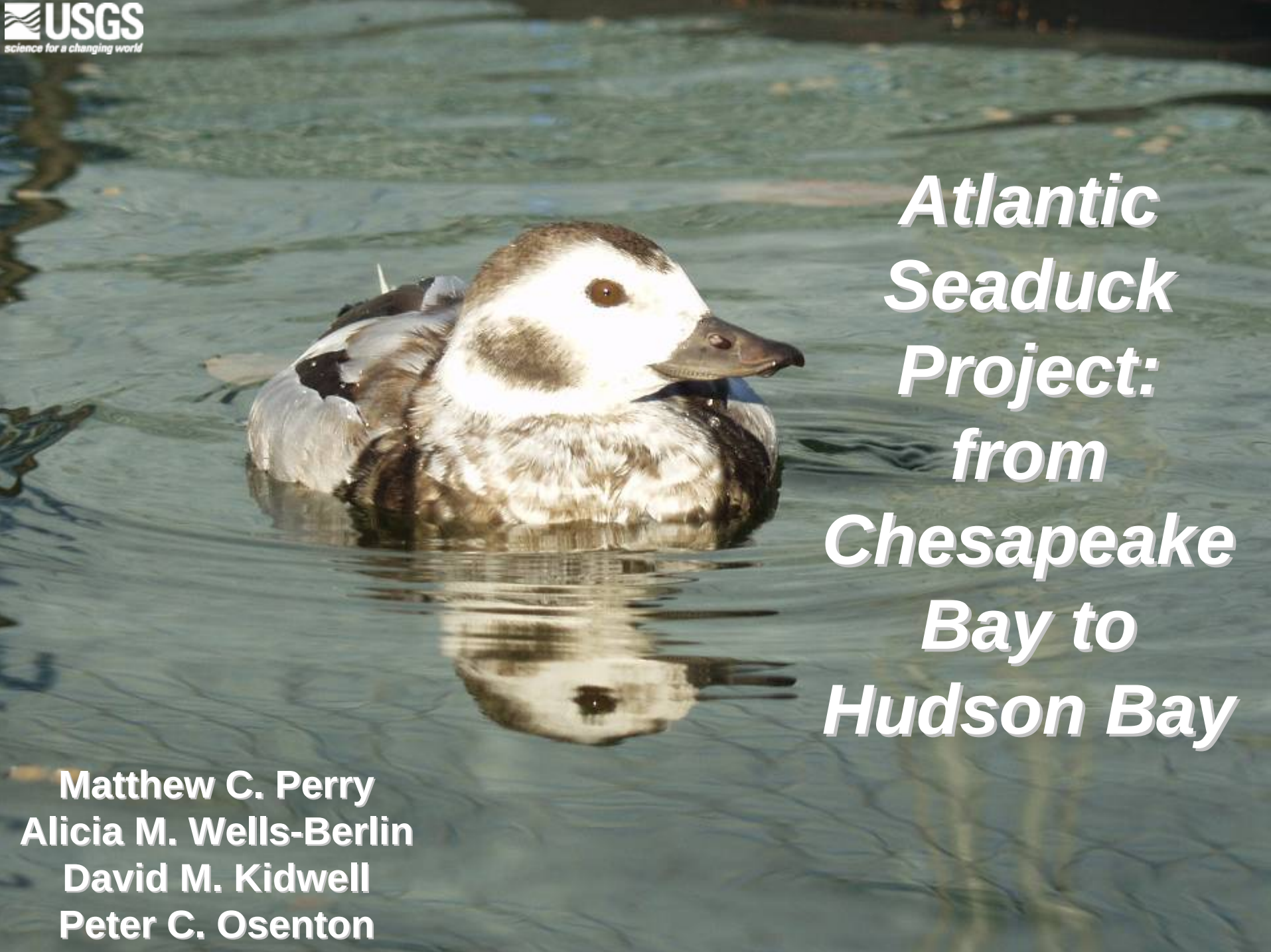


Atlantic Seaduck Project: from Chesapeake Bay to Hudson Bay

Matthew C. Perry
Alicia M. Wells-Berlin
David M. Kidwell
Peter C. Osenton

USGS

Atlantic Seaduck Project

COLLABORATORS:

