

MACROALGAE



Photo by Paul Thompson via flickr

PHYTOPLANKTON

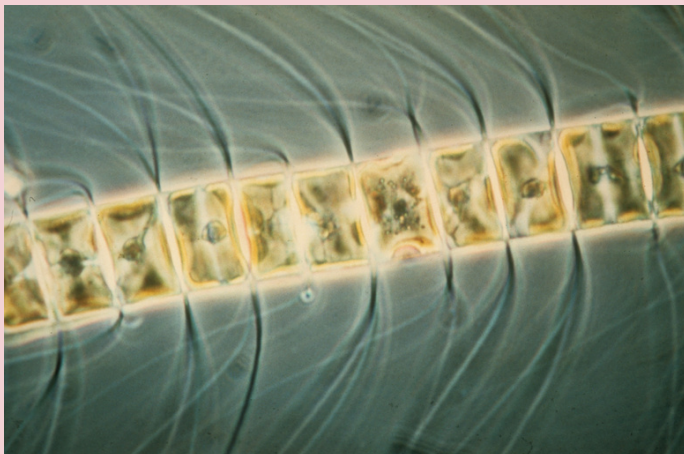


Photo by NOAA Mesa Project via flickr

Macroalgae:

- **Trophic Level:** Primary Producer
- Three main types: green (seaweed), brown (kelp), and red
- Large algae- can be seen without a microscope!
- **Diet:** carbohydrates they make from absorbing sunlight, oxygen and water (photosynthesis)
- **Eaten by:** Black Sea Urchin, Princess Parrotfish, Blue Tang, Threespot Damselfish



Phytoplankton:

- **Trophic Level:** Primary Producer
- So tiny that can't be seen without a microscope
- Produce nearly half of the world's oxygen that we breathe

- **Diet:** carbohydrates they make from absorbing sunlight, oxygen and water (photosynthesis)
- **Eaten by:** Zooplankton, Barrel Sponge



SEAGRASS



Photo by Connie Bishop

ZOOPLANKTON



Photo by Jeff Napp/ NOAA Photo Library via flickr

Seagrass:

- **Trophic Level:** Primary Producer
- Different than seaweed because they are plants not macroalgae- they flower and have roots underwater
- Help stabilize the seafloor and filter ocean water

- **Diet:** carbohydrates they make from absorbing sunlight, oxygen and water (photosynthesis)
- **Eaten by:** Princess Parrotfish, Blue Tang



Zooplankton:

- **Trophic Level:** Primary Consumer
- So tiny that can't be seen without a microscope
- Some are larval stages of larger animals, some are single-celled animals and some are tiny animals with hard skeletons (crustaceans)

- **Diet:** Phytoplankton and other planktons
- **Eaten by:** Blue Chromis, Yellowtail Snapper, Gorgonians and Coral Polyps



BLACK SEA URCHIN

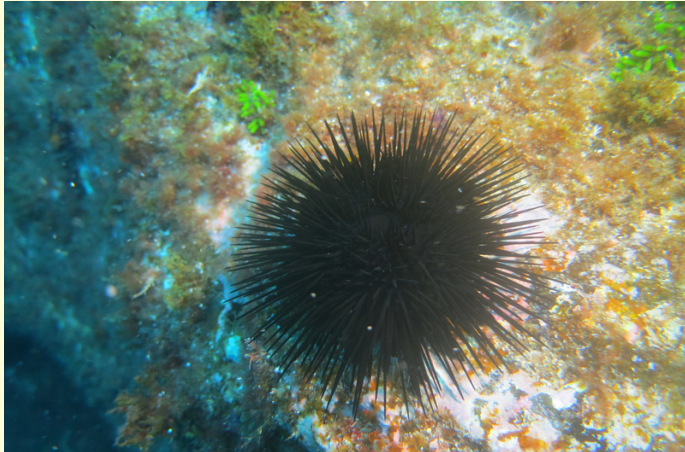


Photo by Christy Semmens

PRINCESS PARROTFISH



Photo by Daryl Duda

Black Sea Urchin:

- **Trophic Level:** Primary Consumer
- Hide during the day then come out to feed at night, scraping algae off of hard surfaces
- Important *grazers*- without sea urchins, algae could completely overgrow coral reefs

- **Diet:** Macroalgae
- **Eaten by:** Hawksbill Sea Turtle, Caribbean Spiny Lobster



Princess Parrotfish:

- **Trophic Level:** Primary Consumer
- Use beak-like teeth to scrape algae and bits of coral off the reef which they grind up and poop out as sand!
- Has pink lines outlining its tail fin, like a skirt on a real princess.

