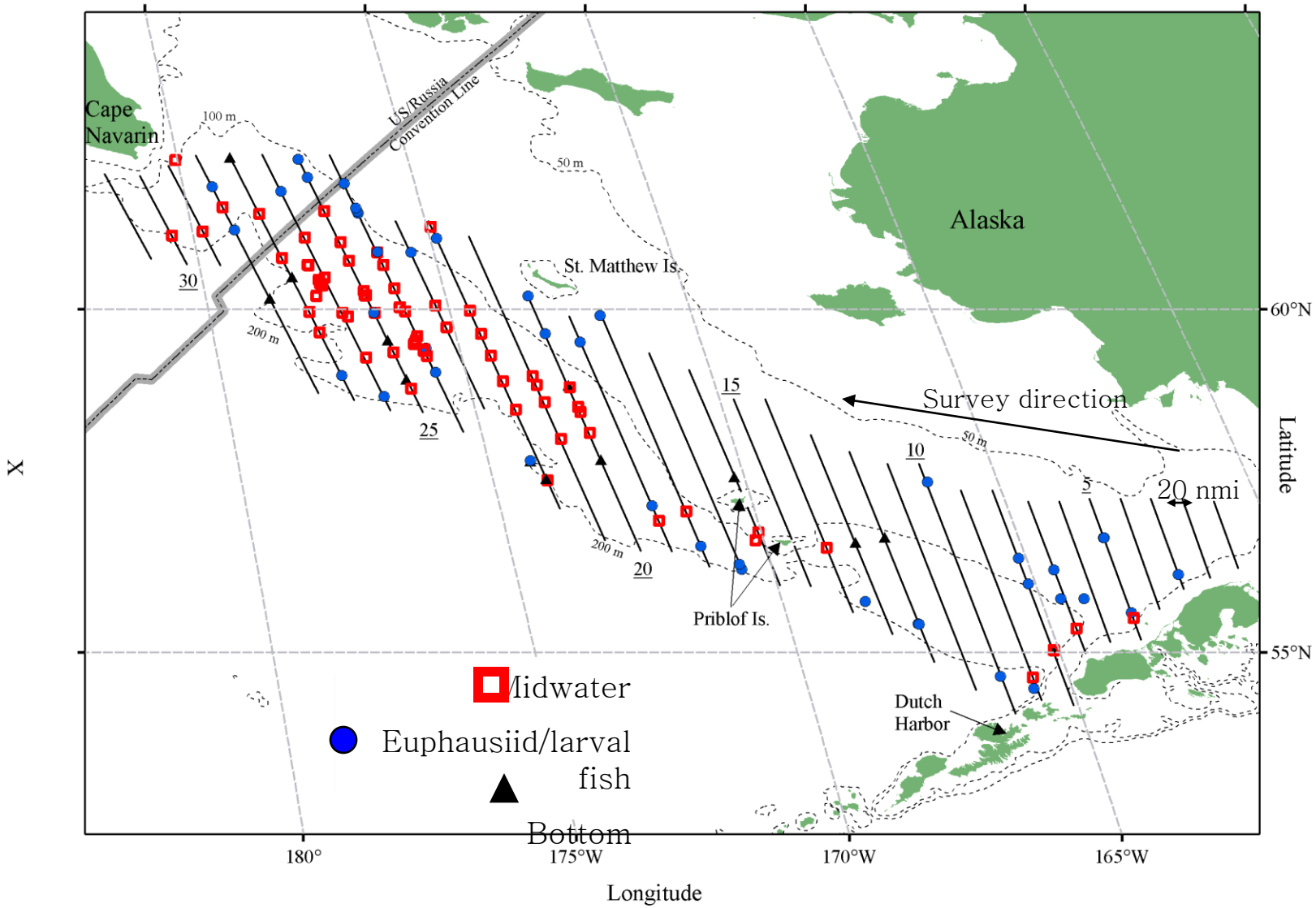
Echo integration-trawl survey of Bering Sea walleye pollock
2 June – 31 July 2008

NOAA ship *Oscar Dyson*

by T. Honkalehto

Summer 2008 Bering Sea shelf echo-integration trawl survey of walleye po



31 transect lines with 78 midwater trawl, 42 euphausiid/larval fish trawl and 13 bottom trawl locations.

