



# Invasive Tunicate! (*Didemnum cf. lahillei*) in the Pacific Northwest

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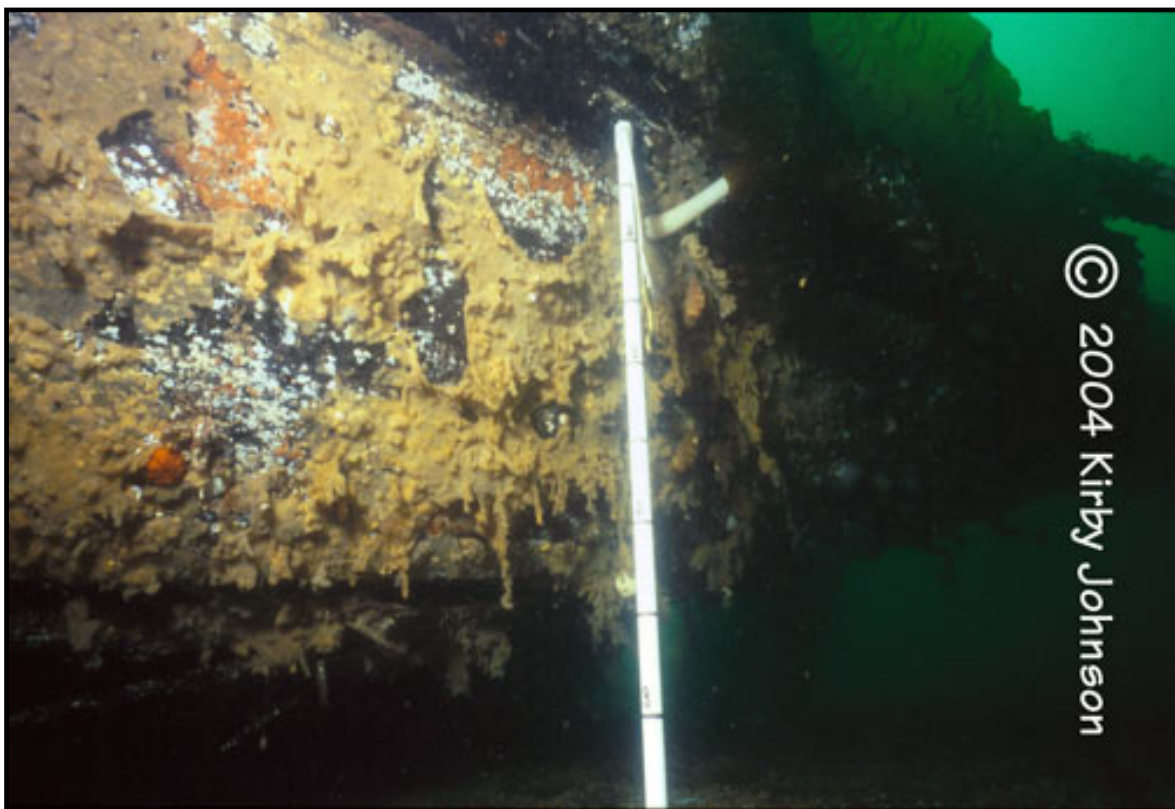


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Report your sighting to:

Scott Smith [smithsss@dfw.wa.gov](mailto:smithsss@dfw.wa.gov) (360) 902-2724 or

Pam Meacham at [meachpmm@dfw.wa.gov](mailto:meachpmm@dfw.wa.gov)  
(360) 902-2741



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## What is this critter?

The species we are concerned about is *Didemnum cf. lahillei*. It was originally an European species and is now found in New England and California. **But most alarmingly has been found recently in Edmonds Underwater Park!** It was likely transferred to Puget Sound in ballast water. (The "cf." in the Genus/species name means that we do not yet have molecular data to prove it's this exact species, but it imitates it closely in characteristics at this point.)

## What's the problem?

Recent findings of these colonial tunicates were at Edmonds underwater park. First spotted back in March 2004 by NOAA employee and marine biologist Kinsey Frick (who had seen this nasty critter in full swing on the East Coast), then grew rapidly by October.

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### What's the big deal?

