

dent & CEO, BayEcotor;

"For 40 years we have nurtured environmental policy, ocean conservation and watershed restoration through our programs, outreach and advocacy. As we celebrate four decades of caring for the earth, we would like to share this insightful journey with curated EcoExpeditions around the planet!"

BayEcotarium is a 501(c)(3) non-profit organization with a mission to enable

ENCEACE

climate resilience and ocean conservation globally, while inspiring actionable change locally. As the largest watershed conservation organization in Northern California, we work to protect and restore the San Francisco Bay and its ecosystems, from Sierra to the Sea™. Educating visitors from the Bay Area and around the world about marine ecosystems and conservation solutions is at the core of our mission. We are driven to instill a strong sense of environmental stewardship in the communities we serve.



Inservation





Environmental Ad





## **EXPEDITIONS OVERVIEW**

We have designed the **EcoExpeditions** as part of our global climate and ocean conservation outreach. The main focus is to provide a hands-on and immersive experience to initiatives around the world that are making a positive impact on climate resilience and ocean conservation. This has the power to change the perspectives of participants and evoke an appreciation for environmental stewardship

Director of the Bay Acogo

Buddo

Dayne

Dr.

Expeditions are led by BayEcotarium's **Dr. Dayne Buddo**, Marine Biologist and Director of the Bay Academy. He is also a PADI Master Instructor with more than 8,000 dives safely completed across over 30 countries. Dayne has published in several peer-reviewed journals on shark conservation, marine invasive species, fisheries management and marine protected areas.

He will be supported by local experts in the destination countries who have many years of experience. This provides the opportunity to have subject matter experts with participants throughout the entire Expedition and be involved with authentic scientific research on coral restoration, shark conservation and marine protected areas. This involves training in all aspects as well as an outreach component, where climate action science interfaces with local communities. In addition, this provides a facilitated exposure to cultural, historical and other nature-based activities.





# O'AHU OVERVIEW

**O'ahu** is the most urban of the Hawaiian Islands, containing two of the most popular cities— Honolulu, the capital, and Waikiki. Home to roughly one million people, O'ahu makes up 1/3 of the state's population. The island is made up of two separate shield volcanoes, with a broad valley between them. Geographically, it is the third largest Hawaiian island, behind the Big Island of Hawai'i and Maui.

O'ahu's nickname is Gathering Place, which is perfect for an island like this. It is a place of historical significance, with the historic China Town in Honolulu, the Pearl Harbor Memorial, and of course, Pearl Harbor itself.



# **O'AHU**

HONOLULU





## **CORAL REEF + RESTORATION**

Hawai'i's leading efforts in data analysis of the reefs-measuring abiotic factors like salinity, temperature, and seawater nutrient composition, as well as monitoring the health of the reef itself with photographs & tissue samples. At Pacific RISA's Coral Restoration Nursery, they are growing indigenous species of corals and out-planting them back onto the reef. In the wild, most of Hawai'i's species are slow growing, but the nursery has been able to skip ahead 20-25 years using a "Fast-Growth Protocol".

Hawai'i is also at the forefront of coral restoration efforts throughout the world. In 2019, Hawai'i suffered its third mass bleaching event in the past five years, which is far from normal. At the Gates Coral Lab, they are currently studying assisted evolution, essentially seeing if they can create "super corals", corals that have been genetically adapted to make them resistant to warming ocean waters and other effects of climate change.

Local experts from University of Hawai'i will also participate in the activities.

When diving, you will observe coral restoration initiatives, identify sharks, conduct coral reef assessments, swim through ancient lava formations, visit shallow wrecks, and see a wide variety of marine life including eagle rays, eels, white-tip reef sharks, vibrant reef fish, sea turtles and more.