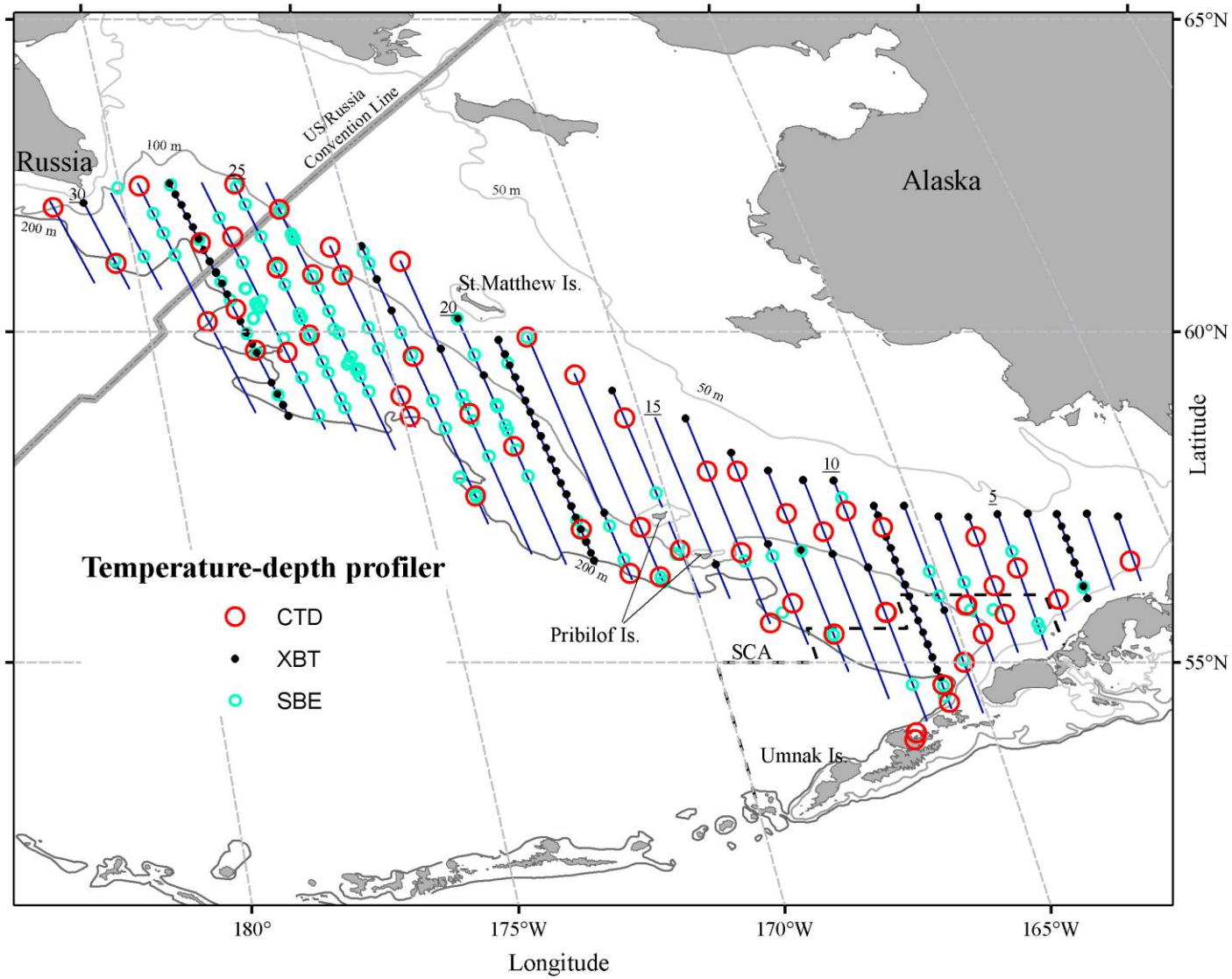
