

Hiding in a coral reef, a ribbon moray eel waits. Its body is long and thin. Its tiny black eyes watch what swims by.

A small silver fish comes. It does not see the eel. Suddenly, the eel springs forward. It sinks its teeth into the fish and quickly gobbles it up.

Just as quickly, the eel darts back into hiding. It waits for the next fish to come along. It won't be waiting long.

Life on the Reef

The eel and the fish live in the Great Barrier Reef. It's part of Australia. More than 1,800 types of fish and 400 types of corals live here, too. They are all part of an **ecosystem**.

Fish, corals, and all living things need food for energy. The animals in the reef must compete for food. There's one rule of survival here. Eat or be eaten.

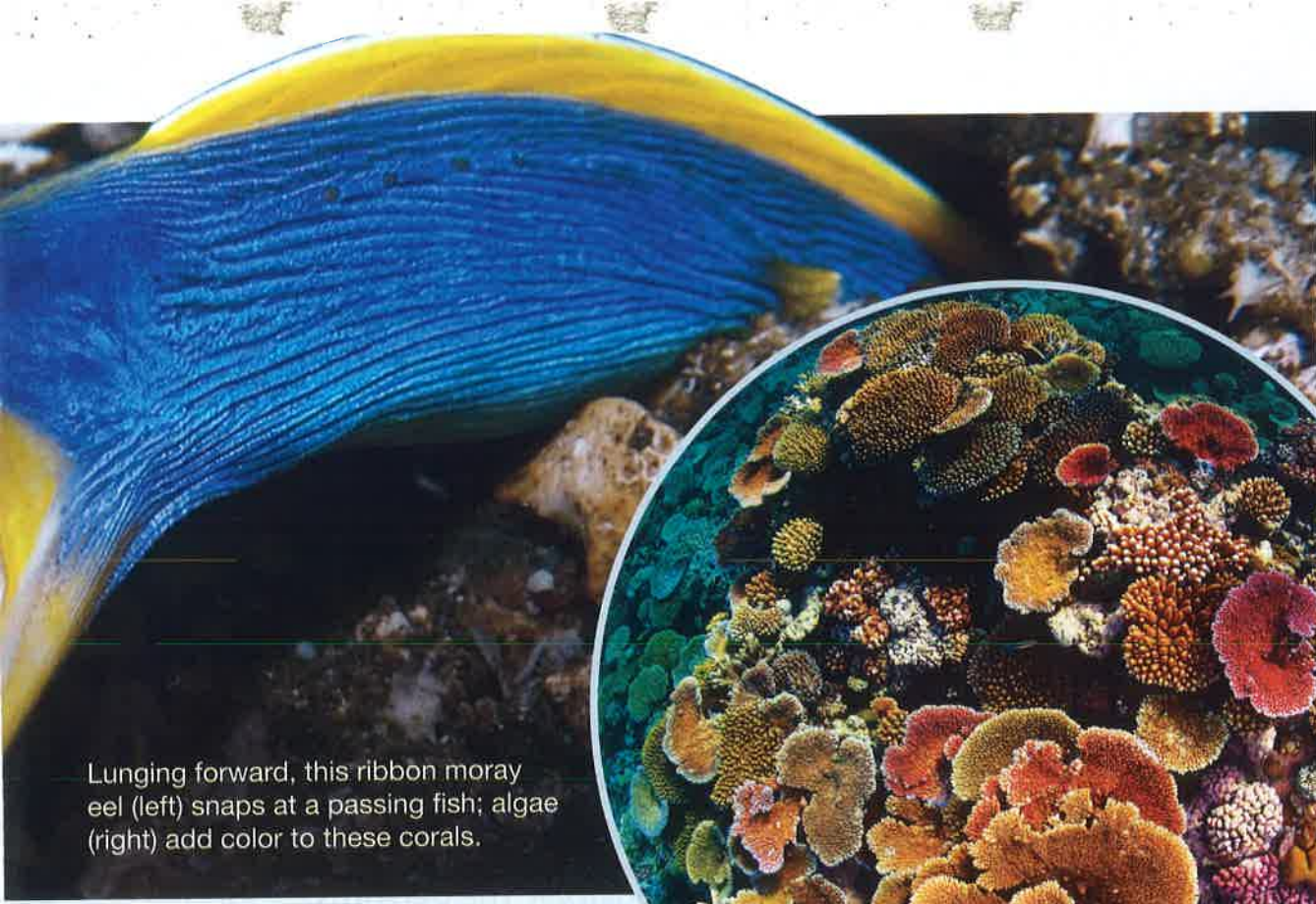
One animal eats another and another animal eats it. Food energy flows through one animal to the next. This process happens over and over. It's called a **food chain**. A food chain begins with the sun.



