

## Diving in Bonaire

Bonaire currently boasts over 355 species of fish as counted by experts and novices via REEF survey. It has healthy corals, clear water and plenty of dive sites. It is blessed as a diving destination and it wants to stay that way. Thus, it has established the entire marine ecosystem as a preserve and park. The nice thing about Bonaire, and somewhat unusual, is that virtually the whole population of 12,000 people has bought into the reef conservation philosophy that has been part of the island verve for a few decades now.

Can you say 'dive Nazi'? That's what many visitors may think when first confronted by all of the marine park rules and regulations. And Bonaire residents don't care. If you come here with a nonchalant attitude about the reefs and their inhabitants, they would rather you take your money, dive gear and attitude elsewhere. This somewhat militant but refreshing attitude of 'fish first' sets the island apart from just about every other dive destination in the world.

Bonaire established the first national park in the Caribbean in 1969 and the first marine park 10 years later. Now, Bonaire Marine Park is the island body charged with governing the use of the waters surrounding Bonaire in order to protect its marine life. The Marine Park extends from the high water mark to the 200ft (60m) depth contour, encompassing the entire coast of Bonaire and Klein Bonaire – an area of about 2700 hectares, including coral reef, seagrass, and mangroves.

Bonaire Marine Park is a model of its kind in the Caribbean (and the world for that matter), protecting the marine environment in its care while maximizing safe levels of use for recreation and commerce. It maintains more than 100 public moorings, conducts extensive scientific research, provides informa-



