

Lighthouse Reef Research Repository
Long Caye, Belize

Explore Research Share



17°12'32.00"N 87°35'13.68"W

Lr³

Wendy's Lab

Belize

Lighthouse Reef Research Repository

Mission: To Protect Lighthouse Reef

Vision: Invest in reef security by hosting researchers that collect and make available data as the baseline for evidence of change.

CITIZENS SCIENCE INITIATIVE

See the world differently

Lr³ Citizen Science Initiative, CSI, is a curated travel experience for all people who care about the future of our planet. CSI invites adventurous people to explore the world from the perspectives of conservationists, ecologists, and scientists.

Who Attends the CSI Program: Families, Homeschoolers, Researchers, Explorers, Educators and Students.

The CSI Program experience is offered exclusively to Lr³ Donors. Most everything for your visit is provided for through outside private donations and sponsorship. Cost for the CSI program per person is approximately \$2,700 USD, travel costs not included.

To sign up contact our Director, Francisco Martinez at US +1 720-260-8858 or by email: francisco@lighthousereef.bz

Or simply Donate at a Champion level or higher and Mr. Martinez will contact you directly.

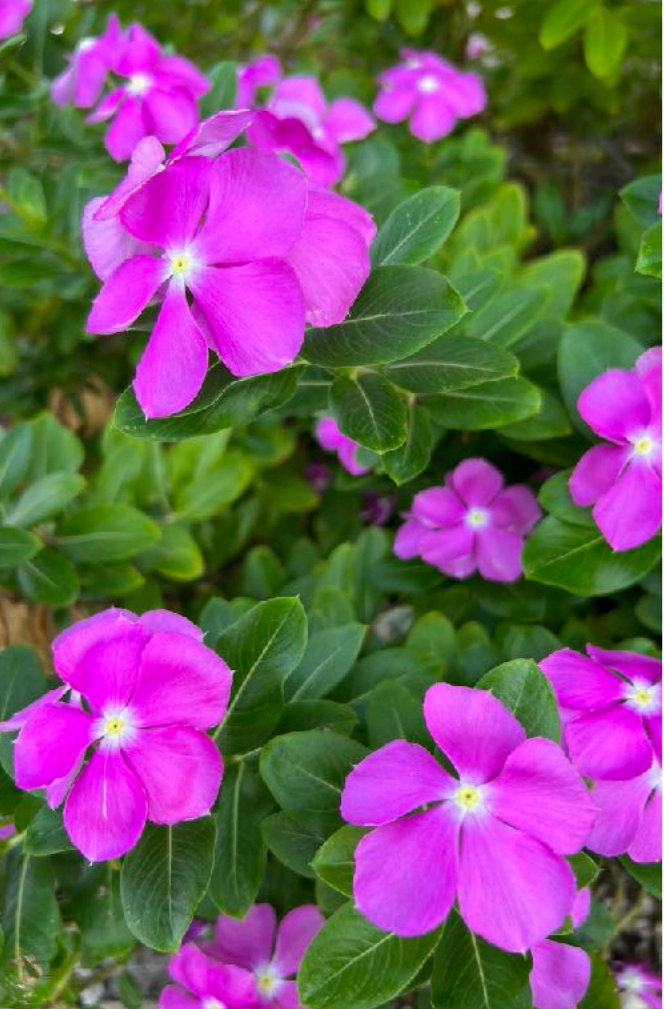




Things you can do

This experience can be structured informally or with formal educational parameters per your specifications.

- Scuba dive / Snorkel
- Kayak / Paddle Board
- Swim
- Jungle Walk
- Sport Fishing, Spear Fishing and Deep Sea Fishing
- Learn how to gather relevant data for scientists while recreating
- Understand your direct impact
- Understand sustainability
- Wildlife watching
- Explore island "Off Grid" systems
- Recognize human impact
- Pollution cleanup on the reef
- Visit a UNESCO World Heritage site and National Park
- Relax, ponder and review your findings with a resident Biologist.



Things you can see

- Marine life: Fish, Dolphins, Turtles, Sharks, Crocodiles, Rays...
- Ocean pollution
- National parks
- Exotic Birds and Audubon Society Rangers protecting endangered birds
- Atmospheric views, Sunrises/sets, Star gazing
- Nighttime wildlife
- Insects
- Central American Flora and fauna
- Invertebrates
- Evidence of Climate change
- UNESCO World Heritage Site
- The effects of traditional tourism
- Mangrove habitats
- Ecological living systems
- Lagoons
- Local artisanal fishermen
- No light and noise pollution
- Coral reefs and patch corals
- Sustainable practices

Example Itinerary

**We help you
plan so you can
make
adjustments as
you like, in the
moment .**

Image: The Great Blue Hole.
Located two miles north of
our location. 15 min by boat.



