



Alaska SeaLife Center
w i n d o w s t o t h e s e a

**Development of culture Technology to Support Restoration of
Herring in Prince William Sound: Use of *in vitro* studies to validate
and optimize restoration actions**

Quarterly Report to the EVOS Trustee Council

Project 080821

Grant Period: November 15, 2007 through September 30, 2008

Reporting Period: January 1, 2008 – March 31, 2008

FY08 2nd Quarter

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Project Milestones

As revised and approved by the EVOS Trustee Council, the objectives are limited to:

Objective 1:

Plan and coordinate travel for Dr. Takahiro Matsubara and an associate or designee to travel to Alaska to attend the Marine Science Symposium in January 2008, participate in an EVOS Trustee Council sponsored workshop on herring stock restoration, visit the fish culture facilities at ASLC, the Seward Shellfish Hatchery and the U.S. Geological Survey (USGS) Marrowstone Field Lab (Nordland, Washington), tour potential stock restoration rearing and release sites in Prince William Sound (PWS) (e.g. Tatitlek), and meet with scientists and interested parties involved in the Prince William Sound herring restoration effort.

Tasks:

1. Contact Dr. Matsubara and arrange for travel to Alaska.
2. Dr. Matsubara will present at EVOS-funded herring workshop.
3. Dr. Matsubara will tour facilities at Seward and Tatitlek including the UAF Endocrinology Lab.
4. Dr. Matsubara will visit Dr. Paul Hershberger at the Marrowstone Field Station to develop hypotheses regarding the role of disease on reproductive function in herring and the potential implications for stock restoration in PWS.

Objective 2:

Conduct an assessment (survey) of yolk proteins and products in female herring that affect gamete quality and potential larval recruitment during the spawning cycle in PWS during 2008.

Tasks:

1. Submit Fish Resource Permit Application to ADF&G for herring collections in 2008.
2. Collect herring in PWS.
3. Sample herring and measure and characterize changes in yolk proteins, amino acids and bound calcium levels in the blood and developing eggs of pre-spawning and spawning herring during spawning cycle within Matthews Bay or alternative site determined by ADF&G.

FY08 Project Tasks

FY 08, 2nd quarter (January 1, 2008 – March 31, 2008)

March

Obj 1: Communications continue with Dr. Takahiro Matsubara. Travel for Dr. Matsubara and his colleague, Dr. Ohkohchi, is tentative for May 7-16. At this time, scheduled in collaboration with EVOS Trustee Council Executive Director, Michael Baffrey, all travel party members including grantees, EVOS TC staff and Executive Director, as well as Dr. Matsubara are tentatively scheduled to tour Dr. Paul Hershberger's herring disease lab at the USGS Marrowstone Field Lab in Washington state on May 12. This will be following by travel to Seward for tours of the ASLC and the Alutiig Shellfish Hatchery on May 14, including travel to

Tatitlek to inspect the shellfish facility at that location. May 15 will be reserved for a stakeholder/scientist workshop in Cordova, with final departure from Anchorage on May 16. PI and co-PI are in communication with *EVOS* TC Executive Director Michael Baffrey to finalizing trip plans.

March

Obj 2: Plans are finalizing for travel to PWS to collect herring. Travel will be timed to coincide with the PWS herring spawn. We will sample herring eggs, measure and characterize herring yolk proteins, amino acids and bound calcium in the blood and developing eggs. We will look for changes in these factors comparing healthy and stressed fish. We are communicating with Dr. Matsubara on details for developing a vitellogenin assay for this task. Charter vessel is standing by for herring collection.

Problems, issues or delays:

Details are falling into place and we anticipate a productive 3rd quarter toward meeting our objectives.