

WHO'S IN THE WATER TODAY?

PHYTOPLANKTON OF THE MONTEREY BAY

Monterey Bay is a vibrant ecosystem, providing a home for giant blue whales, tiny phytoplankton, and everything in between. The organisms that thrive change with the seasons, as each season brings unique weather and water conditions to the bay. Read on to learn which critters you are likely to see, and whether you need your binoculars or your microscope!

SPRING

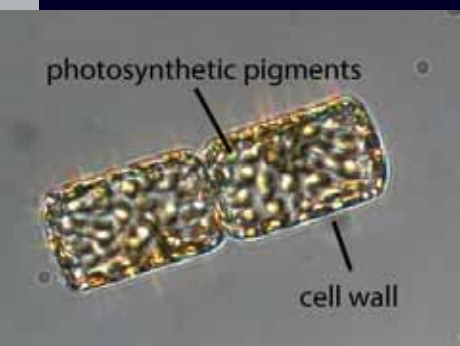
Wind, upwelling, cold water, high nutrients, high oxygen

KELP
ORCA WHALES
HUMPBACK WHALES
GRAY WHALES
SALMON
PIGEON GUILLEMOTS
TERNS

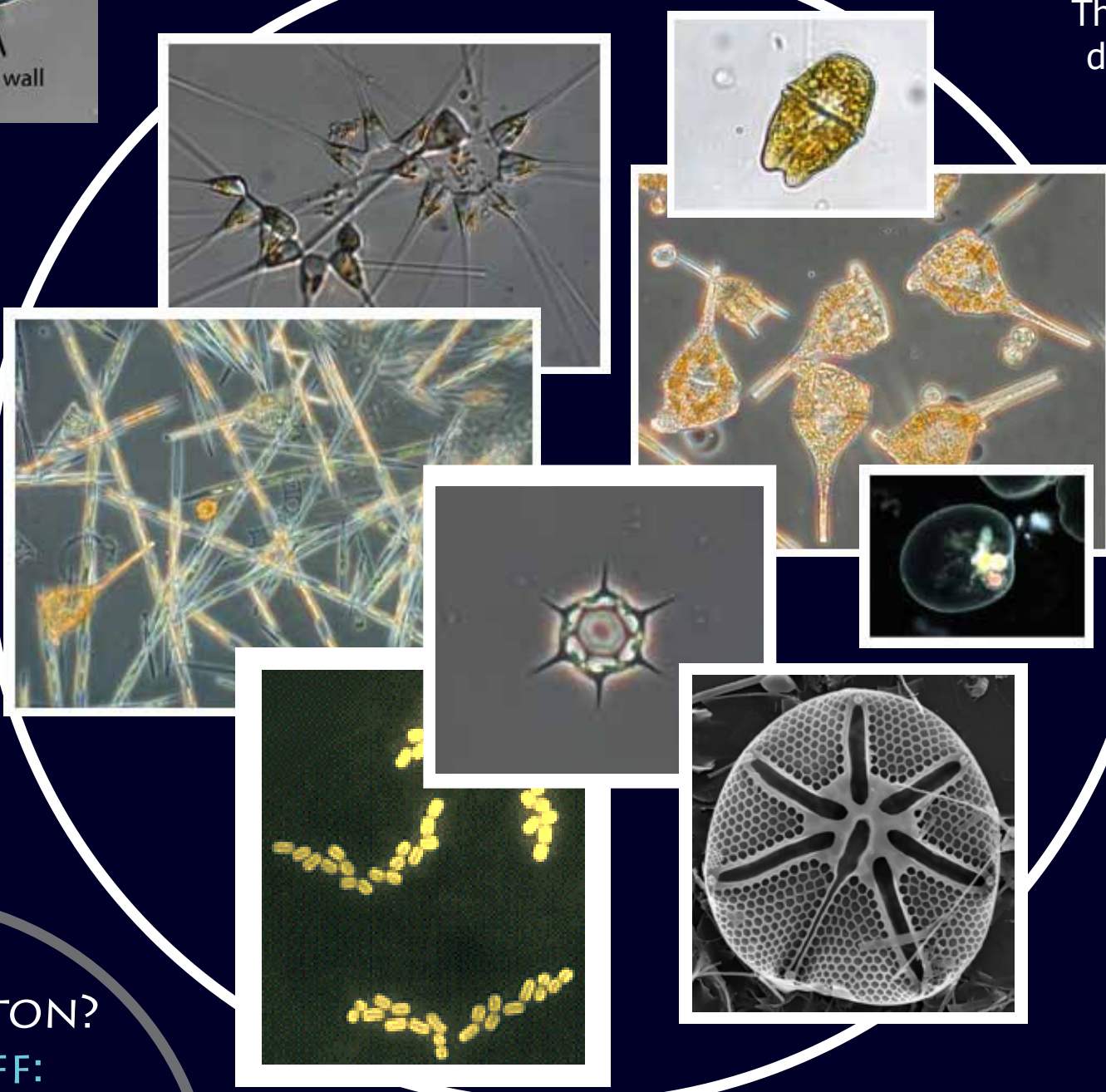
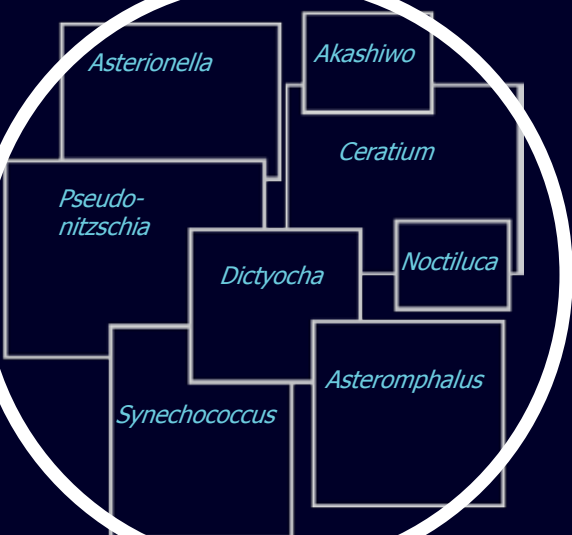
PHYTOPLANKTON?
DIATOMS

