



## ReefCI Information Packet

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See our reviews on TripAdvisor



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## ReefCI Mission

Reef Conservation International's mission is to protect our oceans through science, action, and advocacy. We accomplish this through our ongoing conservation programs, education, and marine research. Through our citizen-scientist programs, we empower everyday global citizens to take an active role in directly protecting and conserving the marine environment.

## Why Choose Us?

We are the best at what we do! ReefCI is the preeminent and award winning marine environmental organization of Belize for hands-on conservation efforts and protection of the ocean and the millions of species that rely on healthy, functioning marine ecosystems.

We believe that it is essential to involve the public in our mission. We encourage everyone to become a part of the community of people who care about the future of our planet's oceans. Our goal is to preserve and manage the Belize Barrier Reef for generations to come by inspiring, educating, and encouraging change via our volunteer citizen-scientists. Our volunteers are the change they wish to see in the world and ReefCI makes that possible! Individually, we are but one drop, but together we are a mighty ocean. Come join us and make a difference!

## Diving with ReefCI

ReefCI trips are a unique experience! ReefCI gives you an opportunity to learn about and help conserve the marine environment by directly helping us work on our marine conservation programs! At the same time, you can enjoy a well-earned break and have a fun holiday/vacation! Our trips are for both experienced and inexperienced divers. Everyone contributes regardless of his or her background and experience. Don't worry if you are a non-diver or novice diver. The PADI Open Water course is included. We only take small groups, which allows us to focus on individual diving skills. Our guests learn about the marine environment and go home much better divers.

The diving is structured but extremely relaxed and not regimented. It is safe, non-challenging diving in the Caribbean with little or no current and visibility ranges from 15-40 metres (50-130 feet). There are rarely other divers in the area (we never have to share a site) and we often discover new dive sites and allow our guests to name them!! **We combine fun dives with the conservation dives and we aim for at least one night dive a week.**

We attract a diverse demographic and have had guests as young as 3 and as old as 82. We attract working professionals, families, singles, couples, retirees, high school and college

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groups. You will find that people coming on this type of trip all have a shared passion for diving and ocean conservation, which makes for great group dynamics. It is a 'family' atmosphere and everyone goes home with new friends!

### Open Water Certification

Many of our guests come to ReefCI to learn to dive. It is a wonderful place to learn with calm clear waters and little current. We swap the usual chlorine filled swimming pool for the Caribbean Sea and the classroom for a hammock under a palm tree! If you chose to complete your certification with ReefCI you will need to bring the PADI Open Water manual, recreational dive planner, and dive log book - **which can all be purchased together online [here](#) and is relatively inexpensive at Amazon (\$60 USD). The PADI Open Water course is only a \$100 USD administration fee to our non-profit.** Certification classes in a standard setting will cost anywhere from \$400-600 USD. You can't beat the price for certification with ReefCI!

### What is Included

#### The following is included:

- 5 days/4 nights (Monday-Friday) on a private island in the Caribbean/Belize
- 3 meals daily during dive week
- 3 daily dives (Friday 1 dive)
- Training for conservation work and participation in our conservation programs
- Island boat transfers to and from island
- Diving equipment (excluding wetsuits, booties, masks and snorkels)
- Accommodations while on the island
- Open Water Certification Course (400-600 USD value!)
- Wireless internet on the island (but cannot be guaranteed due to satellite coverage and bandwidth).

#### The following is not included:

- Flights to Placencia, Belize
- Wetsuits, booties, masks, snorkels
- Dive manuals for PADI training (if getting certified)
- Sapodilla Caye Marine Park Fees: 25 USD per week
- Alcohol while on the island (2-5 USD per drink)

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We are working in the Sapodilla Cayes , which is a Marine Reserve Park. The Belizean Department of Fisheries charges a marine park fee of \$25 USD **per week** to help maintain the national park. Fee is paid in country.

## Dive Equipment

ReefCI can supply BCD's, regulators, and fins. We do NOT supply masks, dive computers, watches, booties, or wetsuits (we do have some in stock, check with us if you cannot bring your own wetsuit). **Anyone wishing to participate in night dives MUST bring their own dive torch!**

## Insurance

Travel and diving insurance is mandatory. Most travel insurance policies can include dive insurance for dives to 30 meters (100 feet). [Divers Alert Network](#); is a popular choice amongst divers, they offer comprehensive dive insurance packages at reasonable rates.

