

# *Bowhead Feeding Ecology Study (BOWFEST)*

Minerals Management Service has provided \$8,000,000 for 5 field seasons (2007-2011) to study bowhead feeding ecology near Barrow in late summer.



# *BOWFEST*

## **Collaborators:**

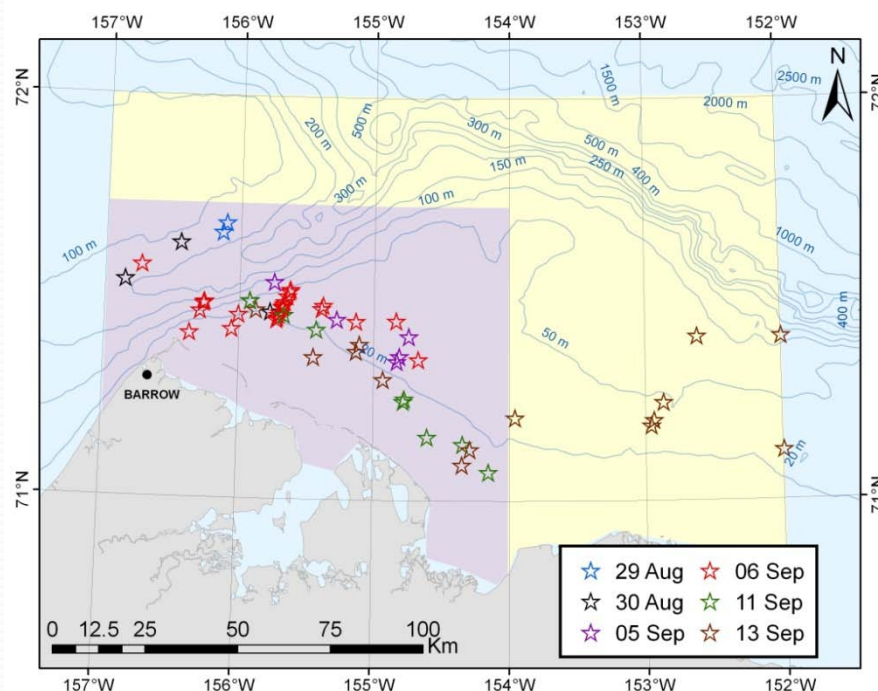
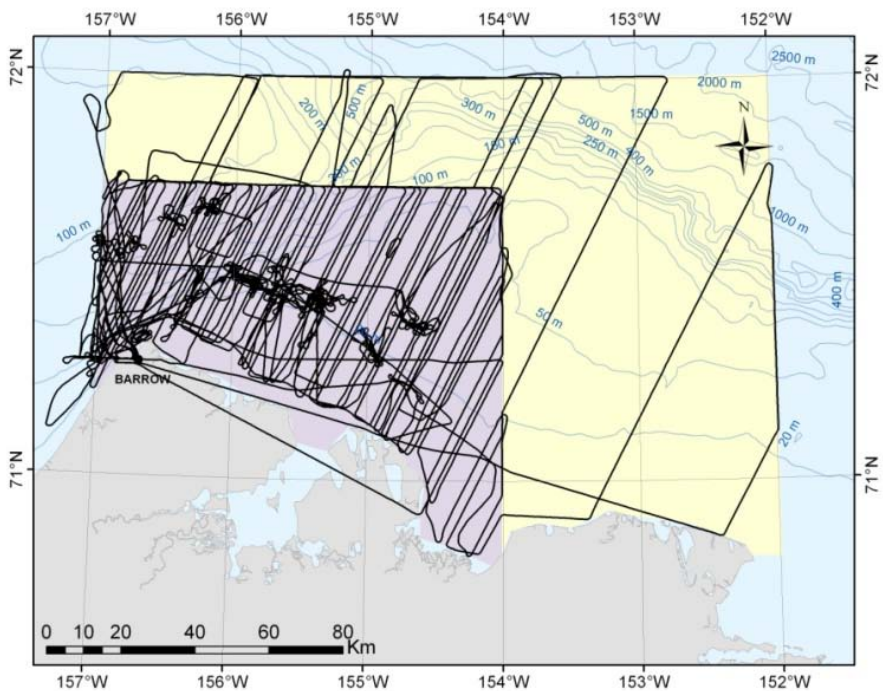
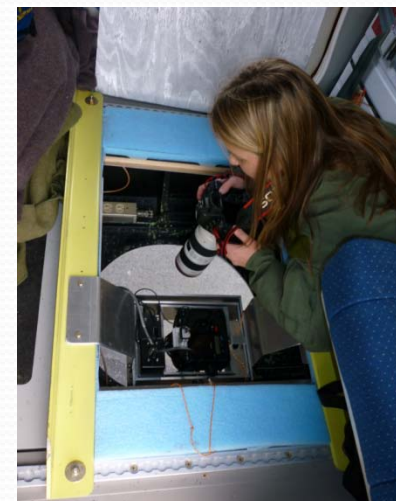
National Marine Mammal Lab, NOAA Fisheries  
Minerals Management Service  
Woods Hole Oceanographic Institute  
University of Rhode Island  
University of Alaska Fairbanks  
University of Washington  
Applied Physics Lab  
Oregon State University  
North Slope Borough  
Alaska Department of Fish and Game  
LGL, environmental research associates