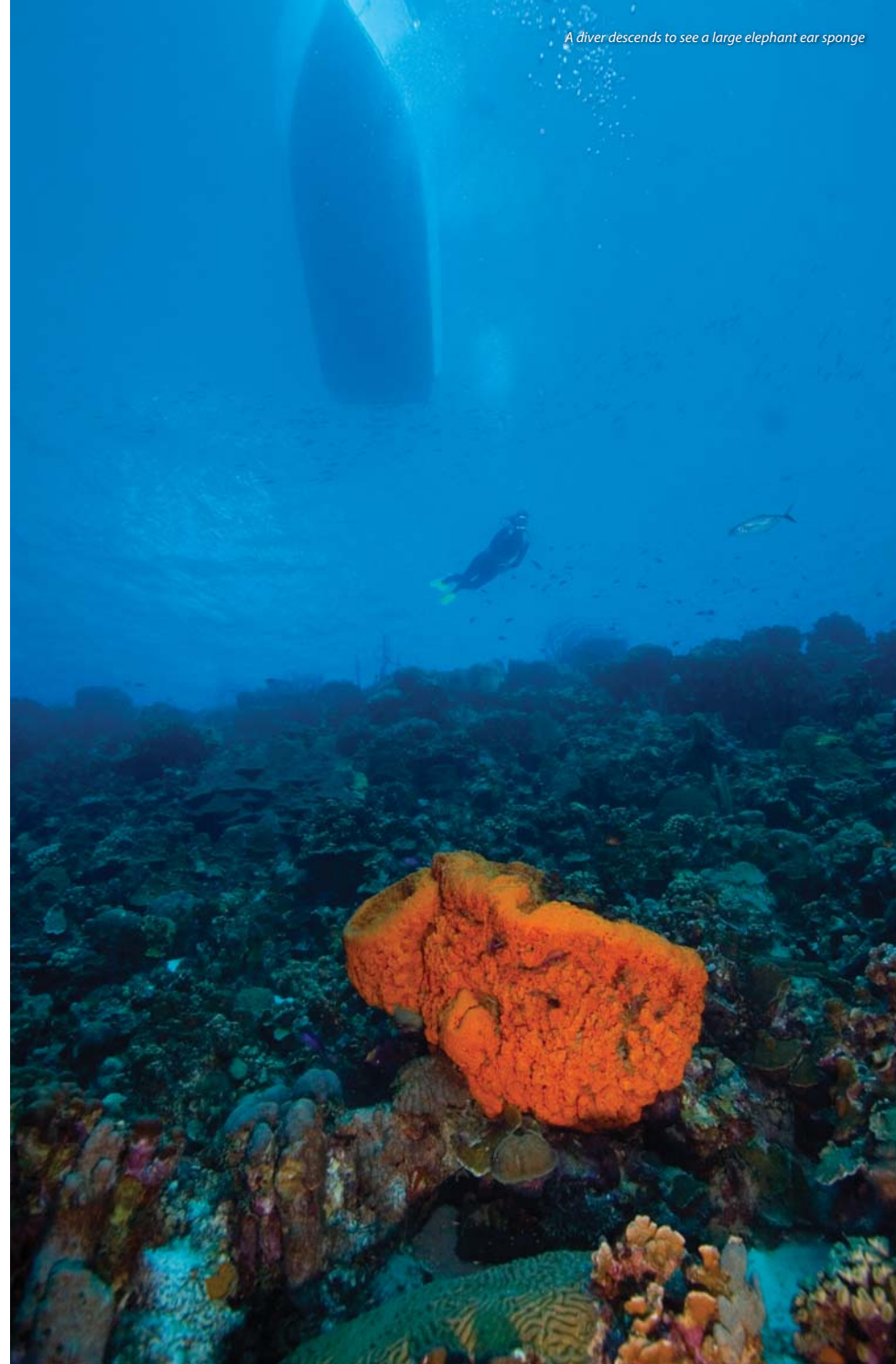
Iguanas are ubiquitous on the island

tion to users and monitors human and natural impacts.

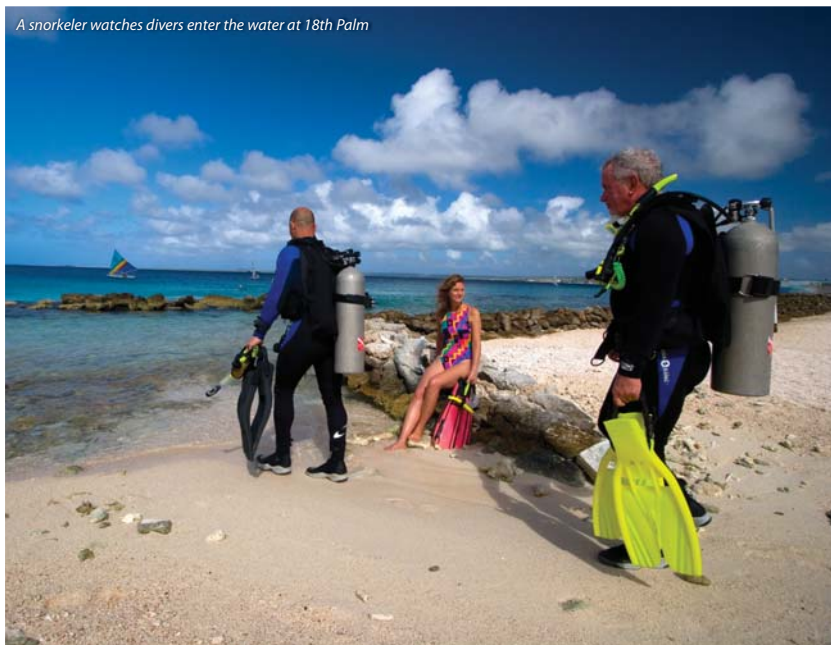
Recognized worldwide as an exemplary marine park, it has eliminated destructive fishing practices and discharge of polluted ballast water. It has also banned spearfishing, collecting of corals, shells, and other marine life, and use of anchors.

Every diver and snorkeler must first go through an orientation covering the park's rules. These are conducted by dive masters at the dive shops before a newly arrived diver is allowed to start diving. Divers are also asked to do a shore checkout dive to get weight right so improper buoyancy doesn't cause a diver to crash into the reef on boat dives.

Admission fees are the sole dependable income of the park. Whether you are a diver, snorkeler, fisherman, yachtsman or windsurfer, if you use the water, you must purchase an admission tag. Tags are available at dive shops, windsurf centers and the Marine Park headquarters at Barcadera. Cost is \$10 for snorkelers and \$25 for divers. The tags are good for a full year so divers going to Bonaire twice in a year don't have to pay again unless they want to.



A snorkeler watches divers enter the water at 18th Palm



The park provides some very informative literature at dive shops, hotels and all park outlets including BNMP brochures on *Boating Regulations*, *Clean up Dives*, *Cruising Bonaire*, *Diving Bonaire*, *Fishing Regulations*, *Marine Park Fees*, *Protected Species*, *Snorkeling* and *Underwater Photography & Video*.

The sites in this book are following the BNMP's latest official mooring site numbers and names for the most part, with the exception of a couple of sites on the east side. The newest open and closed sites were included at the time the book was written.

