

Be a Gentle Visitor to our Reefs

GOING DIVING!

Check out the reef before you go! A reef is a delicate ecosystem that can be easily damaged by careless divers. Here are some tips to help you be a responsible visitor:

- Don't touch or break anything on the reef. Touching or breaking coral can cause it to die.
- Don't stand on the reef. Standing on coral can crush it.
- Don't use reef fins. Reef fins can damage the reef.
- Don't use reef weights. Reef weights can damage the reef.
- Don't use reef knives. Reef knives can damage the reef.
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NO NEED TO DIVE TO SEE OUR MARINE LIFE

There are many ways to enjoy the reef without diving. Here are some ideas:

- Snorkeling: Snorkeling is a great way to see the reef.
- Boat tours: Boat tours offer a great view of the reef.
- Underwater photography: Underwater photography is a great way to capture the beauty of the reef.
- Reef walks: Reef walks are a great way to learn about the reef.
- Reef talks: Reef talks are a great way to learn about the reef.

WHAT TO DO AFTER YOUR TRIP!

After your trip, there are some things you should do to help the reef:

- Shower: Showering helps to remove any sunscreen or other chemicals from your skin.
- Wash your clothes: Washing your clothes helps to remove any chemicals from them.
- Recycle: Recycling helps to reduce the amount of waste that ends up in the ocean.
- Support reef conservation: Supporting reef conservation helps to protect the reef.

BASICS OF A CORAL REEF

What are Coral Reefs?

Coral reefs are large, complex structures made of calcium carbonate. They are built by tiny animals called corals. Coral reefs are found in shallow, clear, warm water. They are one of the most diverse ecosystems on the planet.

Where are the Coral Reefs?

Coral reefs are found in all tropical and subtropical oceans. They are most common in the Pacific and Indian Oceans. In Singapore, coral reefs are found around the island and in the surrounding waters.

WORLD CORAL REEF DISTRIBUTION MAP

WHERE ARE THE CORAL REEFS IN SINGAPORE?

Coral reefs in Singapore are found in the following areas:

- Sentosa Island
- Pulau Tekong
- Pulau Ubin
- The eastern coast of the island

What are the Different Types of Reefs?

Barrier Reefs

Barrier reefs are the most common type of coral reef. They are built on a sandy or rocky base and are separated from the shore by a shallow lagoon. Barrier reefs are found in all tropical and subtropical oceans.

Atoll Reefs

Atoll reefs are a special type of barrier reef. They are built on a volcanic base and are surrounded by a shallow lagoon. Atoll reefs are found in the Pacific and Indian Oceans.

Table Reefs

Table reefs are a type of barrier reef. They are built on a sandy or rocky base and are separated from the shore by a shallow lagoon. Table reefs are found in the Pacific and Indian Oceans.

WHAT LIES BENEATH: Singapore's Coral Reefs

Introduction to the Living Organisms that Live in the Coral Reefs of Singapore

This book is a guide to the living organisms that live in the coral reefs of Singapore. It covers the following topics:

- The Soft Corals
- The Gorgonians
- The Fishes
- The Echinoderms
- The Crustaceans
- The Algae
- The Sea Squirts
- The Molluscs
- The Sponges

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BASICS OF A CORAL

What is a Coral?

Coral is a colony of tiny animals called polyps. Each polyp has a hard, calcium carbonate skeleton. The polyps live in a common cavity called a polyp. The polyps are connected to each other by a network of tissue called the gastrovascular cavity.

CORAL SECTION OF A CORAL POLYP

Why are Corals so Colourful?

Corals are colorful because of the presence of symbiotic zooxanthellae. Zooxanthellae are tiny, photosynthetic organisms that live inside the coral polyps. They provide the coral with energy and nutrients. In return, the coral provides the zooxanthellae with a safe place to live and access to sunlight.

How do Corals Reproduce?

Sexual Reproduction

Corals reproduce sexually by releasing eggs and sperm into the water. The eggs and sperm fuse to form a zygote. The zygote develops into a planula larva. The planula larva settles on a hard surface and grows into a new coral polyp.

Asexual Reproduction

Corals can also reproduce asexually. They can reproduce by budding, fragmentation, or asexual reproduction. Budding is the most common form of asexual reproduction. In budding, a new polyp grows out of the side of an existing polyp. Fragmentation occurs when a piece of a coral breaks off and grows into a new polyp. Asexual reproduction occurs when a polyp produces a new polyp without the need for eggs and sperm.

WHAT LIES BENEATH: SINGAPORE'S CORAL REEFS

LIFE ON A CORAL REEF

The Hard Corals

Hard corals are the most common type of coral. They are built on a sandy or rocky base and are separated from the shore by a shallow lagoon. Hard corals are found in all tropical and subtropical oceans.

The Soft Corals

Soft corals are a type of coral that does not have a hard skeleton. They are found in shallow, clear, warm water. Soft corals are found in the Pacific and Indian Oceans.

The Gorgonians

Gorgonians are a type of coral that has a soft, flexible skeleton. They are found in shallow, clear, warm water. Gorgonians are found in the Pacific and Indian Oceans.

The Fishes

Fishes are a diverse group of animals that live in the coral reefs. They are found in all tropical and subtropical oceans. Fishes are found in the Pacific and Indian Oceans.

The Echinoderms

Echinoderms are a group of animals that have a hard, spiny skeleton. They are found in shallow, clear, warm water. Echinoderms are found in the Pacific and Indian Oceans.

The Crustaceans

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The Algae

Algae are a diverse group of plants that live in the coral reefs. They are found in all tropical and subtropical oceans. Algae are found in the Pacific and Indian Oceans.

The Sea Squirts

Sea squirts are a group of animals that have a soft, gelatinous body. They are found in shallow, clear, warm water. Sea squirts are found in the Pacific and Indian Oceans.

The Molluscs

Molluscs are a group of animals that have a soft, unsegmented body. They are found in shallow, clear, warm water. Molluscs are found in the Pacific and Indian Oceans.

The Sponges

Sponges are a group of animals that have a porous, gelatinous body. They are found in shallow, clear, warm water. Sponges are found in the Pacific and Indian Oceans.

Interactions Among Reef Organisms

Competition

Competition occurs when two organisms fight for the same resources. In the coral reef, competition occurs between different species of coral. Competition can occur for space, light, and nutrients.

Predation

Predation occurs when one organism eats another organism. In the coral reef, predation occurs between different species of fish. Predation can occur for food and shelter.

Symbiosis

Symbiosis occurs when two organisms live together and benefit from each other. In the coral reef, symbiosis occurs between coral and zooxanthellae. Zooxanthellae provide the coral with energy and nutrients. In return, the coral provides the zooxanthellae with a safe place to live and access to sunlight.

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