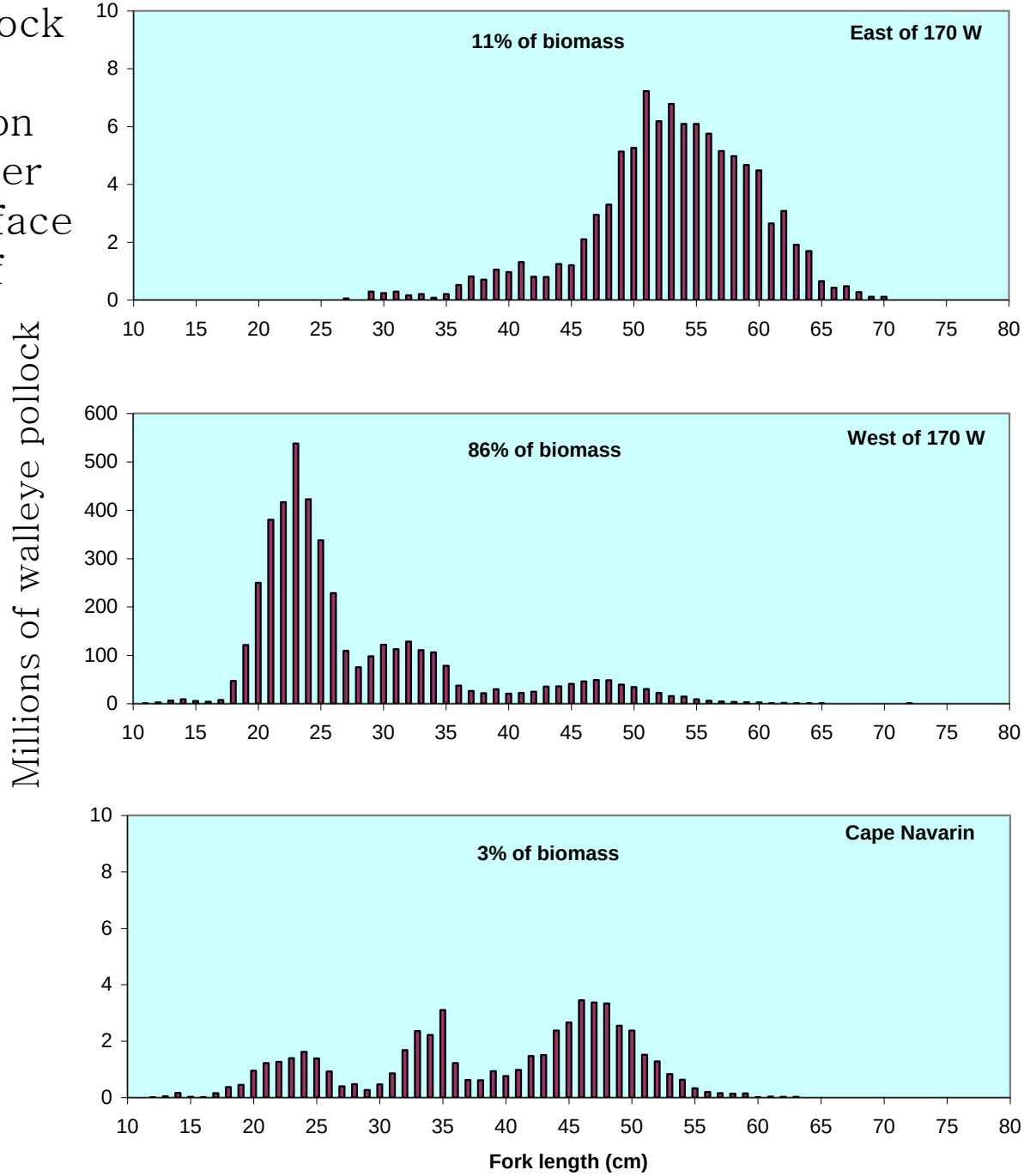