## WHAT TO BRING

The climate in Bonaire is best described as arid but still tropical. The east coast is largely undeveloped and Bonaire is blessed with a fairly continuous breeze 10 months of the year. This normally keeps things pleasant across the island. The winds usually die down in Septem-

ber and October but then start back in November. Along the east coast where divers visit, this means there is usually a soft wind blowing out to sea, keeping the west coast calm and tranquil year round. This is one of Bonaire's major reasons for being such a great dive destination.

So, if you're staying on the east coast, you may want a light jacket or sweater at night. Long-sleeved T-shirts or cotton shirts or blouses are also helpful. It can also be cool at water's edge in the evenings, so a jacket or long garment. Many divers like to night dive, so a fleece parka or something warm after the dive is a smart idea. Evening clothes are casual to casual-nice, depending on your hotel or restaurant.

Bring light clothing. No one wears suits for anything day or night. Shorts, T-shirts, swimwear and sandals or flip-flops get you by almost anywhere. For beachside hikes (there are nice walking paths) and exploring the hills and

## Best Dives

### Wreck Dive

The **Hilma Hooker** is one of the most attractive dives in the Caribbean with resident tarpon and good sponge growth. At night the tubastrea corals blossom.

### Reef Dive

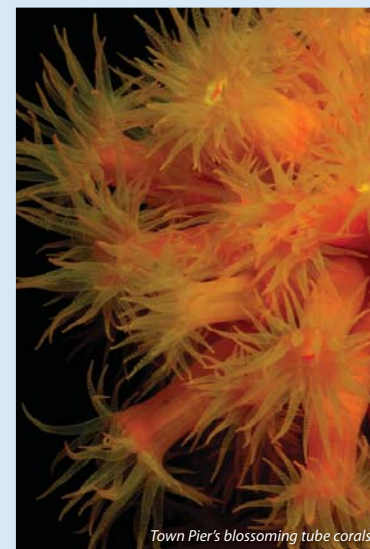
**Karpata** is considered one of the best dives on the island and its combination of corals and fish, shallow and deep, makes it stand above the rest.



Hard corals on the upper reef

### Shark Dive

The best chance to see a shark may be at the hard-to-get-to **Spelonk** on the east side. But the combination of wall, waves, wrecks and a few sharks make this a wild dive.



Town Pier's blossoming tube corals

### Critter Dive

With a documented count of 317 fish species, you can see just about anything you want at **Bari's Reef**. And the invertebrates are plentiful too.

### Pier Dive

**Town Pier** has to be one of the best dives anywhere, with its colorful sponge growth and encrusting invertebrate life. At night, the small stuff comes out. And it's shallow!

## Marine Park Rules (some, not all)

- 1 Every diver must have a valid diving tag and attach it to their BC. These can be purchased from all dive operators.
- 2 A dive orientation from a valid dive operator is mandatory before anyone can dive in BNMP.
- 3 Anchoring is forbidden. Mooring buoys must be used.
- 4 Spearfishing is prohibited. Spear guns must be left at the customs office.
- 5 It is forbidden to remove anything alive or dead from the BNMP.
- 6 Do not damage the reefs in any way. Don't touch the corals and avoid sitting on the bottom.

national park, bring some sturdy hiking or running shoes. Also, bring a hat and sunglasses to protect from the sun.

Bring a good sunscreen for daytime sun protection. At dusk and at night you'll want some insect repellent. 'No-see-ums' and mosquitoes can be a bother and are a fact of life, especially during the rainy months of November through January.

Topless sunbathing and nudity is prohibited on beaches except for Sorobon Beach Resort (a privately owned nudist resort). But topless sunbathing is seen at some of the hotels with a more European clientele.

## WHAT TO BRING DIVING

Bonaire is a good place for a dive trip because if you do forget something, there are many fully-equipped dive shops on the island that offer both rental and sales. If you're not picky and don't want to carry dive gear, full rental of all kit is also available.

The water is tropical and clear. Temperature is generally 78-84°F (25.6-28.9°C), so all that is needed is a 1.5mm to 3mm wetsuit to remain very comfortable. Heartier folks just wear skins or T-shirts. Those acclimated, like

*A guide aids a diver exiting the sea*



## About Shore Diving

Several factors combine to offer Bonaire visitors shore diving opportunities unlike any found elsewhere in the Caribbean.

One is the sheer number of shore dive sites available. With over 50 marked sites, and any number of easily accessible unmarked entry points to choose from, divers will run out of vacation time long before they run out of diving options.

