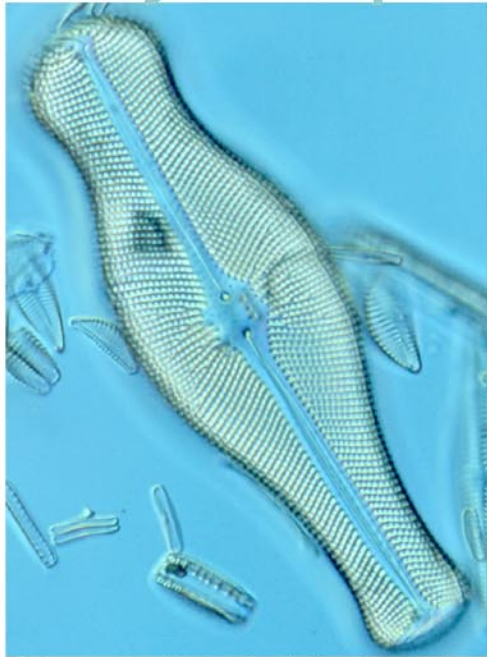


# NUISANCE SPECIES

## INVASIVE

### *Didymosphenia geminata*



Historically, *Didymosphenia geminata* ("Didymo" for short) was a rare and beautiful diatom (a type of algae) restricted to pristine lakes and streams of northern latitudes. In recent years, its reputation has changed. While the diatom is still lovely, it is no longer rare. "Didymo" now forms excessive growths in many streams and rivers of North America.

## PROBLEM

In North America, "Didymo" is expanding its geographical range and forming massive growths in streams. This nuisance organism (and in some regions, it is an invasive species) grows attached in streambeds and may impact freshwater fish, aquatic plants, and important aquatic insects.

*Didymosphenia geminata* is a type of microscopic algae (a diatom). The single cells are not visible to the naked eye.



This algae forms nuisance growths in streams. It appears as felt-like coverings, tufted masses, or even as white strands of toilet paper attached to rocks and logs.

## HUMAN IMPACTS

Economic impacts include fouling of water intakes and a possible link to decline in fisheries. Impacts to aesthetics are common, with reports of unsightly masses that appear like strands of toilet paper or fiberglass. The growths become snagged in fishing gear and make swimming areas unappealing. Direct human impacts are thought to be limited to eye irritation in swimmers.

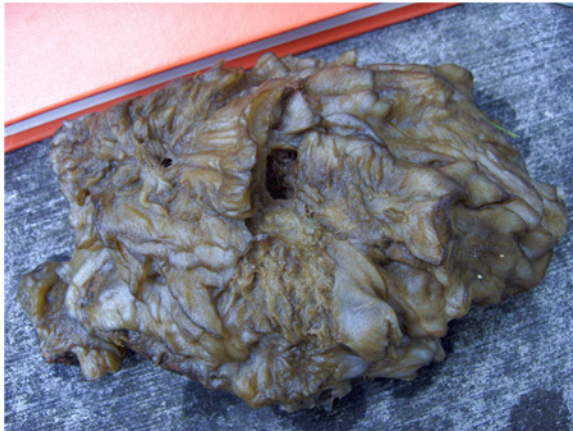
## THE ORGANISM

*Didymosphenia geminata* is a single-celled alga, within the group of algae called diatoms (Bacillariophyta). The cells grow on stalks and form large colonies. The stalks are responsible for the negative impacts of this species and are composed of a complex slimy substance (mucopolysaccharide). Colonies of cells are visible as white to light brown tufts attached to rocks. As the colonies develop, they smother rocks and trap fine sediment.

# MORE

# NUISANCE SPECIES

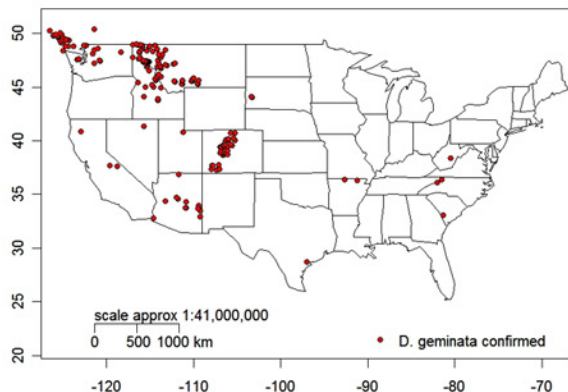
## *Didymosphenia geminata*



The stalks of *Didymosphenia geminata* form dense, moss-like coverings on rocks and other surfaces in streams and rivers. This hand-size cobble is completely with stalks and cells. The texture is rough and cottony to the touch.



As “Didymo” spreads, it can cover a stream. Excessive growths of *D. geminata* are those that cover greater than 1 mile of stream reach (to tens of miles) and persist for more than a few weeks (up to year round).



Excessive growths have been confirmed from many sites in North America. The masses are increasingly reported from lower elevations (below 6,000 feet) and extending more than 10 miles.

## HABITAT

*Didymosphenia geminata* tends to form excessive mats in:

- \* Low, stable flow
- \* Water 3 inches to 6 feet deep
- \* Moderate to high current
- \* Below outlets of lakes and reservoirs
- \* Sunny, open streams

## ECOLOGICAL IMPACT

“Didymo” impacts other stream organisms, and impacts are greater when large mats are present.

- \* Aquatic larval insects (caddisflies, stoneflies, and mayflies) decline
- \* Other aquatic larval insects (midge larvae and worms) increase
- \* Decline in large, adult fish

## REPORT

Please report suspected mats of *Didymosphenia*. Help us confirm the report by collecting a small sample (put a pinch of the material in a vial or in a folded business card). Label samples with the date, latitude, and longitude (or accurate site information). Send reports and samples to:

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