# Aerial surveys

(National Marine Mammal Lab)

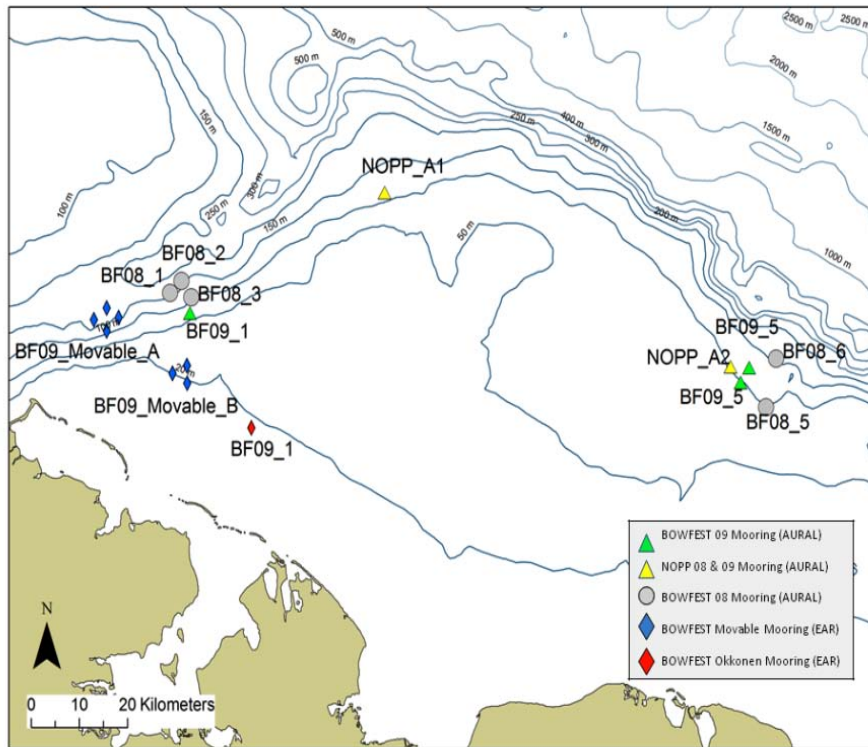


# Passive acoustics

(National Marine Mammal Lab.  
and Univ. Washington/Applied  
Physics Lab)



