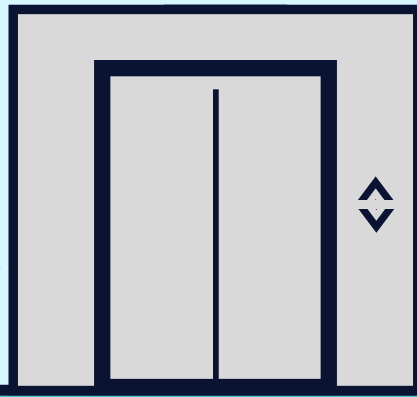
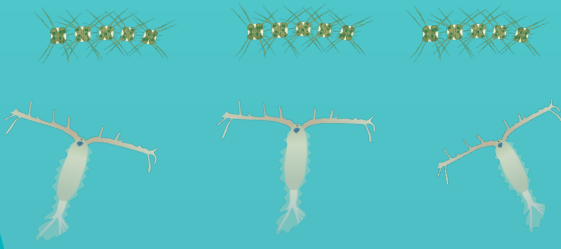


# The Great Carbon Elevator

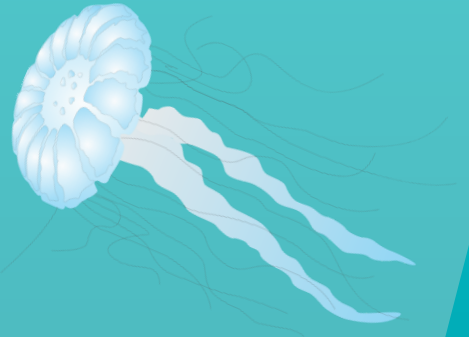
**Zooplankton**, animals that drift in the ocean currents, play an important role in removing carbon from our atmosphere and transporting it to the deep sea.



**VIMS** | WILLIAM & MARY  
VIRGINIA INSTITUTE OF MARINE SCIENCE



Zooplankton graze on phytoplankton in surface waters at night. As the sun rises, they migrate to deeper waters to avoid predators that feed during the day.



As they eat, zooplankton poop! Zooplankton waste particles, called **fecal pellets**, contain all of the carbon that is not used by the animal to grow or reproduce. Pellets are heavier than water, so they slowly sink into the deep.



**200m**

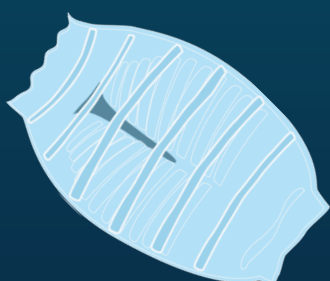
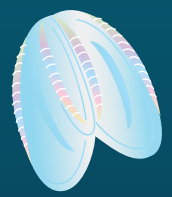
By 200 meters depth, **over 50%** of fecal pellets have been eaten by other animals, bacteria, or broken into smaller pieces that sink less quickly.

Migrating zooplankton continue to digest food and release pellets in mid-depth waters, which makes the pellets more likely to sink into deep ocean zones or onto the seafloor.



**1000m**

Around **20%** of fecal pellets created in the surface make it below 1,000 m depth.



**Less than 1%** of pellets reach the seafloor, where they can be eaten by bottom-dwelling animals or buried for **thousands to millions** of years. This process helps to trap over **6 million tons** of carbon per year, and removes carbon dioxide gas from the atmosphere that causes climate change.

