



**Bright Sight.** A tiny goby swims by a coral colony.

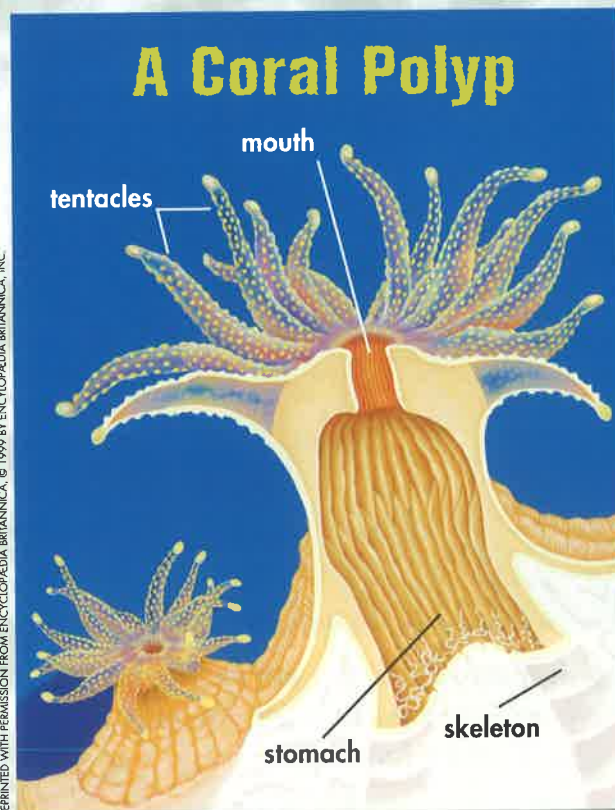
URUMA TAKEZAWA

## Coral Casualties

Smith was surprised to find a healthy reef here. In the 1990s, a long hot spell made the ocean warmer. When polyps get too warm, the algae die.

Many coral polyps cannot live without algae. So in 1998, most of the reefs here died. When the algae die, polyps lose their color. The colonies became white or “bleached.”

Then, in 2004, the reefs were damaged again. A huge wave called a tsunami smashed reefs throughout the Indian Ocean.



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## Reef Troubles

If polyps die, there is trouble in a reef. Without polyps to build corals, the reef stops growing. It may even fall apart. Thousands of sea species lose their **habitat**.

Too few fish is also bad news. For the reef to stay healthy, fish must eat the seaweed. With no fish, seaweed could cover and kill the coral polyps.

People also need coral reefs. Reefs keep waves from smashing into shore. They create places that are safe for boating and fishing. Fishermen and tour guides depend on reefs for jobs.

DR. DAVID J. SMITH, UNIVERSITY OF ESSEX, UK



**Eel Appeal.** *A moray eel swims by the hole where it rests during the day. At night, it hunts for food.*

## Secrets of Success

No wonder Smith was excited to find this healthy reef. Warm water and a tsunami had hurt many reefs in the area. Yet this one survived. Scientists wanted to know why.

Smith hopes the Curieuse reef can answer an important question. Earth's weather is changing. Oceans are getting warmer. This reef proved some reefs can survive warm water. How can other reefs also survive these changes?

Many things have helped the Curieuse reef stay healthy. It is in a national park. Fishing is limited. No towns or buildings have been built on the shore. Changes in the shoreline can affect the way ocean water moves. That can change what food there is for reef creatures to eat. It can also change the water temperature.

