

## **Phytoplankton by Rebecca Lexa**

Did you ever wonder what that dark line of stuff along the waterline at the beach is? No, it's not pollution or dirt. It's phytoplankton! Phytoplankton are tiny microscopic plants that live in the ocean. They are a very important part of the ocean ecosystem, as many small creatures feed on them. Those small creatures are then eaten by larger animals, which are eaten by even bigger ones, all the way up the food web. There are even huge animals like some whales that eat the phytoplankton themselves.

Everyone needs phytoplankton even if these tiny plants aren't on the menu. They actually produce more of the world's oxygen than rain forests; estimates range from fifty to eighty-five percent of oxygen coming from phytoplankton. While there are many, many trillions of individual phytoplankton in the ocean, their numbers can be severely decreased by pollution, ocean acidification, and other ecological disasters.

One group of phytoplankton, Pseudo-nitzschia (pronounced soo-doo-nit-she-ah) produce domoic acid. Buildup of this toxin in shellfish makes them poisonous to eat, though the only recorded illnesses were from a single incident in Canada in 1987. Coastal areas are monitored for domoic acid levels, and if they get too high shellfish seasons are closed. As ocean temperatures warm due to climate change, we're likely to see more phytoplankton blooms leading to higher domoic acid levels, which will negatively impact shellfish harvesting.

So whether it's for the air we breathe or the food we eat, it's a good idea for us to take care of the oceans that the phytoplankton live in!