*EAR*



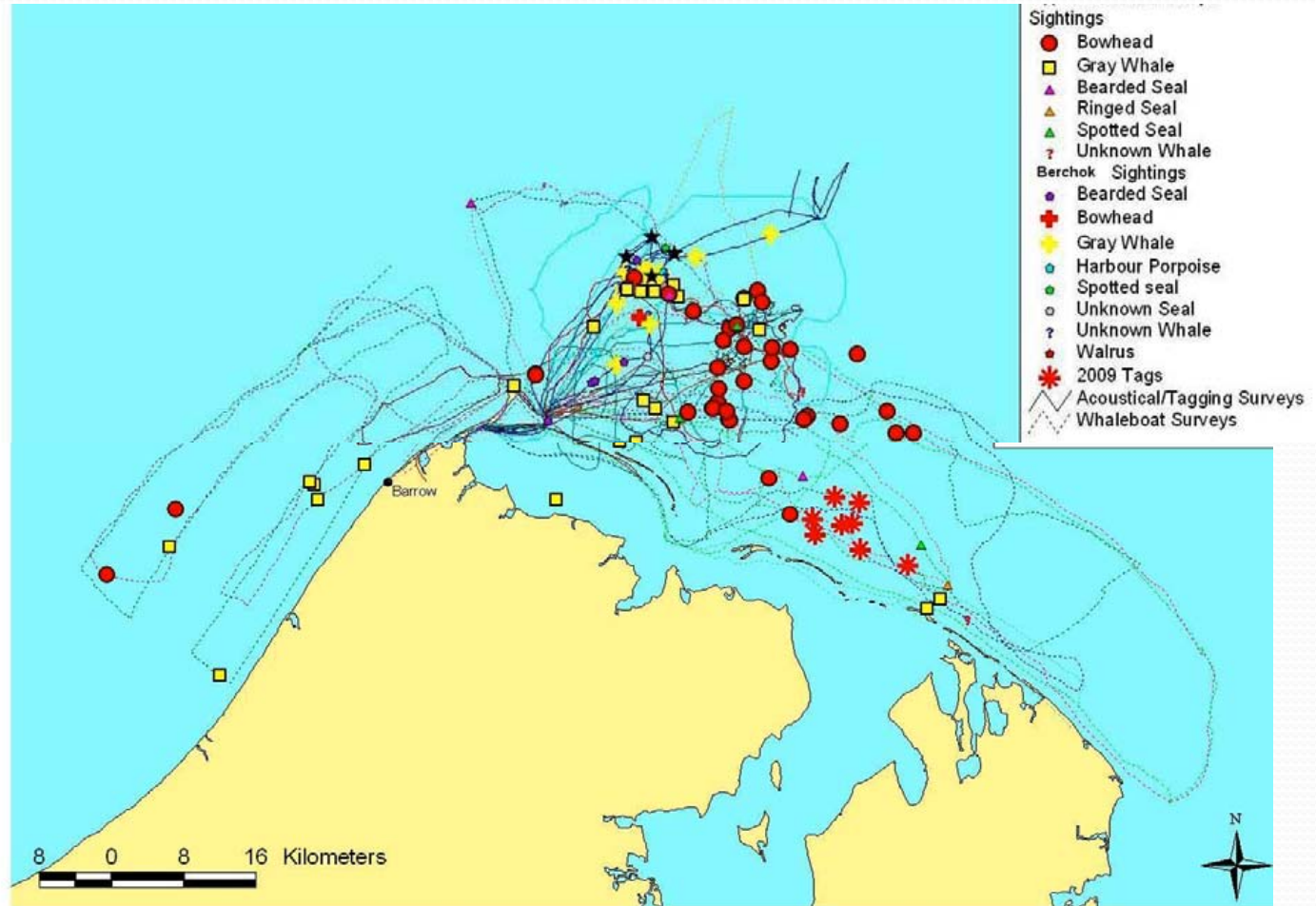
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Acoustic recorders