Bonaire's calm west coast waters make entering the water for your dive safe and easy. And with a fringing reef no more than 50 yards off shore, surface swims are kept to a minimum. Freedom-loving divers are sure to enjoy the unlimited shore diving packages that some dive centers offer.

The one downside is that break-ins and theft from unguarded vehicles parked at dive sites is rampant, especially for night divers. The local advice is leave nothing of value in your vehicle and leave the vehicle open and unlocked. Also, don't try to hide something in the bushes or nearby. The obvious places are usually scouted and relieved of their treasures as well.

## Rating System for Dives & Divers



The dive sites in this book are rated according to the following system. These are not absolute ratings but apply to divers at a particular time, diving at a particular place. For instance, someone unfamiliar with prevailing conditions might be considered a novice diver at one dive area, and an intermediate diver at another, more familiar location.

### Novice:

A novice diver generally fits the following profile:

- basic scuba certification from an internationally recognized certifying agency
- dives infrequently (less than one trip a year)
- logged fewer than 25 total dives
- little or no experience diving in similar waters and conditions
- dives no deeper than 60ft (18m).

\*An instructor or divemaster should accompany a novice diver on all dives.

### Intermediate:

An intermediate diver generally fits the following profile:

- may have participated in some form of continuing diver education
- logged between 25 and 100 dives
- no deeper than 130ft (40m)
- has been diving in similar waters and conditions within the last six months.

### Advanced:

An advanced diver generally fits the following profile:

- advanced certification
- has been diving for more than two years; logged over 100 dives
- has been diving in similar waters and conditions within the last six months.

### Pre-Dive Safety Guidelines

Regardless of skill level, you should be in good physical condition and know your limitations. If you are uncertain as to which category you fit, ask the advice of a local dive instructor. He or she is best qualified to assess your abilities based on the prevailing dive conditions at any given site. Ultimately you must decide if you are capable of making a particular dive, depending on your level of training, recent experience, and physical condition, as well as water conditions at the site. Remember water conditions can change at any time, even during a dive.

divemasters, wear 5mm to 7mm. But tourists should be fine in the 1.5mm to 3mm range.

Otherwise, normal scuba gear or snorkeling gear is fine for Bonaire. Bonaire has many outlets for equipment sales, parts purchase like a fin strap and even repair. Shore diving is a big deal in Bonaire and sometimes the only way to see certain sites. Make sure you have good booties for coming in and out of the water across a reef or rocky beach.

Do NOT bring a spear gun. They are illegal and you will have to surrender it to customs or police until you leave. If you try to use one and are caught (highly likely), the fines are stiff and you will probably have to leave Bonaire. Bring a camera instead.

There are also tight restrictions on the use of gloves, although they can be stowed in pockets and used to go up and down the mooring line. Gloves can also be used during clean up dives, while wreck diving and to get into and out of the water when shore diving the windward side east of **Willemstoren**. Otherwise, if you have a medical reason for needing to wear gloves, please contact the Marine Park. If not: no gloves.

Nitrox is offered almost everywhere. Don't forget your C-card and dive log to show your host dive shop. And bring your mixed gas card if you are going to use Nitrox. Rebreather diving, rental and training are also available on Bonaire.

Looking down at 1000 Steps' Beach



All levels of instruction are found, like this session at Captain Don's pool

## DIVE TRAINING & CERTIFICATION

Bonaire offers all levels of training from snorkeling and basic scuba to full instructor courses. PADI is the main agency represented on the island. TDI technical diving courses are also offered. Check with your dive shop to see what courses you can take. Bonaire is perfect for Nitrox, wreck certification, marine life courses and many other specialties.

Most costs for diving are pretty much the same across the island. It is best to shop for what you want. Remember, the cheapest package may or may not be the best and safest training. Ask questions and shop for the best situation for your needs.



Photographing sponges at Town Pier

## DIVE OPERATORS

Most of Bonaire's hotels have an affiliated dive shop. Bonaire has an organization that most dive shops belong to. The Council of Underwater Resort Operators (CURO) has its members participate in establishing standards and uniform practices that, along with the Bonaire Marine Park Rules, work to preserve the reefs and the fragile ecosystem. These standards are tourist friendly, so a CURO member is a good bet.

