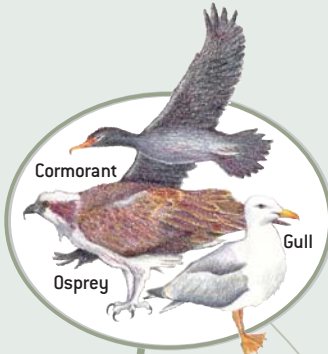


INSIDE THE LONG ISLAND SOUND FOOD WEB

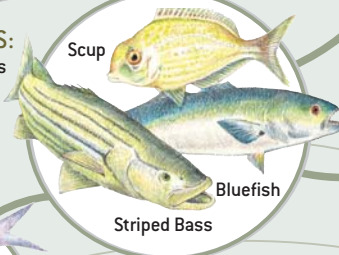
Microscopic animals (zooplankton) receive energy by grazing on tiny plants (phytoplankton); energy then transfers up through complex pathways known as **food webs** as higher animal species eat lower animals and plants. The illustration shows a simplified Long Island Sound food web.

HUMANS: Commercial fish and recreational anglers harvest millions of fish each year to our markets and homes.



BIRDS: Many coastal birds prey on fish in the Sound.

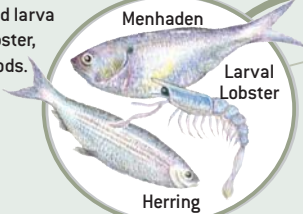
LARGER FISH SPECIES: Fish, such as striped bass and bluefish, that prey on smaller forage species.



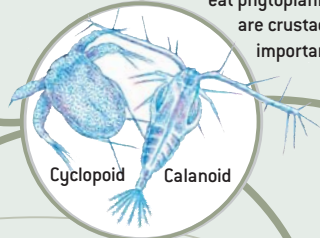
SEALS: Large mammals increasing in abundance as a result of cleaner waters and the 1972 Marine Mammal Protection Act. They are migrants who spend winters offshore, mainly on rock outcroppings.

FORAGE AND LARVAL FISH:

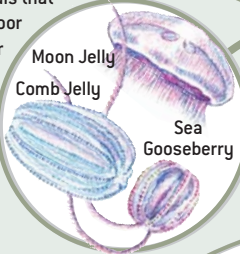
Small fish, such as herring, and larva of larger species, such as lobster, which consume copepods.



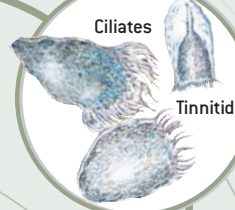
COPEPODS (zooplankton): Microscopic animals that eat phytoplankton and smaller zooplankton. They are crustaceans (related to shrimp), and are important food for larger animals.



JELLIES: Floating animals that consume copepods but are a poor source of food for most other animals. Species include jellyfishes and ctenophores (which do not have stingers).



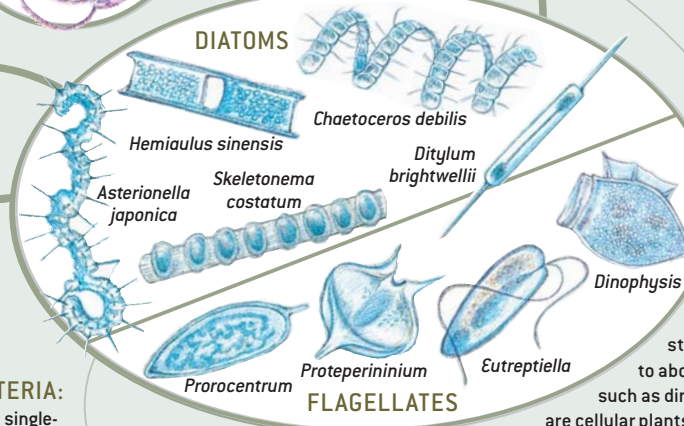
CILIATES (zooplankton): Extremely small animals that feed on phytoplankton such as dinoflagellates. They have hair-like structures (cilia) used to move, feed, and breathe.



VIRUSES: Marine viruses (principally bacteriophages) are the most abundant biological entities on the planet.



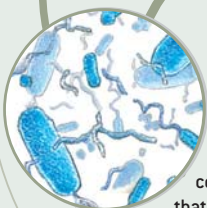
DIATOMS



PHYTOPLANKTON: Known as primary producers, the type and growth of these microscopic plants are controlled by environmental factors, including nutrients, light, and temperature. In winter, about 70-90% of phytoplankton "biomass" is composed of diatoms, whose skeletal structures help them stay afloat. In summer, diatom abundance declines to about 30% of phytoplankton mass, as other species such as dinoflagellates increase in abundance. Flagellates are cellular plants that use whip-like organelles (tails) to move up the water column to reach the light needed to make energy.

BACTERIA:

Mainly single-celled organisms that break down organic substances into nutrients, such as nitrogen, that can be used by plant and animal life.



DETRITUS: Organic matter from plants and animals (pathways shown in lighter lines). Contains nutrients that are consumed and recycled into the food web.

