



The importance of the Eastern Chukchi Sea for King Eiders on migration

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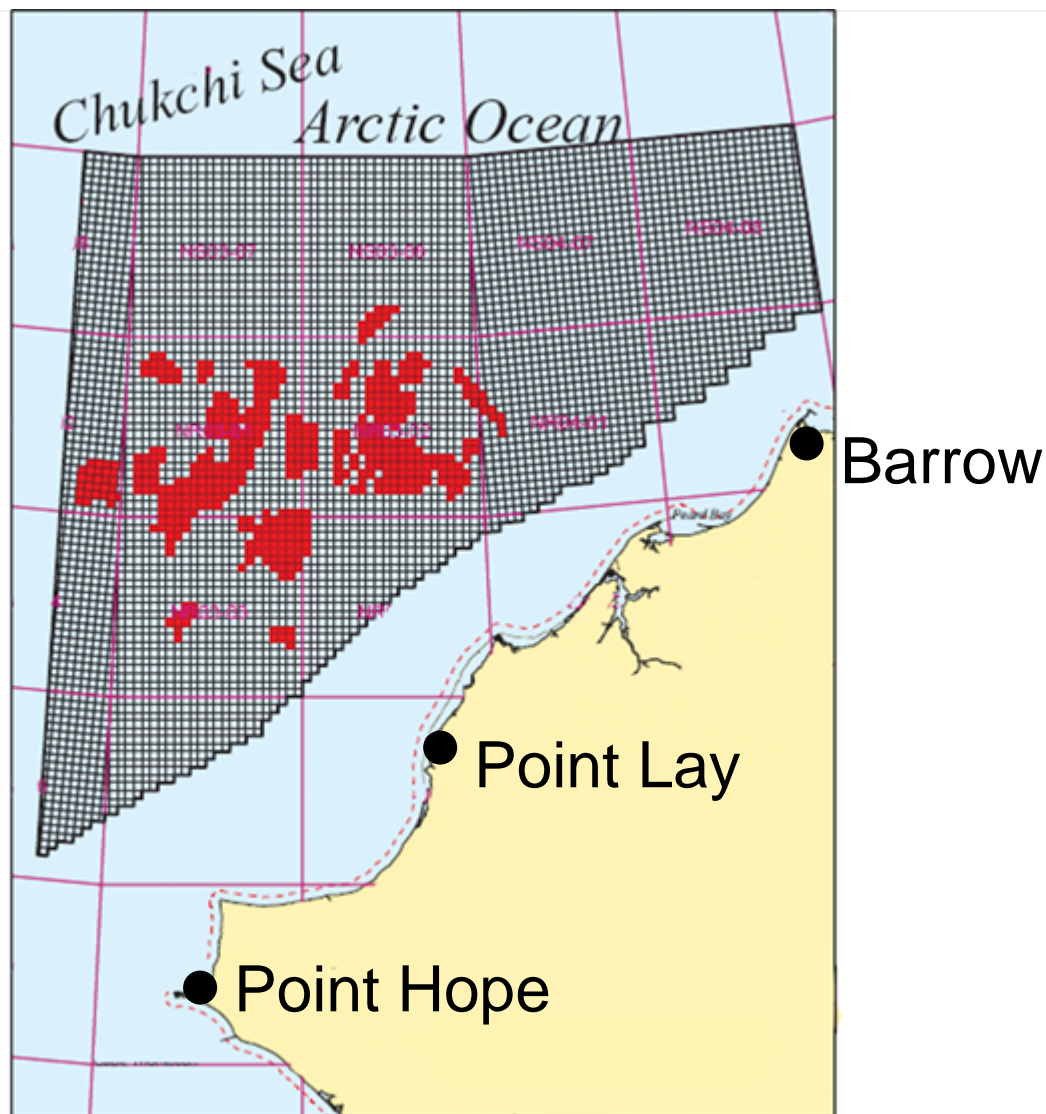


Chukchi Sea

Estimated Oil Resources:
1-14 billion barrels

Leases sold for
US\$ 2,700,000,000
(6 February 2008)