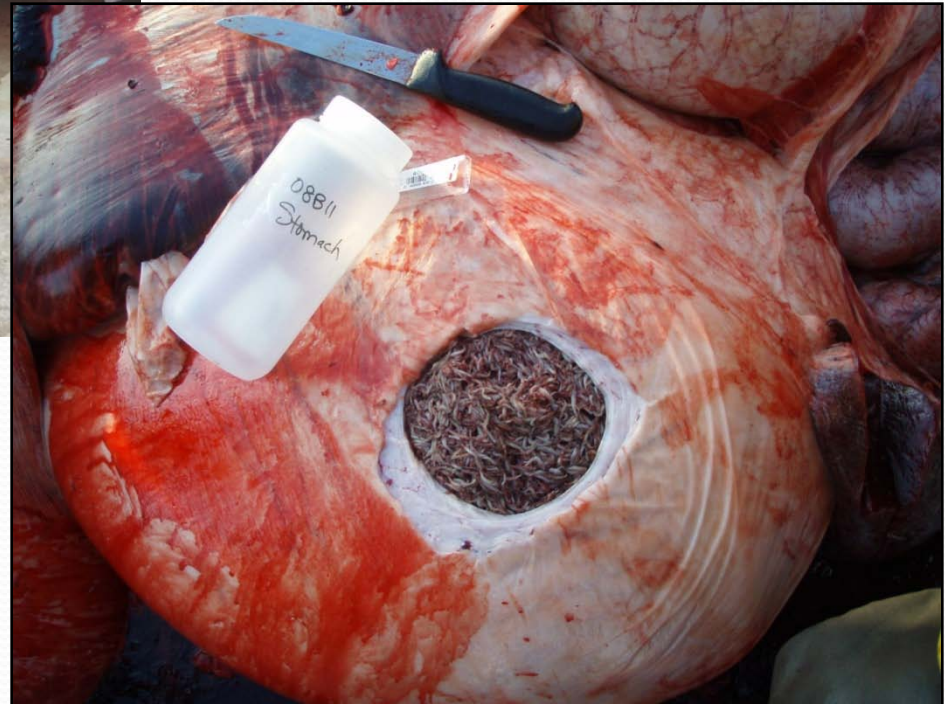
Locations of passive acoustic recorders deployed in 2009.



# Boat-based surveys (North Slope Borough)



# Stomach content analyses (North Slope Borough)

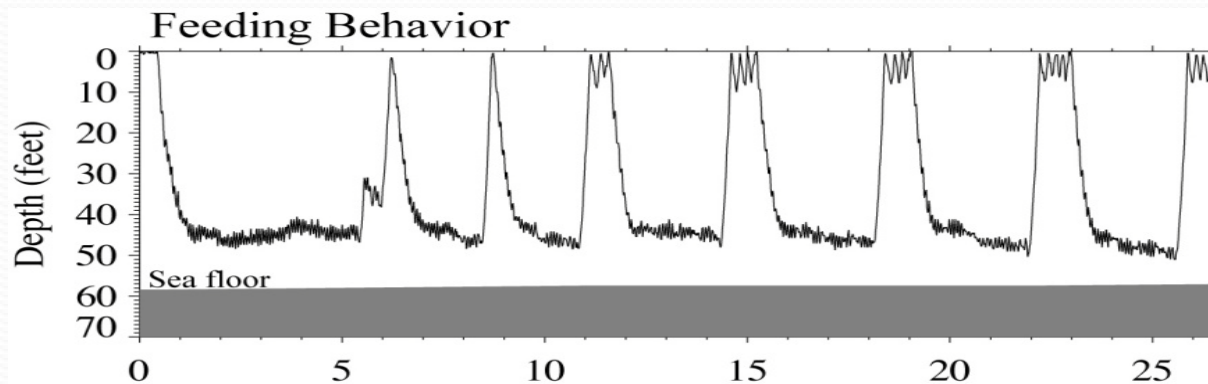


# Tagging and fine-scale oceanography

(Woods Hole Oceanographic Institute)