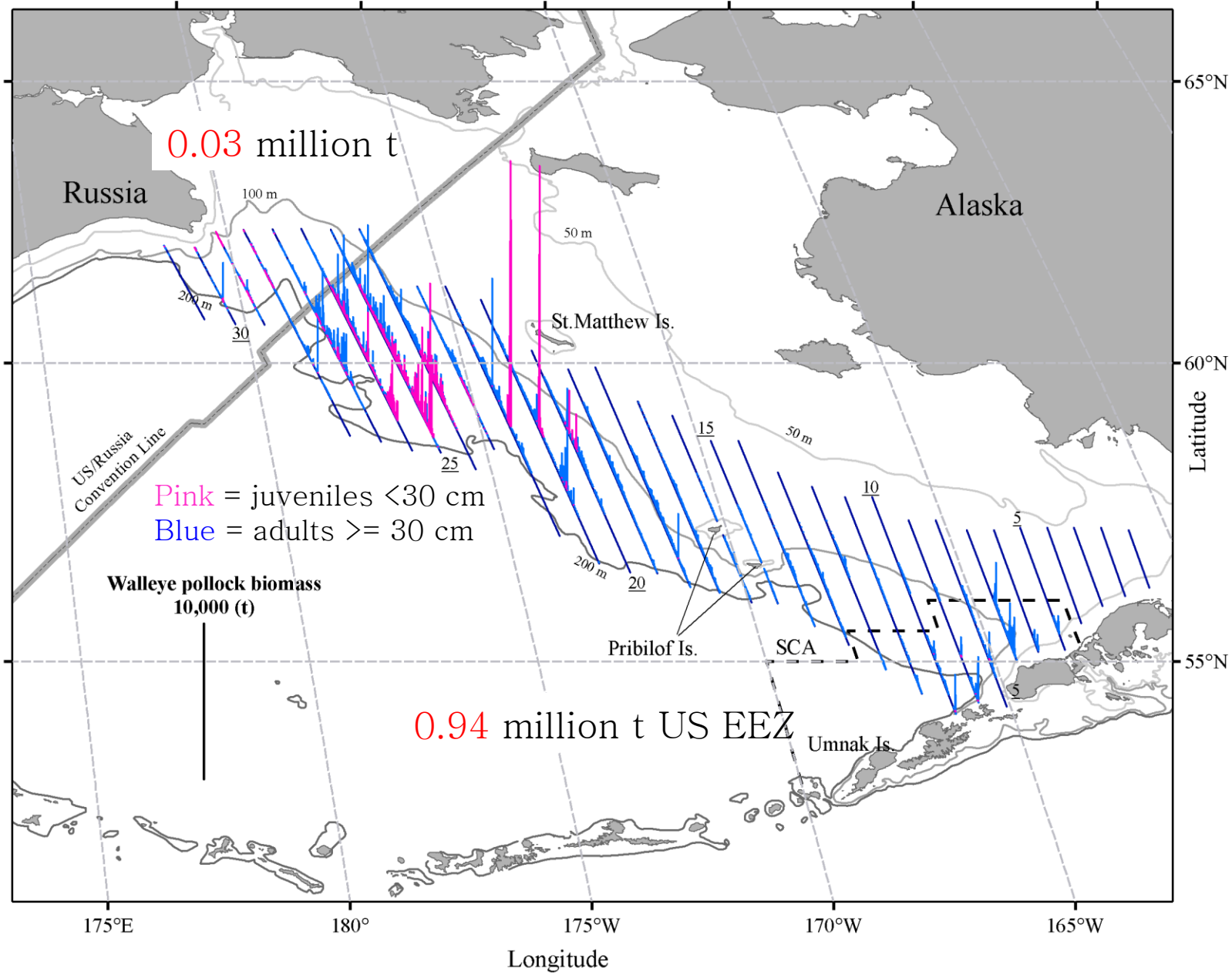