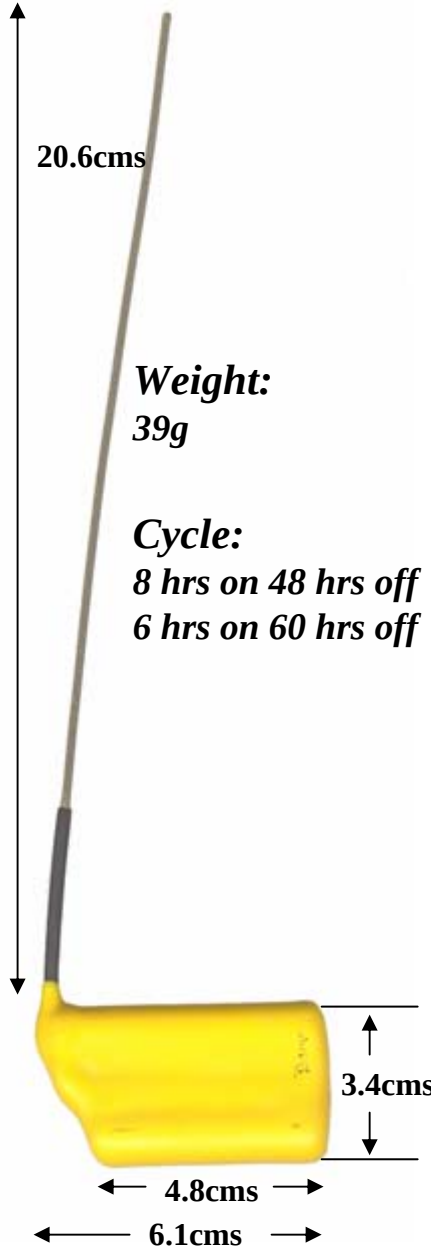
Canadian Wildlife Service
Churchill North. Studies Centre
Massachusetts Audubon
MD Dept. of Nat. Res.
National Health Center
U.S. Fish Wildl. Serv.

SEADUCK PROJECT LOCATIONS:

Chesapeake Bay
Churchill, Manitoba
James Bay, Quebec
Nain, Labrador
Nantucket Sound
Restigouche River, NB

