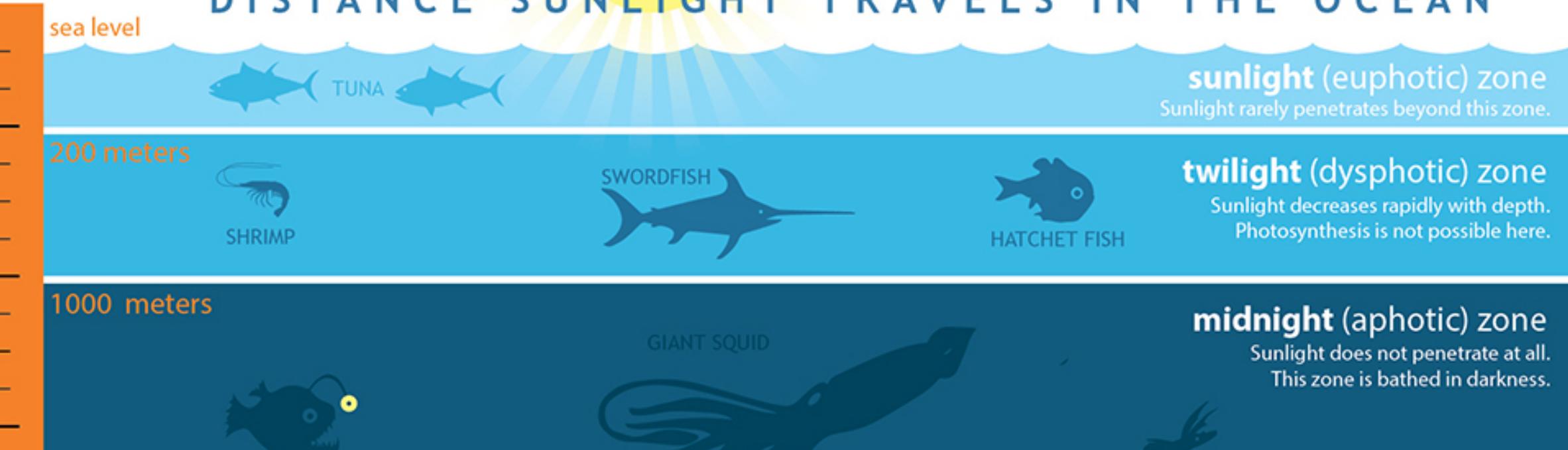


DISTANCE SUNLIGHT TRAVELS IN THE OCEAN



OCEAN ZONES

UNIT 1: INTRODUCTION TO OCEANS AND CLIMATE

OCTOBER 31ST, 2019

OCEAN TRIVIA – CORALS

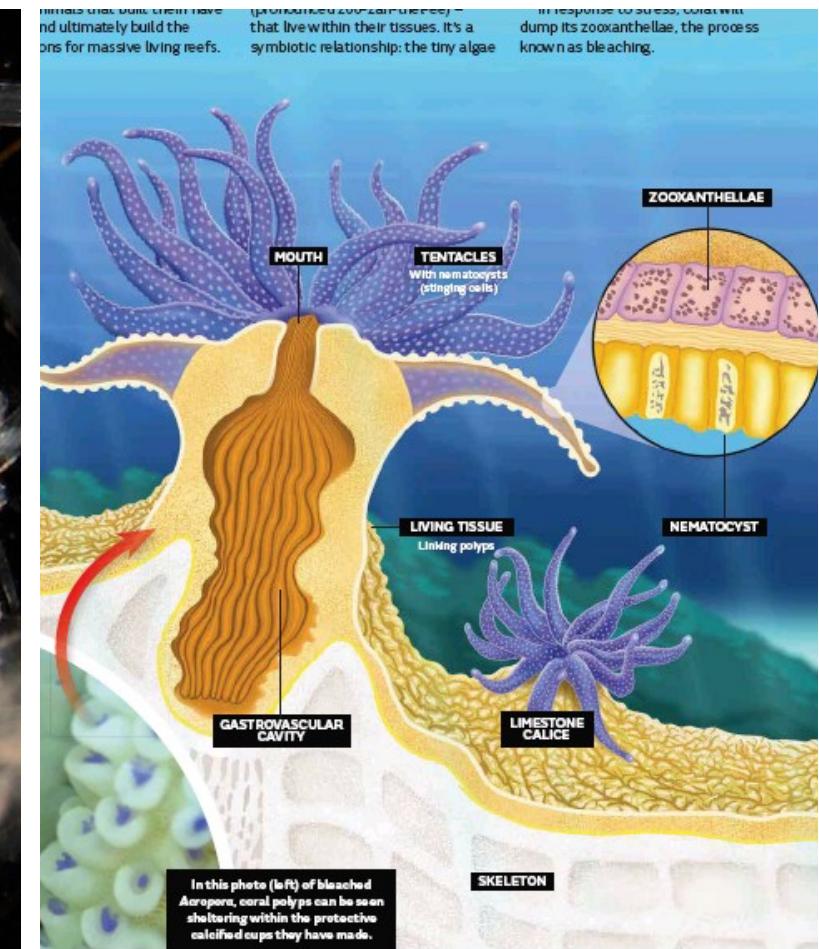
What do corals feed on?

- Sunlight
- Plankton
- Small fish
- Nothing



OCEAN TRIVIA - CORALS

- Algae living in the coral's cells photosynthesize and transfer energy to the coral
- Also use their stinging tentacles to capture tiny floating animals called zooplankton



OCEAN TRIVIA - CORALS

What causes coral bleaching?

- Changes in ocean temperature
- Exposure to air
- Runoff from land and pollution
- Sun burn

CORAL BLEACHING

Have you ever wondered how a coral becomes bleached?

HEALTHY CORAL

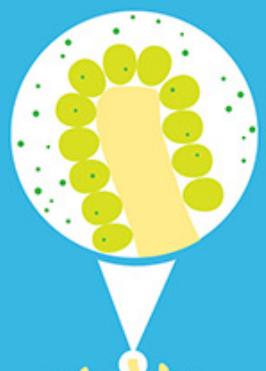
- 1 Coral and algae depend on each other to survive.



Corals have a symbiotic relationship with microscopic algae called zooxanthellae that live in their tissues. These algae are the coral's primary food source and give them their color.

STRESSED CORAL

- 2 If stressed, algae leaves the coral.



When the symbiotic relationship becomes stressed due to increased ocean temperature or pollution, the algae leave the coral's tissue.

BLEACHED CORAL

- 3 Coral is left bleached and vulnerable.



Without the algae, the coral loses its major source of food, turns white or very pale, and is more susceptible to disease.

WHAT CAUSES CORAL BLEACHING?



Change in ocean temperature
Increased ocean temperature caused by climate change is the leading cause of coral bleaching.



Runoff and pollution
Storm generated precipitation can rapidly dilute ocean water and runoff can carry pollutants — these can bleach near-shore corals.



Overexposure to sunlight
When temperatures are high, high solar irradiance contributes to bleaching in shallow-water corals.



Extreme low tides
Exposure to the air during extreme low tides can cause bleaching in shallow corals.