Arrival Day

Airport, Marina and boat ride

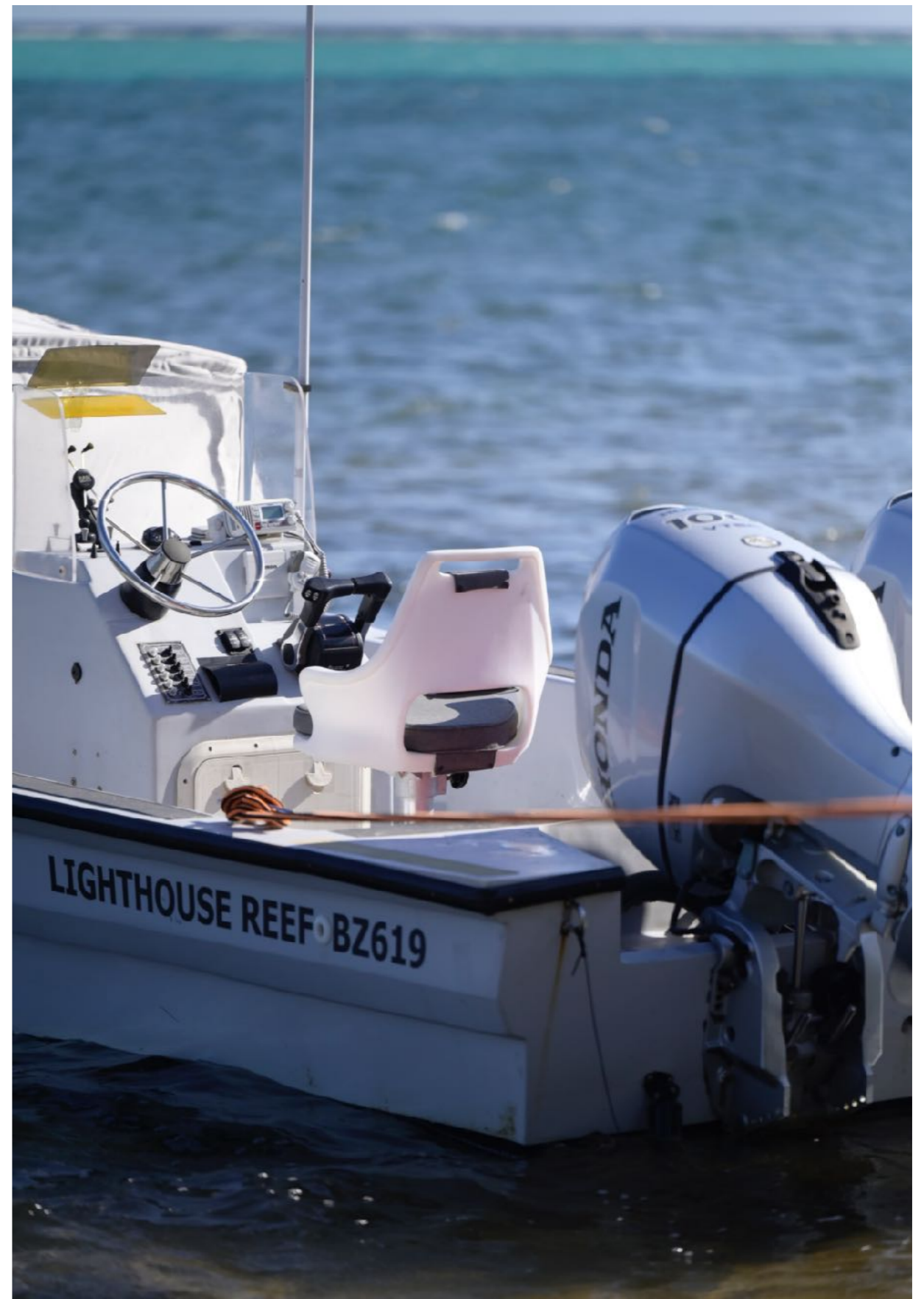
A private driver will collect you and your belongings at Philip Goldson Airport.

When you arrive you will get off the plane from both front and rear exits so don't worry if your seat is towards the back of the plane. We sometimes book that intentionally to be first off. Onboard you will get an immigration and customs declaration form that you can fill out as a standard tourist with nothing to declare. You will disembark the plane and your first stop will be immigration. After immigration stamps your passport, you'll collect your bags (don't use the carts) and go through the right side line at customs with "Nothing to declare". When proceeding through further, pass up the bellhops who will try to charge you to help with your bags (don't use their services) Past Customs you will go 20 feet out the first right exit door. You will then cross into the parking lot and the driver will be there looking for you. If you do not have an international cell phone plan you might consider getting one for the day of arrival. Most people in Belize use WhatsApp to communicate.

Overwatch

The ride out is an adventure in itself. We will go past the second largest barrier reef, through a sunken volcano and out into the deep blue.

The driver will drop you off right at our boat at the marina. Departure from the marina to the island is strictly set for 1400. We will load your belongings directly into the boat. If for some reason the weather is bad or the winds are too high to leave immediately, you will spend a night at the marina on either the second or third floor of the South Harbor Yellow Condo. The Old Belize swim park is across the way. It is designed mostly for kids or tourists but its fun to get a smoothie, a beer or a snack and go down the huge slide or hit the swing. Check them out on IG @Oldbelize







Turneffe Atoll

Turneffe Atoll is one of four sunken volcanos that have transformed into coral reefs.

Make sure to stay protected from the sun on the ride out or you will burn: necks, legs and knees are common forgotten spots. If you need to adjust your seat or get something just tell the boat captain and he can pause the ride for a moment no problem. Listen to your captain and do what he or she says at all times for your safety.

We will first go out to the barrier reef and make our first open water crossing to Turneffe Islands which is a protected treasure of the planet: Teeming with birds, amphibians, reptiles and ALL the fish. As we travel through it will be an eyeful of wonder with hidden channels and a maze of mangrove islands.



Once we leave the Atoll we will be going through the famous Harry Jones Locker, a channel of powerful seas. In stormy weather it's not uncommon for captains to make the decision to stop and stay the night on the boat before crossing. It's our every day road out to our remote and treasured Island.