USGS

PTT100
Satellite Transmitter



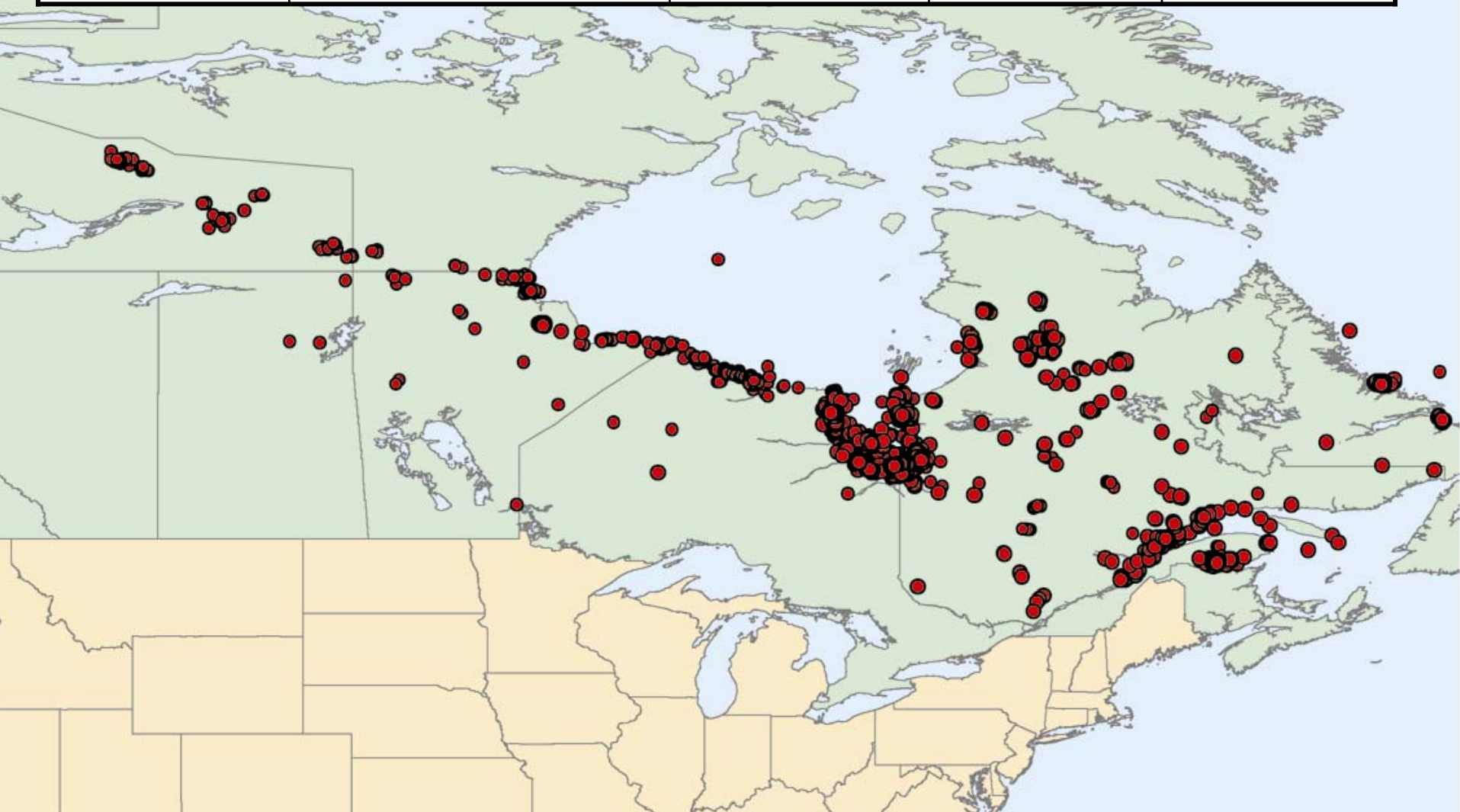
Weight:
39g

Cycle:
8 hrs on 48 hrs off
6 hrs on 60 hrs off

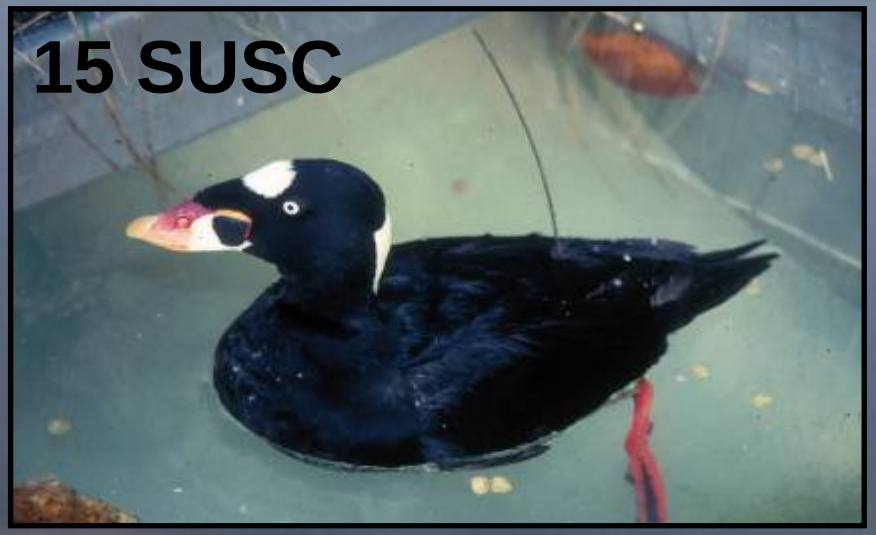
USGS

USGS

	Latitude / Longitude	Elevation (m)	Forest (%)	Tundra (%)
Black Scoter	57˚43’N / 77˚32’W	241	19.5	41.3
Surf Scoter	56˚46’N / 74˚22’W	432	64.8	15.0