Figure x. -- Temperature measured using SBE-39s at trawl locations, CTDs and XBTs during the summer 2008 echo integration-trawl survey of the Bering Sea shelf.

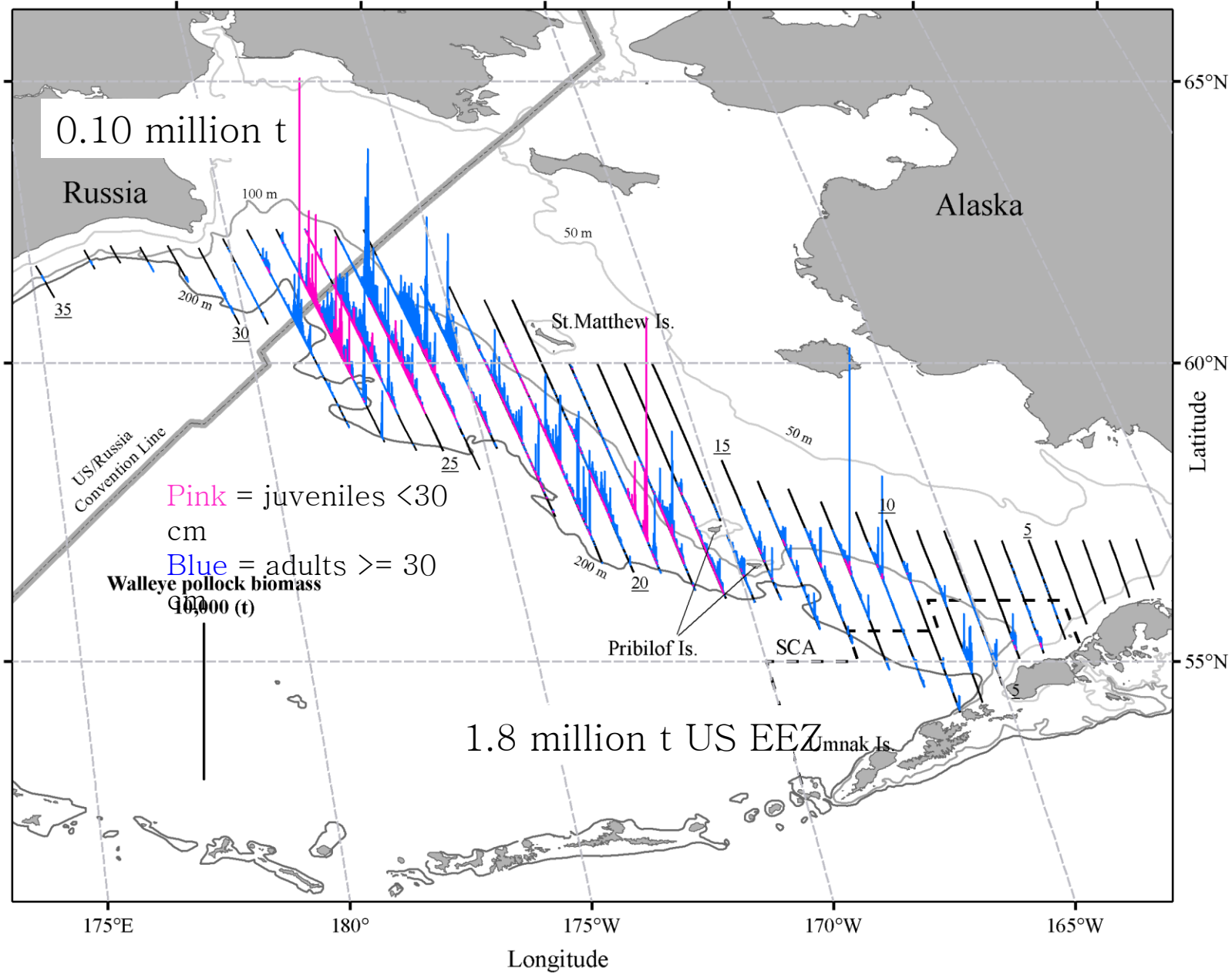
2008 pollock length distribution in midwater (near surface to 3 m off bottom)