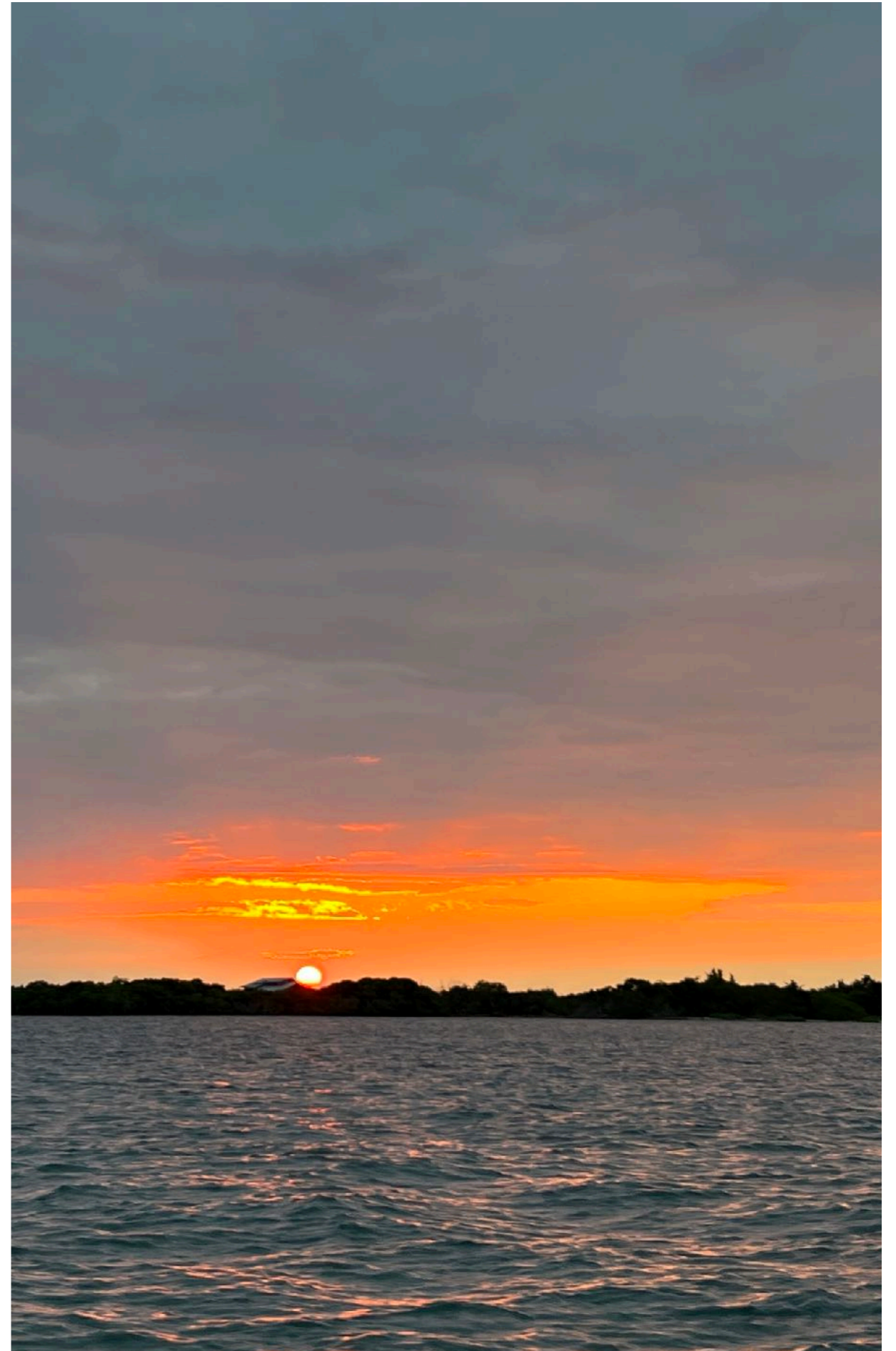
Looking south (top) to the hook of the island, you will notice that there are only a few structures on the north end. Our oasis is on the far left, away from it all.

Long Caye at Lighthouse

A protected UNESCO heritage site

We will arrive at the island about an hour and a half to two hours past departure. We will boat into the shallows and right up to our small beach which will look uninhabited. If you plan on getting into the shallow water right away at this point, water shoes are recommended so that you don't step on a shell and cut your feet. Just make

sure that they are the type of shoes that won't pop off in deep grass or sand. Don't worry! The water is warm and the boat nestles about 15 feet from shore.





Arrival Day 1

It's all unpacking and settling in from

Your first goal is to set your luggage down and rinse off any and all salt water before you go inside anywhere.

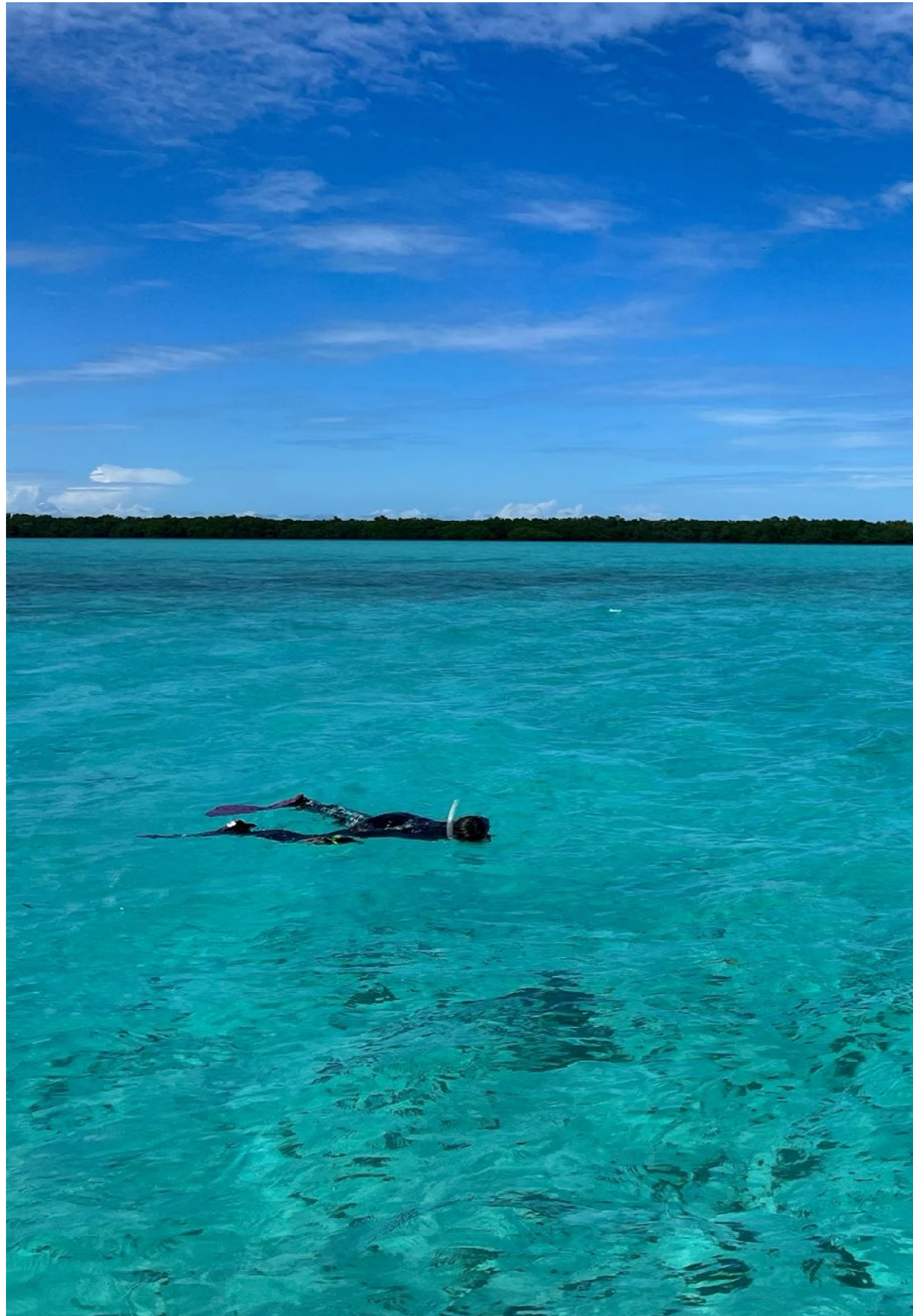
We will then all sit down and eat for orientation and discuss all of the intricacies of the island. How to: Shower and use the bathrooms properly, deal with bugs, sun, sleeping arrangements and the do's and don'ts of exploring on your own. While eating and orientation continue we will transition into a brief Environmental class "Your direct impact" where we will direct you towards a helpful mindset while visiting this sacred place on the planet.