Satellite Telemetry Labrador



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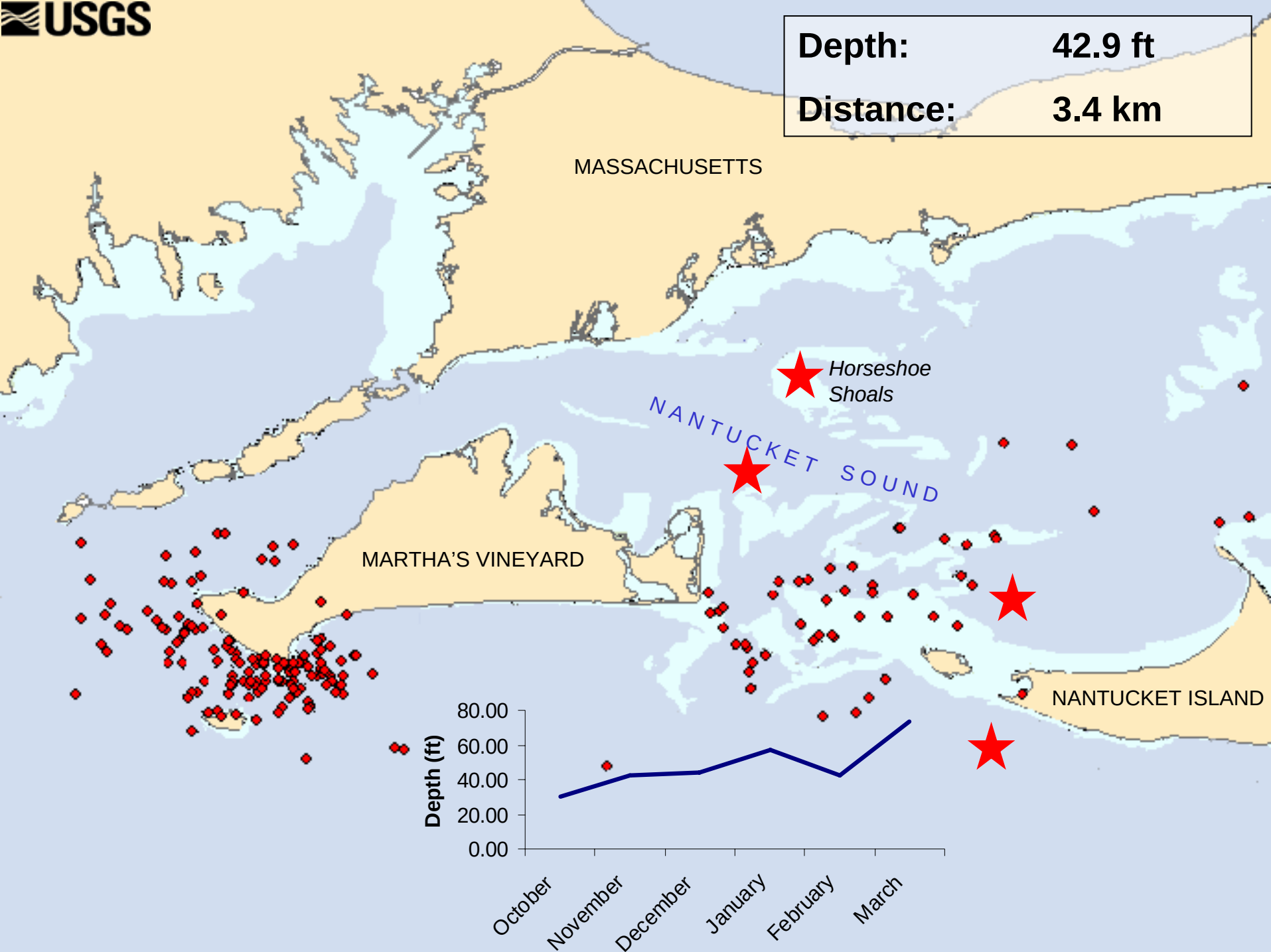