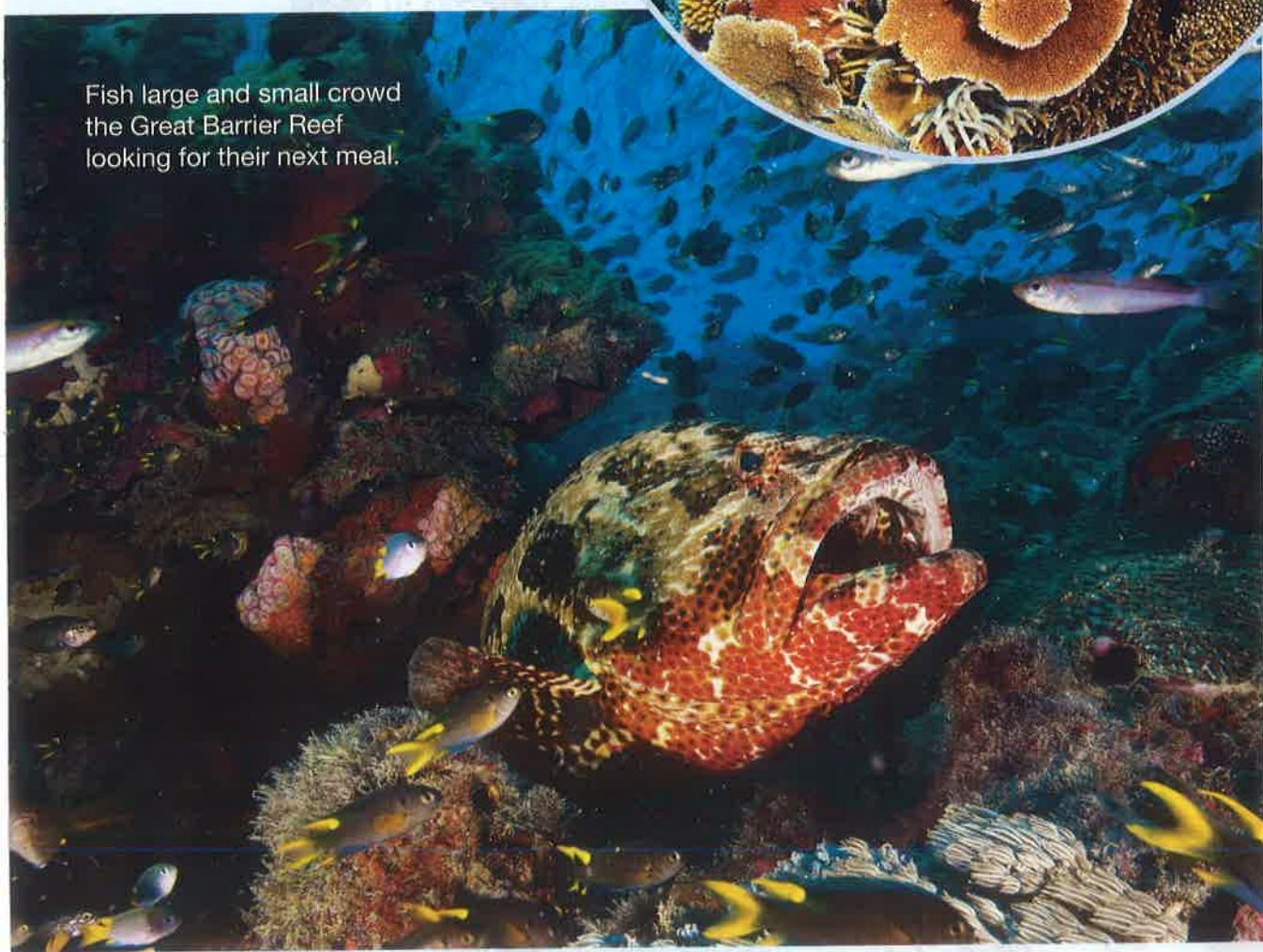
Living Links

The sun shines on algae that live in the reef. The algae use the sun's energy to make food. This process is called photosynthesis. A living thing that can make its own food is a **producer**. Producers like algae are near the bottom of the food chain.

In the reef, some algae live inside coral polyps. Coral polyps are the animals that build the reef. They are **consumers**. They get some food energy from the algae. Corals are also predators. Coral polyps are built to hunt prey. They are shaped like tubes. One end has a mouth and arms that grab passing prey.



Lunging forward, this ribbon moray eel (left) snaps at a passing fish; algae (right) add color to these corals.



Fish large and small crowd the Great Barrier Reef looking for their next meal.



Sticky coral polyp arms reach out to catch passing prey.

Finding Dinner

The coral polyp's arms are delicate. They are also deadly. Inside each one is a poisonous thread. When a tiny shrimp passes by, ZAP! Sticky arms grab it. The threads stun the shrimp. The coral polyp eats it. Energy passes from shrimp to polyp.

After eating, the polyp tucks its arms into its "skeleton." This stony cover at the base of the polyp protects it from most predators.

Yet a parrotfish is not like most predators. The parrotfish spots the corals. It moves in closer.

Crrrrunchhhh! The parrotfish's tough "beak" cracks open the hard skeleton. It eats the soft parts inside. Energy moves up another link in the food chain. It keeps the parrotfish alive, but not for long.