After eating, orientation and our environmental discussion we will then walk the facilities and casually settle in for the evening. Late night discussions are typically had.

12:00-1:00 arrival to marina

2:00 Boat departure

4:00 Arrival and Orientation



Day 2

Explore the island

We will take you around the wonders of the island. We will explore the perimeter of the island on kayaks, hunting for starfish and other cool creatures.

- 7:00 Breakfast every day
- 7:30 Briefing from resident biologist, on science education, “what’s important, looking through the eyes of a scientist”.
- 8:00 Kayak orientation and safety and set out around the island.
- 11:30-12:00 Eat lunch out somewhere on the island.
- 3:00 Return, Clean up and review and share data collected with the resident biologist.
- 4:00-4:45 Class from the Director “Sustainability and off grid systems”
- 5:30 Dinner every night

Up close and personal

Exploring the coral reef





Explore like we explore

You have the freedom to make changes and special requests

We are open for most any exploration. We have found the coolest things by just changing our minds boating around and stopping where we feel like it.

Some ideas of exploration take a huge commitment of time and resources. Others, like kayaking around, are easy right from our water front.

On the last page is a list of extreme things we want to do but we know they will take a day or more to accomplish. We are open to do what sounds fun to you so let us know.

We also have seen the most beautiful things while doing nothing at all. Just lounging around, you will notice birds come out, crabs will come out and even baby sharks will swim by the boat. We are always down with relaxing and observing too.







Day 3

Touring the north, dive and snorkel

See human impact first hand and collect data.

Spending time with local dive, snorkel and fishing guide Elvis Solis. Brace yourself for a fishing session with an eccentric 9 year old boy who looks like a grown man. But don't let his antics fool you. Elvis is the most knowledgeable person on the reef.. no need to ask him about anything, he will tell you unsolicited! Haha! The fact is, it's undisputed: he KNOWS the reef. Tell him what you want to see or catch and he will take you there.

We will pack food for you to take and have dinner ready when you return. May the force be with you!

- 7:30 Class on on Environmental studies visit the north and document human impact.
- Visit the North
- Dive and snorkel with local guide
- 3:00 Return and review observations and experiences



Best fishing in the world is always an option

Fly fish for bonefish, tarpon, permit, and snook. Catch and Release only.

If at some point you want to catch fish to eat, just say the word and Elvis can switch modes catch a good meal and show you his tricks for cleaning and preparing the fish.





Day 4

Ocean trash cleanup and explore

Opportunities to do great things for the planet are rare. Today will be a “roll your sleeves up, messy, muddy day of exploration and doing good”.

- 8:00 Beach and ocean trash cleanup
- 9:00 Bird watching, explore the inland and lagoon
- 12:00 Lunch
- 1:00 Boat to reef edge and patch reefs
- 4:00 return