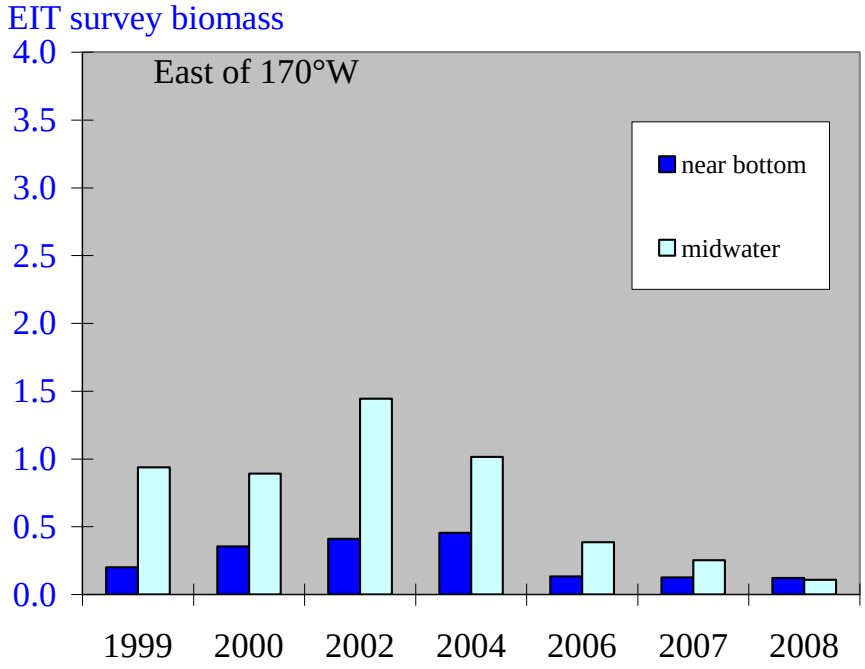


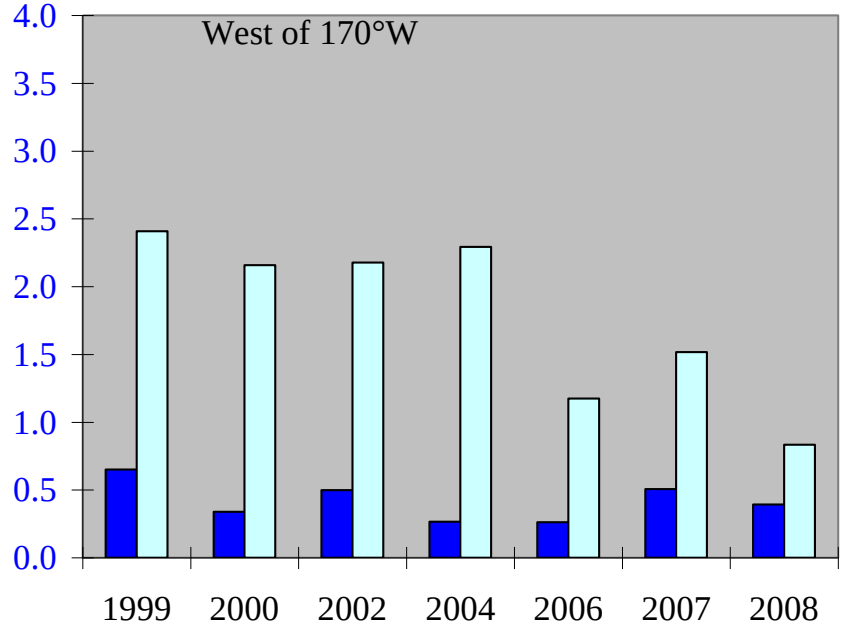
2008 EIT survey midwater pollock biomass

