

Invasive Tunicate Monitoring

2016 Progress Report

The main goal of invasive tunicate monitoring is to detect invasive tunicates as soon as possible, should they arrive.

This is the 11th year KBRR has checked settling plates for marine invasives. We have not detected any invasive species, but wondered if our native species had changed over time. See page two.



Catie and Rosie surveying on Hesketh Island on a -5 low tide.

Invasive species bill

One harbor in Sitka has been dealing with the invasive tunicate *Didendum* for quite a few years now. Lessons learned from this eradication effort have led to House Bill 38, which was voted in by the House of Representatives in March 2016. Rep. Paul Seaton introduced this bill that would help keep invasive species from being moved around to other Alaskan coastal areas on fishing or mariculture gear. The bill still needs to be passed by the senate and signed into law by the governor.

Visual surveys result in no invasives found in 2016...Settling plates from **Homer Harbor** and **Seldovia Harbor** produced no invasive species. **NW Hesketh Island** was surveyed for a suspect invasive tunicate found in 2013. We have since learned it is not invasive. **Kasilof** setnet lines were surveyed thanks to Rosie, Tim Osmar & crew. No invasive species were found. The **Fury jackup rig** was surveyed while tied up to the deep water dock in Homer, no invasives species were found alive on board. APU students surveyed with scuba gear in **Little Jakolof, Seldovia Harbor, and Halibut Cove** and did not find any invasives present. A suspect tunicate report came in from Erin McKittrick on **Seldovia's Outside Beach**. We were able to perform a survey and send samples to experts. The experts were able to determine that it was a native from the genus *Polysyncranton*, but are still unsure of the exact species. For detailed reports on each of these surveys, contact cmbursch@alaska.edu



Native species, *Polysyncranton* sp., found on Seldovia Outside Beach looks a lot like some of the bad invasives.



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Can SERC Settling Plates reveal invertebrate community responses to changing ocean conditions over time?

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2007



2015



CONCLUSION

The plates were dominated by *Distaplia alaskensis* (a tunicate first discovered in Kachemak Bay,) *Hydroid spp.*, and algae. Other organisms, such as *Bugula neritina* and encrusting bryozoans, were also observed, but in small amounts. Water temperature data revealed an average water temperature increase over time. Our preliminary study of settling plate photos in Homer Harbor across eight years and higher temperatures did not reveal significant changes, but a visual survey does reveal some changes in tunicate size, which may have phenological implications. This study was primarily investigative and meant to develop protocol. It was small in scale, involving only 18 settling plates, and will be broadened in the near future.

This scientific poster was shortened for visibility. For complete poster, contact Catie Bursch



Marine Invasive Species!



Prevent the Spread of Marine Invaders!

-  CLEAN
-  DRAIN
-  DRY



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The pictured invasive sea squirt, *Didemnum vexillum*, (Dvex), was found in Whiting Harbor in Sitka.

In suitable environmental conditions it can spread over boat hulls, docks, pilings, and other hard surfaces, as well as seafloor substrate. This invader can also smother algae, sea grasses and slow moving organisms such as clams, oysters, mussels, and other invertebrates.

Photo credit: NOAA, 2010



Marine invasive species are non-native plants and animals that can harm ecosystems that support native species. By crowding out native species, these invaders can negatively impact the marine environment. Non-native marine species are most commonly introduced in places with high human traffic, such as boats and harbors. Marine invaders hitchhike on infrastructure transported from these locations causing their spread. A few simple steps can help protect our Bay and ensure marine invaders do not take over:

- **At a minimum, DRY by storing above high tide for 3 weeks;**
- **If possible, CLEAN (scrape or power wash) plants and animals from all equipment away from the water and dispose in the garbage at an upland site;**
- **DRAIN water from any reservoirs.**

Clean, drain, and dry. Every time.



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