- Harmful Algal Blooms occur
- Good monitoring is essential as blooms can be dangerous to sea life and humans

TROUBLEMAKERS?
PSEUDO-NITZSCHIA



Diatoms are common in the spring. The abundant nutrients help them to build their silica-rich cell wall.

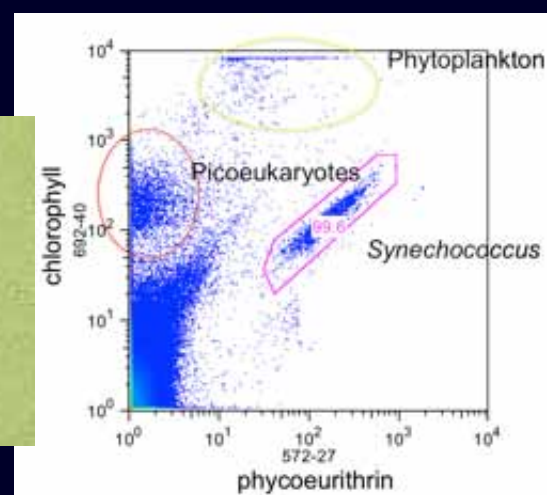


PHYTOPLANKTON?
**SMALL STUFF:
CYANOBACTERIA,
FLAGELLATES**

- Low phytoplankton biomass
- Rains continue to introduce pollutants and nutrients

TROUBLEMAKERS?
NOT REALLY

ELEPHANT SEALS
GREAT WHITE SHARKS
JAEGERS
PACIFIC AND COMMON LOONS
WESTERN GREBES
AUKLETS



Little guys are hard to see! Flow cytometry, which is also used to count blood cells, helps to identify and count the small organisms common in the winter.

SUMMER

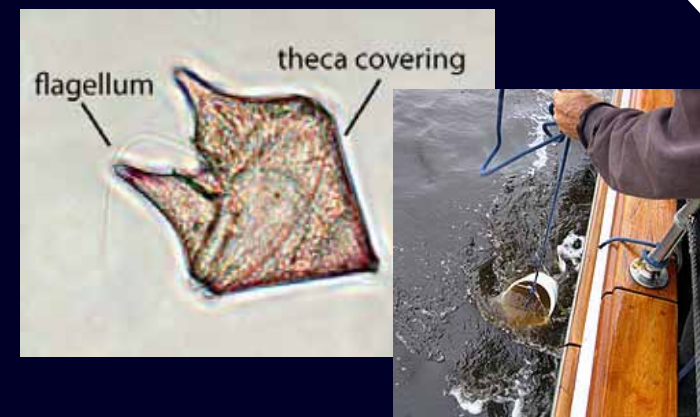
Warm and stratified water, calm conditions, low nutrients at the surface

HUMPBACK WHALES
BLUE WHALES
ANCHOVIES, SARDINES
SOOTY SHEARWATERS
PELICANS

PHYTOPLANKTON?
DINOFLAGELLATES

- Red tides common. Only some are harmful
- First rains flush nutrients into the bay, cause increase in bacteria and blooms

TROUBLEMAKERS?
*AKASHIWO
ALEXANDRIUM*



Dinoflagellates thrive in the fall. Their flagella allow them to swim down away from the surface to reach nutrients.

WINTER

rain storms, high surf

FALL