## ReefCI Programs

Since 2004, ReefCI has offered a unique one-of-a-kind marine conservation diving experience. We offer an all-inclusive diving and marine conservation trip surrounded by turquoise coral seas situated on the Belize Barrier Reef. The Belize Barrier Reef, part of the Mesoamerican Barrier Reef system, is the second largest coral reef system in the world and possibly the most ecologically diverse. Our secluded and private base of operations, Tom Owens Caye, is a .5 hectare (1 acre) Caribbean island situated 40 kilometres (25 miles) from the mainland of Belize. It is a great place for those wanting to enjoy their vacation/holiday in a natural setting, while diving and learning about the ocean habitat. We are passionate about diving and protecting the marine environment which is reflected in our [TripAdvisor Reviews](#). A small sampling:

*"A paradise with a cause!"*  
*"Best trip of my life, especially knowing I made a difference"*  
*"Amazing marine conservation holiday on an idyllic island"*

Guests come to our unique setting to help in a variety of marine habitat and wildlife conservation projects. You will assist with conservation surveys, data collection, and lionfish removal/culling under the guidance of the ReefCI marine biologist and staff. ReefCI depends on citizen-scientists like you to gather data during surveys. We teach our guests about data collection methodology and species identification prior to the survey to ensure consistent

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measurements. Our citizen-scientists learn about local species, marine habitat conservation, and ultimately help in the protection of our oceans by culling the invasive lionfish.

Our ongoing reef habitat and species conservation projects include:

1. [Lionfish Program](#)
2. [Marine Conservation Program](#)
3. [Internship Program](#)

**Please note that not all of the following surveys are guaranteed to be part of your specific trip. Some are seasonal and/or are dependent upon length of your trip, dive experience, and numbers of participants.**

## 1. Lionfish Program

Calling all apex predators! Our lionfish program focuses solely on hunting, spearing, and eradicating this invasive species.

People often feel that “releasing” a fish or any other animal into the wild is a good thing, but not in the case of the lionfish! The initial source of the lionfish invasion can be pinpointed to personal aquarium releases in Florida, USA back in 1985, probably by people whose lionfish were getting too big for the tank or eating the other fish.

Lionfish are indigenous to the Pacific and Indian Oceans and the Red Sea but not the Atlantic-Caribbean belt. In their natural habitat, they have a diet that is not a threat to the environment; and they have natural predators to keep their numbers in check. However, in the Atlantic-Caribbean waters they are an invasive predator, feeding on species that are key to our healthy reef environment such as juvenile groupers, parrotfish and crustaceans. These native species have no evolutionary defence mechanism against the invasive lionfish.

Lionfish are voracious predators and consume juvenile fish recruits. In thirty minutes one lionfish was observed eating more than twenty fish!! ReefCI found a lionfish with a Blue Chromis in its stomach, the Lionfish measured 18cm and the Blue Chromis measured 9cm! That is half its body size in one mouthful! It’s like a human being eating a sheep in one gulp!!

Most fish species spawn once or twice a year over maybe a two-month period during the full moon. Lionfish release their eggs every 4 days!! They can release up to 20,000 eggs. They do not release the eggs until they are fully developed making the chance of survival much higher. This means they reproduce at an alarming rate. They reach sexual maturity in less than 1 year! And they can live until they are around 15 years old!

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The invasive lionfish is one of the greatest threats to the sustainability of coral reefs and fisheries habitat throughout the Caribbean. Scientists are predicting that lionfish will have a grave impact on Belize's already stressed stocks of fish and lobster and could spell potential disaster to our marine habitats.

### What will you be doing?

Hunting and spearing the invasive lionfish!! Here in southern Belize, we at ReefCI spotted our first lionfish in November 2009 but they were few and far between. Now we are spotting them on every dive and sometimes as many as 50-100 at one dive site. This is a dramatic increase and extremely worrying as we are the only divers in the area. ReefCI divers and snorkelers are actively involved in removing this invasive lionfish from Belizean waters. You will be spearing as many as you can!! So, for once in your life you can do something that is banned in most marine parks and go spear a fish! Great fun! After capture, we dissect some of the fish and study their stomach contents for research purposes. Then we eat! ReefCI guests often get lionfish on the dinner menu, cooked in garlic and black pepper or ceviche, they are extremely tasty.

