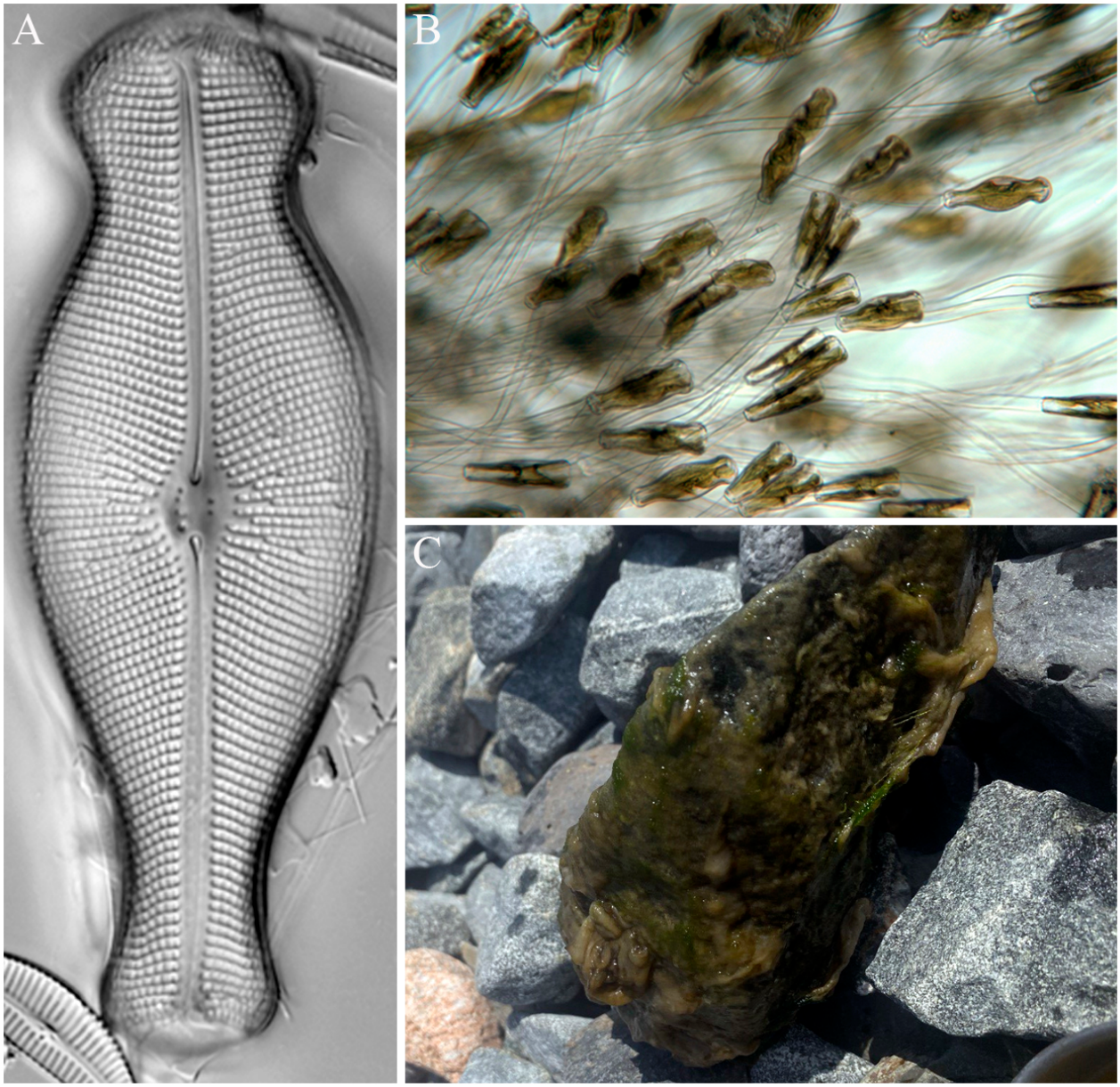
The MicroStars-That-Engage-Our-Senses Gallery

Rock snot – *Didymosphenia geminata* (Didymo)

(Andrei Mironov)



A: a microphotograph of the frustule of *Didymosphenia geminata* (photo by D. Chudaev, Lake Baikal, Russia). The frustule has a very complex structure with pores and slits. B: branching colonies of *D. geminata* under microscope (photo by S. Spaulding, Colorado, US). C: Rock snot: an algal "mat" formed by *D. geminata* on a rock (photo by A. Mironov, Lake Baikal, Russia).

Claim to fame: Rock snot – the production of a brown, sticky mass on rocks in lakes and rivers by *Didymosphenia geminata* (Dydimo) that we can see and feel.

Imagine a river with clear water flowing between rocks and tiny algae swaying at the bottom. And suddenly, one day, it's all covered with a brown, sticky mass that looks like matted hair. This is the work of Dydimo! It's official name is *Didymosphenia geminata* but is also known as "rock snot" or "mermaid's hair".

What do we know about Didymo? It is a microscopic diatom algae, one of the many diatoms that live in water around us. Unlike others, it that can invade a waterbody like a real comic book villain! Didymo has a beautiful silica frustule, which sparkles like a jewel under a microscope and protects Didymo from predatory crustaceans like an armor. But unlike his peaceful friends, Didymo knows how to build huge colonies. Moreover, these colonies are very sticky, easily attach to rocks, plants, and even to your shoes if you happen to be in the river.

When the conditions become ideal – the water becomes cold, clean and rich in nutrients – Didymo begins to multiply rapidly. This process is called the accumulation of biomass. Colonies grow massively, forming huge "mats" that suffocate all living things around! Because of that, other microalgae no longer receive sunlight, while fish and crustaceans find it difficult to breathe and move around. From then on, the Great and Terrible Didymo becomes a mighty king of the waterbody! As a result, the entire ecosystems in rivers, lakes and ponds may be seriously harmed.

Rock snot is produced by Didymo – a tiny, but hugely important diatom that can bring serious harm to rivers and lakes