Nuisance Alga Didymosphenia Geminata: A Threat To Our Fisheries

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Didymosphenia geminata, a type of freshwater diatom alga, has recently been documented outside its historic northern circumboral range and has resulted in highly visible algal blooms. Additionally, in locations with previous record of *D. geminata* in North America, al-gal growth has increased in spatial coverage and temporal persistence. The changes in growth habit may negatively impact fisheries and macroinvertebrates. Nuisance benthic growth of *D. geminata* can extend for greater than 1 km, persist for several months of the year, and cover up to 100 percent of substrate with thicknesses > 20 cm. Nuisance growth, characterized by thick mats that cover the stream bed, consists primarily of mucopolysaccaride stalks secreted by single cells of *D. geminata*. The thick mats are resistant to degradation and may influence the ecological properties of the stream, e.g., species diversity, population sizes, nutrient pools, alter the invertebrate food base, and reduce appropriate habitat and spawning sites for fish. The observed nuisance and invasive behavior patterns of *D. geminata* have prompted studie to improve our understanding of and methods to control this species. Research that examines the impact of algal blooms on species composition and diversity is underway. Studies suggest that *D. geminata* may be transported to new locations by recreational activities and equip-ment. With such limited information available on the basic biology of this species and little understanding of its impacts on fisheries, the best current defense against this alga is to limit its spread to new locations with proper equipment cleaning technique, and effective outreach education.