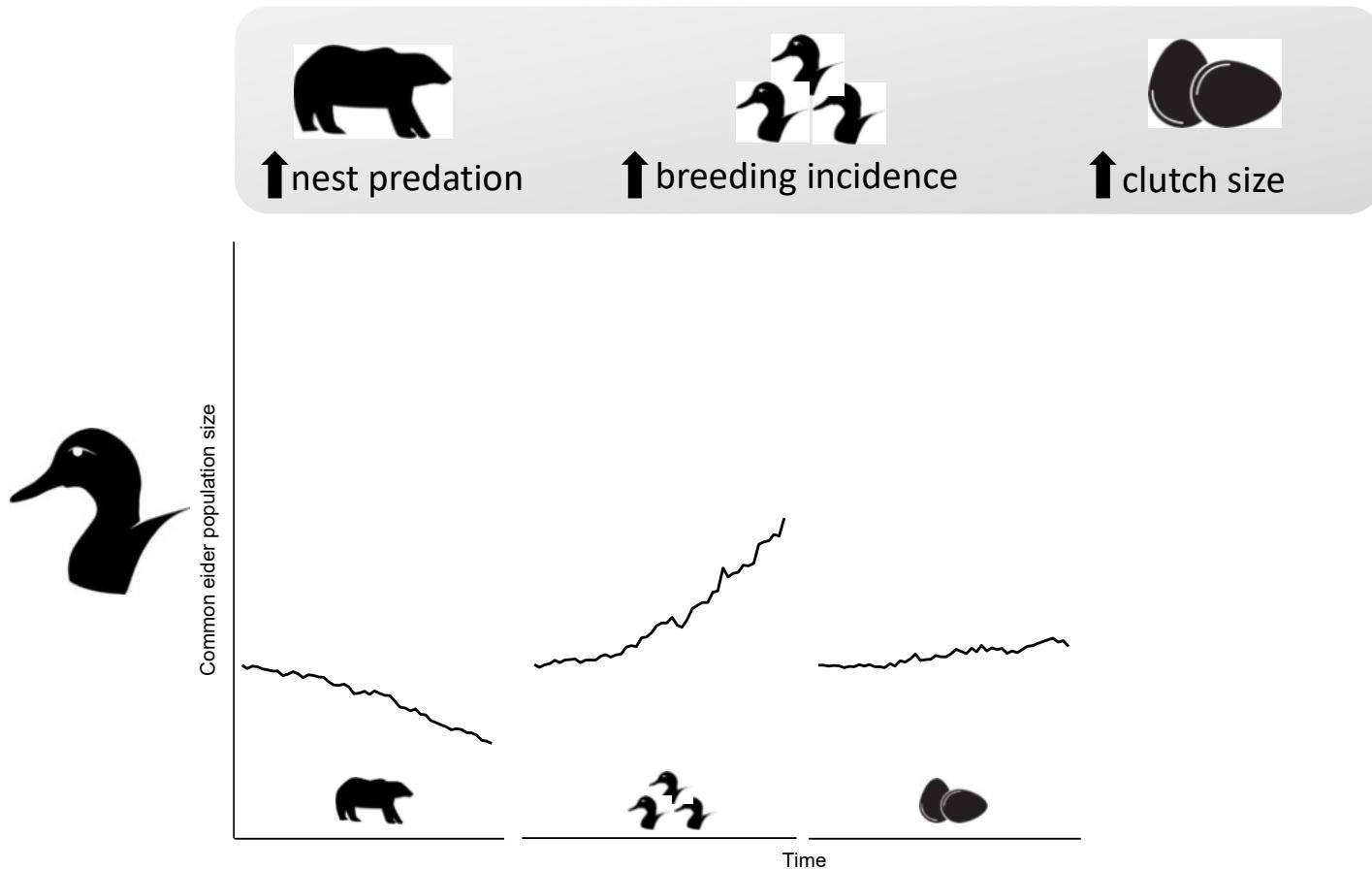
# Multiple climate change effects



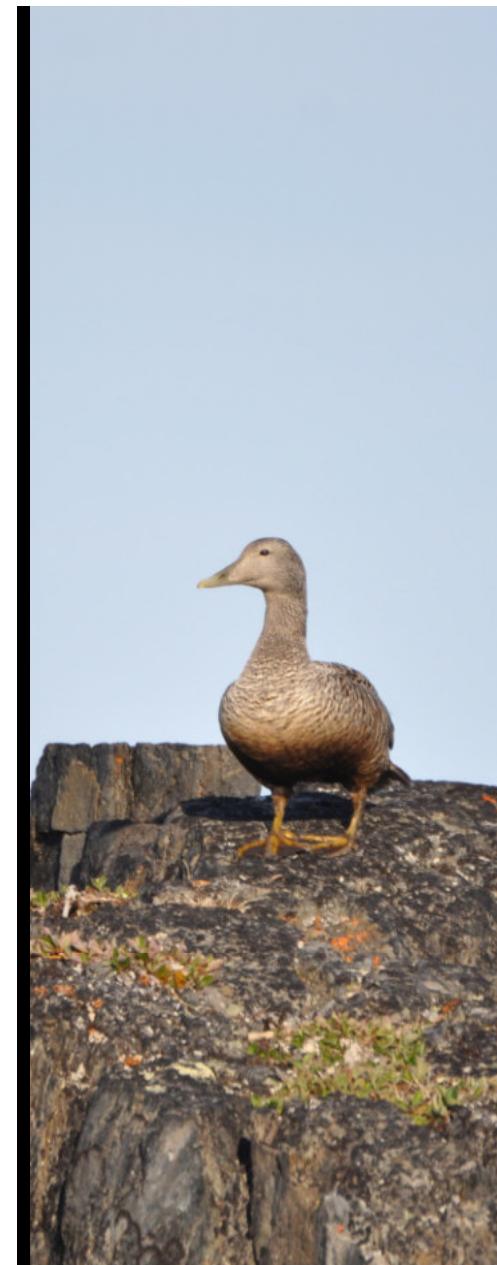
