

## **AISWG Marine Subcommittee audio Conference: Tunicate Monitoring**

Monday, January 28, 2008, 9:30am

Hosted via NMFS bridge number. Minutes taken by Deena Jallen

### **Participants**

Kris Benson- AKDOT

Gino Graziano- Alaska Association of Conservation Districts, Wasilla

Judy Hamilton- KBRR, Homer

Ingrid Harrald- KBRR, Homer

Deena Jallen- UAF CES, Fairbanks

Cheri Murphy- AKDOT, Ketchikan

Whitney Rapp- Glacier Bay National Park and Preserve, Gustavus

Greg Ruiz- Smithsonian Environmental Research Center

Linda Shaw- National Marine Fisheries Service, Juneau

Chela Zabin- Smithsonian Environmental Research Center & University of California, Davis

### **Agenda: Items to discuss**

- Discuss ways to expand monitoring to the Alaska ferry system
- Set next meeting time
- Possible agenda items for next meeting

### **Additional Resources**

- Map of Alaska's Marine Highway with state owned terminals identified
- Contact information
- PDF with tunicate sampling and identification info

### **Discuss ways to expand monitoring to the Alaska ferry system**

Linda Shaw opened the meeting by introducing the participants, and having Greg Ruiz give an overview of the of the Smithsonian Environmental Research Center involvement with research on fouling organisms.

SERC's broad scale goal has been to get baseline data for what species are where, and to get a record of geographic patterns of invasions. SERC has worked on the east and west coast of the U.S. They have six sites in Alaska. The data gathered has shown a strong latitudinal pattern (few invasives at northern latitudes, more invasives in the south). This is somewhat misleading, in that these invasive species could survive in Alaska waters. The reason they are not here yet might not be due to environmental conditions, but to historical activities. The levels of shipping, aquaculture, and human population are still small in Alaska. In the last 5 years, however, the SERC sampling has picked up a number of new tunicates in Southeast Alaska. Hopefully the data collected can help to show the risk of invasion, and how invasions will take place.

SERC tunicate monitoring has been the genesis of the citizen scientist and tunicate plate study. It is modeled after previous surveys. The sampling involves putting out a substrate to see what colonizes on it. The study looks at the diversity of species present, and detects new species. Part of the sampling also looks at the environmental and biological nature of communities in place using networked resources, and volunteers. In the last 10 years, there has been more curiosity about invasive species, and more people have wanted to get involved. Greg Ruiz and SERC thought it would be worth using volunteers to do data collection. Over the last two years, they have gotten a lot of good information from the process of setting out plates, retrieval, and photography of the plates. They are mostly looking for species that are conspicuous. SERC would like to include more environmental data (deploy data loggers along with the settling plates), but time commitment is a factor for citizen monitors. SERC would also like to increase the numbers of sites being sampled, especially in Alaska, but also more sites in California, Oregon, Washington, and British Columbia. In addition to increasing the number of

sites monitored, SERC would like to increase connectivity and connection among sites. SERC has submitted a proposal to Sea Grant to go in those directions, and plans to pursue additional funding. SERC has a commitment to a long term relationship with interested participants to continue monitoring.

Chela Zabin added that there have been 10 sites with plates in Alaska (more if add in the ones in Kachemak Bay). They currently have 3 sites in California, and SERC would like to continue doing quarterly monitoring. They are getting good at distributing instructions and materials. It should be easy to add new people and sites using the established protocol. Greg Ruiz said that they are looking into adding and improving online resources and a web based interface. This would serve as a better conduit between the researchers and monitors, and among the monitors.

(Currently there are 10 plates deployed in Glacier Bay (Gustavus), and 20 in Juneau; 10 plates at the cruise ship dock and 10 at Harris Harbor).

### **Tunicate monitoring in conjunction with Alaska DOT**

Linda Shaw said that in conversations with the AISWG marine subcommittee, the Alaska Department of Transportation and Public Facilities (AKDOT) Marine Highway System was identified as a good platform/partner for tunicate monitoring. One purpose of this teleconference is to flesh out how to make that partnership with DOT work. There are unique considerations for working with the marine highway ferry system.

Kris Benson from AKDOT helped to fill in some of the conditions that would have to be met. If people other than state DOT personnel were to put out tunicate sampling plates, they would need to coordinate with ferry terminal managers. Kris can provide a list of managers and contact information. They would also want plates placed towards shore, to avoid the possibility of them being sucked into thrusters. Cheri Murphy, the AKDOT Ferry Terminal Operations Manager is on board with coordination efforts, and called in to identify what is needed to do the monitoring.

One consideration is deploying plates from fixed docks. Most of the ferry system docks are fixed (as opposed to floating). Normally, tunicate plates hang from 10 foot lines deployed from floating docks, and are always 10 feet below the surface. For the fixed docks, longer lines would be needed to make sure that the plate is always at least 1 meter under water, even during low tides. Chela Zabin said that she would be able to help with developing protocol for fixed docks.

Cheri also pointed out that not all of the docks are owned by the state ferry system. Some docks are owned by city or tribal governments, and some docks are managed by contractors who are non-DOT personnel. Cheri will work on getting an undated shoreside directory with the most recent phone contact information.