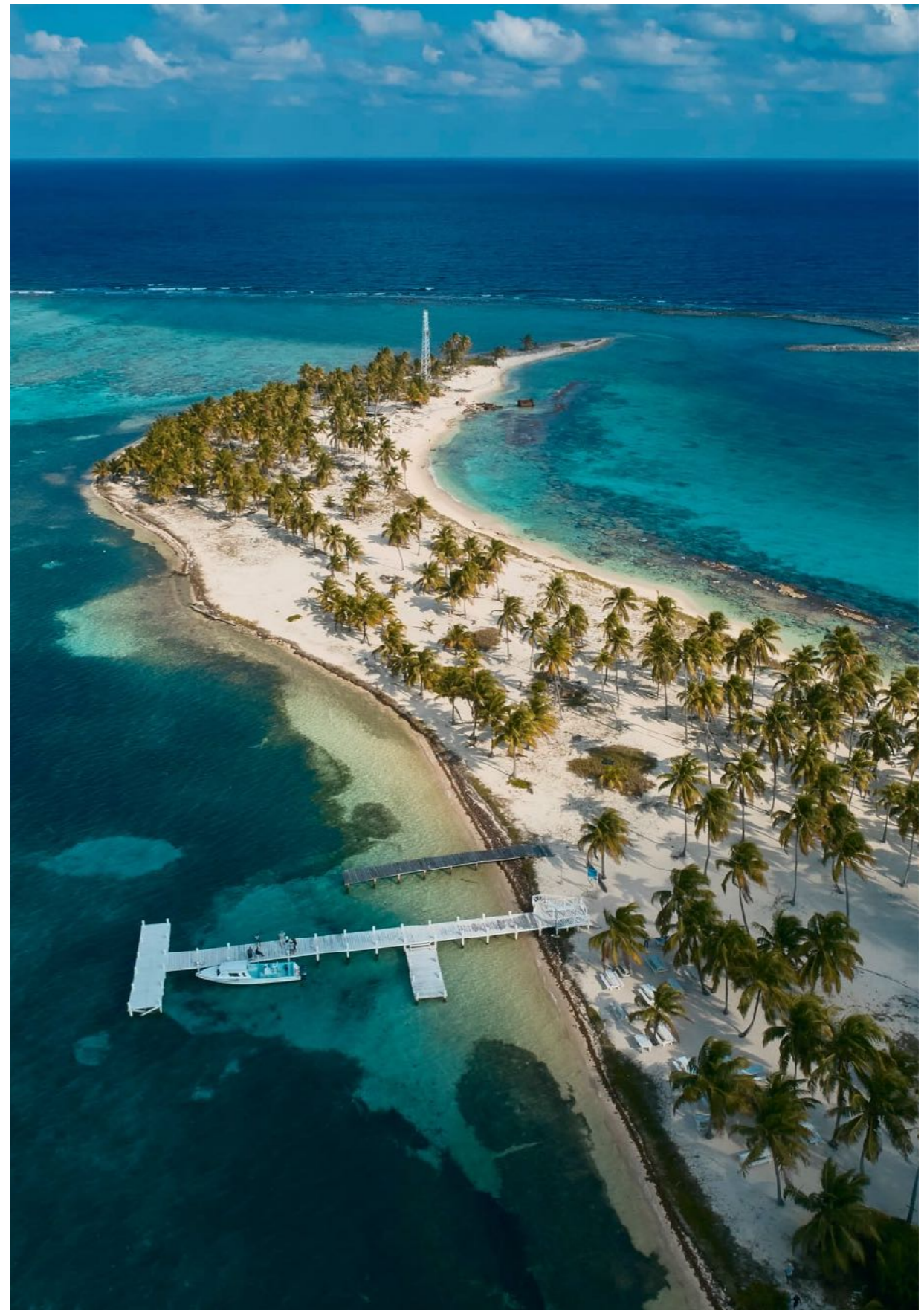
Day 5

Visit Half Moon National Park and the UNESCO World Heritage Site

8:00 We will make ready and boat to the island just in front of us, Half Moon Caye. The Audobon Society manages the island and has picnic tables, restrooms, scenic walking paths and sandy beaches to make Half Moon the perfect place for both exploring and a relaxing “beach” day. We all have to pay a park fee but you can explore everywhere EXCEPT the turtle nesting grounds which are roped off with signs.

Shallow snorkeling around the island is great fun. The Red Footed Booby Bird habitat is a short walk from the dock and there’s a lookout tower to climb and see them up close. Wear something on your feet: the treads of the stairs can get VERY hot!

Sunset beach faces west and offers a nice view of the sun setting over Long Caye and Wendy’s Lab. We will be here all day and return in time for dinner.



The Red Footed Booby

Exploring Wildlife







Day 6

A day of your Choosing

After what you've seen and done up to now you will be better informed to make a decision to either rest and relax or to repeat your favorite adventure

Breakfast, lunch and dinner can be modified and special plans can be made to go visit a new area or the reef, discuss more about science, culture or simply relax and let it flow naturally.