Dey et al. 2018 *Biol Cons*



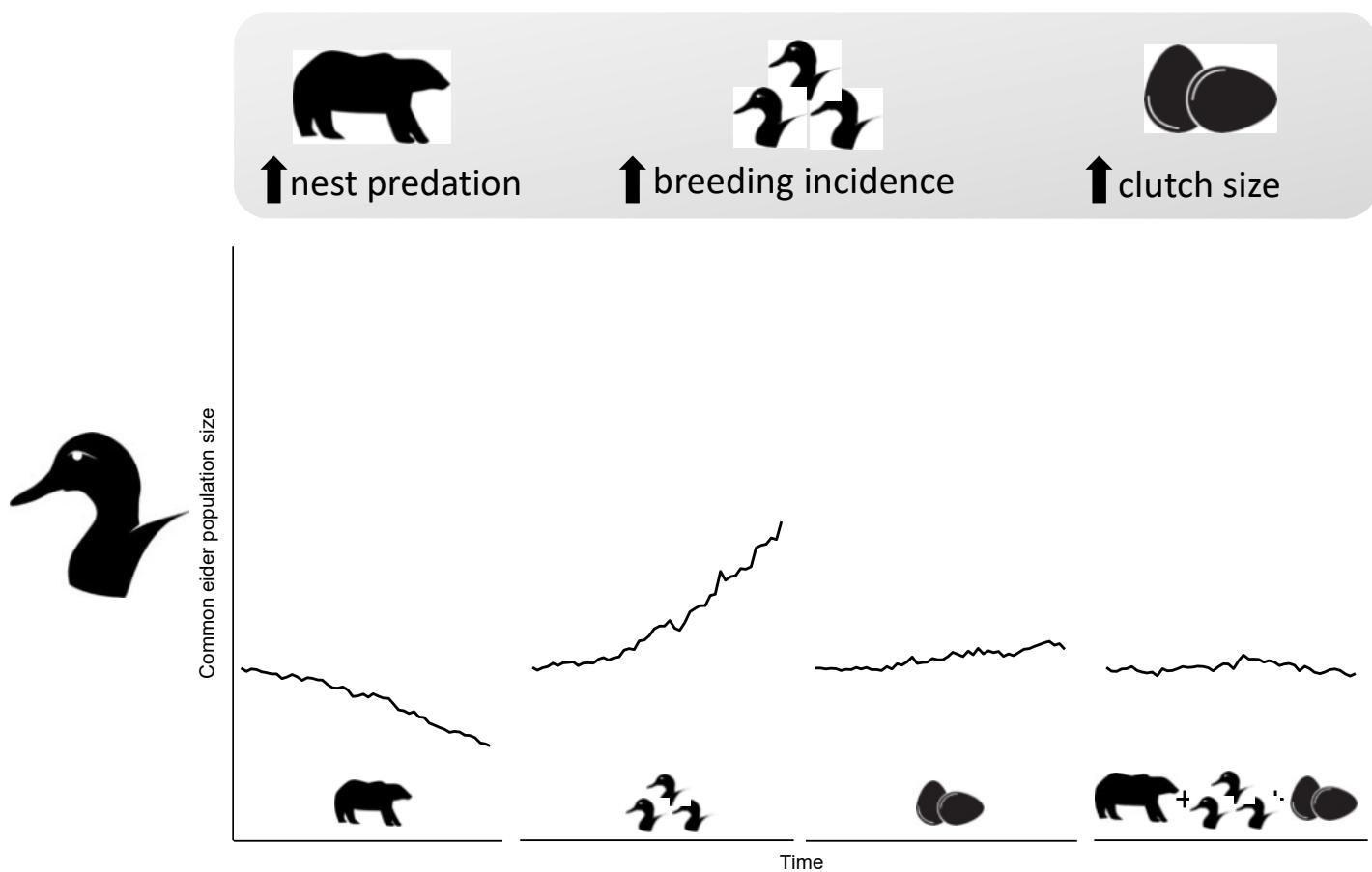