Area



2007 EIT survey midwater pollock biomass





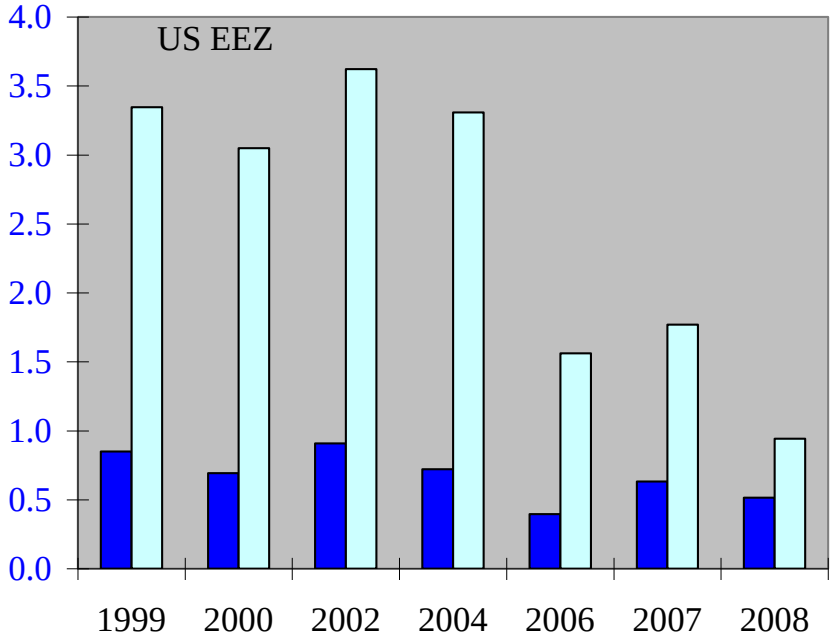


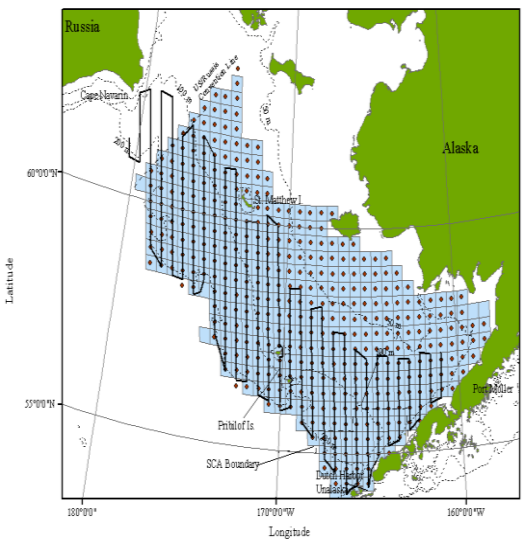
Figure X.--Estimated walleye pollock biomass in midwater (surface to 3m off the bottom), and near bottom (3 m to 0.5 m off bottom), east (a) and west (b) of 170°W, and in the US EEZ (c) during the 1999-2008 echo integration trawl surveys.

