

# WATCH OUT!

## *America's Least-Wanted Are on the Prowl*



In California, **European green crabs** have eaten about half of local Manila clam stocks. If these non-natives invade Puget Sound at high densities, it could cost up to \$26 million and more than 800 jobs. (Photo by Greg Jensen.)

Aquatic invasive species are non-native freshwater or marine plants and animals that cause harm to native plants and animals and their habitats. Controlling these invaders can cost our nation's economy billions of dollars each year.

How do these harmful organisms get here? Some are released by people who discard unwanted aquarium, classroom or water garden pets or who dump their leftover live bait after fishing trips. Others are transported in the ballast water tanks of large ships or on propellers and hulls of pleasure boats. In the past, a variety of species hitched rides with packing materials from seafood suppliers on other coasts.

Most introduced plants and animals do not thrive in our waters. They may go unnoticed and cause no real harm for decades. However, ones that *do* survive can cause major damage to the environment and our economy.

Many non-native species are either established in Puget Sound or have been seen nearby. It's nearly impossible to get rid of an aquatic invasive species once it's well established. For this reason, it's important that we all do our parts to keep unwanted plants or animals out of our waters in the first place:

- Remove any visible mud, plants, fish or animals from your boat and its trailer. Clean and dry anything that came in contact with water — including scuba and fishing gear, clothing, boots and pets.
- Try landscaping with native plants instead of non-native ornamentals. Ask horticulture professionals or Master Gardeners if the ornamentals you are interested in have the potential to become invasive.

- Find new homes for any unwanted fish, plants, birds and other pets or return them to a local pet shop for resale or trade.
- Volunteer to monitor the coastline ([vmp.bioe.orst.edu](http://vmp.bioe.orst.edu)) or just keep an eye out and report any sightings of aquatic invasive species. Call the Aquatic Nuisance Species Hotline, 1.877.STOP.ANS, or Washington Sea Grant, 206.543.6600 or [seagrant@u.washington.edu](mailto:seagrant@u.washington.edu).



[wsg.washington.edu](http://wsg.washington.edu)

This poster is a cooperative project between Washington Sea Grant and WSU Beach Watchers of Snohomish County. Based at the University of Washington, Washington Sea Grant works with communities and businesses to manage and protect marine resources. It is part of a national network of 30 Sea Grant colleges administered by the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

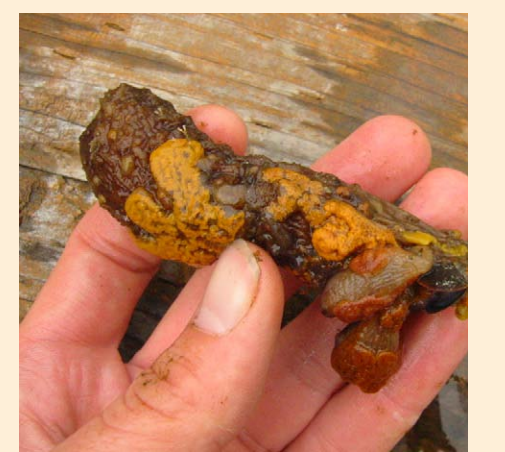
Varnish clams probably arrived in ships' ballast water during the late 1980s. The clams are established on many northern Puget Sound and Hood Canal beaches, sometimes in densities exceeding 800 per square yard. Large numbers are often found in areas bathed in freshwater runoff.



*Spartina* is valued on its native East Coast for its erosion-controlling traits. However, along our coasts, this introduced cordgrass can transform productive Northwest mudflats and eelgrass beds into marshes. By changing the landscape and displacing native species, it threatens our region's rich habitats for shellfish, fish, birds and mammals. An effective *Spartina* control program is now in place.



Club tunicates are also called "sea squirts." This particular kind came from Korea or Japan, possibly as stowaways aboard ocean-going vessels. Now well established in some Pacific Northwest marinas, club tunicates can be carried from marina to marina on the hulls of smaller boats. They grow like weeds, out-competing native species and spelling disaster for Washington's shellfish farmers.



Left unchecked, *Spartina* can shape shorelines and nearshore areas into meadows of non-native grass.