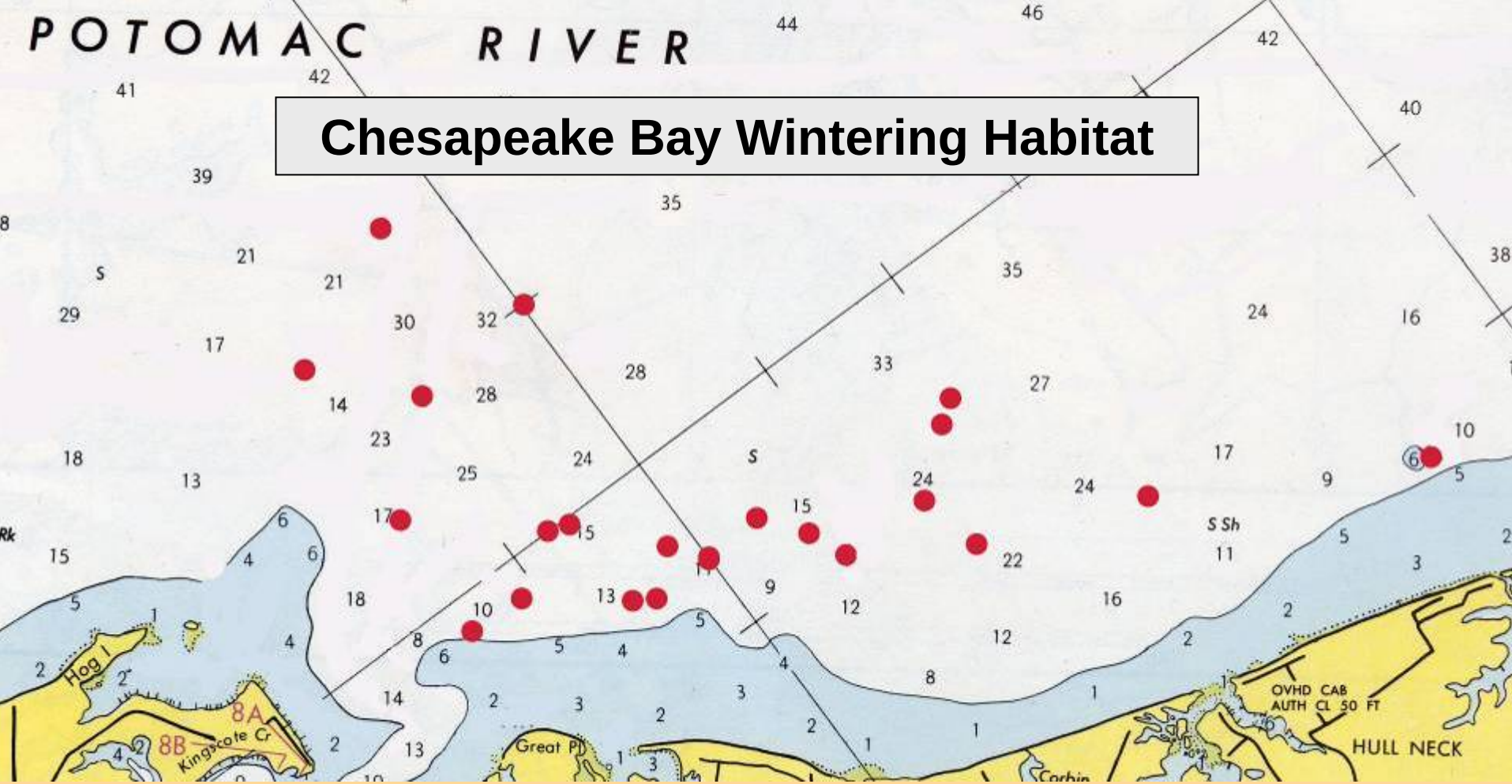
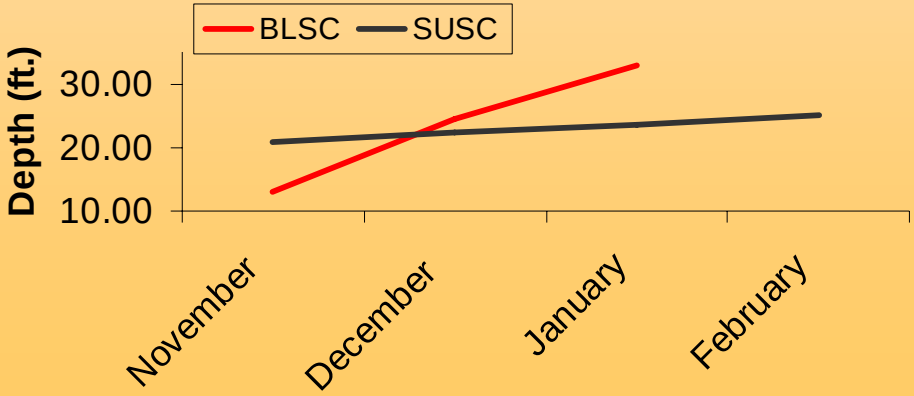
USGS