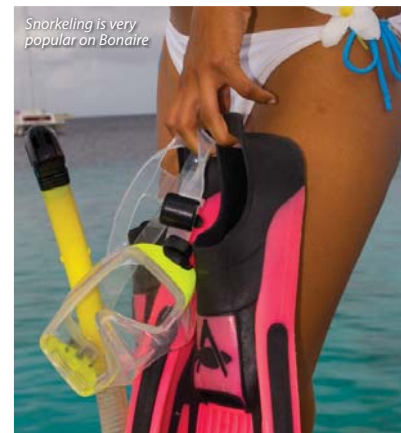
There are also independents that offer private guiding and instruction services. Since there is so much shore diving, private guides are in demand and some are extremely good. Most rely on word of mouth and reputation,

so ask fellow divers about those offering private guide services.

Others, like Dee Scarr of Touch the Sea, offer a naturalist experience as one-on-one and very small group interaction. Scarr is a longtime Bonaire environmentalist and experienced naturalist whose goal is to help divers and snorkelers better understand marine creatures. Another is Sea & Discover. Run by Caren Eckrich, a marine biologist and PADI dive instructor, she teaches people about the reefs through fun and interactive snorkel and dive programs. She is best known for her kids' program, Reef Explorers, where children learn about ocean creatures and ecosystems, improve their water skills and become one with the sea.

The Divi Flamingo Beach Resort specializes in scuba diving for the disabled. Some guest rooms and all common areas and dive shops are wheelchair accessible.

See the listing at the back of the book for approved dive operators and guide services.



*Snorkeling is very popular on Bonaire*

## LIVE ABOARDS

There are currently no live aboards operating around Bonaire.

## SNORKELING

As the water here is very clear, shore access is easy and the currents are normally mild, snorkeling is a very popular pastime. Many people come to Bonaire for the snorkeling alone. Klein Bonaire is a popular snorkeling spot. Kayakers often paddle to a spot and snorkel. And walk-ins at the popular beaches are a daily occurrence. Experienced snorkelers love to night snorkel on Bonaire.

It is necessary for all who use the waters of the Bonaire National Marine Park to pay a Nature Fee of \$10 per year (\$25 for scuba divers), and this includes snorkelers. Like divers, snorkelers receive a designated tag. The tag allows complimentary admission to Washington-Slagbaai National park, which has some nice beaches and great flamingo viewing.

Tags are available at all dive operations, hotels, resorts, windsurfing operations, sport fishing charter boats, sail/snorkel/water taxi operations, marinas, and other water sports operations on Bonaire.



*The island's west-central coast*



*Snorkeling near Andrea II*

Beautiful tube sponges at Town Pier



## UNDERWATER PHOTOGRAPHY

Underwater photography is a favorite pastime of many divers coming to Bonaire. The brilliant orange elephant ear sponges and bright purple tube sponges, gorgonian sea fans, Christmas tree worms and beautiful reef fish make Bonaire a great place for colorful wide-angle lens work, medium focal length for fish and macro photos.

Most of the larger dive centers have a staff pro who can provide instruction, camera rental or shoot personal video. E-6 film processing is becoming harder to find as digital is taking over the photo scene in leaps and bounds. Ask if your dive center offers it before you go if you want on-the-spot results.

Most dive centers have personal video services and there are companies like Scuba Vision that also join the boats of dive centers and offer a video at a reasonable fee.

Going on boat dives and especially shore dives with a good Bonaire underwater photographer is highly recommended. The longtime guides all know one another. If seahorses are seen at **Witches Hut**, the better guides will know where to look for them. You may hear a rumor that the seahorses are at **Andrea II** and look all day and find nothing. A good guide will be in the know about where the good critters are and where they can be found, making your photo experience much better in the long run.

In Bonaire, you will find that underwater photography is catered to, but not in a huge way. Most boats have fresh water buckets that can hold perhaps three housed point-and-shoot cameras and strobes (or one SLR system). On land, the tanks dedicated to camera rinse can be rather crowded, with both boat and shore divers sharing the same bin, and masks and fins allowed to be washed in the same water. In doing this book, we found few operations that actually had large specific dedicated camera-only rinse tanks, and those that did had only one and those weren't exactly large.

We point this out as most divers use wrist lanyards, and a crowded rinse bin and boat rinse tub can mean people hastily pulling their gear out and snag-

ging yours as well. This can cause latches to unlock and uncovered domes and ports to get scratched. While it seems like a good idea to keep your camera wet all the time, the lack of enough boat basins and the overcrowding at the shop can be a problem. Better to keep your camera wet with a damp towel on board and then soak it in the room bathtub until they get a handle on camera care.

