



FACT SHEET

Office of Water Resources

September 2017

Freshwater Aquatic Invasive Species Threatening Rhode Island Didymo — “Rock Snot”



Thick, brown, Didymo bloom covers the bottom of a stream, smothering aquatic organisms underneath**



Clumps of didymo feel like wet cotton or wool and resist pulling apart ‡



As the stalks die, they become frayed and white, resembling toilet tissue‡

Species Description and General Information

Didymo (*Didymosphenia geminata*), also referred to as “rock snot”, is an invasive freshwater diatom (a type of algae) that can generally be found in relatively cold, shallow, clear, rocky streams. Unlike other common algae species that can be found attached to the stream bottom, didymo cells will not appear green in color. Mats of didymo may be brown, yellow-brown or white in color. Didymo is also distinctive from other native algae species because it does not feel slimy, but instead like wet cotton or wool. The diatom produces stalks that attach to rocks and vegetation along stream bottoms. These stalks form the bulk of a nuisance bloom, not the diatom cells themselves. A didymo infestation may start as small bubbly colonies on submerged rocks, then form long filamentous streamers as the stalks grow. The ends of the streamers will eventually turn white and break up, giving the mat the appearance of strands of toilet paper.

Why is Didymo Considered an Invasive Species?

Nuisance didymo blooms can completely cover the stream bottom, smothering aquatic plants, native mussel beds and ruining habitat for beneficial insects (such as stoneflies, mayflies and caddisflies). Because aquatic insects are an important food source for brook trout (and other aquatic animals), didymo blooms can negatively impact their populations by decreasing food availability. Further, thick mats of didymo can restrict water flow, and algae decomposition can decrease water oxygen levels necessary for trout. As a result, didymo is seen as a threat to trout streams, trout fishing and related tourism. Although not harmful to human health or drinking water, mats of didymo are unsightly and degrade the aesthetic quality of streams.

**New Hampshire DES ‡Tim Daley, Pennsylvania DEP

Where is Didymo From and How is it Spreading?

Didymo is native to the cool, oligotrophic (low nutrient) waters of the far northern regions of Europe and North America where it has largely remained a benign species. Recently, however, it has begun to take on invasive characteristics in its native range and has been expanding its range south to warmer and more nutrient-rich waters. Currently, it is found in New York, Pennsylvania, Vermont and New Hampshire. The reason for this sudden expansion is not well understood. Humans are playing a significant role in introducing didymo to new water bodies. It only takes a single diatom cell to start a new infestation. These microscopic cells cling to fishing gear, boots, boats and can be absorbed by felt-soled waders. Therefore, felt-soled waders have been banned in RI (Freshwater Fishing Regulations 1.17: <http://www.dem.ri.gov/pubs/regs/regs/fishwild/fish1314.pdf>). Didymo cells can remain viable for several weeks under moist conditions, so any gear that is not dried completely or properly decontaminated can introduce didymo to new water bodies.

What Methods Can Be Used to Control Didymo?

There are currently no known methods to effectively control or eradicate didymo in natural water bodies. The only defense against the negative impacts of a didymo infestation is to prevent its introduction.

Please Help Prevent the Introduction of Didymo to Rhode Island!

Because one single microscopic didymo cell can start an entirely new infestation, recreational users of water bodies are encouraged to check, clean, drain and dry equipment before using it in another water body.

Check: Look for, and remove, visible algae and plant material from anything that has come in contact with the water or sediment, including boots, gear, nets, rods and reels etc.

Clean: Soak, scrub or expose all equipment in one of the solutions below for at least 10 minutes:
Hot water: 140°F (hotter than most tap water)
Dishwashing detergent: 5% solution (~1 cup of detergent to 1 gallon of water)

Dry: Dry all gear completely before re-use. If cleaning in one of the above solutions is not feasible, drying alone will suffice. Completely dry all materials and keep dry for at least 48 hrs.

Freeze: Freezing gear until solid will kill didymo, although it can also damage gear, so be aware..

DO NOT USE FELT SOLED BOOTS

The use of felt soled waders has been banned in Rhode Island. Avoid use of porous material that can soak up water and harbor bacteria and microscopic organisms such as Didymo. These products increase risk of contamination and spreading Didymo to other ponds. For more information see the [RI Freshwater Fishing Regulations](#).



For more information also see:

- Northeast Aquatic Nuisance Species Panel
www.northeastans.org/
 - 2013 International Didymo Conference
<http://stopais.org/didymoconferenceresults.html>
 - Trout Unlimited
<http://www.tu.org/science/aquatic-invasive-species-ais>
 - Aquatic Invasive Species in Rhode Island
<http://www.dem.ri.gov/programs/water/quality/surface-water/aquatic-invasive-species.php>
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