This bumphead parrotfish is ready to sink its teeth into the stony corals.



A blacktip reef shark is shown swimming in the ocean. The shark has a brownish-grey body with a lighter underbelly. Its dorsal fin is prominent and has a black tip. The background is a deep blue-green color, suggesting an underwater environment.

This blacktip reef shark hunts for food.

At the Top

Next, a blacktip reef shark spots the parrotfish. It dives. Its sharp teeth rip into the fish. Gulp! The energy in the parrotfish moves into the shark.

The shark is at the top of this food chain. Eventually, it will die. When it does, it becomes the next link in the food chain.

On the Bottom

Scavengers like crabs crawl out of cracks in the corals. Crabs are **decomposers**. They feed off of the dead shark. Decomposers are the final step in the food chain.

There are many food chains in the Great Barrier Reef. All of the chains connect to form a **food web**.

Linking Food Chains

A food web is made up of more than one food chain. Many animals eat more than one thing. This helps their chances of survival. Many consumers eat the same kind of producer. For example, turtles eat sea grasses. So do surgeonfish.

Predators may eat more than one kind of consumer. Coral polyps eat tiny shrimps. They also eat small fish. Decomposers eat all kinds of dead plants and animals.

Each living thing plays its part in a food chain. In each step, energy passes to the next animal. Together the chains form a web of life. In the reef, this web is like no other on Earth.