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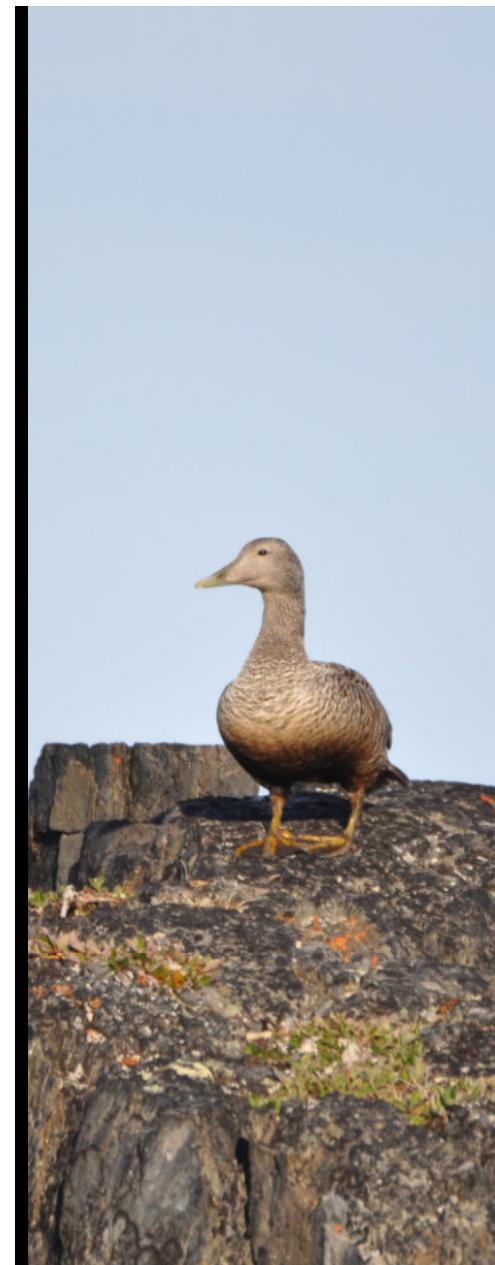
Dey et al. 2018 *Biol Cons*