Insufficient data from
most bird species



Source: www.mms.gov/alaska



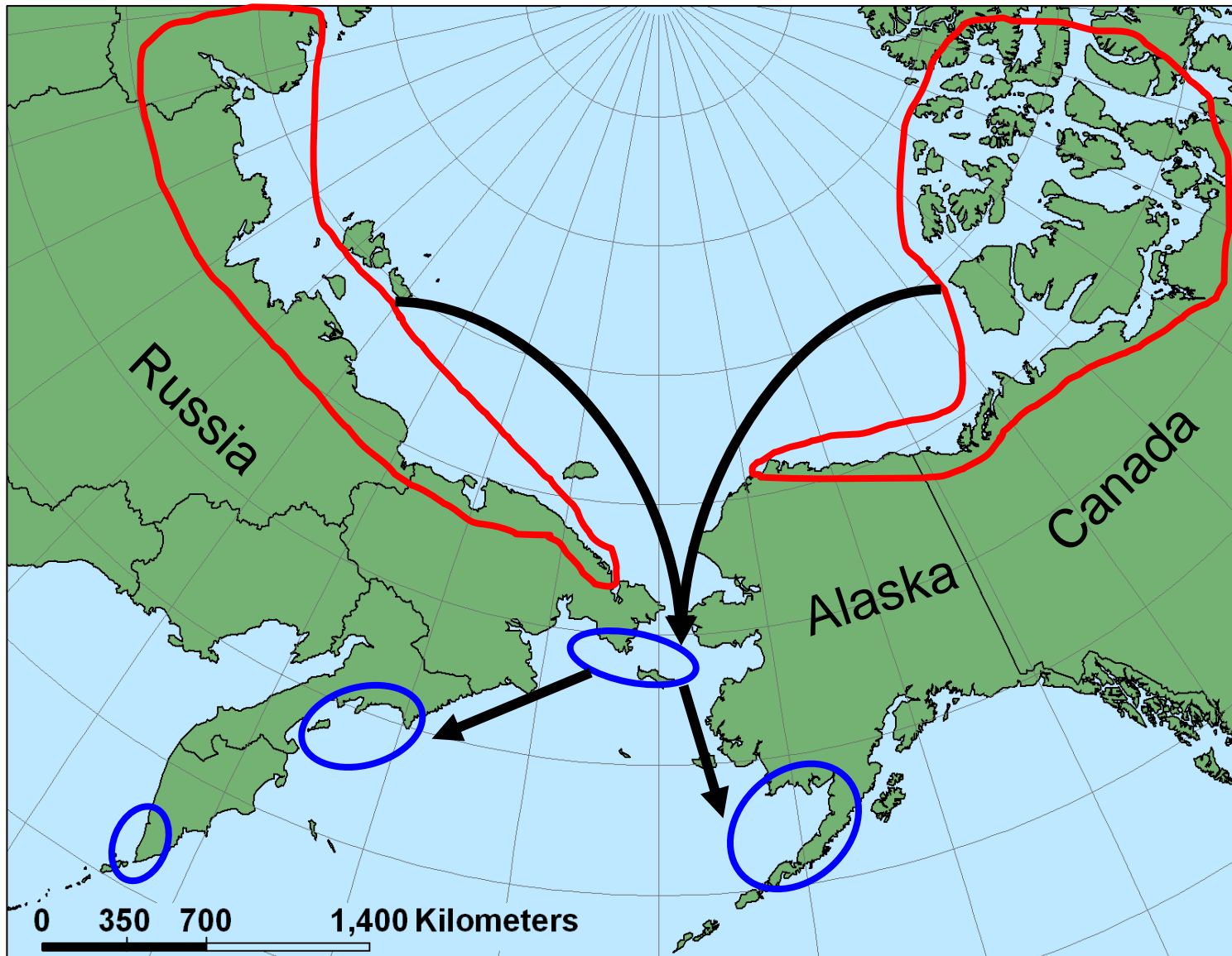
Background



- King Eiders are large sea ducks
- spend >10 months per year at sea
- forage on benthic prey by diving to sea floor



Background



**breeding
range**

**wintering
regions**



Questions

- When are King Eiders in the Eastern Chukchi Sea?
- What proportion of the population stages there?
- Where do individuals occur and concentrate?



