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Colonial sea squirts invade Alaska

Commonly known as sea squirts, colonial tunicates are effective invaders of the marine environment and can have serious impacts on natural habitats, biodiversity, and economic activities. The colonial sea squirt, *Didemnum vexillum*, also called marine vomit, was found in Sitka waters. This nonnative tunicate grows on natural substrates such as rocks and gravel seabeds, as well as seaweed, mussels and oysters. It also colonizes man-made structures like docks, boat hulls, lines and nets. The aggressive growth of this invasive tunicate may alter fisheries resources and the habitats that sustain them.

- *D. vex* is expanding across the offshore fishing grounds of Georges Bank off the New England coast.
- When tunicates foul aquatic farm gear, defouling activities result in increased handling and increased product costs.
- Populations of *D. vex* on the Pacific coast of the U.S. may be sources for further expansion to Alaska.

An invasive colonial sea squirt, *Didemnum vexillum*, was found in Sitka's Whiting Harbor in June 2010. It grows over a variety of surfaces, such as docks, boat ramps, boat hulls, rocks and gravel seabeds, as well as pliable substrates such as nets, rope, kelp, and other native organisms. It can encrust nonmobile marine animals such as mussels and oysters.

Tunicate profile

Description: *D. vex* may be orange, pink, yellow, tan or cream. Its surface has visible veins with small pores. The texture of the sea squirt is smooth, like firm gelatin, and is somewhat leathery rather than slimy. Mature colonies can form large, pendulous lobes that resemble tendrils of dripping wax or may form extensive undulating mats with short lobes when growing on the ocean floor.

This invasive tunicate is tricky to identify, and may easily be confused with colonial sea squirts or sponge animals that naturally occur in Alaska.

Habitat: Primarily found along inshore coastal areas, *D. vex* typically grows on submerged hard surfaces including docks, pilings, and rocky ocean bottoms. In Sitka it

has been found growing in the intertidal zone. It can tolerate a wide range of water temperatures and environmental conditions.

Reproduction and dispersal: *D. vex* is a particularly strong invader in part because it is capable of reproducing sexually and asexually. When fragments detach from a parent colony they are viable and can reproduce as long as suitable habitat is available. This characteristic is especially concerning because cleaning infested boat hulls or aquatic farm gear into or near the marine environment can easily result in spreading this invasive sea squirt.

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What can I do to stop the spread of aquatic invaders?

Be observant. Report any animal or plant you think is unusual and may be a pest, PLEASE DO NOT TAKE A SAMPLE! Instead, note its location (take GPS points if you can), take a photo, and immediately phone the Alaska Department of Fish and Game Invasive Species hotline at **1-877-INVASIV** or email tammy.davis@alaska.gov.

Avoid infested waters—avoid Whiting Harbor. If you have visited an area known to be infested with an aquatic pest, inspect anchors, ropes and chains before leaving the area and dispose of any unusual plants or animals in a sealed container in a trash can. Let lines and anchors dry completely or rinse thoroughly with fresh water.

Keep your vessel hull free of fouling. Don't let pests hitchhike to a new location. Maintain antifouling treatments to your vessel hull, if appropriate. Do not conduct any hull-scraping in the water. Use a dry dock or other facility where the fouling material can be collected and disposed of in an upland area or landfill.

Don't move contaminated gear. Pieces of dock, barges, and other materials that are stored in the water can easily be contaminated with invasive species. Do not move pieces of dock without first having dried them out completely or decontaminated them.

Decontaminate your gear. Use plenty of fresh water, away from saltwater or let it dry out completely.

Remove colonial tunicates manually from your gear. Dispose of tunicates in a garbage receptacle or let dry completely. If pressure washing of aquatic farm gear cannot be avoided, only do so on land and make sure the outflow does not go into the sea.

Educate a friend about invasive species.

Learn about your local marine habitats and the organisms they support. Learn about invasive species that threaten your local areas and share information with others.

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Invasive Species **ALERT:** COLONIAL SEA SQUIRT

