Herbivores

A green turtle munches on eelgrass growing in a quiet Brazilian bay. She weeds out dying blades of grass and keeps the eelgrass bed healthy. As a **hatchling,** she ate shrimp, crabs, and jellyfish. As an adult, she eats only plants. In fact, the green sea turtle is the only plant eater among sea turtles.

Herbivore comes from the Latin words *herb,* meaning "plant," and *vore,* meaning "eater." Many of the largest land animals

? WORDS TO KNOW . . .

hatchling (HACH-ling) young that has just hatched from an egg

▲ A female green turtle swims past a bed of coral.

▲ Kelp is a large form of algae—the green stuff that coats home aquariums.

are herbivores. They include elephants, giraffes, buffalo, and rhinoceroses. In the oceans, green sea turtles and sea cows (dugongs and manatees) are the only large plant eaters.

Ocean herbivores live in the pelagic and intertidal zones. That's where marine plants grow. Algae and phytoplankton need sunlight, just like oak trees and grass. As the ocean gets deeper, colder, and darker, fewer plants are found. In very deep water, there are no plants and no plant eaters.

One-celled ocean plants provide food for zooplankton.

Copepods eat the most plants because there are more copepods than any other zooplankton. Both copepods and phytoplankton drift on the seas. Other animals, such as clams or mussels, filter the plankton from the moving water. They eat balanced meals of meat (zooplankton) and vegetables (phytoplankton).

Tide pools form on rocky shores. Seaweed clings to the rocks as waves batter the tide pools. Tide pools house several plant eaters. Limpets thrive in tide pools. They move over rocks and vacuum algae from the surface. Like snails, they leave a slime trail behind them.

Urchins live in tide pools, kelp beds, and coral reefs. Urchins eat larger sea plants, such as wrack, dulse, and kelp. Colorful urchins protect themselves with sharp spines. They

chins feast on kelp. Sea otters feast on urchins. ▸
They are all part of the oceanic food cycle.

PROFILE: COWRIES

Cowries are herbivores that graze on algae at night. They form remarkably beautiful shells. Their shells blend in with sand and gravel seafloors to protect cowries from predators.

In some countries, cowries have been used as money and made into jewelry. In Fiji and the Solomon Islands of the South Pacific, the golden cowrie is a sign of a tribal chief's power. Some people believe that cowries protect them from evil spells.

gnaw at kelp holdfasts and do serious damage to kelp beds. Luckily, sea otters, crabs, and wolf fish keep sea urchin populations under control.

Sea Cows

Manatees, dugongs, and Steller's sea cows, a now extinct species, belong to the same family of mammals, often called sea cows. They live in shallow, warm water with plenty of sea grass. They breathe air like dolphins and whales. However, their closest natural relative is the elephant!

Sea cows eat sea grass and flowering plants that grow in bays, such as hyacinths and hydrillas. They munch up to 100 pounds (45 kg) of plant matter daily.

Pollution and the clearing of sea grass from rivers and bays has reduced the sea cows' food supply. These meek creatures are endangered throughout the world.

Balanced Nature

Coral reefs show how nature balances life in an ecosystem. Coral builds reefs in warm, shallow ocean water. Filter feeders, such as coral and anemones, keep the water clear.

Algae grow well in warm, shallow, clear water. In fact, algae could

LOOK IT UP!

The Save the Manatee Club is dedicated to preserving manatee habitats and keeping Florida's manatees safe. Learn more about manatees from the club's Web site: *http://www.savethemanatee.org.*

▲ Slow-moving manatees thrive in areas where sea grass is plentiful.

▲ Clownfish live comfortably among the poisonous tentacles of sea anemones. They are immune to the anemone's sting.

grow so quickly that it might cover up a reef. The coral would die. Nature balances plant and animal growth so both can live.

Many reef-dwelling fish are herbivores. Blue-and-purple parrot fish, dainty surgeonfish, and bold damselfish chew on algae vigorously to limit its growth. They protect coral from being overrun by algae. They live among the poisonous coral tentacles. The tentacles protect the fish from predators. The process of two living things working for each other's well-being is called symbiosis.