Didemnum cf. lahillei is a non-native, colonial tunicate species that is an aggressive invader and a threat to a variety of marine life including our commercial shellfish fisheries. It has no natural predators in our area, since it creates metabolic toxins, and grows rapidly in size, taking over underwater real estate and smothering out other native species. It has also invaded other areas, including the East Coast, where it's a huge problem.

### How can I help?

The WDFW is anxious (and everyone should be) to determine how widely this pest has spread and if there might be a chance to contain it before it takes a firm root in our waters. We are asking all recreational divers to keep an eye out for it and then report it! **Early efforts to isolate and treat the tunicate in the Pacific Northwest have been very effective, and prompt action is critical!**



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### What should I do if I see it?

**Report your sighting to:**

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**Pam Meacham** at [meachpmm@dfw.wa.gov](mailto:meachpmm@dfw.wa.gov)

**(360) 902-2741**

Be sure to include:

- the date of your sighting
- the dive site location
- a description of the colony (size, color and what it is located on)
- location of the mass within the dive site (depth, bearings, distances, landmarks, etc)





[Click on photo for enlarged version](#)

**Should I get a sample or touch it?**

**No!** Touching it can spread it to other dive sites via your dive gear, or by simply breaking off pieces of it that will drift in the current and start new colonies. Try to take a photo if you can! Then report it.

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**What does this critter look like? Give me the SHORT answer!**

The short answer: **Yellowish in color. Many small white dots can be seen on the surface, and darker 'channels' that can be seen through the somewhat transparent outer layer.** More mature patches take on a 'drippy' look, with long lobes hanging down off the colony. Look carefully at this photo! This is the actual sample of the first one sighted at Edmonds Underwater Park on Sept 26th, 2004. Gretchen Lambert took this photo of it out of water.



Click on photo for enlarged view

**Yellowish in color. Has many small white visible dots, and darker 'channels' that can be seen through the somewhat transparent outer layer.**

**OK, I'd like more info than that please!**

Stachowicz Lab Images (Ascidians of the West Coast of North America) and Kirby Johnson, a REEF Pacific NW AAT member, have supplied the images for this webpage. Kirby's were specifically taken of the patch growing in Edmonds Underwater Park. Here is also a good description, but remember this critter has several different forms, depending on how old the colony is.



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- **Description:** As a colonial tunicate the individual animals are connected by a membrane - the tunic. **Unlike other tunicates (or "sea squirts") you will not see a pair of openings on the outer surface.**
- Gretchen Lambert, an ascidian biologist who has tracked this species worldwide, provided this description: "Each zooid has 2 siphons but only the incurrent one opens on the surface of the tunic so in this species you won't see paired openings; the excurrent siphon of each zooid opens at the side, into a spacious chamber inside the colony. Here and there at the surface are large round transparent openings which are the common atrial openings from which the waste products and tadpoles are released. By combining the excurrent water of many zooids, a sufficient current is produced to carry these products away. Thus on the surface one will see many randomly spaced tiny incurrent openings, and here and there a large atrial opening."
- **Many small white dots can be seen on the surface -(these are tightly packed bundles of calcium carbonate spicules)**
- **Channels through which water travels inside the colony can be seen just under the outer layer.**
- May take on a variety of forms: flat mats, structures with projections and beard-like lobes, or long stringy lobes or "ropes"
- **Color:** Seems to be a yellowish color in the northwest.
- **Size:** Individual animals are small, colonies can get very large. The colony found at Edmonds was about 6 feet by 6 feet.
- **Habitat:** Hard substrates: wood and metal pilings, dock structures, moorings and ropes, chains, boat hulls, tires. It likes artificial reef habitat.
- **Depth:** Intertidal to over 160 ft.
- **Similar species:** some of our local sponges



[Click on photo for enlarged version](#)

## Links to other related sites

### For more info on this colonial tunicate see:

- [USGS Woods Hole Science Center](#)
- [Stachowicz Lab Images - Ascidians of the West Coast of North America](#)
- [Various detailed photos from the Netherlands and U.S. West Coast](#)

### For more info on other invasive species we should watch for and report:

- [Washington Invasive Species Coalition](#)
- [USGS Aquatic Nuisance Species Program](#)
- [WA SeaGrant Non-Indigenous Species Site](#)
- [Guide to the least-wanted aquatic organisms in the PNW](#)

OH! And in case you didn't see this mentioned above...

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