

# Shorkeling and Diving Guide





## WHAT YOU WILL SEE

## Snorkeling and Diving Guide

Cruises to Australia, New Zealand and the Pacific Islands have at least one thing in common: **the excellent diving and snorkeling** opportunities available at the ports of call.

Whether you're experienced or have yet to dive beneath the surface for the first time, it's always good to have a heads up on what you can expect to see.

This useful guide to what you will see while snorkeling and diving gives an insight into the kinds of marine creatures you are likely to encounter while exploring some of the world's most unique reef systems. From the corals that lie just beneath the surface, to the fascinating creatures of the deep, this e-book covers it all.

So what are you waiting for?

Dive in and discover this **aquatic playground** for yourself!

## CORAL

### **Hard Coral**

#### **Blue coral**

Blue coral is very distinct, with its gorgeous blue colour making it easily stand out from other corals. Because of this unusual and electric blue colour, it is extremely popular in tropical aquariums.

Commonly found in shallow reefs, it grows extensively throughout the Indo-Pacific Coral Sea in northeast Australia and American Samoa.

#### **Brain coral**

The name gives it all away when it comes to Brain coral. Their spheroid shape and grooved surface gives them an appearance of a brain, so it's not hard to identify this coral while snorkeling or scuba diving.

Brain corals are typically found in shallow, warmwater reefs and can grow as large as 1.8 meters high.

#### **Elkhorn coral**

This structurally complex coral closely resembles that of elk antlers, and can act as a habitat for many other reef species, including lobsters, parrot fish and snapper shrimps.

Primarily found in shallow waters, they are an abundant species and can be found in waters ranging from 1 to 5 meters deep. The color of this coral species ranges from brown to a yellowish-brown.







#### **Great Star coral**

This colonial stony coral forms into massive boulders, plates or domes and can grow to over 5 feet in diameter in waters of shallow and moderate depths. During the daytime, it is a fluorescent orange or red color, but can change to shades of green, brown, yellow-brown and grey.

Great Star Coral can be found in most reef environments and is often the predominant coral between 12 and 30 meters.



#### **Lettuce coral**

Also sometimes referred to as Cactus coral and Potato Chip coral, Lettuce coral appears in large leafy growths, with unusual, yet very attractive patterns. The coral itself is usually brown, while the polyps attached to it are generally green.

Lettuce coral is found in most reef habitats, including mangrove areas, back reefs and the outer reef, but is common in Fiji and the Tongan Islands.

#### **Staghorn coral**

This branching, stony coral is easily recognizable by its cylindrical branches, and can range from just a few centimeters to over two meters in length and height. It usually occurs in back reef and fore reef environments, up to 30 meters deep

Staghorn coral is commonly found in the Great Barrier Reef and Ningaloo Reef on Australia's west coast.

#### Table coral

Resembling flat plates or round tables, this coral is ideally shaped to expose as much of their surface as possible to the light. Supported by a short, stout stem, each plate resembles a bed of nails and is usually a dull green or brown.

Table coral is commonly found in the tropical waters of the Red Sea, Indian Ocean and western and central Pacific Ocean.



## Soft coral

#### **Bubble coral**

Bubble coral are one of the most unique kinds of coral, in terms of appearance, that you will come across while exploring a coral reef. Originating from the reefs of the Indo-Pacific, this coral has a green or white ridged hard skeleton that acts as a base for the usually inflated polyps, which closely resemble bubbles. These bubbles may be green, white or yellowish in color and have somewhat of a pearly appearance.

Bubble coral can be found in reefs in Australia, Fiji, Indonesia and the Tongan Islands.



#### **Carnation coral**

Easily one of the most beautiful, peaceful and unique corals under the surface, Carnation coral is found in a range of stunning, flamboyant colors, with red and orange being the most common.

Also referred to as the Cauliflower Soft Coral or Strawberry Soft Coral, it resembles carnation flowers and can be found in the tropical reefs of the Red Sea, Indian Ocean and western Pacific Ocean.

