

Red Tides

and HABs

For information about HABs and shellfish safety:

California Department of Public Health,
Shellfish Information Line: 800-553-4133

CDPH Quarantine Info: <http://www.cdph.ca.gov/Pages/MusselQuarantineFAQ.aspx>

To report a red tide or other unusual marine sighting:

www.jellywatch.org

To report a marine mammal stranding:

Long Marine Lab: 831-469-1719

Monterey Bay Aquarium:
www.montereybayaquarium.org

Marine Mammal Center:
www.marinemammalcenter.org

To report a seabird stranding:

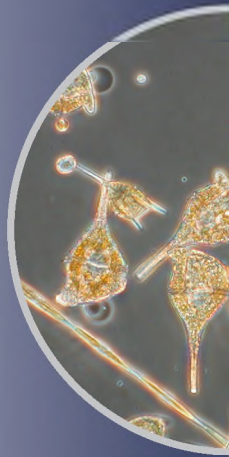
Monterey County SPCA Humane Wildlife
Services: www.spcamb.org/hws.html

Native Animal Rescue:
www.nativeanimalrescue.org

Want to support HAB legislation?

www.HABlegislation.com

Red Tide, *n* - a discoloration of sea water caused by an explosive growth in phytoplankton density: sometimes toxic to fish life and, through accumulation in shellfish, to humans.



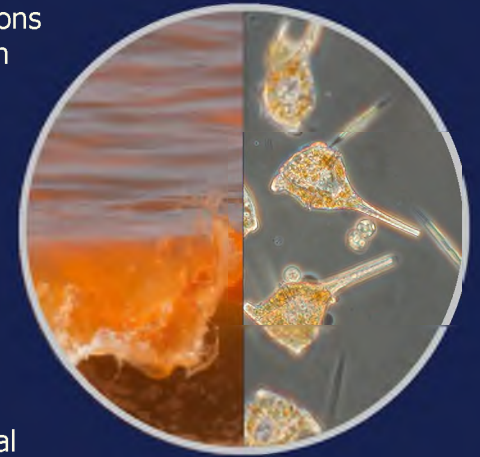
Single-celled algae called phytoplankton are abundant in both marine and freshwater ecosystems. Phytoplankton are an essential component of aquatic foodwebs, and provide much of the oxygen in our atmosphere.

There are many kinds of phytoplankton, and they require different environmental conditions to grow. When conditions are favorable, phytoplankton can grow and multiply rapidly, or "bloom."

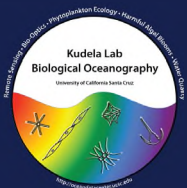
A small number of phytoplankton species can cause red tides or Harmful Algal Blooms (HABs) when they bloom. Research, education, and monitoring are critical for protecting humans from the effects of Harmful Algal Blooms.

The **California Harmful Algal Bloom Monitoring and Alert Program (HABMAP)** was established in 2009 to provide a coordinated response network to address these issues and inform the public.

In Monterey Bay, weekly phytoplankton monitoring occurs in Santa Cruz and Monterey. Visit the PhytoBlog to see weekly conditions: <http://oceandatacenter.ucsc.edu/PhytoBlog>



www.habmap.info



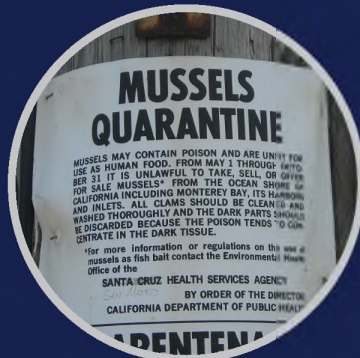
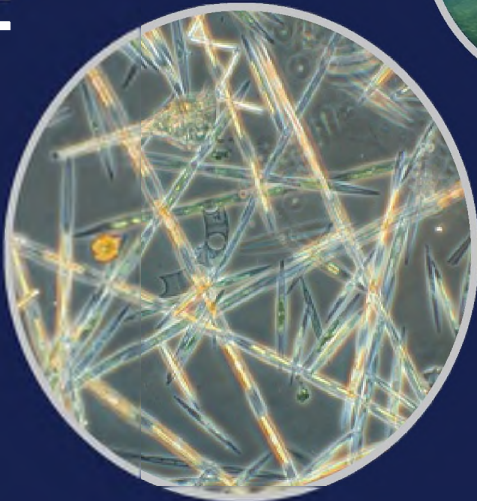
Red Tides and Harmful Algal Blooms

What is a Red Tide? A red tide is a naturally-occurring, higher-than-normal concentration of phytoplankton. Pigments in the phytoplankton can cause the water to turn red, brown or orange.

What is a Harmful Algal Bloom (HAB)? A HAB is a higher-than-normal concentration of phytoplankton that causes harm to humans, marine life, or the environment. HABs can be harmful through production of toxins, reduction of oxygen, or clogging of fish gills.

What causes Red Tides and HABs? Different environmental conditions lead to blooms of different species of phytoplankton. In Monterey Bay, red tides are more common in the warm, calm waters in the fall, and HABs are more common in the cold, nutrient-rich waters in the spring.

Do HABs only occur in the ocean? No. HABs can occur in freshwater as well. The green bloom in the photo below is a HAB in a freshwater California lake.



Health Hazards

Dangerous conditions can occur in the absence of red water. Many HABs are colorless, and many red tides are harmless.

When is seafood safe? How do I know? California has an annual shellfish harvesting quarantine from May through October. When in doubt, call the CDPH Biotoxin Information Line at 800-553-4133 for recorded information about seafood health advisories and quarantines.

What seafood is affected by toxins? Filter-feeding organisms like mussels, oysters, clams and scallops can all accumulate toxins in their tissues. Crabs, lobsters, anchovies, and sardines can also accumulate toxins in their viscera.

Is commercially-harvested and sold seafood safe? Commercial seafood found in restaurants and grocery stores is strictly regulated and tested against toxins.