ReefCI is currently supplying local restaurants with the lionfish we spear. We are giving them lionfish to include on their menus to introduce lionfish as a food source and to increase awareness of this problem amongst restaurant customers!! Lionfish ceviche, lionfish fish cakes, and fried whole lionfish are all delicious to eat. ReefCI is also working with local Belizean women to help them make jewellery from the spines and fins. We give them the sun-dried fins and spines and then buy the jewellery from the women and make them available for purchase.

We are extremely proud of our battle against the invasive and destructive lionfish. ReefCI is removing more lionfish and collecting more data on lionfish than any other organization in the country of Belize. ReefCI staff and guests are on target to remove over 7,000 lionfish this year alone and dissect 1,585 for research purposes!

Release your inner predator! Please join us in the fight to save the reef from this invasive species!

## **2. Marine Conservation Program**

ReefCI's Marine Conservation Program includes the following:

- Lobster Surveys
- Queen Conch Surveys

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- EcoMar Coral Watch (Coral Bleaching Data Collection)
- ReefCI Check (Reef Habitat Surveys and Fish and Coral Identification Dives)
- Whale Shark Watch
- Spearfishing Invasive Lionfish

### Lobster Surveys

The Caribbean Spiny Lobster is a high commercial value species throughout the Caribbean. Over the past few decades the populations have been seriously depleted due to an increase in overfishing. In many countries in the Caribbean there are now open and closed seasons. The closed season is normally when the females are ready to release their eggs into the water column. During the closed season in Belize (February-June), lobsters are banned from fishing and from restaurant menus.

Together with the Belize Department of Fisheries, ReefCI monitors the population of lobsters in the patch reefs (where the fishermen are most likely to retrieve lobsters by free diving), as well as the deep waters on the continental shelf. The surveys conducted in the shallow patch reefs give an idea of the density of lobsters in the region. The primary reason for surveying the continental shelf is to gain the male to female ratios and number of females carrying eggs. There are several specific locations where female lobsters gather to release their eggs. These biologically important locations require protection in order to sustain the lobster populations.

#### What will you be doing?

The lobster survey is conducted using the rover diver technique. We go down in groups of about 6 divers with the person at the bottom of the line at about 25m and the person at the top of the line on the top of the wall. Two people carry slates and a measuring stick. We move along the wall at the same pace for about 100 metres. Each lobster must be coaxed out of its hole using the measuring stick. First we ascertain what sex the lobster is, then we measure the total length and tail length and if the lobster is a female we look to see if she is carrying eggs. We do the same for about another 100m on the top of the wall with the deepest diver moving to the top of the line and the person who was on the top remaining where they were.

### Queen Conch Surveys

The queen conch is a large marine mollusk whose scientific name *strombus gigas* means giant spiral shell. After mating, which occurs July to October, females lay long egg masses with about half a million embryos, although as in the case of most marine organisms, the older and larger the conch becomes the more eggs it can produce. It takes about three to five years for the queen conch to become fully mature and be considered an adult. Within three years, the conch can grow up to two pounds in weight and eight inches in length. The average shell length will increase about three inches per year in its active growing

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stage. The adult conch can be identified by its heavy shell which has a flattened flare on one end. Therefore, the older the conch gets, the thicker its shell will be. A conch can live up to forty years if it is not harvested by its main predator during its adult stage- humans.

Conch has been overfished in Belize because of its high commercial value. There is much debate as to whether conch is breeding in the shallow or deep waters. Theories have suggested that both are true. Increasing numbers of conch are being forced into the deep to breed because of the increase of fishing pressure.

To monitor the migration paths, breeding patterns and populations of these species, a number of plastic cable ties with individual numbers on have been placed around each conch, and every subsequent observation is recorded. This may indicate not only the migration patterns of conch between different depths it can also record the directional migration patterns associated with the anticlockwise currents. By regularly diving in the area, ReefCI has been able to locate and protect two important new breeding grounds!

#### What will you be doing?

Divers go down in buddy pairs to a sandy area where there is a large conch population. One buddy has some callipers and a slate and the other a large measuring device and some tags. We record the lip thickness (this determines age and sexual maturity), size of spiral, size of conch, habitat, depth and tag number. When the tagging project is completed, we conduct several conch survey dives each week throughout the year where we locate the conch and note the number and location.