Also, be warned that the sand here is very fine at most beaches. Since beach diving is a major part of the dive scene, entries in and out of surf zones where there is a lot of fine sand in the water can be harmful to the health of your camera. After beach dives, carefully check and clean your O-rings to ensure fine sand particles have not got lodged in the O-ring slots and on the rings themselves. A little preventive maintenance in the evenings can save many dollars in replacing a camera due to a housing flooded because of an errant speck of beach sand.

Goatfish along the upper reef



## Conservation

This island is a conservationist's Mecca. Plants, animals and marine life all get a lot of attention from various groups here. STINAPA (Stichting Nationale Parken) is the umbrella organization overseeing most environmental concerns. There is also a local sea turtle foundation. Scientists and researchers have come here for years for various marine related projects. STINAPA is the lead organization for most local and regional conservation efforts. Capt Don Stewart also started the Accolades program to honor those who have given personal time to aid Bonaire's environment and also to people worldwide involved in saving the sea and earth.



Every diver must buy a marine park use tag

### Accolade Foundation

The Accolade Foundation recognizes individuals all over the world for their efforts to protect, manage and educate about environments. These people have inspired others to get involved and to do something to protect and educate about nature. A brainchild of Capt Don Stewart, the folks nominated for an Accolade are those who put their personal time and effort into making the marine world better for everyone.

Here is part of the philosophy of the unique, Bonaire-based Accolade Foundation:

- We all need to better understand nature, its myriad forms of life and their interactions. Collectively, recipients of the Accolade have had a wide impact on people young and old. The Foundation aims to spread the word about their efforts so as to recognize what they have accomplished and inspire others to follow the paths they have illuminated
- The effort needed to save planet earth from environmental degradation is a Herculean task. While individuals can and do have significant success with environmental issues, collectively they can be a force majeure whose power will be acknowledged locally, nationally and internationally. The Accolade Foundation hopes to be the spark that ignites worldwide collaborative effort to promote sound environmental management practices
- The power of one individual multiplied by thousands of others can and must be heard from mountains and valleys and across oceans; from villages and cities to the leaders of all governments. Then and only then will begin the healing process to stop environmental degradation
- With the technological and electronic wonders of today, for once we have the power to communicate instantly across the globe. Let us start the conversation. Let the small clapping of hands from Bonaire (considering Bonaire is to coral reef preservation what Greenwich is to time) resonate to the thunderous wave of activism around the world.

### Protected Species

Young hawksbill sea turtle



Animal and plant species found on Bonaire and Klein Bonaire that are globally threatened and in danger of extinction include:

- **Corals and marine life:** all types of soft and hard coral and sea fans, dead and alive, are locally and internationally protected by law. Coral reefs rival rain forests in their biological diversity. The magnificent array of reef fish and bottom-dwelling animals, such as crustaceans, that visitors enjoy observing all depend on the health of the coral reef. In addition, the coral reefs provide food and income for the Bonairean people. The black corals, which have been heavily exploited in some Caribbean countries, are completely protected on Bonaire, as are all other corals. Black coral used in jewelry is the internal skeletal structure of the living coral, and grows very slowly. For many species of coral, one inch of growth may take decades
- **Marine mammals:** mammals, such as whales, porpoises and dolphins, are fully protected locally and internationally
- **Birds:** Bonaire is home to diverse bird populations, all of which are protected. Flamingos, loras and parakeets are also protected under CITES (Convention on International Trade in Endangered Species). The lora, the island's local parrot, isn't found anywhere else in the world. Bonaire is also home to one of only four surviving breeding colonies in the world of southern flamingos. It is illegal to buy, possess or receive products containing their feathers
- **Lizards, iguanas and bats:** benefit from local and internationally protection
- **Plants:** all plants are protected by domestic law, and many, including orchids, lilies, cacti, bromeliads, and *lignum vitae* trees, are CITES regulated. Bonaire once was forested with hardwoods, including the slow-growing *lignum vitae* (tree of life). Coveted as a wood for shipbuilding, you see the tree only rarely now. Let us protect what is left. Orchids are rare due to the dry climate, but occupy an important niche in the ecosystem. Cacti are a key element in soil conservation. You may see some small bromeliads, also known as air ferns – don't disturb them
- **Sea turtles:** completely protected as are their nests and eggs, by both local and international law as they are threatened worldwide by overexploitation. It is illegal to catch, kill, eat, possess, offer for sale, sell, buy, trade or give as a gift turtle meat or any other part of a turtle. Bonaire and Klein Bonaire are nesting grounds for four species of sea turtle.

