

Environment

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Didymo, or "rock snot," grows on rocks in Esopus Creek in the Catskill Mountains.

Photo courtesy of Samantha Root

Rivers cope with flu-season symptom of their own:

ROCK SNOT

Samantha Root
and David Richardson

As we approach the cold and flu season, a few of our nearby streams and rivers are just now getting over some serious congestion.

Didymosphenia geminata, commonly known as didymo or "rock snot," is an invasive algae species that thrives in certain streams and rivers during the summer months.

The algae species is nicknamed "rock snot" because of its phlegmy appearance on the streambed. To add to the joke, didymo stalks sometimes grow long, gray tendrils of material that resemble pieces of wet tissue.

Depending on its geographic location, this algae has anywhere from a yellow tan to a dark brown color. Despite its slippery, slimy appearance, didymo has a cottony texture that makes it more difficult to pull apart than other algae.

Native to the cold, freshwater streams in the mountains of northern North America, Europe, and Asia, human activities have been helping didymo expand its range globally.

In 2004, the algae jumped the equator and made its first appearance in New Zealand, where it has

ECO FOCUS

A bi-weekly column from the
Cary Institute of Ecosystem Studies

been spreading like wildfire ever since. In New Zealand, didymo blooms form huge mats that grow up to eight inches thick, stretch over 2.5 miles long and have caused millions of dollars in damage by clogging intake pipes and decreasing tourism.

As of this summer, didymo has spread to five streams in New York: the East and West Branches of the Delaware River near the Pennsylvania border, the Battenkill Creek near the Vermont border, the Kayderosseras Creek just outside of Saratoga Springs, and the Esopus Creek in the Catskill Mountains.

While didymo mats in New York have yet to reach the extreme sizes as those found in New Zealand, we have seen blooms up to two inches thick that cover anywhere from 1-100 percent of the streambed and extend for several miles.

To date, it is impossible to fully remove didymo mats from affected streams — and it is incredibly easy to spread the invasive species to new freshwater sites.

What do newly invaded didymo streams have in common?

For one, they are all located at prime fishing access points. In fact, fishing gear seems to be the primary method of transportation for didymo cells. Felt-soled wading boots let didymo cells hitch a ride to a new location. The felt sole acts as a sponge, providing didymo cells with a temporary residence where they can survive for up to 90 days without water.

In response to proof that felt-soles transport the nuisance species, fishing supply stores, such as Trout Unlimited and Simms Fishing Products, have already reduced or discontinued their inventory of felt-soled waders.

Still, felt-soled waders are not the only means of transporting didymo cells. According to the Federation of Fly Fishers, it is important to "inspect, clean, and dry" all equipment that comes into contact with the water after each use.

As evidenced by our summer research, just because you can't see didymo — it doesn't mean it isn't there.

Since didymo was confirmed in the Esopus Creek in 2009, it was assumed that the outbreak was confined to the section of the creek

downstream of the portal for the Shandaken Tunnel. Through the month of June, didymo was not visible upstream of the portal, yet using microscopy, we found didymo cells on rocks at several upstream sites.

When it comes to congestion prevention, humans have it better than streams and rivers. We are able to wash our own hands to avoid a runny nose, while water systems depend on us to make sure our gear is clean, dry and free of non-native species such as didymo. Before entering streams and rivers, take precautionary measures. Waders and gear can be cleaned easily and efficiently by spraying or submerging them in a 2 percent solution of household bleach.

With its recent debut in the Kayderosseras Creek and the Esopus Creek, didymo is increasing and getting closer to home. By doing our part to slow its spread, we can keep our streams and rivers healthy and "snot free" all year long.

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