

CORAL REEFS

Presented By

Jeong, Kit

Li, Angela

Loui, Anthony

Nguyen, Mickey

Wan, Diana



Advised By

Mr. Mark Heckman

Director of Education
Waikiki Aquarium

Ms. Barbara Rogers

Science Educator
President William McKinley H.S.

President William McKinley High School
Waikiki Aquarium / University of Hawai'i – Manoa
Honolulu, Hawaii

Presentation Overview



- What are Coral Reefs?
- Importance of Coral Reefs
- General Threats
- Overfishing and Possible Solutions
- Bleaching and Possible Solutions
- Conclusion



What are Coral Reefs?



Finger Coral



Lobe Coral

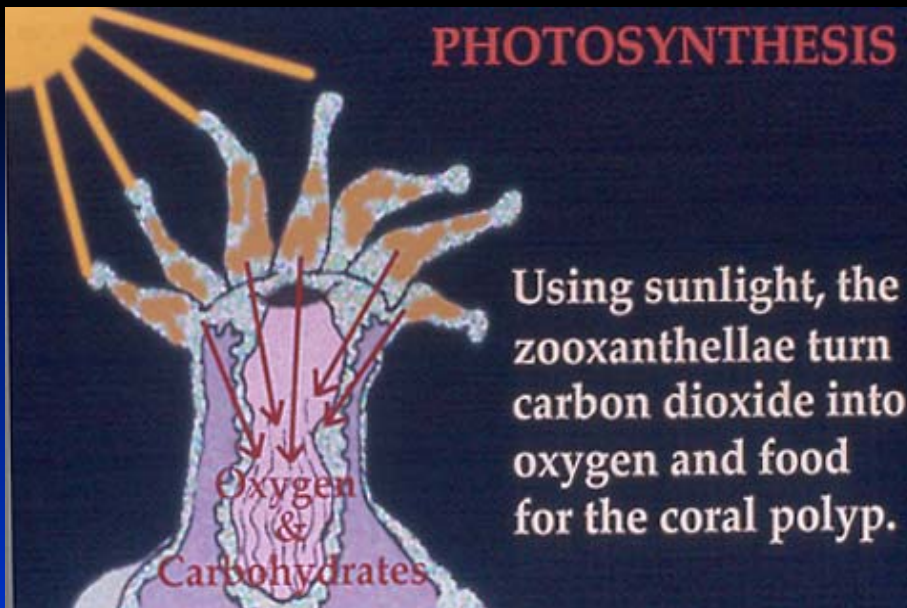
- Massive living calcium carbonate structures primarily built by corals
 - ◆ Corals are colonies of invertebrate animals called coral polyps



Cauliflower Coral



Rice Coral



Using sunlight, the zooxanthellae turn carbon dioxide into oxygen and food for the coral polyp.



Importance of Reefs

- Function as breakwaters
- Build islands
- Act as producers and recyclers
- Provide food and shelter for plants and animals
- Provide aesthetic beauty and enjoyment
- Stimulate local economies
- Act as a source of new medicines



Threats to Reefs

- Overfishing
- Human Population Growth
- Industry/ Urban Pollution
- Sediment/Turbidity
- Nutrient Enrichment
- Invasive Species
- Tourism (Coral Contact)
- Lack of Education
- Laws/Regulations/ Enforcement
- Global Warming
- Bleaching



Primary Threats to Reefs for this Presentation



Then

Overfishing



Now



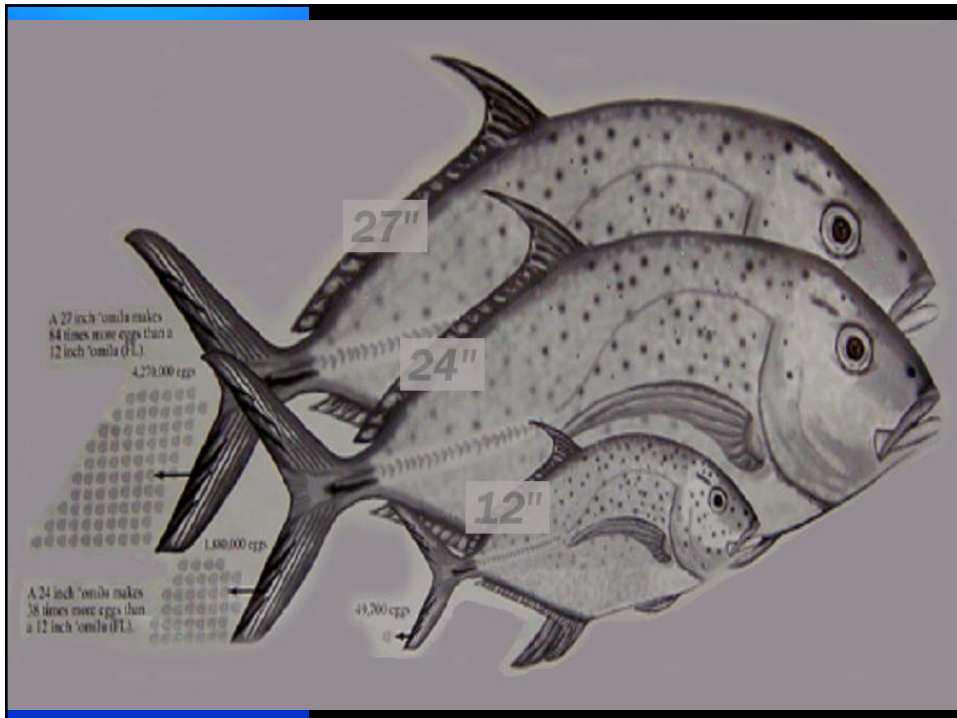
Bleaching

What is Overfishing?