#### Gorgonian coral

Also known as Sea Whips and Sea Fans, Gorgonian coral is found within the tropical and sub tropical oceans of the world. This coral is normally erect, flattened, branching and reminiscent of a fan. Some can even be whiplike, bushy and encrusting. Brightly colored purple, red or yellow, this coral is primarily found in shallow waters.



#### Sea Pens

Similar to the sea whips and Gorgonians, these feather-like structures look very similar to an antique quill pen, hence their name. They look like miniature sea anemones with eight tentacles, and are known to anchor themselves with their bulb-like shape into deep soft bottoms like sand or mud.

The exposed portion of sea pens can grow up to 2 meters and many bioluminescences in the dark.

#### **Toadstool coral**

Originating in the South Pacific, Toadstool coral closely resembles a toadstool mushroom and is generally brown, tan or green in color. While they appear fragile, they are often robust and since found in shallow reef areas, they can withstand intense sun exposure and pounding surf.

Often the visual focal point of a reef landscape, they can grow up to or larger than 5 to 7 inches.

#### Tree corals

When you hear the name "tree coral" you will probably automatically assume it to have a tree-like structure, and you would be accurate. Also known as Finger Leather, Branch or Cauliflower corals, tree corals are low branching and form encrusting mats.

Commonly found in strong currents, tree coral can range in color and is most easily recognizable by its shape.



## FISH

#### **Anemone/Clown Fish**

Made famous by the world-wide hit movie, "Finding Nemo", the clown fish is usually yellow, orange, reddish or blackish and white in color and can reach a length of just 18 centimeters. Clown fish have a close relationship with sea anemones, with each providing a number of benefits to the other. Both defend and protect against predators, while also providing food or cleaning the other from parasites.

Clown fish and sea anemones can be found in warm waters at the bottom of shallow seas in sheltered reefs and shallow lagoons, particularly in Australia's Great Barrier Reef.



#### **Angel Fish**

Found in the shallow waters of the tropical Atlantic, Indian and western Pacific Oceans, the bright colors and laterally compressed bodies make them stand out from the other fish you may uncover while snorkeling or diving.

These bold and seemingly fearless fish often have streamer-like extensions of the soft dorsal and anal fins, along with small mouths and relatively large pectoral fins.



#### **Butterflyfish**

Most commonly found in the reefs of the Atlantic, Indian and Pacific Oceans, Butterflyfish look like smaller versions of Angel fish and range between 12 and 22 centimeters in length. The name derives from their brightly colored and striking bodies, with the black, white, blue, red, orange and yellow clearly standing out and making them easily recognizable. They spend their days tirelessly pecking at coral and rock formations, in search of coral polyps, worms and other small invertebrates.



#### Damselfish

Bright in color and easy to spot in a group, Damselfish can be found in tropical coral reefs around the world. They are known for cultivating red filamentous algae, and are one of the only fish to engage in this activity.

Although they can be quite aggressive, damselfish are usually only 2 inches in length and can range from yellow and blue sapphire to azure or black and white striped.

#### **Needle fish**

These slender fish range from 3 to 95 centimeters in length and have a single dorsal fin, placed far back on their body.

Often found in shallow marine habitats or on the surface of the open sea, they have long narrow jaws, filled with sharp teeth and have a habit of jumping short distances through the air, up to 38 miles per hour.

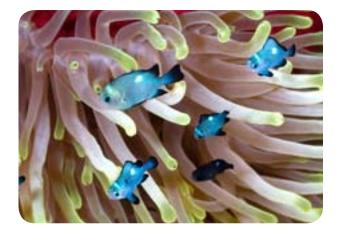
#### **Parrot fish**

The 90 or so species of Parrotfish can be found in coral reefs, rocky coast and sea grass beds in shallow tropical and subtropical oceans throughout the world. They are named after their parrot-like beaks, which they use to rasp algae from coral and other rocky substrates. Parrotfish are exquisitely rainbow colored and have an inquisitive and friendly nature. These peaceful fish can range from 30 centimeters to 1 meter in length.