Methods

- 190 birds caught in 1997-2007 in AK and CAN
- birds fitted with satellite transmitter
- calculated arrival and departure dates in Chukchi





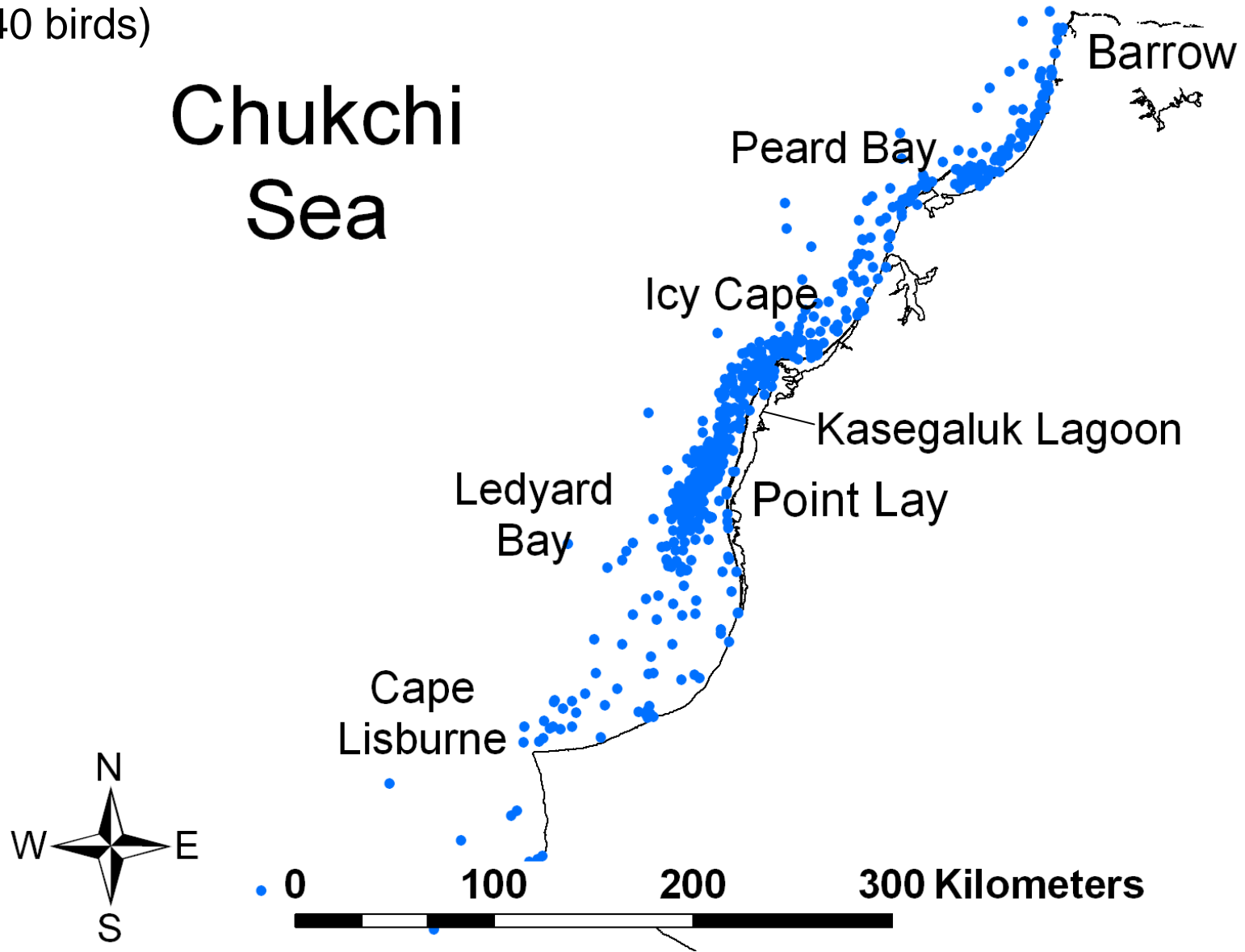
Results: southward migration

- mid June through early November
- staging pattern different between age/sex classes
- mean staging time 13 days (range: 2 - 68 days)
- 74% of tracked birds use Eastern Chukchi Sea



Results: southward migration

($n = 140$ birds)