Wordwise

consumer: a living thing that eats other living things

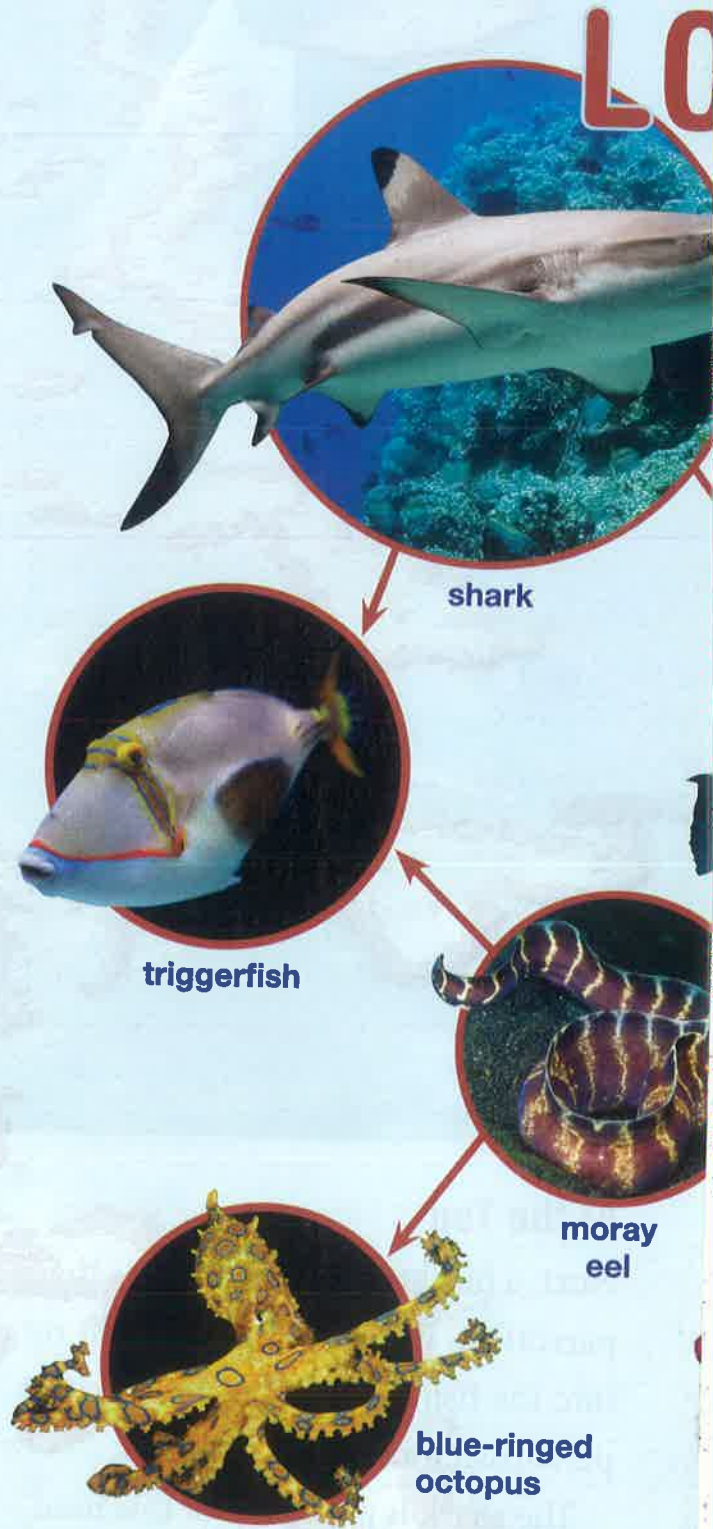
decomposer: a living thing that eats and breaks down dead plants and animals

ecosystem: all the living and nonliving things in an area

food chain: the movement of energy from one type of living thing to another

food web: the overlapping food chains in an ecosystem

producer: a living thing that makes its own food



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NATIONAL GEOGRAPHIC
Explorer

Vol. 11 No. 1

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PUBLISHED BY NATIONAL GEOGRAPHIC LEARNING

NATIONAL GEOGRAPHIC EXPLORER

(ISSN 1541-3357) is published seven times during the school year—September, October, November–December, January–February, March, April, May—by National Geographic Learning, 1125 17th Street NW, Washington, D.C. 20036. Postmaster: Please send address changes to NATIONAL GEOGRAPHIC EXPLORER, PO Box 4002865, Des Moines, IA 50340-0597. Periodical postage paid at Washington, D.C., and additional mailing offices.

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Cover: Clown fish

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