

ALASKA DEPARTMENT OF FISH AND GAME

NEWS RELEASE



Denby S. Lloyd, Commissioner
Charlie Swanton, Director

Contact:
Tammy Davis, Project Leader
Invasive Species Program
Phone: (907) 465-6183
Fax: (907) 465-2772

Division of Sport Fish,
Headquarters
P.O. Box 115526
Juneau, Alaska, 99811-5526
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Invasive Tunicate Found in Whiting Harbor, Sitka

This June in Sitka, as a precursor to an invasive species BioBlitz, the Alaska Department of Fish and Game (ADF&G) along with scientists from NOAA/NMFS, Sitka Tribe of Alaska, University of Alaska, Southeast, Sitka Sound Science Center, and invasive species experts from the Smithsonian Environmental Research Center (SERC) and San Francisco State University, Romberg Tiburon Center (SFSU-RTC) visited Whiting Harbor to look for marine invasive species.

One regrettable find has recently been confirmed by genetic analysis run by SFSU-RTC to be a harmful, highly invasive colonial tunicate, *Didemnum vexillum* (*D. vexillum*), a colonial ascidian or sea squirt. Where present, this species is a notorious fouling organism on boats, fishing nets, docks, buoys; its ability to rapidly grow, encrust aquaculture nets, shellfish beds, and sensitive marine environments makes it a species of high concern. This organism can spread by sexual reproduction and fragmentation.

This colonial tunicate can vary in color from cream, to tan, white or yellow. Preferring to colonize manmade surfaces, when *D. vexillum* is found on hard substrates such as docks, mooring lines and ship hulls it may appear to have dripping, bulbous, finger-like tendrils. When growing on the seafloor it may appear as irregular, low growing mats with a folded appearance, and can encrust rocks, sand, kelp, and a variety of living organisms.

D. vexillum is known to have negative effects on marine environments. ADF&G is concerned by this invasive species' potential to interfere with commercial, recreational and subsistence fishing, aquaculture, and other coastal and offshore activities. It aggressively grows over bivalves, other sessile invertebrates, and benthic organisms and may suffocate them or interfere with their growth. It has no known predators. Native species that rely on these organisms for food and/or habitats for reproduction can be significantly impacted when *D. vexillum* is introduced to the ecosystem.

D. vexillum has been present in British Columbia and Washington for several years. It was found on the coast of Oregon this May. Between 2007 and 2009, Washington State Department of Fish and Wildlife spent \$850,000 managing the tunicate invasion in Puget Sound. Success of control and eradication efforts has been costly and inconsistent.

There are several pathways for introducing *D. vexillum*, that include ballast water; fouled boat hulls (commercial, recreational, barges, etc.); relocating fouled piers, pilings, floats, and docks; fishing equipment, and aquaculture gear and product moved from infested areas to new environments. Local spreading can occur through natural pathways that include water currents and hitchhiking on mobile organisms.

ADF&G is working in partnership with University of Alaska, federal, tribal, and non-profit agencies in Alaska and with invasive species experts at SERC and SFSU to continue to evaluate the extent of the tunicate distribution at Whiting Harbor and to coordinate rapid response efforts in the greater Sitka area. SFSU will continue genetic analysis of the *D. vexillum* detected in Alaska with hopes of understanding how it is related to other populations of the species found in marine and estuarine environments on the west coast of the U.S. and Canada.

If you believe you have seen this colonial tunicate, please take a picture of the organism and call the invasive species hotline: 1-877-INVASIVE or contact Tammy Davis directly at (907) 465-6180 or tammy.davis@alaska.gov .