

**Project #: B91**

**Title: Eastern Bering Sea shelf crab and groundfish bottom trawl survey**

**Principal Investigator(s) and Recipient Organization(s):**

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**Contract Period and Amount of Funding:**

This survey is funded with in-kind money and will play a supporting role from 2008 to 2010 by providing biological and environmental survey data to other PI's being funded by BSIERP.

**Report Period:**

1 April 2009 through 30 September 2009

**Report Date:**

1 October 2009

**Lead Author of Report:**

Robert Lauth

**Proposed timeline and milestones within report period:**

- Charter two commercial fishing vessels to conduct a bottom trawl assessment survey of groundfish and invertebrate resources on the eastern Bering Sea shelf to complete standardized area-swept trawl survey of 376 sampling stations positioned within a 20 nm X 20 nm grid pattern; May-July 2009
- Edit survey data and generate standardized area-swept estimates of abundance for relevant invertebrate or fish taxa, and synoptic environmental dataset that includes profiles of light intensity, water temperature, and salinity for each trawl station; August-September 2009
- Prepare NPRB semi-annual report (Apr-Sep, due Oct 1); September 2009

**Project Summary:** The Alaska Fisheries Science Center conducts annual bottom (benthic) trawl surveys to monitor the condition of the eastern Bering Sea continental shelf epi-benthos. This survey is funded with in-kind money and will support BEST-BSIERP by providing biological and environmental survey data to other PIs in the program.

**Progress Summary:** Milestones for this period were met. The FV *Arcturus* and *Aldebaran* conducted 386 bottom trawls between 2 June and 18 July to complete the standard survey of the eastern Bering Sea shelf. Data collections included: 149,136 length measurements representing 45 fish taxa; 6,756 age structures representing 13 fish taxa; 5,622 stomach samples representing 19 fish taxa, and 1,370 pathobiology samples from 39 different fish and invertebrate taxa. Also collected was a synoptic environmental dataset that included profiles of light intensity, water temperature, and salinity for each trawl station. The FV *Aldebaran* made underway surface temperature, salinity, nitrate, chlorophyll and dissolved oxygen measurements during the survey. In addition, temperature and salinity profiles were collected from most of the bottom trawl hauls by attaching a CTD to the bottom trawl headrope. Survey data were edited and standardized area-swept estimates of abundance for relevant invertebrate and fish taxa were generated.

**Lessons learned and project adjustments:** Not applicable

**Integration activity:**

Physical and biological data and results were provided to the following BSIERP projects:

1. B60 Pollock and cod distribution
2. B62 Fish forage distribution and ocean conditions
3. B68 Retrospective analysis of patterns in productivity of fish, seabirds, and marine mammals in the eastern Bering Sea ecosystem
4. Ecosystem modeling

**Education and Outreach:** Not applicable

**Next year's Work plan:**

**BSIERP B91**, Eastern Bering Sea shelf crab and groundfish bottom trawl survey, Robert Lauth, [bob.lauth@noaa.gov](mailto:bob.lauth@noaa.gov), (206) 526-4121

**2009-2012 Tasks, Assignments, Timeline**

<i>What</i>	<i>Who</i>	<i>Start ( 2009)</i>	<i>Other key dates</i>
2010 eastern Bering Sea continental shelf crab and groundfish bottom trawl survey	<b>Lauth, Robert</b>	May-July 2010	Data delivery October 2010