Relax

**Listen to the
environment**

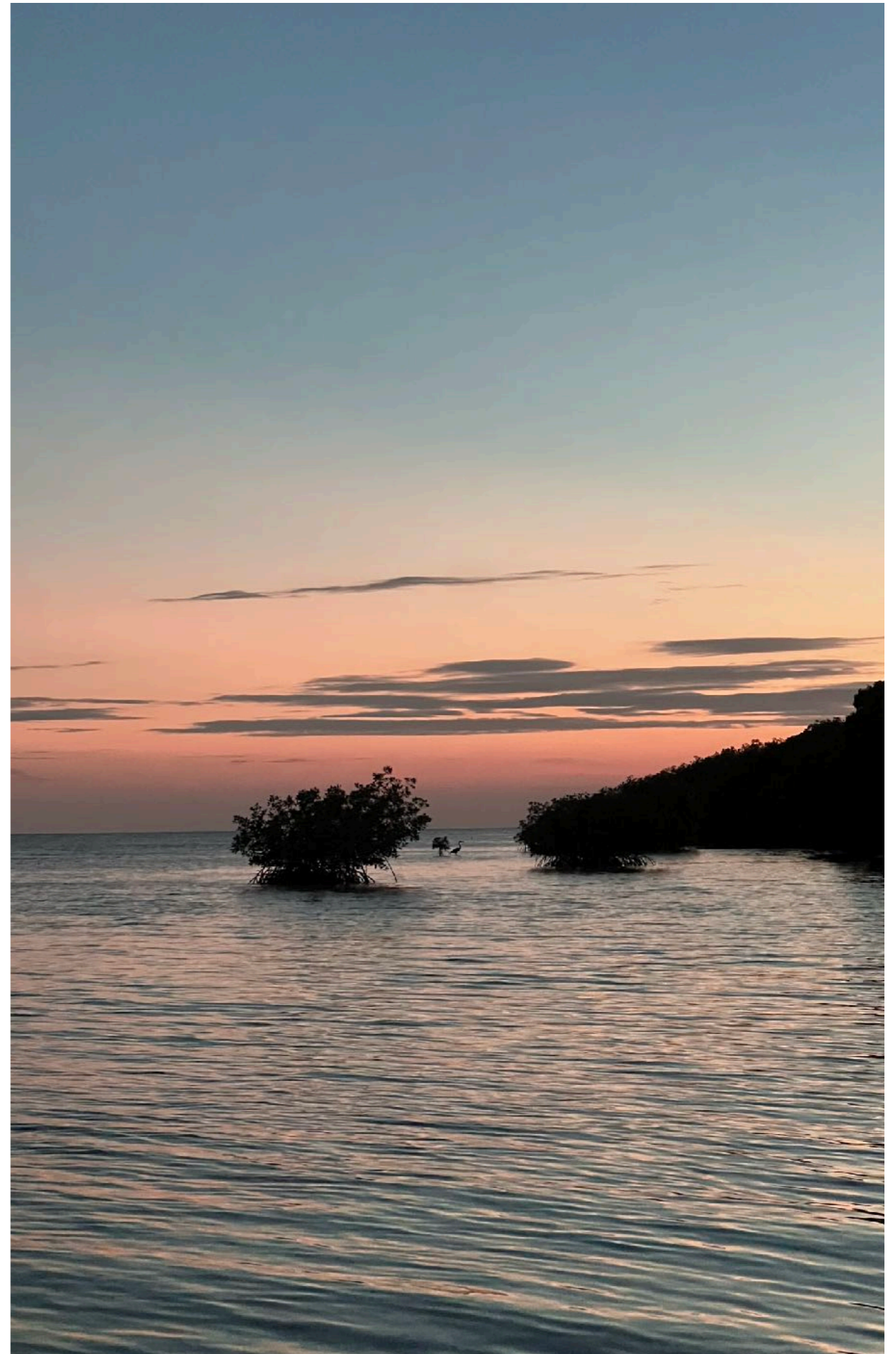
Return Day 7

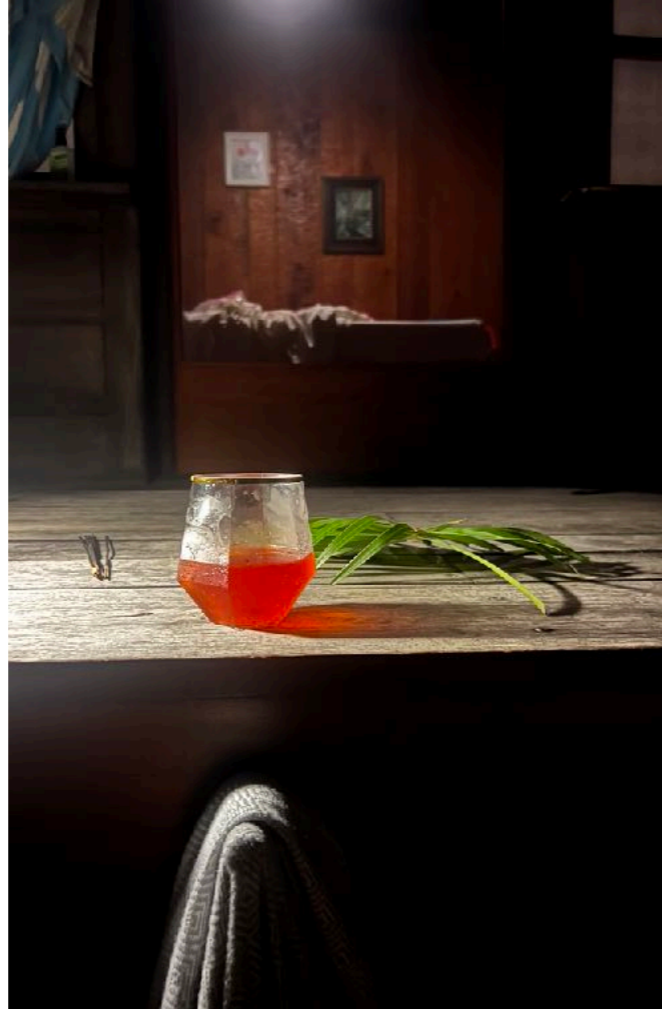
Back to home

1.5 hour boat ride in, 30 min to the airport
1.5 hours before boarding time

Packing, while planning your return visit, is the typical adventure on this day. Making sure you have the photos you wanted and all of your questions answered by our resident Biologist.

Keeping your fingers crossed that you see dolphins on the boat ride back is always a good idea too!





Accommodations

The Water Deck

This is the prototype for the main private residential structure being erected in 2025 by Andre & Wendy.

“We built this structure first during the Covid pandemic. It’s the main experiment for building materials, design and functionality. Everything was brought in on my black inflatable boat SALVO P5.8 from the US Navy. Cement, steel, lumber and tools over 55 miles of open sea on a 19’ inflatable combat rubber raiding craft. It’s the best dwelling to stay in that our hands could build.”

Staying in the Water Deck is luxurious though it is in the center of all things and showers are still had in the Lab







Accommodations

Wendy's Lab

Staying in Wendy's Lab you can see her research first hand

We spend most of our time exploring the ocean and collecting data to share with universities. The lab is a private small structure but it's cool inside. It's a great place to unwind after a full day of adventure. Pick one of the bunks for your place to sleep. It can get hot during the day and there are lights and sounds of equipment throughout the evening.