Courtesy STINAPA



## Health & Safety

Overall, Bonaire is a healthy place to visit. There are no exotic diseases and the mosquito bites only lead to itching. The island has a 60-bed hospital; Hospital San Francisco at Kaya Soeur Bartola #2 in Kralendijk. There are a number of doctors practicing on the island. There is an ambulance plane on call for emergencies. The emergency phone number for the hospital ambulance is ☎ 114.

The pharmacy, in downtown Kralendijk, Botica Bonaire, is well stocked and the pharmacists seem to be quite familiar with diving maladies like sore ears and coral cuts.

### PRE-TRIP PREPARATION

There are a number of shops in Bonaire that offer equipment for sale and rental and there is some equipment repair available as well. But if you own your own gear you will want to get your regulator tuned up before coming here, if you haven't used it for six months or so. You may also want to do some local 'check out' dives, even if just in a pool, to check things out.

Also, get some exercise prior to the trip so you can face the challenges of boat diving and more so, the ins and outs and walks associated with shore diving. Swimming, hiking with a backpack and jogging will help increase fitness and stamina.

Make sure your passport is not about to expire or hasn't already expired. You can't get into Bonaire without one and you can't get back home even if you do manage to get into Bonaire.

### MEDICAL & RECOMPRESSION FACILITIES

A hyperbaric recompression chamber is located adjacent to the hospital and is run by highly trained staff and aided

by a number of dive professionals working on the island. To be admitted, one must go via the emergency room at the hospital. The emergency phone number for the ambulance is ☎ 114. Your DAN affiliate should also be consulted in the event of a diving accident or diving illness symptoms, as well as your dive shop manager, so they can react to the emergency and set things in motion for treatment.

### DAN

Divers Alert Network (DAN) is an international membership association of individuals and organizations sharing a common interest in diving and safety. It operates a 24-hour diving emergency hotline in the US at ☎ 919-684-8111 or ☎ 919-684-4DAN (which accepts collect calls in a dive emergency). DAN does not directly provide medical care; however, it does provide advice on early treatment, evacuation, and hyperbaric treatment of diving-related injuries.





## Marine Life



*Pufferfish mate at the reef top*

Boasting the largest fish population in the eastern Caribbean and an equally diverse invertebrate population, Bonaire is a superb place to get to know the ocean and its creatures. Most fish, crabs and other marine creatures have specific habitats. Finding out where a certain subject likes to live, when it feeds, when and where it mates and all of the other routines of life under the sea will enable the diver to locate the subject with greater ease. This enhances observation and also photography.

Colorful fish are perhaps the most sought after in the Bonaire waters. Beautiful angelfish, parrotfish, basslets and triggerfish all catch a diver or snorkeler's eye. But there are more mundane fish also worth watching for their unique coloration and ability to camouflage, like a seahorse or frogfish.

The invertebrate world around Bonaire can't be dismissed. The amazing sponge formations on virtually every dive site give the reef form and color. Bonaire's corals are healthy and very

competitive, sometimes growing into or on top of one another. And the crustaceans like shrimp, crabs and lobsters all have unique homes and many have symbiotic relationships with other marine creatures.

Below is a small sampling of some of Bonaire's special undersea life.

### HAZARDOUS MARINE LIFE

The diversity of marine life extends also to dangerous marine animals. Most of these are quite small and not ferocious, but highly venomous. There are cone shells, scorpionfish, stingrays, hydroids, fire corals, urchins and many other marine creatures that adversely affect a diver.

Divers should read or ask about which will be commonly seen and should know first aid procedures in the rare event a person is wounded by a marine animal. Be especially careful on night dives. Carrying proper antiseptic ointments greatly helps.

### Sharks

Sharks are encountered on few dives in Bonaire. Attacks are rare and usually only occur in some misguided feeding attempt, or on fishermen illegally spearing fish. In the event a shark does become aggressive, it is sometimes wise to rise to a shallower depth to get out of its territory. If a shark comes too close, stop and face it while watching closely and quietly. Be prepared to push it away with a camera, knife, spear or tank. Treatment for bites is to stop any bleeding, reassure the patient and treat for shock and seek immediate medical treatment.

