

EVOSTC ANNUAL PROJECT REPORT

Project Number: 070830

Project Title: Trends in Adult and Juvenile Herring Distribution and Abundance in Prince William Sound

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Time period covered: Oct 1, 2008 to August 31, 2009

Date of Report: August 28, 2009

Report prepared by: Richard E. Thorne

Project website (if applicable): pwssc.org

Work Performed:

This is the third and final year of a project whose objectives were to provide information on abundance and distribution of key herring life stages and to provide a platform for biological collections for other EVOS TC projects. Two cruises have been completed each year in fall and late winter/early spring, a total of six cruises. Databases on basic abundance and distribution are available for all cruises.

Cruises

Two cruises were successfully completed during this third year: one in November 2008 and the second in March/April 2009. Both cruises had multiple components: a juvenile herring survey, marine mammal and bird census and a direct capture effort for biological samples. An adult herring survey was also conducted during the spring cruise. Areas covered for the juvenile herring portion of the cruises were Simpson Bay, Port Gravina, Port Fidalgo, Eagle Bay, Whale Bay, Sawmill Bay and Zaikof Bay (Fig. 1). Electronic copies of cruise reports are available for both cruises upon request. Analysis of data from the juvenile herring portion of the cruises is complete (See Fig. 2). Basic analysis of the spring 09 adult portion is completed and will be finalized when data on length weight is available from the complementary efforts of ADF&G. Preliminary analysis suggests an adult herring biomass of around 20 thousand metric tons.



Fig. 1. Transect track for juvenile herring cruises in November 2008 and March 2009.

Meetings attended

1. EVOS TC Herring workshop in Anchorage, December 9-10, 2008
2. Alaska Marine Science Symposium, January 18-21, 2009- gave two oral presentations on EVOS TC-sponsored research

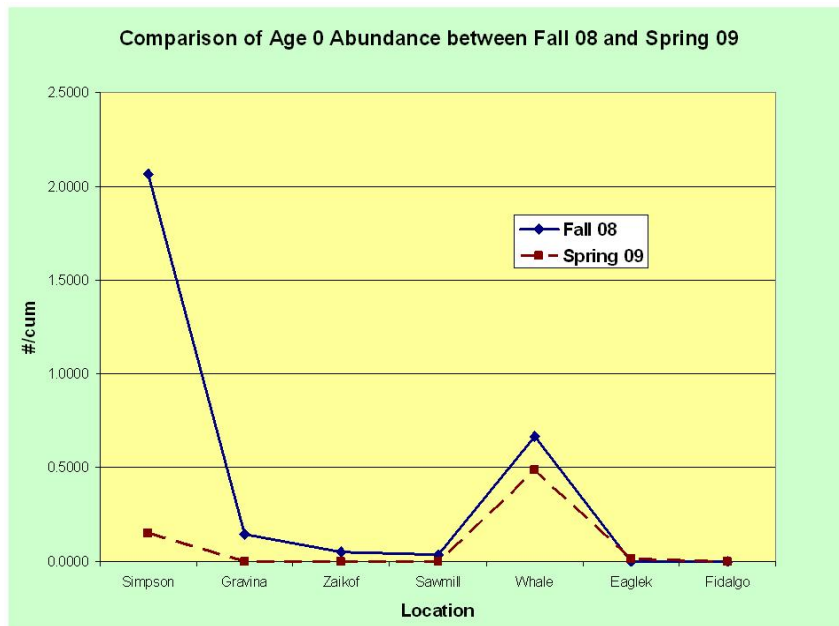


Fig. 2. Example of results from current year: a comparison of age 0 herring abundance at various locations in Prince William Sound between fall and spring.

Future Work:

No future cruises are scheduled under this proposal. Future field efforts will depend on the outcome of pending proposals. Effort during the next seven months will focus on further data analysis, integration and final reporting.

Coordination/Collaboration:

This project provided a platform for biological collections for other EVOS TC projects as well as synoptic seabird and marine mammal observations.

Community Involvement/TEK & Resource Management Applications:

We worked closely with ADF&G on surveys and samples. Local fishermen were used in vessel charters. We published articles in *The Breakwater*, the newsletter of PWSSC.

Information Transfer:

PWSSC webpage (www.pwssc.org) was updated with recent research activities. Databases for all juvenile surveys are completed and available. One related manuscript was published during the reporting period and is listed below. Several additional manuscripts are in draft form.

Frid, A., J. Burns, G.G. Baker and R.E. Thorne 2008. Predicting synergistic effects of resources and predators on foraging decisions by juvenile Steller sea lions. *Oecologia* 10.1007/s00442-008-1189-5, 12 p.

Budget:

Budget expenditures are proceeding near projections. Contributions toward vessel charters from associated projects (NMFS-funded) were higher than anticipated and may result in some minor deviations among categories (salary versus services), but no shortfalls are expected.