Participants in the call agreed that it would be best to start with the state owned docks (see Additional Resources for map). Greg Ruiz will take a look at the geographic distribution of the state owned docks to see if they overlap with areas of interest for potential green crab habitat. Cheri will talk to the state ferry terminal employees. She feels that they will be on board with doing the monitoring.

Kris Benson pointed out that the time commitment of 3-4 hours for sampling might be a problem. Greg Ruiz clarified that the estimate of 3-4 hours would only occur quarterly, and would be an upper estimate. His crew puts out 5-10 plates in a location in about 3-4 hours, but they have set out thousands of plates. Whitney Rapp has set out several plates in Glacier Bay, and estimated that it took about 3 hours at retrieval. She found it helpful to have someone to take notes, so she would not have to keep drying her hands while examining the plate and entering data. She estimated it took a total of 5 hours in a 3 month period, which included having a system for cleaning and storing the plates.

Other considerations include distributing the plates. Greg Ruiz has been



Tunicate plate attached with zipties to the bottom of a brick.

working towards having a system where they send out a package by mail with plates, cable ties, and lines. People then obtain bricks locally, assemble the plates, and deploy. It might also be possible to send bricks on the ferries, but they would have to be accompanied, or other arrangements made for transport. Deena Jallen asked if there are alternatives to bricks, such as fishing weights, or jugs filled with rocks. Bricks are not always locally available in Alaskan communities. Greg Ruiz said that they would like to use bricks for their uniformity. Other weights could be used, but it becomes difficult to write out a standardized protocol.

SERC employees can't travel to all the sites, but may be able to go to some, and will be available to answer questions. There are folks in several places who would also be available to help (Juneau, Homer, Glacier Bay). Whitney Rapp said that she found the protocol very easy to follow, and would not require a lot of experience to successfully implement it.

Most of the ferry terminal sites would be of interest, but monitoring will depend on logistical concerns. Cheri Murphy suggested starting with the ferry dock in Ketchikan. Gary Freitag is in Ketchikan, and has recently started a position with Sea Grant. Kris Benson and Cheri Murphy will look into setting up tunicate monitoring in Ketchikan with Gary Freitag in March, with the goal of being able to expand to more ferry terminal sites in June if things work out. Greg Ruiz will look at the ferry system map and pick sites that represent gaps in sampling areas.

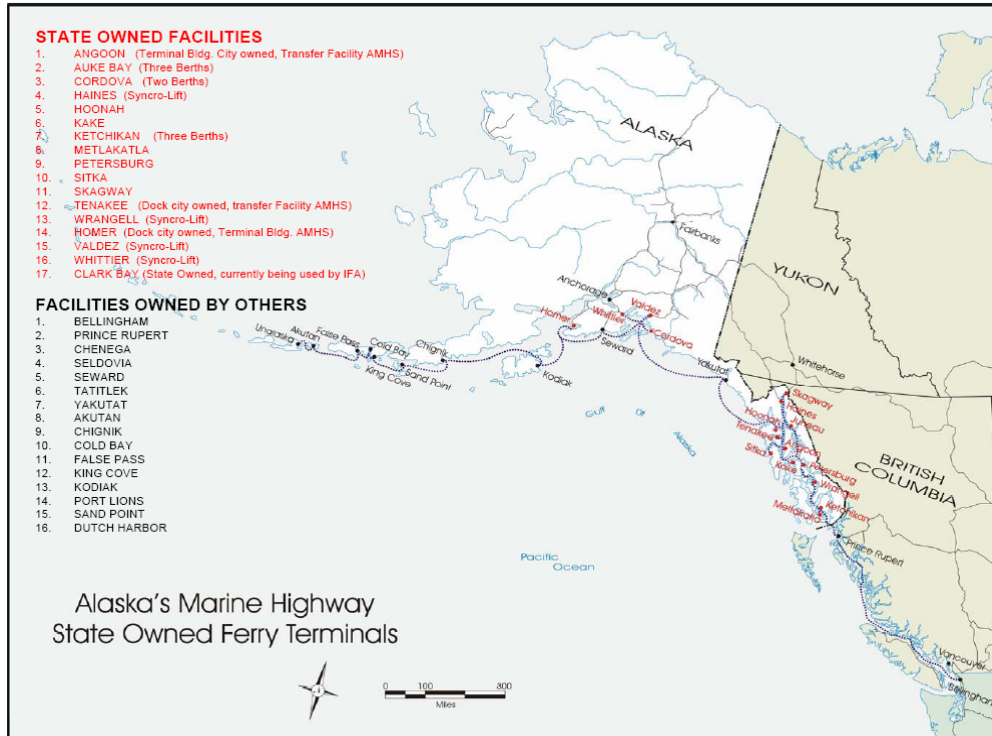
Linda Shaw said that the tunicate sampling would lend itself well to public education. She would like to have a poster or display that could be set up on ferries, ferry terminals or at sampling sites to help educate the public about invasive species. It might also be interesting to have a 'brick cam'. Footage could be edited together to show a time lapsed series of settling organisms.

#### **Next Tunicate teleconference**

February 19, 9:30 am

To attend, call into 907-586-7977. Allow line to ring until another party picks up, long distance charges apply.

#### **Additional Resources**



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