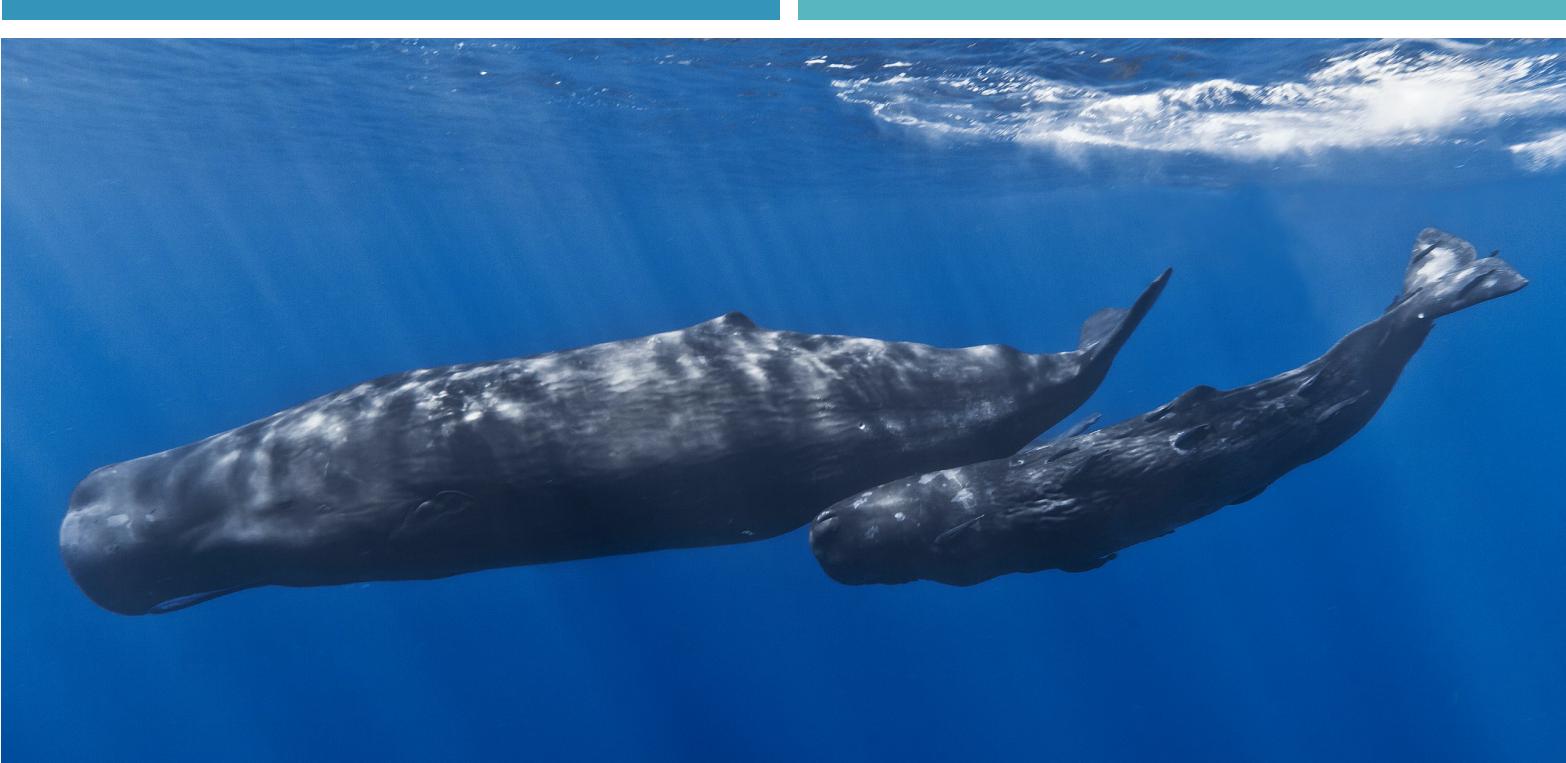


NOAA's Coral Reef Conservation Program
<http://coralreef.noaa.gov/>