■ Excessive fishing for:

- ◆ Sport
- ◆ Aquarium collection
- ◆ Commercial
- ◆ Subsistence





How *WE* can help...

- Raise awareness
- Testify
- Support fishery management areas
- Purchase captive raised fish
- Research seafood choices

Otherwise noted:

Public Meeting Schedule to Discuss the Proposal to Ban Lay Nets

January 5, 2004, Monday, Wai'anae, O'ahu
Wai'anae Library (6:30 to 9), 85-625 Farrington Hwy.

January 20, Tuesday, Lihue, Kaua'i
Wilcox Elementary School Cafeteria

January 22, Thursday, Kailua-Kona, Hawai'i
Kealahou High School, 74-5000 Puuhuluhuli St.

January 23, Friday, Hilo, Hawai'i
Waiakea High School, 155 W. Kawili St.

January 26, Monday, Moloka'i
Mitchell Pauole Center, Kaunakakai

January 27, Tuesday, Lana'i
Lana'i Public Library, Lana'i City

January 29, Thursday, Maui
Maui Waena Intermediate School, 795 Onehee Ave., Kahului, Maui

January 30, Friday, Windward O'ahu
Benjamin Parker School, Kane'ohe, O'ahu

HAWAII SEAFOOD WATCH POCKET GUIDE

MOCK-UP 10/7/03

Best Choices

Clams (farmed)

Crab: Dungeness

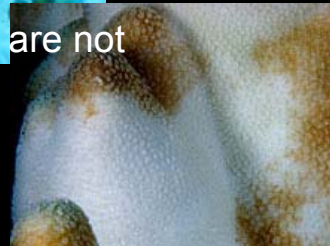
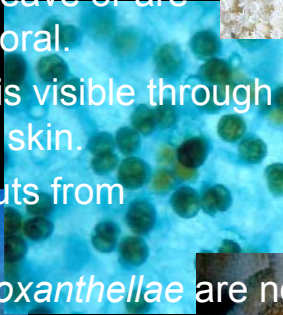
Crab: Kona/Papaikualoa (imported)

Halibut: Pacific

Mussels (farmed)

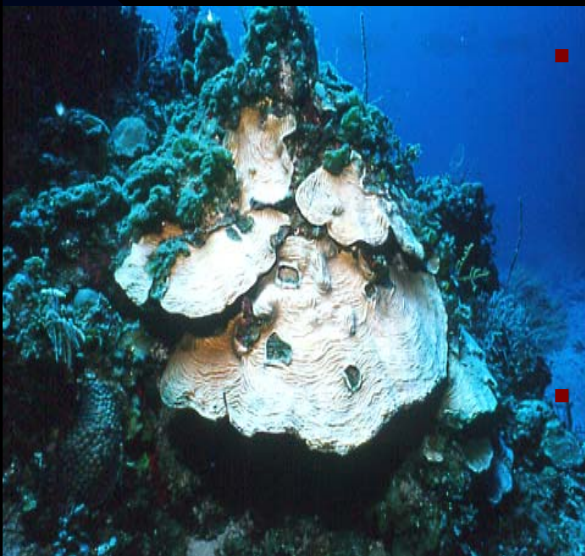
What is Bleaching?

- *Zooxanthellae* leave or are expelled from coral.
- Coral skeleton is visible through the transparent skin.
- Coral lacks inputs from *zooxanthellae*.
- Coral dies if *zooxanthellae* are not replaced.



What Causes Bleaching?

- Bleaching is a natural phenomenon.
 - ◆ Temperature change
 - ◆ Salinity change
 - ◆ Disease
 - ◆ UV Exposure
- Anthropogenic influences





How *WE* Can Help...

■ Reduce Global Warming

- ◆ Energy conservation
- ◆ Recycling
- ◆ Reducing air pollution



Conclusion

Help SAVE our REEFS!



Do your part today!



Acknowledgements

- Image Credits:

- ◆ Dr. Bruce Carlson
- ◆ Mickey Nguyen
- ◆ Jennifer Smith
- ◆ Diana Wan
- ◆ NGS Picture Pack: Coral Reefs
- ◆ Northwestern Hawaiian Islands
Coral Reef Reserve
- ◆ Waikiki Aquarium

- Special Thanks to:

- ◆ Dr. Cindy Hunter
- ◆ Coastal America