All of the information assimilated for this project is allowing us to map out the key biologically important areas of the Sapodilla Cayes Marine Reserve Park, in terms of conch populations and activity. During 2010 the Belizean government implemented no take zones in the Sapodilla Cayes Marine Reserve. The numbers of conch in the shallow waters are already on the increase, which in turn are increasing the numbers of species that feed on them such as the Spotted Eagle Ray.

#### **EcoMar Coral Watch (Coral Bleaching and Data Collection)**

ReefCI supports and contributes to the [Meso-American Coral Reef Watch Program](#), an organization developed by the marine conservation group, ECOMAR. The program was launched in 2008 in Belize, Mexico, and Honduras as an early warning alert system for coral bleaching in the region.

The goal of the program is to raise awareness among stakeholders – marine guides, visitors, non-governmental organizations and government departments - on the increasing impacts climate change may have on the delicate balance that exists on tropical coral reefs.

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Once aware of the conditions inherent of a natural and healthy reef; guides, visitors and park rangers can submit regular reports on the conditions of the reefs so that changes over time can be measured.

Climate change is a reality and its effects on our oceans are clear. The program monitors levels of coral bleaching of stony corals. As sea temperatures rise during the later summer months, the corals begin to get stressed and first become pale, then turn partially white, and then if the sea temperatures remain too warm for too long the entire coral colony can become completely white.

#### What will you be doing?

Divers go down in buddy pairs with Coral Watch slates and look for affected brain/cactus, branching/pillar, boulder/mound, flower and lettuce/sheet corals. The divers note the type of bleaching from paling, partially bleached to completely bleached. The water depth and the water temperature are also noted. This is a great way to learn about corals and about the different types of bleaching and disease. Everyone says that these surveys change the way that they dive and makes them appreciate the health of the reef.

#### **ReefCI Check (Reef Habitat Surveys and Fish and Coral Identification Dives)**

Our ReefCI team has developed a coral reef monitoring protocol that is more focused on the unique marine ecosystem of southern Belize. Still employing simple techniques that non-scientific divers can easily master, we aim to collect scientifically robust data allowing us to monitor and report on our coral reefs health. ReefCI Check is a comprehensive assessment of the health of coral reefs. We have fine-tuned the “indicator species” observed based on the ecological and economical value and sensitivity to anthropogenic disturbances, specific to the Sapodilla Cayes Marine Reserve. A new aspect to our methodology is counting the male and female Parrot fish, while still including Groupers, Surgeon fish, Butterfly fish, Grunts, Snappers, and the invasive Lionfish. Invertebrates, coral bleaching/disease, trash and coral damage will be recorded and the substrate composition thoroughly mapped.

#### What will you be doing?

The Team Scientist or Team Leader lays the 100m transect line. There are three buddy teams; including one for fish, one for invertebrates, and one for substrates. The fish survey is conducted first in order to avoid fish being disturbed prior to the survey. One buddy times while the other counts the indicator fish in 5 meter cube areas for 1.5 minutes. This is then repeated along the line. The next team surveys invertebrates with one buddy on each side of the line. They count the invertebrates inside a 2.5 metre width on each side of the transect line. This requires looking under rocks and ledges and into holes in order to find the species.

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The 3rd team counts the substrates. One buddy has a plumb line with a small weight on the end; the diver drops the line onto markings at each 50cm (.05m) interval and gives a hand sign to their buddy who then records the data onto a slate. The Team Scientist conducts a site description which includes any coral damage, anchor damage, disease etc. Some of the fascinating marine life you will encounter along the way includes whale sharks and lobsters.

### **Project AWARE Whale Shark Project**

Whale sharks are the largest fish in the ocean, they grow up to 14 meters (46 feet), weighing up to 15 tons! They are migratory creatures and it has been estimated that they may live up to 100-150 years old! They eat plankton and small fish and are harmless to people. Diving with whale sharks in Belize is one of the most rewarding experiences when you are diving in the Caribbean.

The Mesoamerican Barrier Reef in Belize attracts one of the largest concentrations of whale sharks in the world. Whale shark season/migration in Belize runs March-June; however, we do spot them year-round. The presence of the whale sharks is dependent on the health of the spawning fish aggregations. ReefCI actively participate in working on the spawning fish in the area.

Like many of its shark relatives, whale sharks are in decline and they may soon face extinction if we don't act now. Whale sharks' gentle nature makes them an easy fisheries target for meat and fins, highly valued in the international shark fin trade.