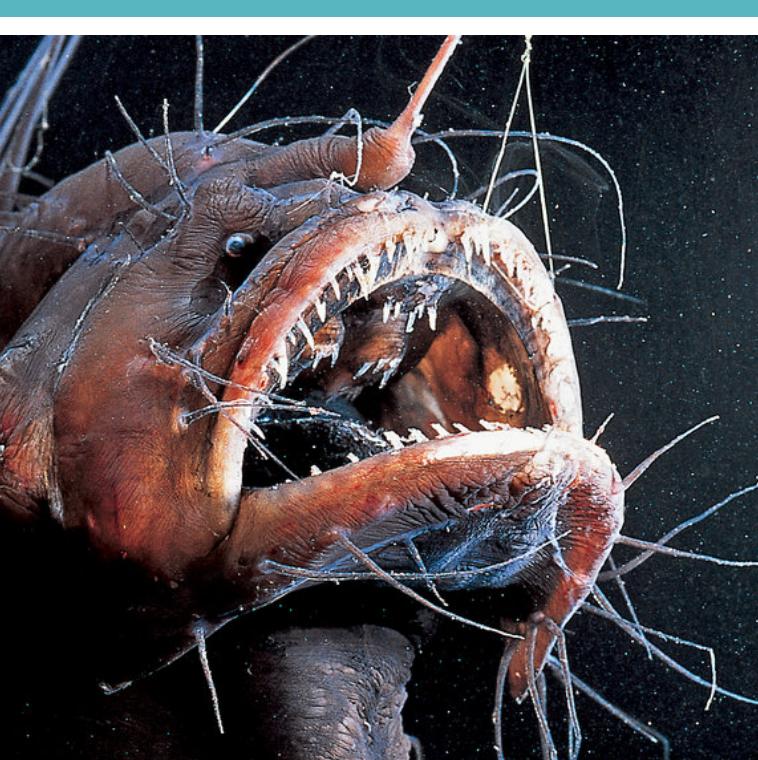
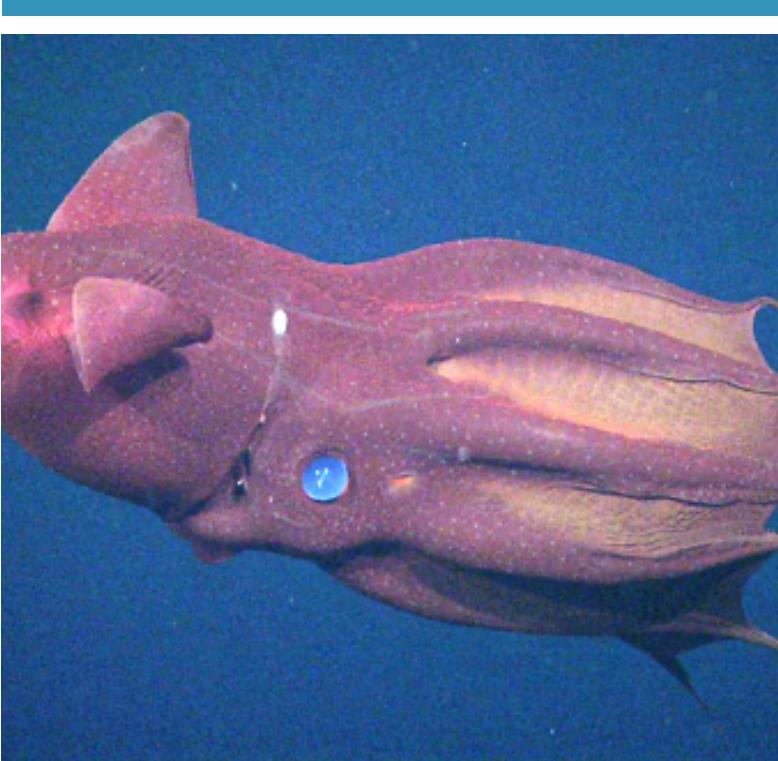
SUNLIGHT ZONE