USGS
Depth: 42.9 ft
Distance: 3.4 km
MASSACHUSETTS
Horseshoe Shoals
NANTUCKET SOUND
MARTHA'S VINEYARD
NANTUCKET ISLAND
Depth (ft)
80.00
60.00
40.00
20.00
0.00
October
November
December
January
February
March

Chesapeake Bay Wintering Habitat



Species	Depth	Distance from Shore
Surf Scoter	16.7 ft.	1.89 nm
Black Scoter	24.4 ft.	1.8 nm

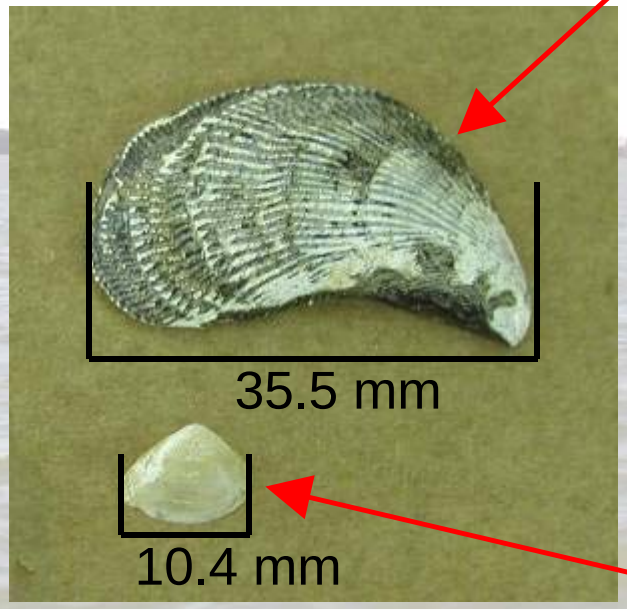


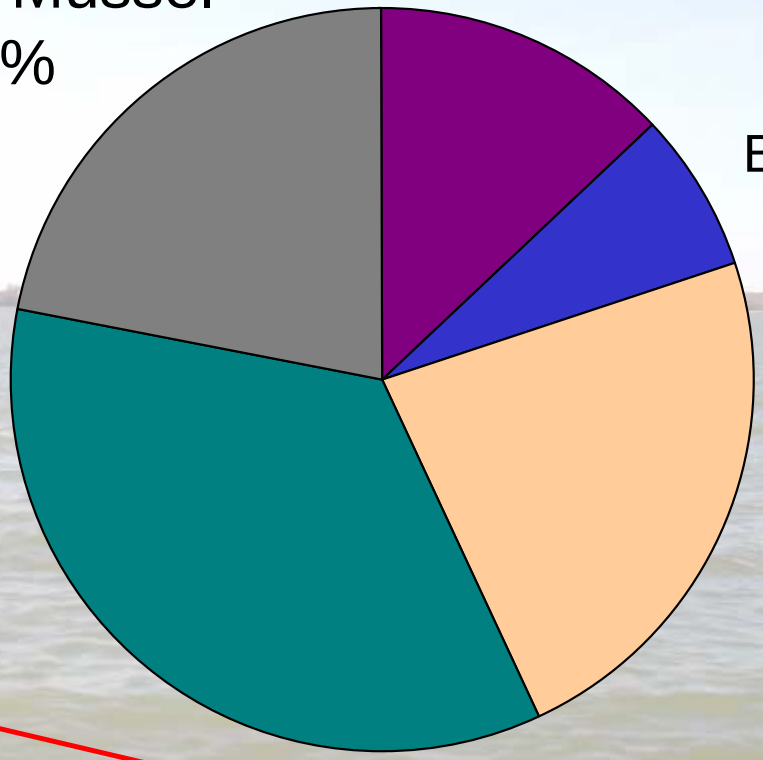
FOOD HABITS - SEADUCKS

Species	Chesapeake Bay	Maritimes	Northeast	Total
Total	732	316	365	1413

USGS

Food Habits n=245





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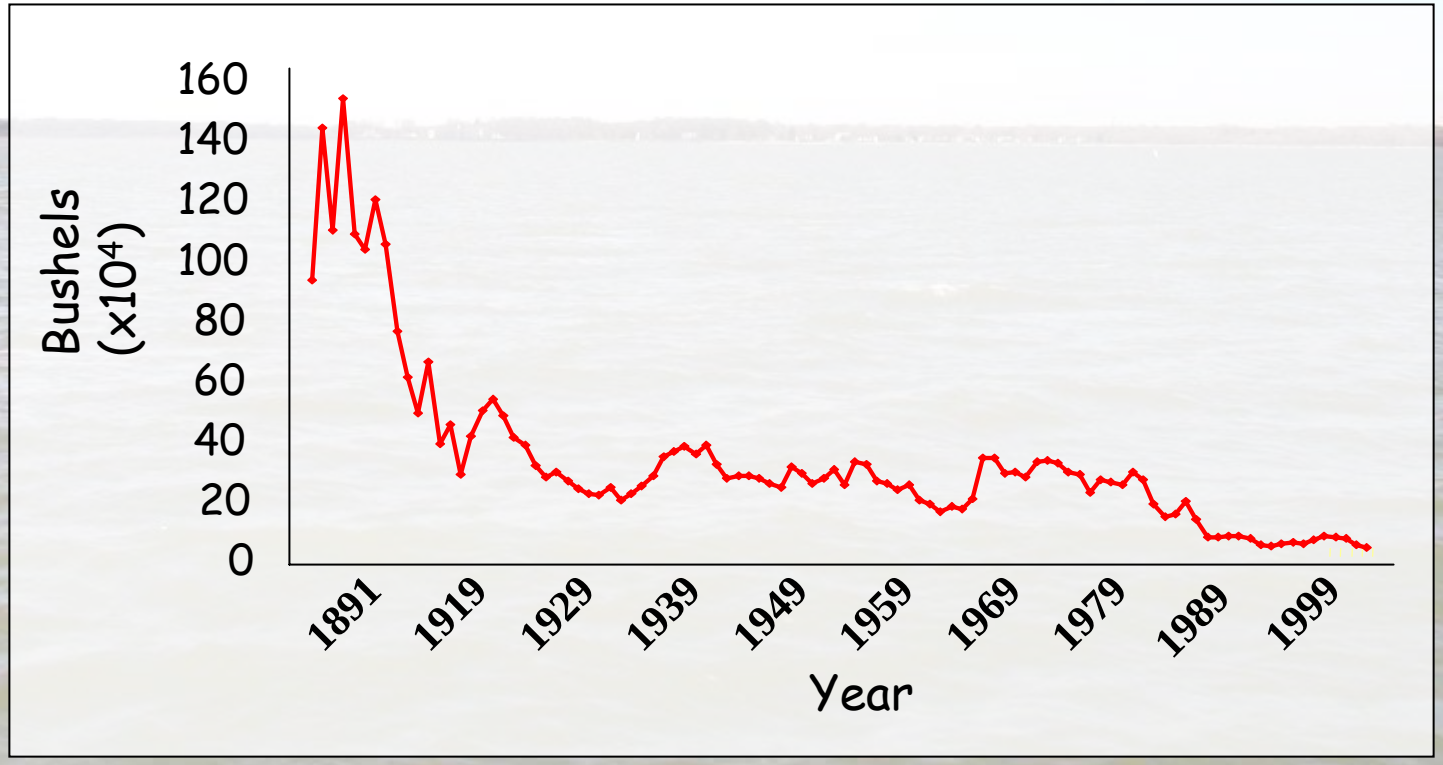
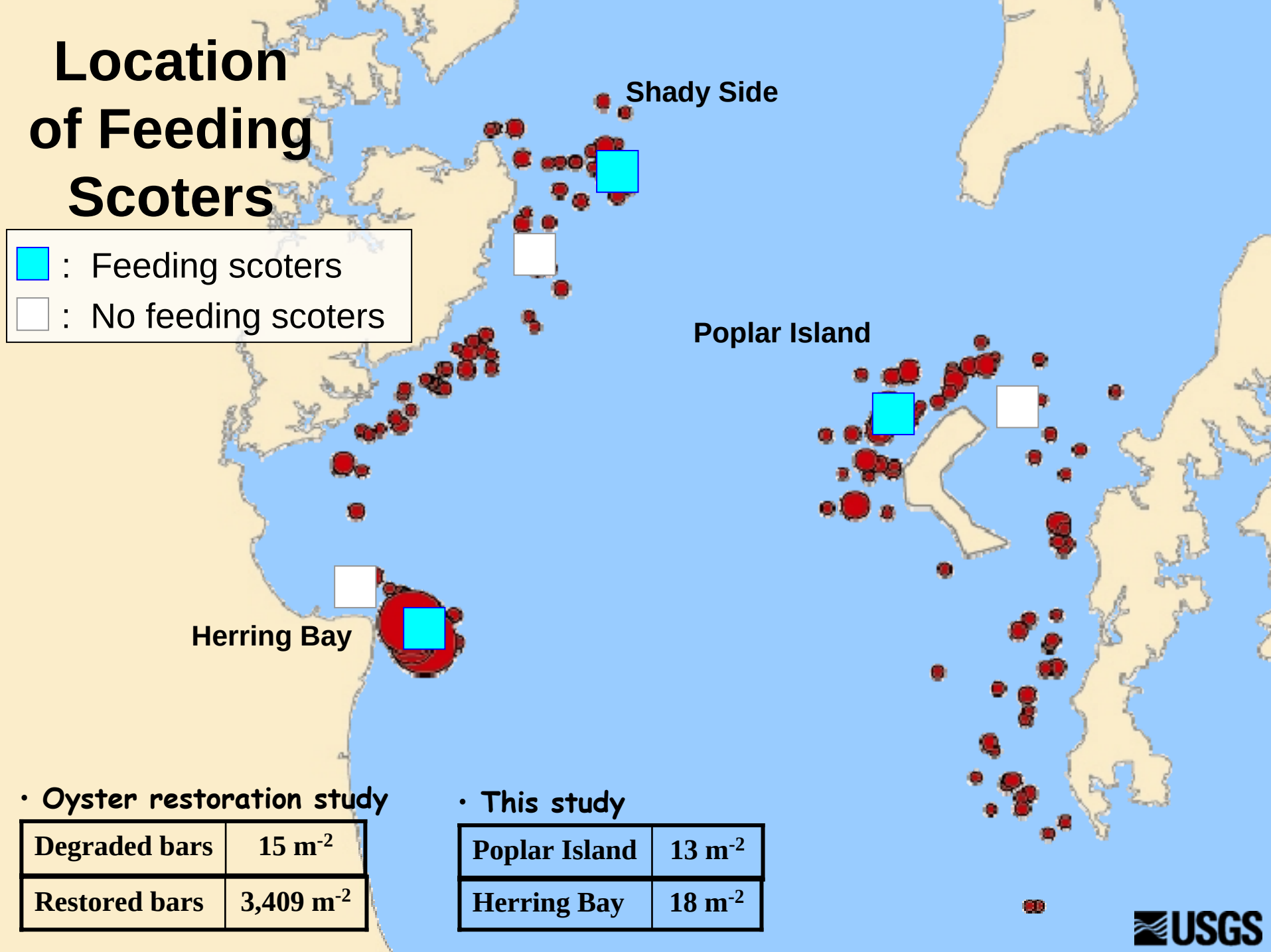
Chesapeake Bay

