Help to prevent the spread:

Humans are the primary vector responsible for the recent spread of diatoms collectively called “rock snot”.

Anglers, kayakers and canoeists, boaters and jet skiers can all unknowingly spread these species. However, pets are also capable of carrying rock snot from one water to another.

The microscopic cells are sticky and can cling to fishing gear, waders (felt soles can be especially problematic), boots and boats, and **remain viable for months under even slightly moist conditions.**

To prevent the spread of rock snot to additional waters, DEEP asks that anglers, especially those who also fish the Farmington River or streams outside Connecticut, and other users to practice **CHECK, CLEAN, DRY** procedures.

CHECK: Before leaving the water, remove all obvious clumps of algae and plant material from fishing gear, waders, clothing & footwear, canoes & kayaks and anything else that has been in the water. Leave them at the site. If you find any later, clean your gear and dispose of all material in the trash.

CLEAN: Soak/spray & scrub boats and all other “hard” items for at least one minute in either very hot (140°F) water, a 2% bleach solution, or a 5% dishwashing detergent solution. A 20% salt solution for 30 seconds has also been shown to be effective. Absorbent materials such as clothes and felt soles on waders should be soaked for at least 40 minutes in very hot water (140°F), or 30 minutes in hot water (115°F) with 5% dishwashing detergent. **Freezing will also kill the cells.**

DRY: Drying will also kill the cells, but items must remain completely dry (inside and out) for at least 48 hours.

Additional Guidelines

When outdoors use only small quantities of cleaning agents such as bleach, dishwashing detergent, and other chemical compounds. Always avoid using cleaning agents streamside or in areas where they can drain into surface waters.

When possible clean all gear, boots, boats and clothing at home.

If entering multiple streams in one day, please enter waters known to contain “rock snot” (i.e. Farmington River) last.

If your sample matches three of the “yes” descriptions and was found in river or stream other than the Farmington River, **we’d like to know!**

Please send a quarter-sized sample in a small container or in a sealable plastic bag to:

Fisheries Division
79 Elm Street
Hartford, CT 06106

Be sure to include your name, address and phone number or e-mail address so that we may contact you.

Also, please provide a detailed description of where you found your sample: name of the river or stream, the town, and precise location (such as GPS coordinates, nearest road, a clearly marked map, or a street address).

Rock Snot

Didymosphenia geminata, Didymosphenia hullii, Cymbella janischii

How you can help to prevent the spread of potentially nuisance freshwater algae.

Connecticut Department of Energy and Environmental Protection
Fisheries Division
860-424-FISH (3474)
Ct.gov/deep/fishing

June 2017

Rock Snot 101:

Rock snot is commonly used to refer to a group of diatoms (single cell microscopic algae), which under certain environmental conditions grow prolifically (bloom), forming thick mats that cover sections of the river bottom. The majority of these species belong to the genera *Didymosphenia* and *Cymbella*. Both appear similar to the naked eye, however, when viewed using a microscope, the cell structure is very different; Didymo is "bottle-shaped" and *Cymbella* "crescent" shaped.

History in Connecticut. In March of 2011, an angler collected a small sample of what was believed to be "Didymo". After its discovery, routine monitoring began in order to document any spread or additional blooms[1]. Through this extensive work, it was determined that the Didymo found in Connecticut was actually a new species[2]. This species has been named *Didymosphenia hullii,* after the late Dr. David Hull, former director of transplant surgery at Hartford Hospital.

While working to broaden our knowledge about Didymo, a second type of "rock snot" called *Cymbella janischii* was discovered about 1 mile downstream of the Route 318 bridge in Barkhamsted (near church pool)[2]. This diatom is native to the Pacific Northwest and has only been found east of the Rocky Mountains in a few locations (closest being New York). It is likely that this alga was inadvertently transported to the West Branch Farmington by humans.

[1] Khan-Bureau et. al. 2014. Observations of two nuisance stalk-forming diatoms form a river in Connecticut, Northeastern U.S.A. BioInvasions Records vol. 3, issue 3: 139-149

[2] Khan-Bureau et. al. 2016. Characterization of a new species in the genus *Didymosphenia* and of *Cymbella janischii* from Connecticut, U.S.A. European Journal of Phycology: 1-16

Where is "rock snot" in Connecticut?

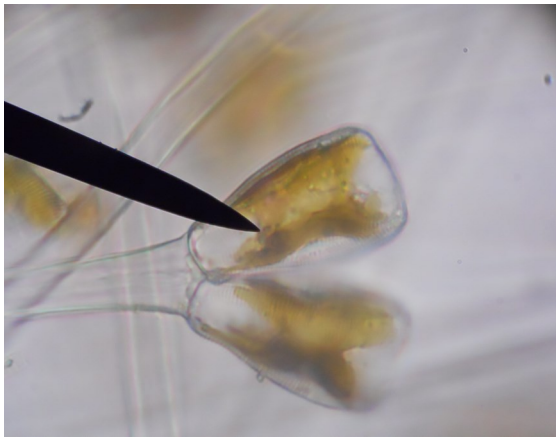
Didymo: As of 2017, *Didymosphenia hullii* and *D. geminata* have been observed within the West Branch Farmington River . Until now Didymo had been only confirmed above the confluence with the Still River, Barkhamsted. In June of 2017 both have been confirmed as far downstream as the Barkhamsted/New Hartford town line. Didymo usually "blooms" from December to May.

***Cymbella*:** During summer 2015, there was thick growth of *C. janischii* observed approximately 1.5 miles up and downstream of the Route 318 bridge in Barkhamsted. As of June 2017, the *Cymbella* bloom is prolific and widespread throughout the West Branch Farmington River Trout Management Area. bloom of *C. janischii* tends to occur from mid-June through mid-August.

Cymbella janischii is less "finicky" than Didymo.

While Didymo prefers very cold-nutrient poor waters, C. janischii can tolerate warmer water temperatures and higher concentrations of nutrients (similar to those found in many popular trout streams across Connecticut).

We encourage anglers to be vigilant with "Check, Clean, Dry" practices when they are finished fishing the West Branch Farmington River.



How to tell if you may be seeing "rock snot"

	YES	NO
Location	mostly clear flowing water with rocky bottom, may be attached to plants	deep silty areas with no rocks or plants, highly colored waters.
Color	tan, light brown or whitish	green or dark brown/ black clear or transparent
Texture	clumps or ropy strands, rough cottony feel, fibrous	slippery or gelatinous
Appearance	no leaves or roots (BUT may attach to leaves or stems). Sometimes mistaken for fiberglass, toilet paper or tissue.	has leaves or roots, looks like an aquatic plant