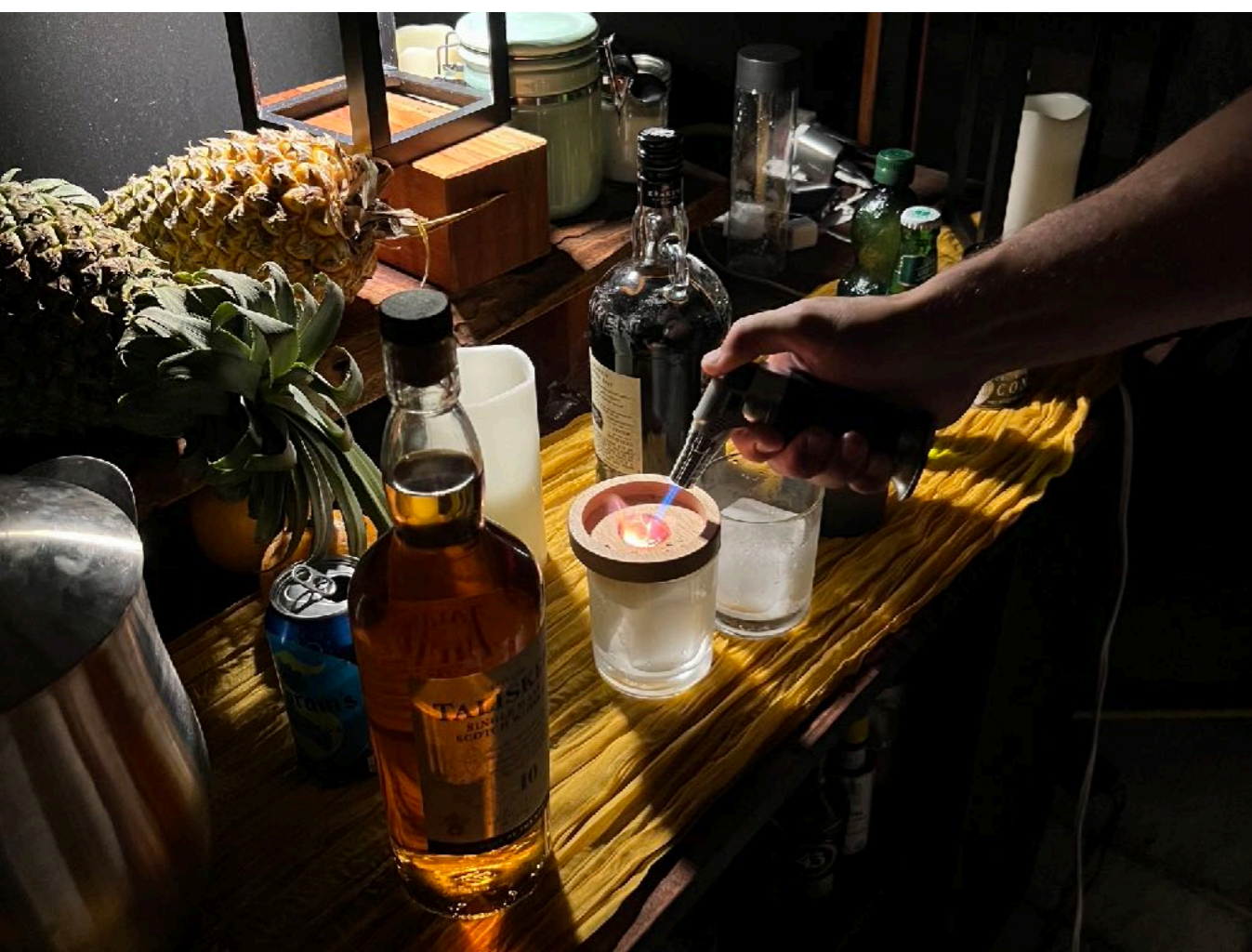
Food & Alcohol

You're a guest here at this private residence of Wendy and Andre and you are welcome to treat our kitchen as your own. We will assist you in making sure it is stocked with everything you need. Making sure your dietary requirements are all in order is very important to us.

Snacks, group meals and privately prepared meals are all an option. We do not sell food but if you would like a meal prepared by a local resort we are happy to help you do this.

We do not sell alcohol. Most guests bring their own and there is typically some left over from prior guests.







Weather

Annual mean temperature is 80°F with 80% humidity. 5-10 mph winds are calm days, but over 15 mph become difficult, and days with over 20 mph winds are non boating days. The island always has a good side to explore.

Whats the best time of year to

There are unique things to see and experience all year round

- January- February: Cooler weather, small rain storms
- March- April: Spring growth, high winds
- May-June: Warmer weather calming waters
- July-August: Hot weather, still days
- September-October: Glassy calm seas, occasional storms
- November- December: The end of Hurricane season and the arrival of migrating birds and whales

Clothing & Gear

Dress to protect from the sun and bugs and keep a swimsuit in your bag.

Most of the time we wear lightweight fly fishing pants and hooded shirts. The goal is thin, light colored, loose fitting that dries fast. Bring 4 pair of everything. Think *mechanical* protection from the sun rather than chemical. As for shoes, bring some trail running shoes that are light and tough, sandals but make sure they have ankle straps otherwise when you step off the boat into the water and sand you'll be fishing for those too. As for gear, it's best to bring your own snorkel, fins and mask. Everything else like dive gear can be rented from the resorts or guides. Headlamps are always good. Items to bring: Hat with a wide brim, hair ties or headbands and a buff, lightweight wind/rain coat, waterproof dry bag for your phone/wallet.



Recommended gear

- SCUBAPRO Seawing Nova Fins
- TUSA M-1003 Freedom Elite Scuba Diving Mask
- Oceanic Ultra-Dry 2 Snorkel



Showering

We only get water when it rains.
Conservation of water is survival

Using the shower you will notice there is no running water. All of your water comes from one outlet outside in front of the lab.