Summary of 2008 EIT survey results

- EBS summer shelf waters were cold –3rd cold year in a row (2006–2
- 86% of midwater pollock biomass was west of 170°W in the US, higher % than 2007 (81%); numerically dominated by age 2s
- 2008 US EEZ midwater pollock biomass was 0.94 million t, ~½ of 2007 biomass (1.8 million t)
- 2008 Russia midwater biomass was 0.03 million t, (2007 was 0.10 million t)
- Proportionally more EIT survey pollock biomass has declined in midwater than near bottom, compared w/earlier years

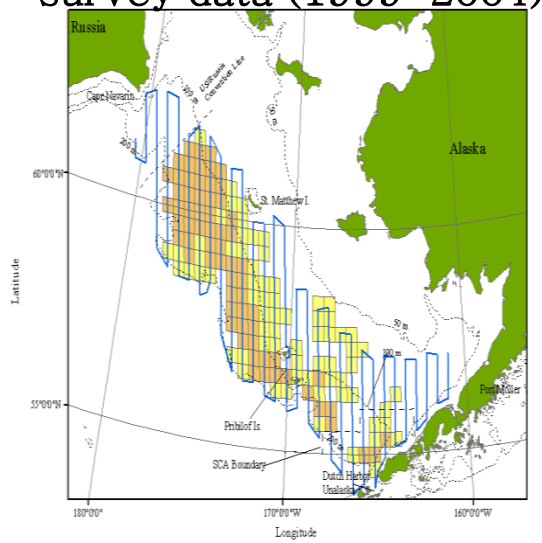
Using Acoustic Data From Vessels of Opportunity to Estimate Walleye Pollock Abundance in the Eastern Bering Sea

1. EIT and BT surveys overlap in space and time



Biennial EIT survey (black line) Annual BT survey (blue squares).

2. Index region defined from re-analysis of EIT survey data (1999-2004)



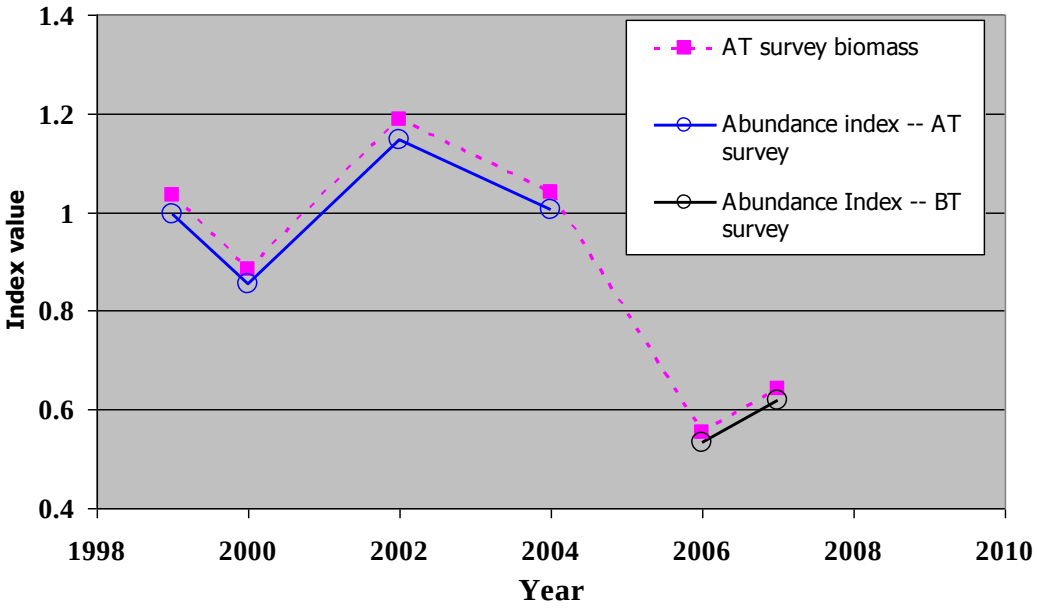
Orange: pollock
Yellow: pollock, other spp.
Blue line: EIT transects.

3. Acoustic data collected by chartered BT trawlers

F/V *Arcturus* (top)
F/V *Northwest Explor*
(bottom)

Goal: Derive ***annual*** midwater abundance index from BT acoustic dat

Results:
The BT acoustics-based index of pollock abundance agreed well with EIT (AT) survey results



BT survey index

EIT survey pollock