#### Grouper

Known for their stout bodies and large mouth, the Grouper (or "groper" as it's referred to as in Australia) can weigh over 100 kilograms and can swallow their prey whole. Often duly colored in greens and browns, they are found throughout the Indo-Pacific region and can have at least seven rows of teeth on the middle of their lower jaws.







#### **Puffer fish**

Just by looking at a puffer fish, you can tell this is no ordinary fish. Their expressive faces give the impression that they are smiling, but unbeknownst to many they are actually believed to be the second most poisonous vertebrates in the world.

Closely related to the porcupine fish, the puffer fish is a slow mover but can very quickly ingest huge amounts of water to turn themselves into a virtually inedible ball, several times their size.

The Puffer fish has an Indo-West Pacific distribution and is found in Australia from north-western Australia and from the Great Barrier Reef to northern New South Wales. Surgeonfish

With a family name that means "thorn tails", Surgeonfish are easily distinguishable by their scalpel-like spines and their dangerously sharp tails, which are literally as sharp as a surgeon's scalpel.

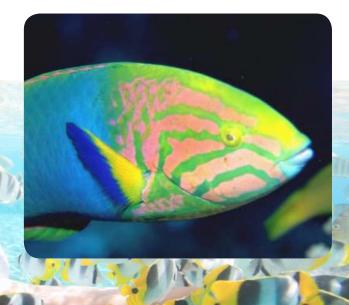
They are relatively small and have a maximum length of 15-40 centimeters, with over 80 different species recorded worldwide.

#### Wrasse

This brightly colored marine fish is typically small and is usually found in the shallow coral reefs and rocky shores of the Atlantic, Indian and Pacific Oceans.

Australian Wrasse's in particular are very varied and include the Eastern Blue grouper, the Pigfish, the Five Banded Wrasse and the particularly beautiful, Green Moon Wrasse.





## SEA CREATURES

#### **Blacktip Reef Sharks**

The Blacktip Reef Shark is a species of requiem shark and is easily identified by the prominent black tips on its fins. Commonly found in the coral reefs of the Indian and Pacific Oceans, they can grow up to 1.6 meters in length and are known for staying in the same local area for up to several years.

Timid and skittish, the Blacktip Reef shark rarely poses a danger to humans and instead feeds on reef fish like Mullet.

#### **Dolphins**

Closely related to whales and porpoises, dolphins are marine animals that are found worldwide, with almost 40 species found on record. Dolphins are among the world's most intelligent and friendly animals, with their seemingly playful attitude making them popular in human culture.

Bottlenose dolphins are commonly found in the waters just off Australia, while New Zealand is the only place in the world where you can find a Hector's dolphin.

#### Dugongs

The Dugong is a large marine animal, very similar in appearance to the Manatee. The majority of the world's dugongs can be found in the northern waters of Australia, from Shark Bay to Moreton Bay, with their diet of sea grass restricting them to coastal habitats.

These large, grey animals can grow up to 3 meters long and can weigh up to an impressive 400 kilograms. They often come to the surface to breathe through nostrils near the top of their snout, and can be viewed from both the boat and while in the water.







#### **Green Sea Turtles**

The Green Sea Turtle are one of the few species so ancient that they watched the dinosaurs evolve and become extinct. As both a land and sea creature, the turtle is protected by a smooth carapace (shell), the color of which is what the turtle is named after.

Weighing up to 700 pounds, they are among the largest sea turtles in the world and can be found in shallow, coastal waters, lagoons and estuaries.

#### Jellyfish

These free swimming marine animals consist of a gelatinous umbrella-shaped bell and trailing tentacles and can be found in every ocean, from shallow waters to the deep sea. They can range from 1 millimeter to nearly 2 meters in bell height and diameter.