### Bristle Worms

While they may seem soft and fluffy, they can deliver a painful sting. Each of the bristle worm's body segments has a pair of small parapodia, or paddle-shaped appendages. These have embedded tiny hairs or bristle-like pieces. They have well-developed sense organs with a kind of head with eyes, antennae and sensory palps. If stung, pick out the hairs using tweezers or duct tape and submerge the sting in very hot water for 30 to 60 minutes. If the victim has a history of venom allergies, seek immediate medical treatment.



*Bristleworm with painful bristles*

### Fire Coral

It looks pretty with its caramel color, but touching fire coral is like putting your hand on a lit cigarette. It actually has tiny 'hairs' that burn like crazy and can swell up afterward. This mechanism is to defend against munching parrotfish, but divers sometimes get tagged as well. If stung by their powerful nematocysts, the skin will burn and itch. Rinse with seawater or water and apply vinegar or methylated alcohol on the sting. In a severe case anti-histamines can help but seek immediate medical treatment.



*A diver observes a giant green moray eel*

### Jellyfish

The stings of a jelly are released by nematocysts contained in the trailing tentacles. The rule of thumb is the longer the tentacles, the more painful the sting. Keep an eye out for jellyfish in the Lac while snorkeling. On the outer reefs, man-o-war and sea wasps are found. Most stings can be treated with vinegar. Some people do react adversely to jellyfish stings, similar to those who are allergic to bee stings. Be prepared to administer CPR and seek medical aid.

## Barracuda

Barracuda bites are also quite rare. The fish tend to be attracted to shiny objects and have been known to attack in murky water. Like sharks, this is normally a case of mistaken identity and invariably an accident.

On Bonaire's reefs, small schools and individual blackbar barracuda will frequently be encountered. There are also a lot of larger great barracuda. These fish should not be teased. Their bites can be damaging, so stop any bleeding, reassure the patient, treat for shock and seek immediate medical treatment.

## Spotted Scorpionfish

These fish will be seen commonly in sandy and rubble areas in Bonaire's waters and on night dives. They inject

venom from spines on their back. The wound can be quite painful with a lot of swelling. To treat, wash the wound, immerse in water as hot as the victim can stand for 60 to 90 minutes and seek medical aid.

## Sea Urchins

These spiny critters can be a real problem. The stings from the spines can range from irritating to highly intense. Spines can also break off inside the skin. Avoid contact with urchins, which means being vigilant in the areas they frequent, especially at night.

Treat by administering CPR until the pain subsides. Seek medical advice and use antibiotics where advised. In some cases spines may have to be surgically removed.

*Diver and great barracuda*



## Coral Facts

*A giant anemone sits atop a coral reef*



- 1 Be aware that we use the word 'coral' for three things: the individual coral animal, called the polyp; the polyps and the skeleton they've secreted, also called a coral head; and the skeleton without its living polyps, also called coral rock. The first two of these are alive, the last is not alive, which leaves a great deal of room for confusion.
- 2 A coral polyp (the living coral animal) is only three to four cell layers thick.
- 3 To create a model of coral tissue against its own skeleton, take a wet tissue and drape it across a bare razor blade.
- 4 Every individual coral animal in a coral head is a clone of every other coral animal in that coral head.
- 5 A coral head is started by a single coral larva, which grows, and begins to secrete a calcium-based skeleton, and clones itself, and repeats the process. Slowly.
- 6 A hemispherical coral head 3in across is 200 to 300 years old.
- 7 The branching corals – elkhorn and staghorn – grow more quickly than the 'head' corals, such as brain coral and star coral. They thrive in shallower waters, though, so are more likely to be broken by wave action.
- 8 Look at a star coral head, or a starlet coral head: every single little mound or indentation – every single little circle in the whole coral head – is an individual coral animal.
- 9 Look at a brain coral head, or a sheet coral: the polyps aren't as easy to distinguish as they are in the star corals, but a careful look will reveal the mouths of the polyps, daytime or night-time.
- 10 The tissue of every coral polyp in a coral head is connected to all the polyps around it. The entire surface of a coral head is covered with living coral tissue.

By Dee Scarr

© Lonely Planet Publications. To make it easier for you to use, access to this chapter is not digitally restricted. In return, we think it's fair to ask you to use it for personal, non-commercial purposes only. In other words, please don't upload this chapter to a peer-to-peer site, mass email it to everyone you know, or resell it. See the terms and conditions on our site for a longer way of saying the above - 'Do the right thing with our content.'