- Severely altered estuarine system

Ex. Oysters currently at 1% of historic levels



Location of Feeding Scoters



- Oyster restoration study

Degraded bars	15 m^{-2}
Restored bars	3,409 m^{-2}

- This study

Poplar Island	13 m^{-2}
Herring Bay	18 m^{-2}

USGS

Food Consumption
Behavior
Growth
Blood
USGS

Foraging Energetics

Hooked Mussel	**vs.**	**Dwarf Surf Clam**
35.5 mm		10.4 mm
Hard substrate		muddy substrate
Attached		Buried

With decline of quality and quantity of mussels can surf scoters maintain themselves on alternative prey item, dwarf surf clam?

USGS

West Nile Virus

USGS

Common Eider Selenium Study
Chris Franson

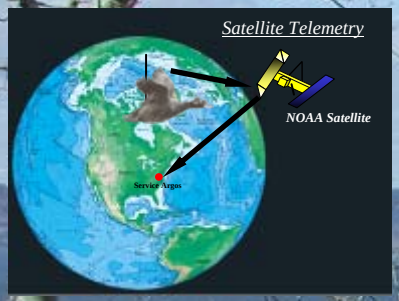
- 20, 40, 60 ppm
- emaciation
- immune response adversely affected

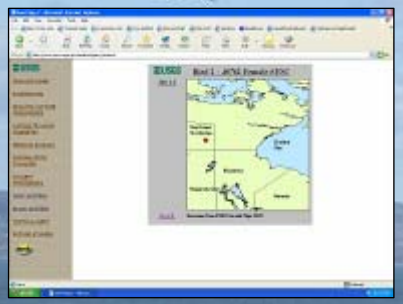
LTDU
Churchill
Manitoba
USGS

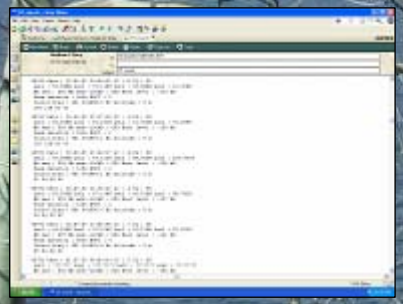
USGS

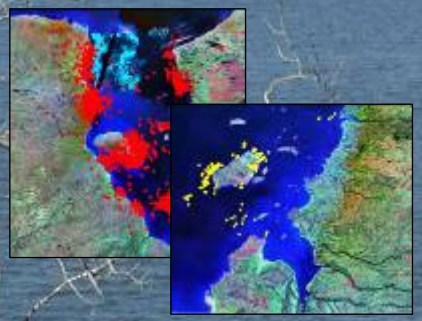
USGS

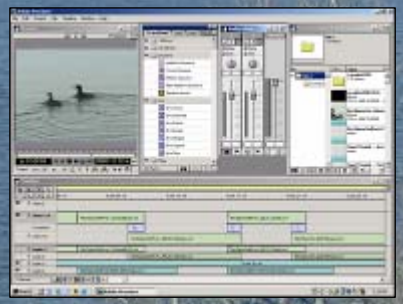
Information Transfer











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Acknowledgements

- Canadian Wildlife Service
- U.S. Fish and Wildlife Service
- Sea Duck Joint Venture
- U.S. Geological Survey
- Microwave Telemetry, Inc.

Special Thanks To:

- Chris Renne
- Marie Brady
- Bob Alison & Joe Jehl
- All other assistants & volunteers

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