TWILIGHT ZONE

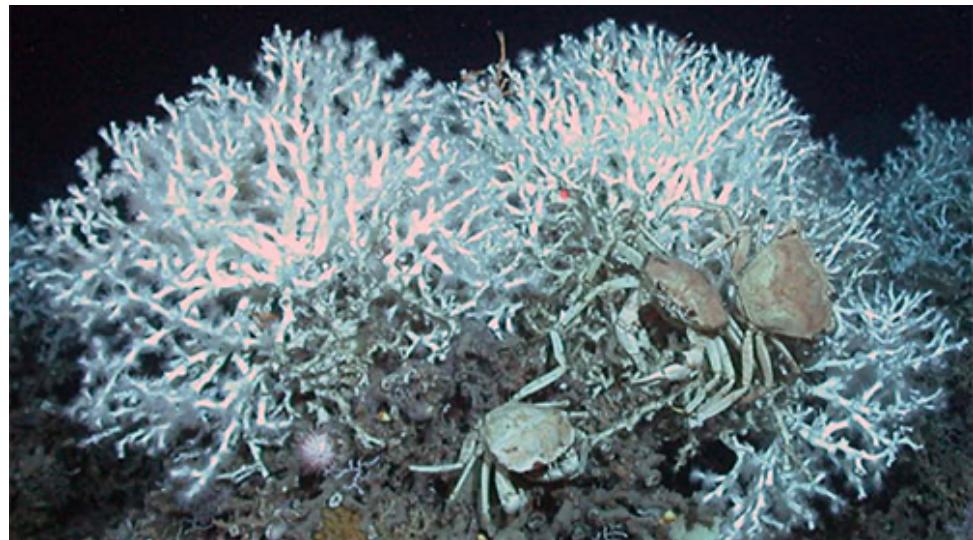


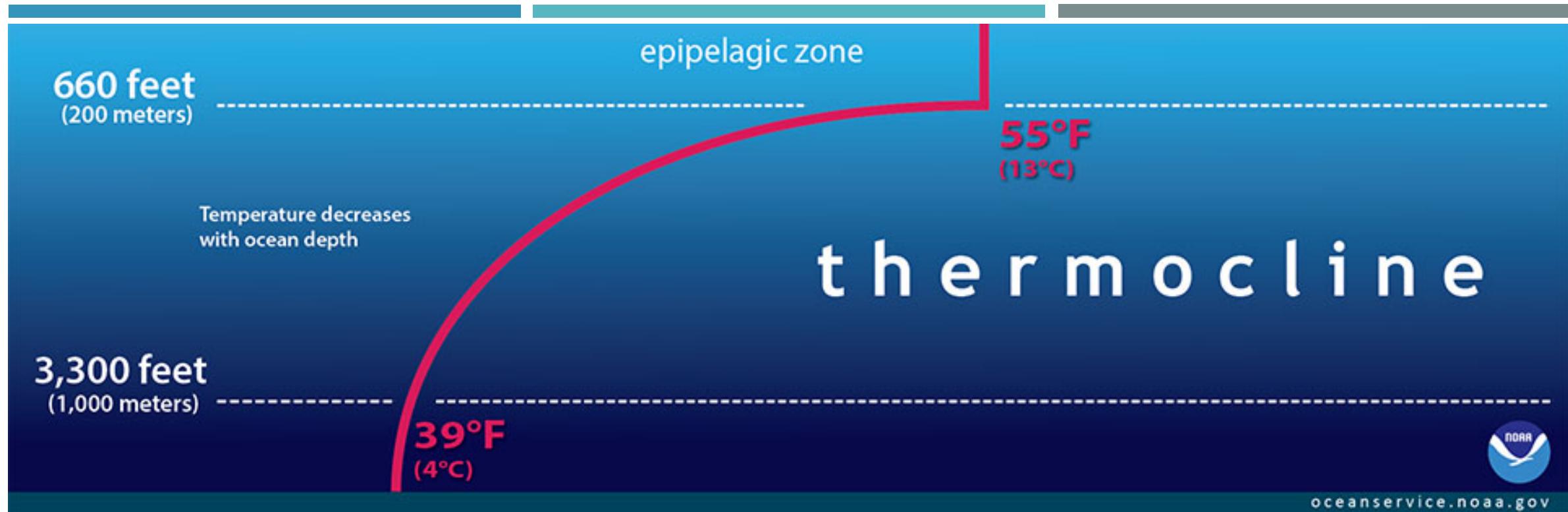


MIDNIGHT ZONE



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THERMOCLINE