



### **Neon Colors Help Coral Reef Survival**

*The extensive bleaching of coral reefs is an alarming threat to marine ecosystems. To fight this threat, some corals are turning neon to survive.*

Coral reefs are the rainforests of the sea. They serve as habitats for thousands of fish and other marine creatures. For people, they provide many benefits including food, medicine, and recreation. But these valuable ecosystems are suffering greatly from the effects of climate change.

Corals get stressed because of changes in water quality or temperature. When they get stressed, they undergo a life-threatening process known as bleaching. Bleached corals are in danger of dying.



### *Are corals plants or animals?*

Corals are animals. They are not plants because they cannot make their own food. Instead, they have tiny arms that look like tentacles which they use to catch food and sweep it into their mouths.

Corals are actually made up of tiny creatures called polyps that have gathered together to form colonies. But corals also depend on another organism to survive. Microscopic algae live on healthy corals and provide many benefits to sea animals.

### *How do corals and algae help each other?*

Like plants, corals take root and stay in one place. They are usually colorless, but the algae that live on them cause them to have different colors. The coral and algae's mutually beneficial relationship is called symbiosis.

As they live in the corals, algae remove the corals' waste products and use them to make their own food in a process called photosynthesis. In exchange, the corals get oxygen and products of the algae's food-making process to live and grow.

### *What causes coral bleaching?*

Rising ocean temperatures cause corals to release the algae crucial for their survival. When the algae are expelled, coral tissues lose their color and turn white in a process known as bleaching. Bleaching is a serious threat to a coral's survival. Without the algae they need to survive, corals may die.

Scientists have observed, however, that some corals have developed neon colors instead of turning white during bleaching. The cause of this reaction was unknown until the recent study.



### *Why do the corals develop neon colors?*

Instead of turning white, some corals produce colorful pigments and develop bright purple, pink, or orange colors. According to scientists, this behavior is the coral's attempt to survive harsh conditions in the ocean. The colorful pigments are like a layer of sunscreen that provide a

more suitable environment for algae to return to the corals. Scientists believe that the bright colors attract the algae's attention and encourage them to return.

With the continued threat to corals caused by global warming, scientists think that corals are finding new ways to survive.

Flesch Reading Ease score: 60 (text scale)

After reading the passage, answer the following questions:

1. Why are coral reefs important?

- a. They are the rainforests of the sea.
- b. They serve as habitats for fish and other marine creatures.
- c. They provide food, medicine, and recreation to people.
- d. All of the above

Answer: d

2. What is coral bleaching?

- a. A coral's response to changes in water quality or temperature
- b. A coral's release of the algae that live in it
- c. Both a and b
- d. None of the above

Answer: c

3. What is symbiosis?

- a. The food-making process of algae
- b. A mutually beneficial relationship between two organisms
- c. A coral's short arm
- d. The neon colors developed by corals

Answer: b

4. Why do the corals develop neon colors?

- a. To attract and encourage algae to return
- b. To survive harsh ocean conditions
- c. To create a protective layer that acts like sunscreen
- d. All of the above

Answer: d