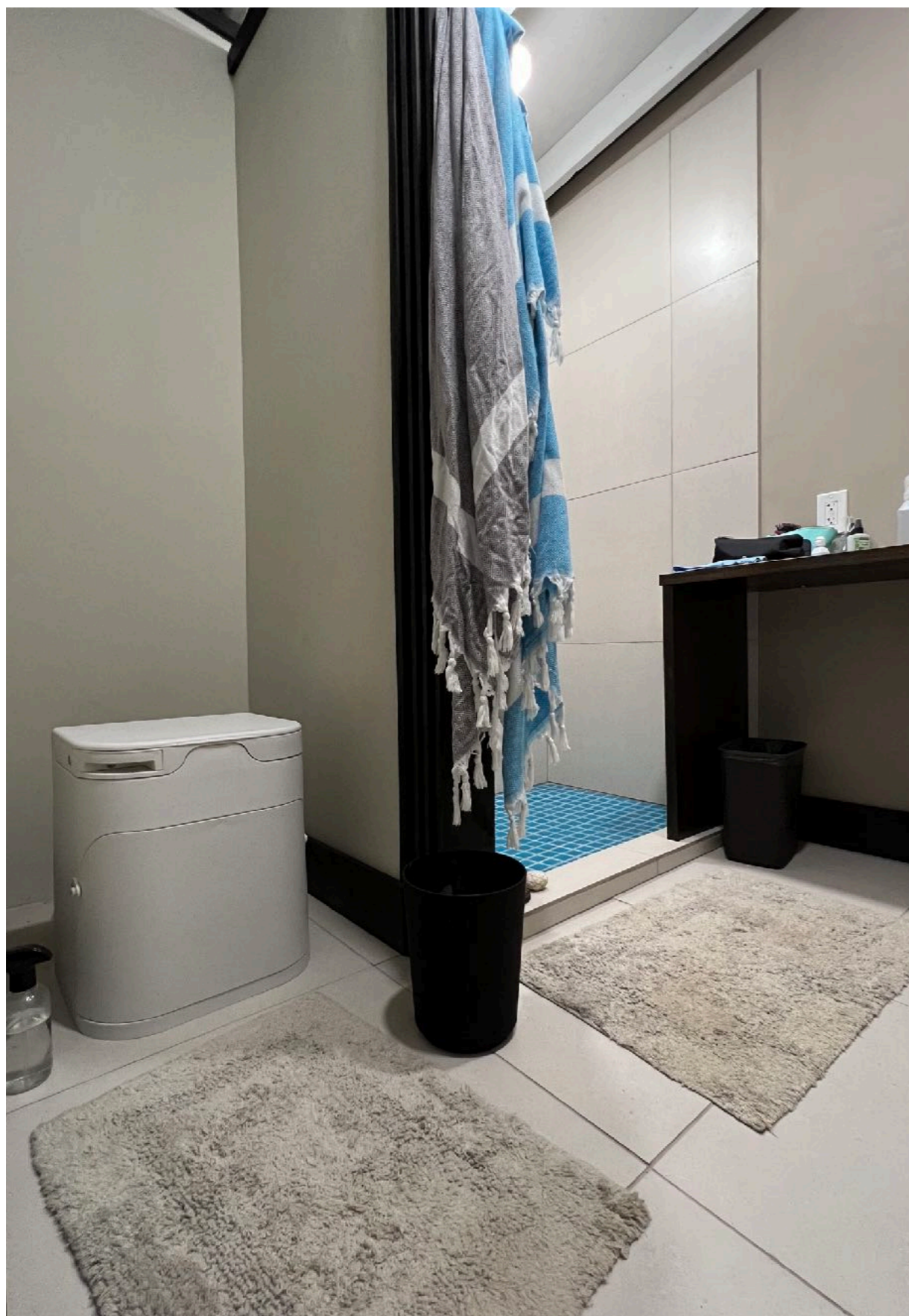
- Retrieve a bucket full of water and place it in the shower.
- Pour some of it using the large sea sponge into the hot water kettle and heat it up then add hot water as needed

Get wet • Soap up • Rinse off

- All water goes down into a bucket outside to be used for watering not food bearing plants.



For the environment & THE BUGS... The only soap allowed is UNSCENTED Dr Bronner's; can be used for all things including face and hair.



Lavatory Use

There are specific use guidelines to our facility that help keep the island and the reef clean and undisturbed. There is a little more work involved but with your help and effort we can set an example for all others.

- Everyone sits to pee
- Open the #2 hatch, do your duty, wipe with designated paper only, close the hatch and press the button on the right side.
- Spray clean and wipe dry
- If you see a red light on the button, tell someone it's full.

Dry Composting

Our toilets are “Dry composting” that means that #1 & #2 are collected dried out and returned to the mainland landfill. This insures that we make as little impact on the environment as possible

It's something we all need to be disciplined about every minute of

Trash and Feeding Wildlife

When you put food into the wild it creates an imbalance and that causes problems. It seems harmless to throw a bowl of starchy water onto the ground or into the ocean but it can lead to life threatening situations. Crocodiles and sharks that think food sources are close to you are a danger. Don't let this be your fault. Plus Rats and crabs will overshadow your experience. Don't let food or trash hit the ground or go uncovered. We remove all trash from the island.





The Bugs &

As is with all places in Central America and the Caribbean, Bugs and predators are something you need to understand how to deal with.

There are all types of insects but here the two you need to concern yourself with are Mosquitos and Sand Flies. Both are out in swarms after a good rain but you can count on them like clockwork every day at dawn and dusk to hunt for you. We call it “the bug hours”. After a few weeks, you don’t get reactions to the bites but for short term visitors you are best to wear three forms of protection: Cover up with light long pants and shirts, Impregnate your clothes with Permethrin and let dry, and lastly use Natrapel to ward them off of you. Above all try to be inside screened areas during the bug hours.

Other dangers are small scorpions, which can hurt but typically won’t kill you unless you have reactions and are stung close to the throat. Sharks and rays will leave you alone if you’re in groups and don’t feed them. Crocodiles are ALWAYS at the waters edge when its dark and especially when its calm. They typically will scare off but if you step on one because you’re not paying attention, it will bite you. There are trained rescue and medical professionals on site at all times.





The Sun

One hour in the sun is enough to burn you really badly. If you are new to the area but you tan well, it still takes one hour a day for two weeks to be okay going shirtless.

Best to use light colored thin clothing as protection but if you must use sun screen, we recommend a reef safe one that won't kill fish and ruin gear. If we see you with an alternative, we will take it from you and replace it with the proper type. Or just ask :)



Keep covered or pay the price

Example Extra Expenses

These are some of the extras you may like to purchase from local guides and resorts.

- Most adventure fees from registered local guides are about the same: \$100 per hour. For example if you go diving or snorkeling you would pay \$100 per person. This covers preparation time and guide fees. Snorkeling for two people for an hour is \$200 plus boat fees and any equipment rental fees
- Gear rental fees from local resorts are \$80 per day regardless of equipment i.e. fishing, diving, kayaks or any other. The only exception to this is dive air tanks which are an additional \$20 per tank fill.



Description	Resort Retail Cost (per person USD)
Unplanned or extra ride from airport to marina	\$50.00
Boat ride from Marina to Long Caye one way	\$350.00
Meals from resorts	\$90.00
Room stay at resorts	\$350.00
Guided 2 hour Snorkeling trip (no equipment needed)	\$200.00
Extra boat transportation around the island: fuel cost	\$35.00
Fishing with Elvis 4 people (All gear included, weather dependent)	\$1,600.00
Fuel and Boat fee for night snorkeling trip 10 min out	\$85.00
Half Moon Park Fees	\$50.00
Boat ride from Long Caye to San Pedro	\$450.00
San Pedro hotel	\$320.00
Marina Room stay	\$280.00
Guided Excursion to ATM Cave per person	\$400.00
Guided deep sea Fishing charter	\$1,500.00
Helicopter Transport to the island one way	\$2,000.00

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