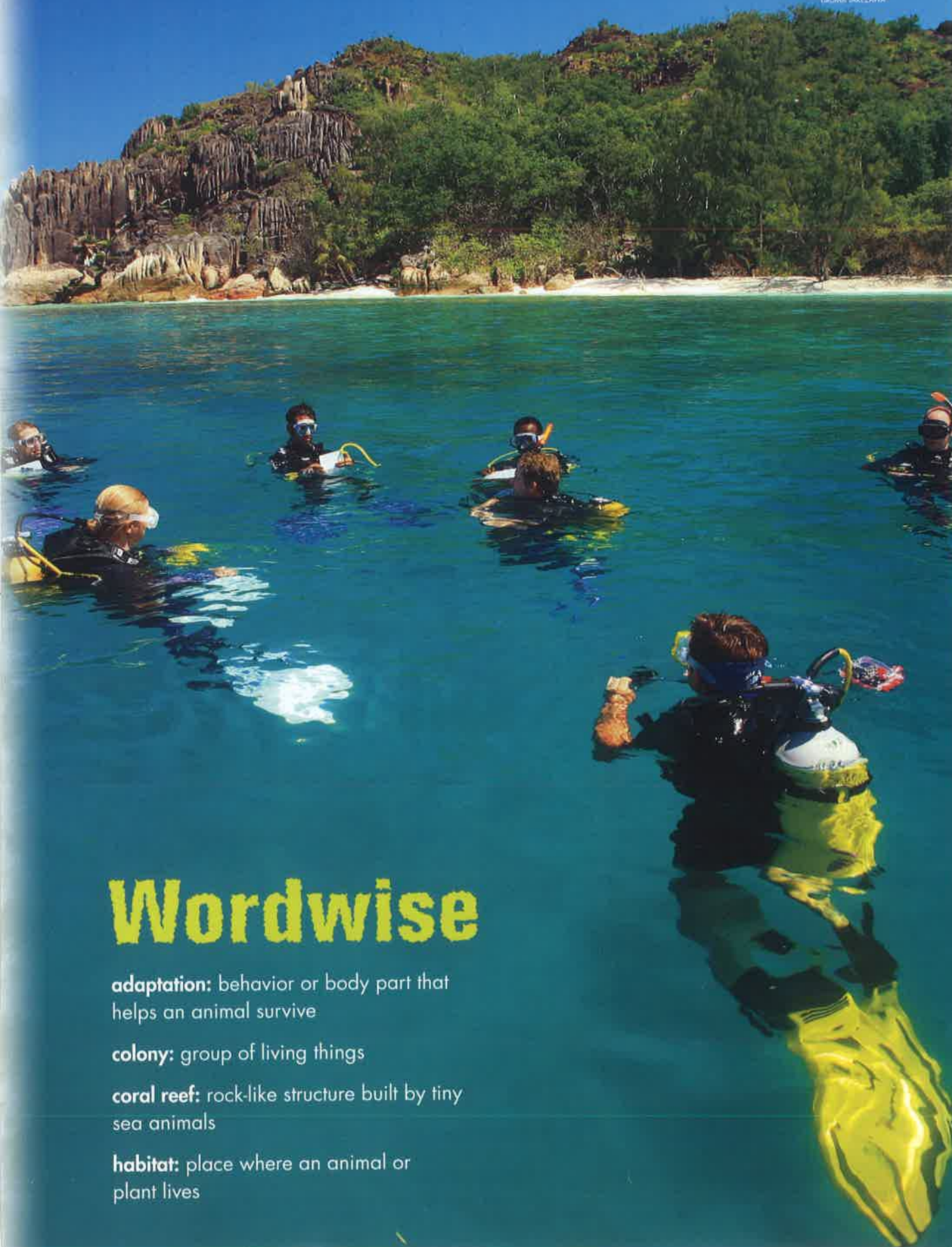
## Surprise Visitor

Smith visited the reef many times. There was a lot to learn. On his last day of diving, he sensed something behind him. He looked up to see a deadly tiger shark! Yet Smith was glad to see it. The shark was one more sign that the reef was healthy.



**Mini Meeting.** *Talking under the water is tough. So the team makes plans before diving.*

URUMI TAKEZAWA



## Wordwise

**adaptation:** behavior or body part that helps an animal survive

**colony:** group of living things

**coral reef:** rock-like structure built by tiny sea animals

**habitat:** place where an animal or plant lives



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**Cover:** This caterpillar may fool predators with its fake eyes and large head.

(Photo: Gary Meszaros/Getty Images)

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