Plankton Productivity Red Tide Poster

Some of the Pacific Coast Shellfish that can accumulate algal toxins and become toxic to people:

Shellfish such as clams filter feed on single-celled phytoplankton (plants), some of which contain **PSP** (Paralytic Shellfish Poisoning), **DSP** (Diuretic Shellfish Poisoning), and **ASP** (Amnesiac Shellfish Poisoning) toxins.

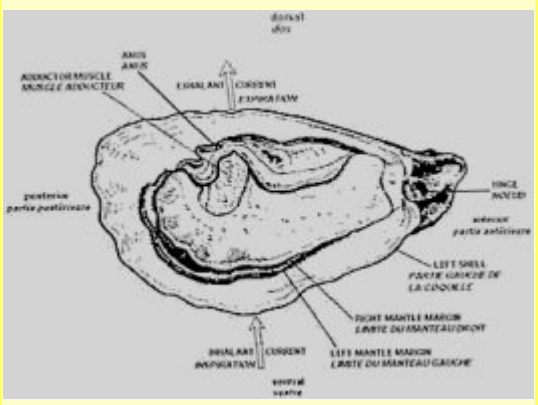
Heart Cockle
Clinocardium nuttallii
Shell width to 12cm / 5"

Butter Clam
Saxidomus giganteas
Shell width to 15cm / 6"

Blue Mussel
Mytilus edulis
Shell width to 12cm / 5"

Anatomy of a Pacific Oyster

Below: Pacific Oyster with right valve removed



(Click on figure to show larger)

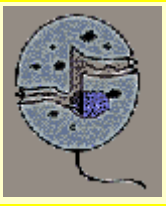
After Quayle, D.B. 1988. Pacific Oyster Culture in British Columbia. Can. Bull. Fish. Aquat. Sci. 218. p.11

Native Littleneck
Protothaca staminea
Shell width to 7cm / 3"

Geoduck
Panopea generosa
Shell width to 20cm / 8"
(Siphon length up to 1m/3')

Pacific Oyster
Crassostrea gigas
Shell width to 20cm / 8"

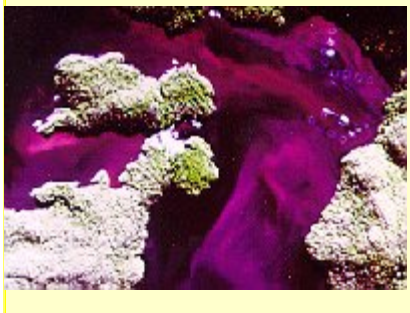
Some of the phytoplankton that cause Red Tides



Red Tide Blooms

A red-tide bloom may produce a colouring in the water similar to tomato soup. The image to the right was taken in Saanich Inlet, B.C., during a bloom. Not all red tides produce a water colour change and water colour changes ***must not*** be used to determine shellfish contamination. This particular bloom was caused by the non-toxic *Noctiluca scintillans*.

False-Colour Images



False colour composite of a mixed bloom of *Gonyaulax spinifera* and *Prorocentrum micans* at a Vernon Bay aquaculture site, Barkley Sound, B.C. The image at right is a close-up of the aquaculture site (actual size is about350m^2/1050ft^2).