Jellyfish sting their prey using nematocysts and contact with a jellyfish tentacle can trigger millions of these to pierce the skin and inject venom. Most jellyfish stings are not deadly to humans, but stings from Box jellyfish and the Irukandji (both found on the East Coast of Australia), can be deadly. Stinger suits are a necessity in areas with these jellyfish.

#### **Manta Rays**

The Reef Manta Ray and the Giant Oceanic Manta Ray are the largest rays in the world. These circumglobal creatures are typically found in tropical and subtropical waters and have a distinctive body shape with triangular 'wings" and paddle-like lobes extending in front of their mouths.

A swim with a Manta Ray is guaranteed to be an unforgettable experience, with these graceful creatures regarded as true beauties of the ocean.







#### **Moray Eels**

Growing up to 4 meters in length, Moray Eels have a snake-like appearance and a long fin that extends from head to tail. Although it looks quite ferocious, the moray eel is not an aggressive creature and attacks only when threatened.

Their color varies from black to brownish-yellow, with a pale underside and they can be speckled, striped, freckled or tattooed. They tend to live in the holes in a reef.

#### Octopus

Octopuses have two eyes and four pairs of arms, which are bilaterally symmetric. No internal or external skeleton means they can squeeze into tight places, inhabiting many diverse regions of the ocean, including coral reefs and the ocean floor.

All octopuses are venomous however the blueringed octopus is the only one known to be deadly to humans. These highly intelligent creatures move about by crawling or swimming around headfirst, with arms trailing behind.

#### Sea Cucumbers

Sea Cucumbers are found on the ocean floor worldwide, with around 1250 species recorded. Named for their resemblance to the cucumber fruit, they are all ocean dwellers that inhabit the shallows, with some living on the deep ocean floor.

The greatest number of these can be found in the Asia Pacific region and they are generally harmless to humans.







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#### Sea snakes

Sea snakes are a group of venomous elapid snakes, which are extensively adapted to a full aquatic life and are unable to move on land.

Found in the warm coastal waters from the Indian to the Pacific Ocean, the sea snake has a paddlelike tale and closely resembles an eel. While many are quite gentle, others can be aggressive and bite, especially when provoked, so it is best to keep a distance from these creatures.

#### Sea urchins

These small, spiny, globular creatures are found in oceans all around the world and usually resemble round spiny hedgehogs.

Their outer, solid, skeletal structure is called a test and consists of hundreds of interlocking, calcareous plates. They move on hydraulic tube feet and feed on algae and the remains of other marine animals.

#### Starfish

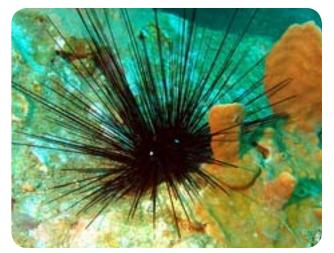
Starfish are among the most familiar of marine animals and are easily recognizable for their starlike appearance. There are some 2,000 species living in oceans across the world and they are most famous for their ability to regenerate limbs and in some cases, entire bodies.

Starfish range from 12 to 24 centimeters in size and can live in the wild for up to 35 years.









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#### **Stingrays**

Stingrays are commonly found in the shallow coastal waters of the world's temperate seas. These somewhat lazy creatures spend a lot of their time partially buried in the sand, with their colouration often reflecting the seafloor's shading.

These flattened creatures are most recognizable for their infamous trailing tail, which features serrated edges and a sharp point, with a primary purpose of protection. They are not aggressive animals and only attack when they are stepped on or feel threatened.



#### Whales

Blue, Humpback, Sperm, Killer, Minke and Beluga are all types of whales you may encounter both in the water, and from your cruise ship. Ranging in size from 3.5 to 30 meters in length, whales are the giants of the ocean and are the largest animal known to have ever existed.

Whales collectively inhabit the world's oceans and are among the most fascinating and enigmatic of all creatures.





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