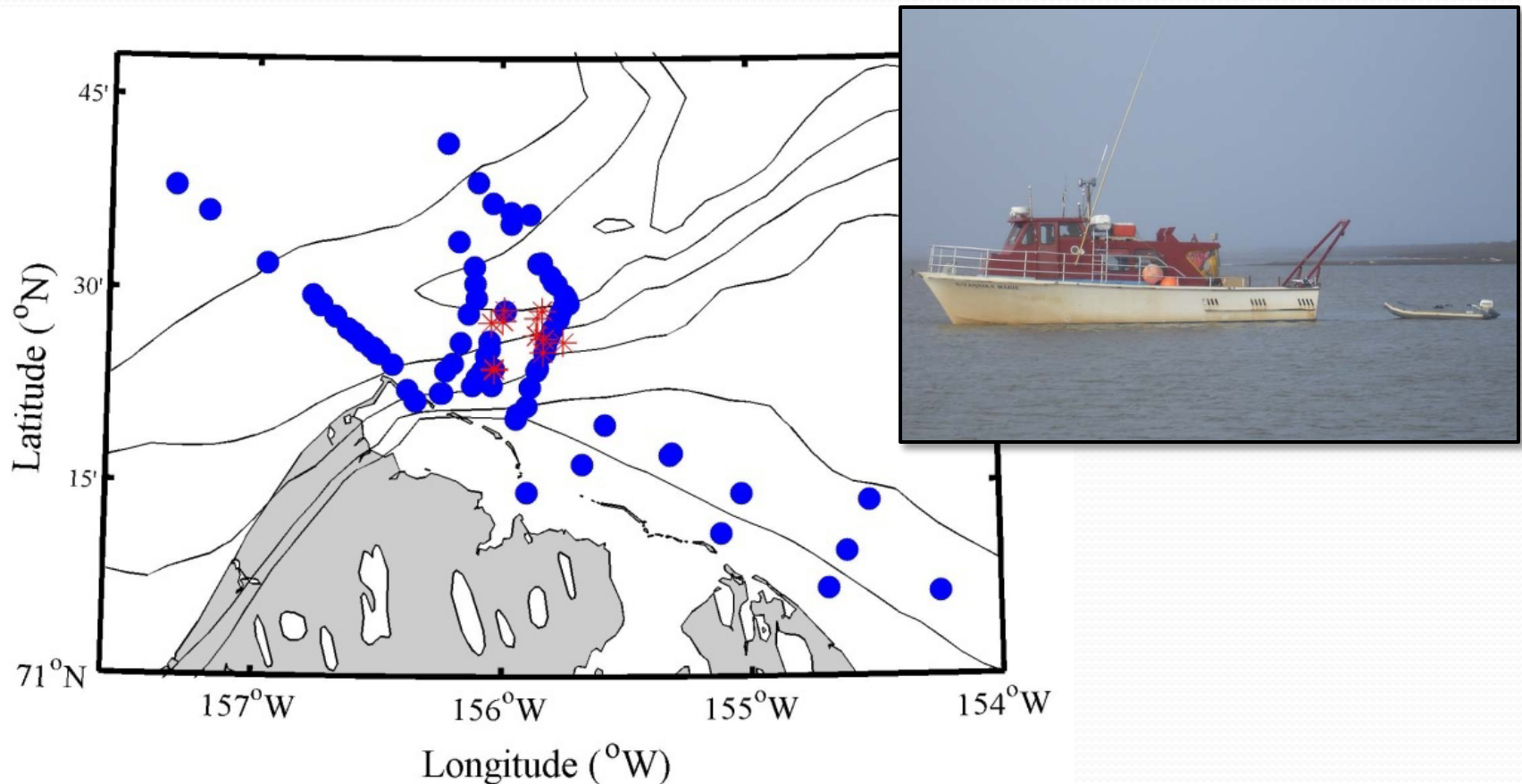
Launched tag immediately prior to attaching to a bowhead.



Time since tag attachment (minutes).