Results: spring migration

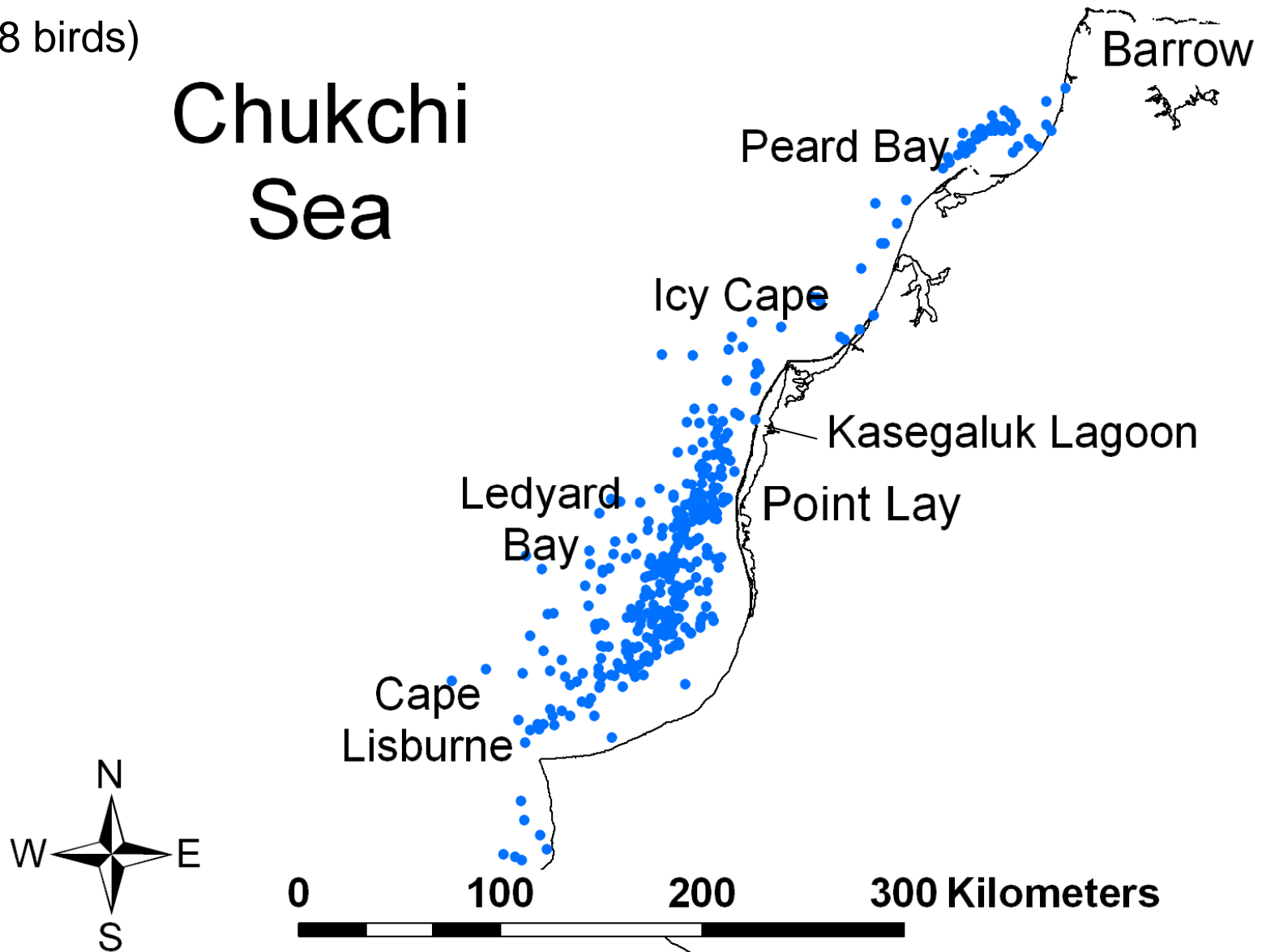
- spring staging mid-April – early June
- mean staging time 21 days (range: 8 - 45 days)
- 100% of North American breeders use the area
- 55% of Siberian breeders use the area ($n = 11$)



Results: spring migration

($n = 78$ birds)

Chukchi Sea





Conclusions

- Eastern Chukchi Sea is crucial staging area
- both American and Russian birds use it