- **Diet:** Macroalgae, Seagrass
- **Eaten by:** Nassau Grouper, Gray Reef Shark, Great Barracuda, Green Moray Eel



BLUE TANG



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Photo by Daryl Duda

THREESPOT DAMSELFISH



Photo by Janna Nichols

Blue Tang:

- **Trophic Level:** Primary Consumer
- Have a sharp spine at the base of their tail which they use for self-defense
- Babies are actually yellow, as adults they can change their color from light blue to deep purple
- **Diet:** Macroalgae, Seagrass
- **Eaten by:** Nassau Grouper, Gray Reef Shark, Great Barracuda, Green Moray Eel



Threespot Damselfish:

- **Trophic Level:** Primary Consumer
- Farm their own algae patch and will viciously guard it, extremely territorial
- Father will aggressively guard his clutch of eggs which stick on the underside of rocks or hard surfaces

- **Diet:** Macroalgae
- **Eaten by:** Nassau Grouper, Gray Reef Shark, Great Barracuda, Green Moray Eel



BARREL SPONGE



Photo by Carol Cox

BLUE CHROMIS



Photo by Janna Nichols

Barrel Sponge:

- **Trophic Level:** Primary Consumer
- *Filter feeders*- eat by pumping the seawater through their interior and filtering phytoplankton in their large opening
- Some can grow big enough to fit a person inside

- **Diet:** Phytoplankton
- **Eaten by:** French Angelfish, Hawksbill Sea Turtle



Blue Chromis:

- **Trophic Level:** Secondary Consumer
- Usually found swimming in the open water above reefs rather than among the corals and rocks
- Daytime predators swim through the water and pick out tiny animals called Copepods
- **Diet:** Zooplankton
- **Eaten by:** Nassau Grouper, Gray Reef Shark, Great Barracuda, Green Moray Eel



FRENCH ANGELFISH



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Photo by Daryl Duda

YELLOWTAIL SNAPPER



©Daryl Duda

Photo by Daryl Duda

French Angelfish:

- **Trophic Level:** Secondary Consumer
- Juveniles act as important cleaner fish, keeping other fish clean by eating off bugs, dead scales, and illnesses (parasites)
- Appear in the same pairs for their whole lives and can defend a territory the size of a football field
- **Diet:** Barrel Sponges
- **Eaten by:** Nassau Grouper, Gray Reef Shark, Great Barracuda, Green Moray Eel



Yellowtail Snapper:

- **Trophic Level:** Secondary Consumer
- Usually found in the upper water column above the reef where they often school together
- Can survive up to 14 years in the wild if they avoid predators

- **Diet:** Zooplankton, Crustaceans, Shrimp, Small fish, Worms
- **Eaten by:** Gray Reef Shark, Great Barracuda, Green Moray Eel, People



GORGONIANS AND CORAL POLYPS



Photo by Tom Nicodemus



Photo by Frank Krasovec

HAWKSBILL SEA TURTLE



Photo by Dan Hershman

Gorgonians & Coral Polyps:

- **Trophic Level:** Secondary Consumer
- Gorgonians include soft corals, like sea fans and sea whips that attach to hard rocks and sway with the currents to catch their prey
- Coral polyps are the individual tiny animals that live within all corals on the reef. They use tentacles to capture prey

- **Diet:** Zooplankton, Phytoplankton
- **Eaten by:** Banded Butterflyfish



Hawksbill Sea Turtle:

- **Trophic Level:** Secondary Consumer
- Named for its hawk-like beak which they use to get food from crevices in coral reefs
- Make nests in deep holes on the beach to lay their eggs- one nest can have up to 200 eggs!

- **Diet:** Black Sea Urchins, Barrel Sponges, Jellyfish, Squids (although they will eat just about anything- they are omnivores)
- **Eaten by:** Gray Reef Shark



CARIBBEAN SPINY LOBSTER

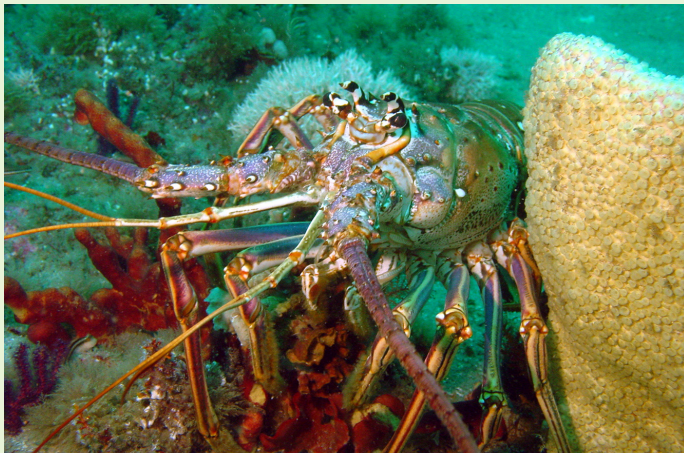


Photo by Doug Kessling

NASSAU GROUPER



Photo by Jeffrey Haines

Caribbean Spiny Lobster:

- **Trophic Level:** Secondary Consumer
- *Crustaceans*- they have a hard shell-like skeleton that covers their body, tail, and 6 legs
- Don't have big claws- instead they have two sharp spiny antennae at the top of their head which they use for fighting and defense
- **Diet:** Black Sea Urchins, Barrel Sponges, Jellyfish, Squids (although they will eat just about anything- they are omnivores)
- **Eaten by:** Nassau Grouper, People



Nassau Grouper:

- **Trophic Level:** Tertiary Consumers
- *Lie-in-wait ambushers*- use extreme camouflage to avoid being seen by prey until they are close enough to grab with their big mouths
- Form *spawning aggregations* where thousands of males and females meet to reproduce (lay eggs)
- **Diet:** Princess Parrotfish, Blue Tang, Threespot Damselfish, Blue Chromis, French Angelfish, Caribbean Spiny Lobster, other groupers
- **Eaten by:** Sharks, People, other groupers



GRAY REEF SHARK



Photo by Daryl Duda

GREAT BARRACUDA

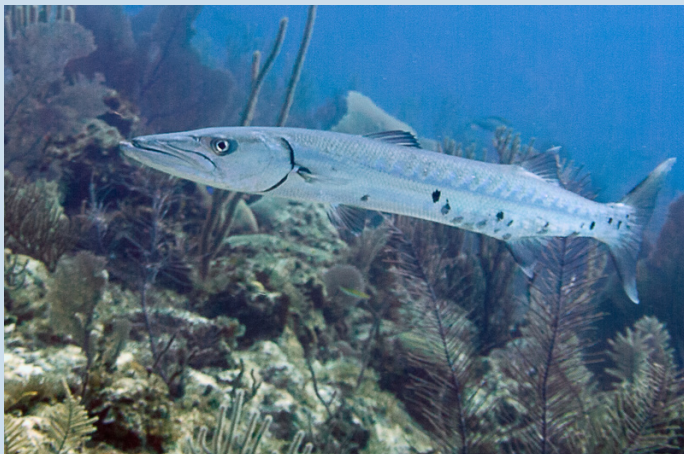


Photo by Jeffrey Haines

Gray Reef Shark:

- **Trophic Level:** Tertiary Consumers
- Hangs out in deep water during the day and then comes onto the reef at night to feed on fish
- Excellent sense of smell- can detect one part tuna extract in 10 billion parts of seawater
- **Diet:** Princess Parrotfish, Blue Tang, Threespot Damselfish, Blue Chromis, French Angelfish, Yellowtail Snapper, Hawksbill Sea Turtle, Nassau Grouper, Great Barracuda, Banded Butterflyfish, Moray Eel, and other sharks.
- **Eaten by:** Other Sharks



Great Barracuda:

- **Trophic Level:** Tertiary Consumers
- Elongated, silvery body, strong jaws, and lots of sharp teeth to help stalk and capture prey
- *Lie-in-wait predator* uses stealthy coloration and body shape to hide and surprise attack their prey
- **Diet:** Princess Parrotfish, Blue Tang, Threespot Damselfish, Blue Chromis, French Angelfish, Yellowtail Snapper, Banded Butterflyfish
- **Eaten by:** Sharks, People



BANDED BUTTERFLYFISH



Photo by Christy Semmens

GREEN MORAY EEL



Photo by Jeffrey Haines

Banded Butterflyfish:

- **Trophic Level:** Tertiary Consumers
- Mate for life and are often seen in pairs swimming over the reef
- Have long snouts and bristly teeth to hunt prey in small crevices and pick apart the tentacles of small coral polyps
- **Diet:** Gorgonians and Coral Polyps, Zooplankton, Algae
- **Eaten by:** Nassau Grouper, Gray Reef Shark, Great Barracuda, Green Moray Eel



Green Moray Eel:

- **Trophic Level:** Tertiary Consumers
- Will sometimes partner up with Groupers to hunt- the moray eel scares prey out of crevices and the grouper follows along
- Aren't actually green!- have a blue body covered in a protective yellow mucous giving them their green color
- **Diet:** Princess Parrotfish, Blue Tang, Threespot Damselfish, Blue Chromis, French Angelfish, Yellowtail Snapper, Banded Butterflyfish
- **Eaten by:** Sharks