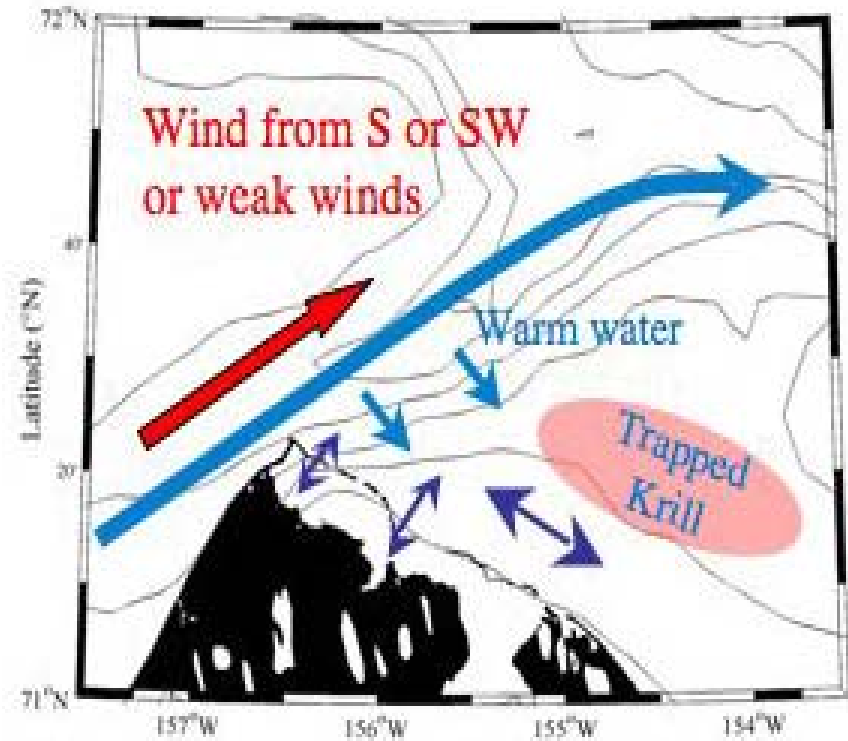
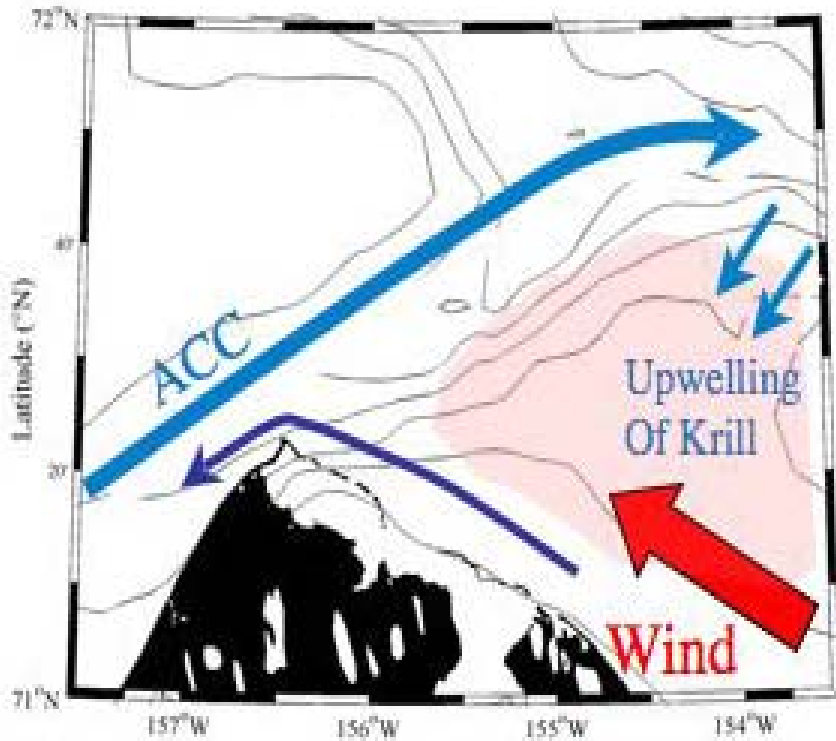
# Oceanographic sampling

(Woods Hole Oceanographic Institute,  
Univ. Alaska Fairbanks, and Univ. Rhode Island)





# Krill trap on the Barrow Shelf



Schematics demonstrating the two-step mechanism whereby krill are concentrated on the Beaufort Shelf near Barrow. Blue = currents; Red = wind dir; Pink = krill; ACC = Alaska Coastal Current.



Bowheads feeding in echelon formation