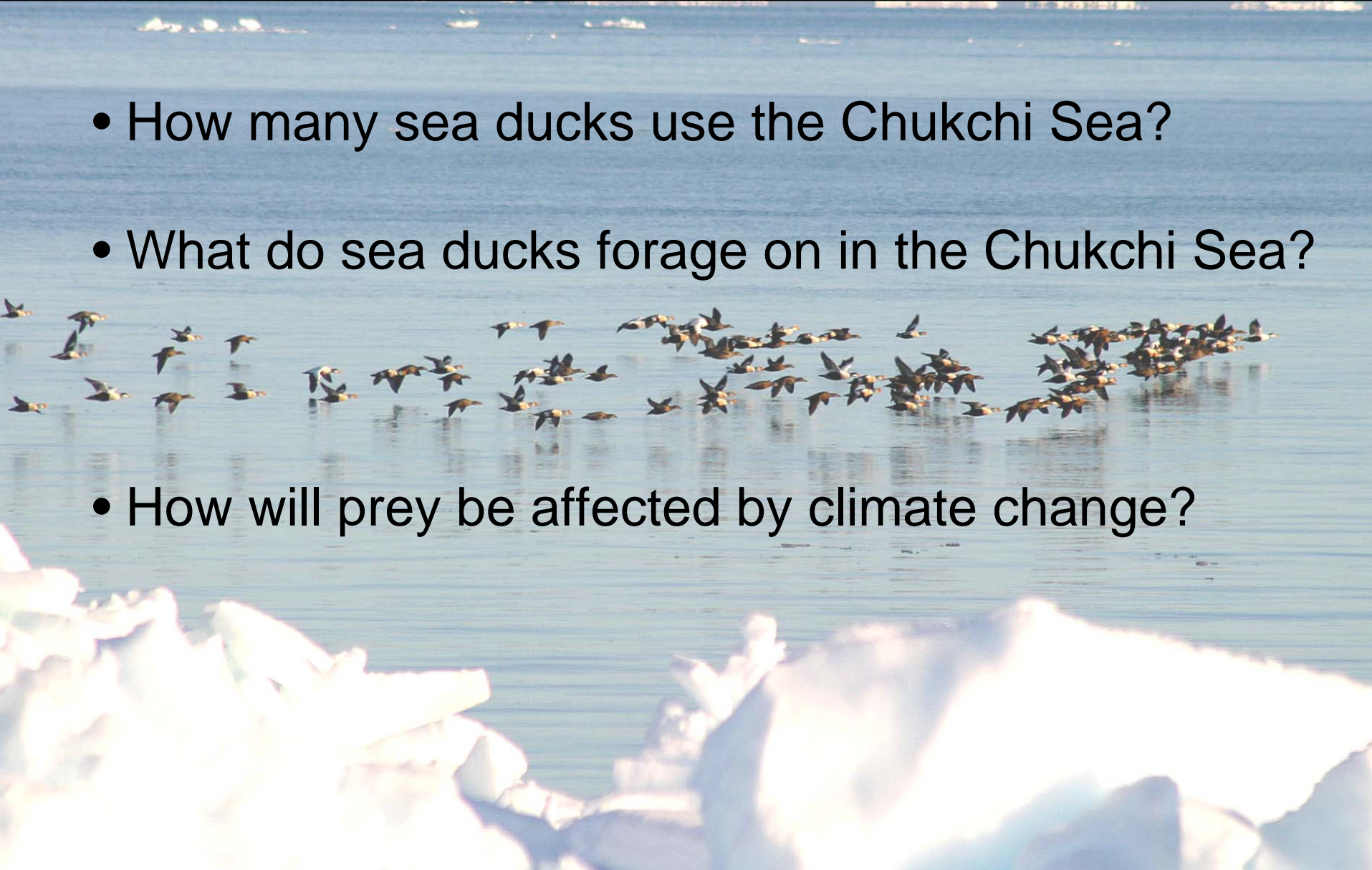


- largest concentrations within 50 km of coast



Future directions

- How many sea ducks use the Chukchi Sea?
- What do sea ducks forage on in the Chukchi Sea?
- How will prey be affected by climate change?





Acknowledgments

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...and a large number of
field assistants...





Questions?

<http://mercury.bio.uaf.edu/kingeider>



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