

Alaska Invasive Species Working Group: Marine Subcommittee audio Conference

October 11, 2007

Hosted via NMFS bridge number

Participants

Kris Benson- AKDOT

Daniel Doolittle- KBRR, Homer

Deena Jallen- UAF CES, Fairbanks

Ingrid Harrald- KBRR, Homer

Judy Hamilton- KBRR, Homer

Lisa Ka'ahue- PWSRCAC, Anchorage

Linda Shaw- National Marine Fisheries Service, Juneau

Joan Tovsen- UAA/UAF, Anchorage

Agenda: Items to discuss

- Update on invasive species activities
- Set next meeting time
- Possible agenda items for next meeting

Update on Invasive Species Activities

Joan Tovsen is doing graduate work in Northern studies with UAA and UAF online. She is looking at cruise ships as a driver of tourism. Alaska is currently the # 2 destination in the world for cruising (Caribbean is #1). Cruises are a form of 'soft tourism' and are increasingly popular with baby boomers. The ships often come from warm waters to Alaska, and carry organisms in their ballast water. Another issue with cruise ships is blackwater (sewage) discharge. The ocean ranger program has encountered political snags and provisions. The cruise ships have sophisticated processing systems for blackwater, but don't always turn them on. The ships are essentially dumping fertilizer into Alaskan waters. The impact this has on invasive and native species is not known. Joan is also looking at emergency preparedness issues with cruise ships.

Linda Shaw wondered if studies have been done on comparing the quantities of discharge from oil tankers vs. cruise ships. To some extent, the attitude becoming conventional wisdom is that 'cruise ships aren't as bad as oil tankers'. Joan said that the numbers of cruise ships have greatly increased since 2000. The oil tankers are another issue, they go to California, and could pick up invasive species there in ballast water.

Judy Hamilton from Kachemak Bay Research Reserve has been looking at a Sea Grant proposal call. They will be putting in a request for hull fouling research. The tunicate plates placed earlier in the year were recently picked up. The KBRR was able to go through the actual processing protocol for the plates. So far, they have not found anything suspicious, and have been looking for a caprellid amphipod that was found in Homer several years ago. The KBRR has a new education and outreach coordinator, Ingrid Harrald. Ingrid will be working on community monitoring projects in the bay. She will be the point person for groups doing green crab monitoring. Tunicate plates were also deployed in Juneau, and Linda Shaw will contact Lance Lerum about them.

Linda Shaw attended the 15th International Conference on Aquatic Invasive Species in Nijmegen, Netherlands, and moderated a session on risk assessment. The ICAIS is one of the oldest aquatic invasives conferences. Conference attendees also went on a walk on the River Waal. All the rivers in continental Europe are connected by canals, going all the way back to the Caspian and Black Seas. The Caspian and Black Seas are the source of zebra mussels, which eventually spread through the European rivers and canals and then were carried by ballast water to the Great Lakes. On a tour of the banks of the River Waal Linda said that it was amazing how invaded the water systems were. She saw zebra mussels, two Asian clam species, and mold casts from Asian mitten crabs. Invasive species had become the predominant species in the areas, which was a contrast to Alaska, where native species still dominate ecosystems. In sampling a tributary of the River Waal, they caught invasive Chinese breeling, and spiny cheeked crayfish. The 'take home' message was that Alaska does not want to end up like Europe. All the ecosystems there have been altered for so long, that the beginning state is lost. At least in Alaska, we have the luxury of knowing what the undisturbed ecosystems mostly look like. Also in England and Scotland (on a personal

side trip) , she spotted Alaska fireweed, and a presenter in her session reported that in Ireland, a nursery is marketing skunk cabbage (as a wet tolerant ornamental), which is native to Southeast Alaska. Linda and some of the other conference attendees felt that papers on control methods were lacking. Europe is not doing much to actively control invasive species. However, there was one interesting paper on 'bio-bullets' from a Cambridge researcher. The study involved encapsulating potassium chloride in such a way that it was taken up by zebra mussels in their diet. The 'bullets' would then dissolve, and release the chemical. Other methods of killing zebra mussels involve broadcast release of chlorine, which affects all the organisms in the area. The bio-bullets were more targeted; the native mussel species did not recognize them as food, which made the method more species specific. Linda and some of her colleagues were musing about the possibility to use such a control method on invasive tunicates.

ICAIS attendees also toured Rotterdam, the 2nd largest port in the world (Shanghai is 1st). Rotterdam does not have ballast water regulations like USA ports do, where ships traveling from outside of the exclusive economic zone (EEZ) are affected by ballast water regulations. Rotterdam is waiting for the International Monitoring Organization (IMO) to do something and put regulations in place.

Also at the ICAIS meeting, Linda was able to discuss some funding priorities regarding Spartina monitoring and training with some NOAA higher-ups. Rapid response plans for green crab, Spartina and tunicates are needed in Alaska, and NOAA may be able to involve the AISWG in some of those efforts. Dan Gilson from PWSRCAC attended ICAIS, and gave a talk about green crab monitoring.

Kris Benson from AK DOT asked about setting up tunicate monitoring at ferry terminals. Linda Shaw said that she will look into setting up monitoring over the winter, and identify who should be involved in a conference call to discuss the matter. Judy Hamilton recommended contacting Greg Ruiz from SERC (Smithsonian Environmental Research Center). The project would be targeted for setting out plates in the spring. Chris Benson will look into getting someone directly from the Marine Highway program involved in the planning.

Lisa Ka'ahue reported that they are negotiating a contract with the University of Washington to do some baseline hull fouling research. They would like to sample marine ferries in Bellingham, and PWSRCAC has been asked to find a contact in Alaska for other ferries. Lab work would likely be done at the University of Washington at their labs. The contract is currently in phase one, and is going out for bid. They will be doing a literature search regarding traffic in Prince William Sound, and identifying the greatest source of invasive hull fouling species and standardizing sampling methods. PWSRCAC will attempt to identify which sources pose the greatest risk (tankers, barges, ferries, etc.) Judy Hamilton said they have been looking into a pilot study on hull fouling for Sea Grant by sampling hulls from fishing vessels coming to Kachemak Bay for the summer from out of State, and comparing vessels that are resident vs. transient. The KBRR will be doing that sampling on its own. Lisa said that she expects phase two of the project will involve a broader sampling effort, which will be expensive and need more participants. Such work may also tie into Joan Tovsen's projects. To clarify, the ballast issues would not apply to the ferry system, as their vessels don't carry ballast, but they could be a source of hull fouling organisms. Kris Benson will look into finding a contact person for hull sampling efforts.

Linda Shaw closed the meeting by saying that after coming back from Europe, it is very encouraging to see how Alaska is doing on problem solving, dealing with issues, and intervening before things become big problems. Hopefully next summer, they will do more training on invasive species management, and also implementing additional proactive habitat monitoring programs tied into community monitoring efforts.

Next Meeting for the AISWG Marine Subcommittee:

The next meeting is scheduled for 9:30 am, Thursday November 8th.
Call in number: 907-586-7977 (allow line to ring until another party picks up, long distance charges apply)

Additional Resources

<http://www.icaais.org/>

International Conference on Aquatic Invasive Species

<http://www.icaais.org/pdf/program07.pdf>

preliminary program