The AWARE Whale Shark Project engages divers and snorkelers in whale shark data collection efforts in partnership with the UK based Shark Trust. The Whale Shark Sightings Database allows volunteers to report their sighting information online. This public, photo identification database supports photo and sighting data comparisons by scientists, researchers, and others interested in preserving this vulnerable species. Photographic identification is a powerful non-invasive technique for studying shark life histories and movement in their natural environment. This is especially important for a highly migratory species like the Whale Shark.

### What will you be doing?

Nobody can guarantee a Whale Shark encounter; however, if you are lucky enough to experience a Whale Shark you must record as much information as possible, and take photos (without a flash). Displaying a myriad of pale blue spots and stripes, each whale shark has its own unique pattern. Divers and snorkelers are asked to photograph and make notes about each whale shark's individual skin pattern, size and other identifying factors. Following each sighting, divers will be asked to submit the sightings data and images to an online database.

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In order to participate in the Whale Shark project, you must pledge to follow the Whale Shark code of conduct. If you would like to learn more about the Project AWARE Whale Shark Project, please visit [Project AWARE](#).

### 3. Internship Program

The objective is to deliver real insight into marine conservation methodologies and provide hands-on conservation work experience, while also having lots of fun with great diving on a beautiful remote Caribbean island. The 2 or 4 week program is suitable for individuals or groups that seek:

- High value work experience for those who are interested in working or studying within a science or environmental field.
- Non-scientists who are interested in a trip with a more intensive conservation element.

#### What will you be doing?

ReefCI's Internship Program includes all the programs offered in our [Marine Conservation Program](#); however, it is a more intensive conservation and learning experience. Participants will participate in the following conservation work:

- Lobster Surveys
- Queen Conch Surveys
- EcoMar Coral Watch (Coral Bleaching and Data Collection)
- ReefCI Check (Reef Habitat Surveys and Fish and Coral Identification Dives)
- Whale Shark Watch
- Spearfishing Invasive Lionfish

The main elements of the program include:

- Learning to dive or further your PADI dive qualifications and dive experience
- Individual contribution/chapter in ReefCI's published Annual Report
- Monitoring experience and understanding of a broad spectrum of research methodologies
- Comprehensive knowledge of Caribbean fish, invertebrates, and coral species
- In-depth understanding of threats to the local marine environment
- Experience in giving fun and educational conservation presentations – to both tourists and local children
- Experience in working with Belize Fisheries Department
- Practical insight into Marine Park Management and liaising with fisheries officers
- Community outreach participation

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- Real-life insight into the effect of marine/sustainable fishing regulations on a small local fishing town
- We aim to include some conservation photography and videography if time permits

## Weekend Accommodations

**Our trips run Monday till Friday – we depart at 9:00-9:30 am on Monday and return to the mainland on Friday anywhere from 11am-1pm. Volunteers need to arrive and depart during the weekends.**

You will need to book somewhere to stay on the weekends Friday thru Sunday in Placencia. Click [here](#) for suggestions and recommendations for weekend accommodations – there are recommendations for all budget levels. Weekend accommodations are not included in the price of your trip. Cost ranges anywhere from 15 USD to 100 USD a night depending on your hotel preferences.

## Things to Do on Weekends

Besides the incredible diving and conservation experience with ReefCI during the week, Belize on the weekends has so much to explore! From ancient ruins, jungles and nature expeditions, spelunking, repelling, ziplining, cave and river tubing, to cultural tours; there is something for everyone and the weekends are yours to explore! You are guaranteed a trip of a lifetime in Belize! ReefCI is happy to book your adventure for you. Tours depart from Placencia on the weekend and are all-inclusive. To see a list of available tours please click [here](#).

## Booking Your Trip

We only take small groups; therefore, to secure a place, it is advisable to do so as soon as possible. Please visit ReefCI's secure [online booking](#) system, which has our real-time availability, to reserve your trip today.

We are happy to answer any questions via email or phone. Email us at [anthony@reefci.com](mailto:anthony@reefci.com) with your questions. We always respond within 24 hours or sooner. Alternatively, feel free to call Anthony in the USA at **+1 513-334-9393** if you wish to speak to someone directly.

Please see what our guests are saying about us on [TripAdvisor](#).

We look forward to welcoming you to ReefCI and beautiful Belize! [Reserve](#) your spot today!

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