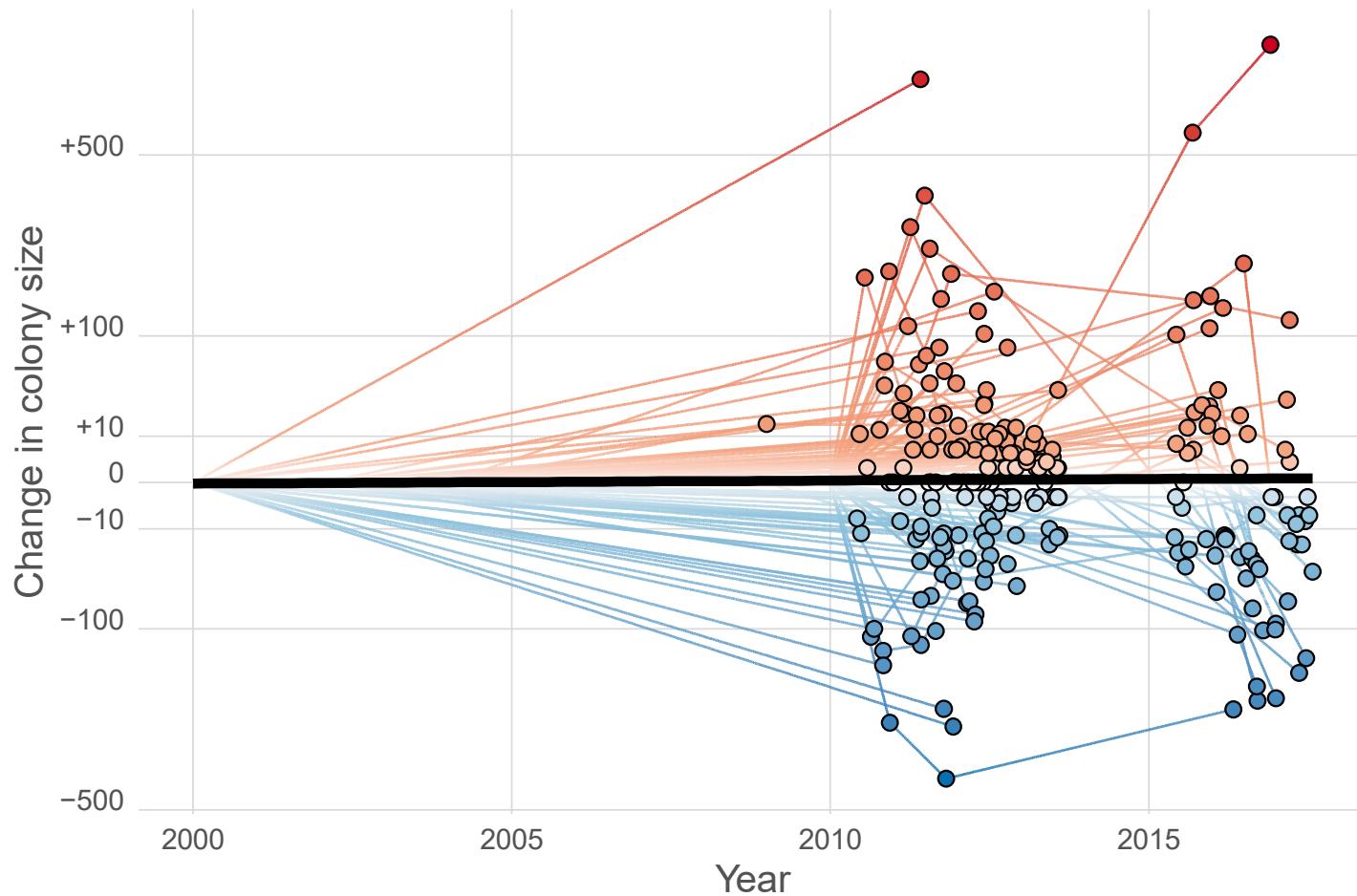
# Multiple climate change effects



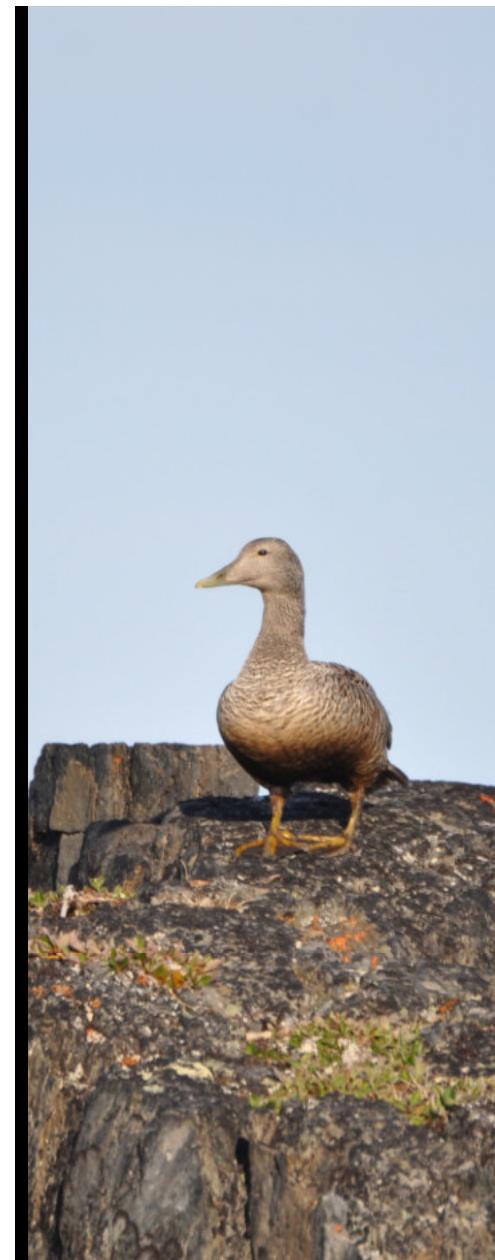
Dey et al. 2018 *Biol Cons*

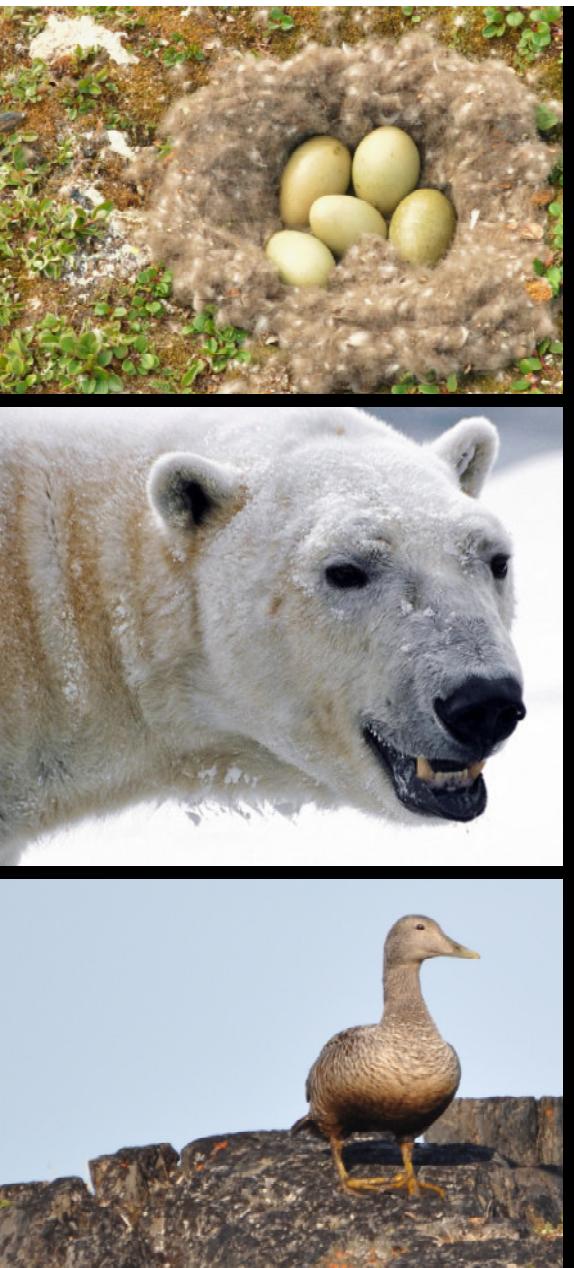


# Change in eider colony size

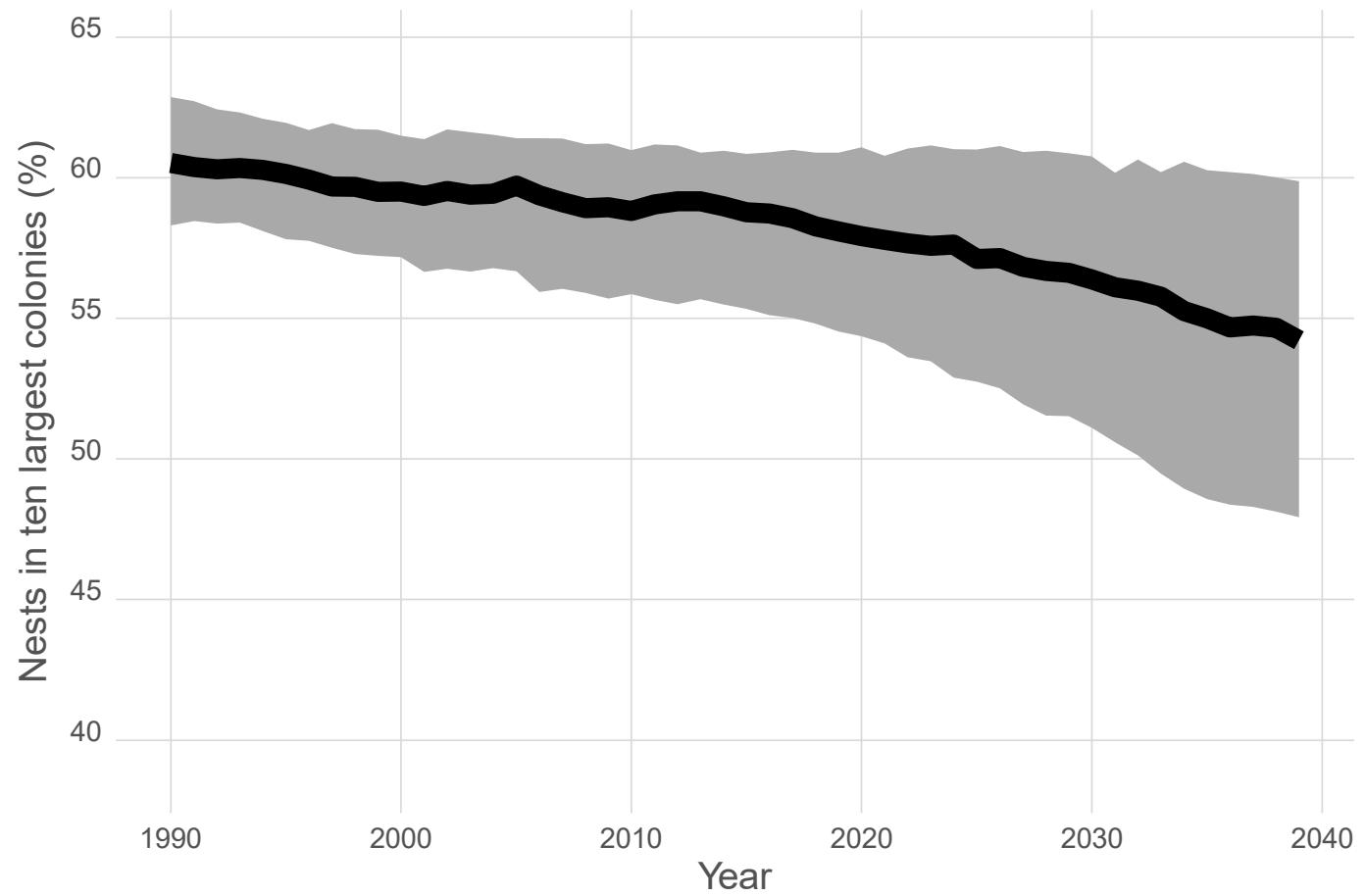


Dey et al. *in review*





# Change in eider distribution



Dey et al. 2018 *Biol Cons*

# Harvesting in eider colonies





# Summary

Nest predation will continue to increase

Eiders will redistribute in space

Population size will be relatively stable



Greg Schechter

# Acknowledgments



# Acknowledgments



University  
of Windsor



Polar Knowledge  
Canada



Environment and  
Climate Change Canada



# Questions?

@CodyJDey  
@AChangingArctic  
@PredictEcoLab