## ITINERARY

## APRIL 2, 2021

| TIME    | ACTIVITY  |
|---------|---|
| 2 pm    | Arrival, lei greeting, transfer to Waikiki<br>hotel the Queen Kapiolani                         |
| 3 pm    | Welcome Cocktail and overview of pro-<br>gram with Dr. Dayne Buddo, and Altru-<br>Vistas        |
| 5:30 pm | Interactive, place-based & celestial ori-<br>entation mapping experience with Ho<br>Mai Ka Pono |
| 7:30 pm | Dinner and guest speaker from the PVS<br>(the Polynesian Voyage Society)                        |

#### APRIL 5, 2021

| TIME            | ACTIVITY                             |
|-----------------|--------------------------------------|
| 7 am            | Breakfast and depart hotel           |
| 8 am -<br>12 pm | Underwater Reef Surveys<br>(2 dives) |
| 1pm             | Lunch                                |
| 2 pm            | Dive de-briefing and data review     |
| 6 pm            | Dinner                               |

## APRIL 3, 2021

| and the second se | and the second se |
|---|---|
| TIME  | ACTIVI  |
| 8 am  | Breakfast   |
| 9:30 am   | Guest sp<br>Hawaiiar  |
| 11 am   | Tour of U<br>Hawaiiar   |
| 12 pm   | Lunch   |
| 1:30 pm   | Tour of Ar  |
| 3:30 pm   | Discussic<br>sentative<br>sea level   |
| 5:30 pm   | Dinner wi   |

#### APRIL 6, 2021

| TIME            | ACTIV                 |
|-----------------|-----------------------|
| 7 am            | Breakfas              |
| 8 am -<br>12 pm | Coral Re<br>(2 dives) |
| 1 pm            | Lunch                 |
| 2 pm            | Dive de-              |
| 6 pm            | Dinner                |

#### ITY

#### t and depart hotel

beaker - UH Manoa, School for n Studies

IH Manoa, School for n Studies garden

#### rboretum

on with City of Honolulu repree to discuss climate change, I rise and conservation

vith special guest

#### ITY

st and depart hotel

estoration

briefing and data review

#### APRIL 4, 2021

| TIME     | ACTIVITY   |
|----------|--|
| 8 am     | Breakfast and depart hotel   |
| 9 am     | Sailing experience with Holokino, Aust<br>Kino (Hokule'a)  |
| 12:30 pm | Lunch  |
| 2 pm     | Visit to Moku o Lo`e - Institute for Mari<br>Biology. Visit the coral nursery in Kane<br>he. Complete lab on Coral Restoratio<br>Ocean Acidification |
| 6 pm     | Dinner at resturant  |

## APRIL 7, 2021

| and the second se |                            |
|---|----------------------------|
| TIME  | ACTIVITY                   |
| 7 am  | Breakfast and depart hotel |
| 8 am -<br>12 pm   | Snorkeling with sharks     |
| 1pm   | Lunch                      |
| 2 pm  | Snorkeling with sharks     |
| 6 pm  | Dinner                     |



# ITINERARY | COST

#### **APRIL 8, 2021**

| TIME            | ACTIVITY                             |
|-----------------|--------------------------------------|
| 7 am            | Breakfast and depart hotel           |
| 8 am -<br>12 pm | Underwater Reef Surveys<br>(2 dives) |
| 1 pm            | Lunch                                |
| 2 pm            | Dive de-briefing and data review     |
| 6 pm            | Dinner                               |

#### **APRIL 10, 2021**

| TIME | ACTIVITY                                     |
|------|--|
| 8 am | Breakfast,check out and<br>Airport transfers |

| A | PRI | L 9, | 20 |
|---|-----|------|----|
|   |     | ,    |    |

| TIME     | ACTIV                   |
|----------|-------------------------|
| 8 am     | Breakfas                |
| 9 am     | Observa<br>culture s    |
| 12:30 am | Lunch                   |
| 2 pm     | Hike to Ke<br>(Albatros |
| 5:30 pm  | Arrival at              |
| 7:30 pm  | Wrap-up                 |

#### **DOES NOT INCLUDE :**

- Expenses of a purely personal nature.
- Passport or visa fees
- Room service charges.
- Gratuities to hotel staff, and to your guide and driver
- Travel Insurance (We advise that each participant arrange for their own travel insurance especially for CFAR - Cancel for Any Reason).

- Extra beverages or snacks, and extra meals not on the itinerary
- Single rooms available for \$500 supplemental fee
- -Dive gear rental

#### 21

#### ΤY

- t and depart hotel
- tions of Lo'i kalo ancient agriystems
- a'ena Point Field assignments ss banding and nest checking)
- hotel
- o and Farewell Dinner

- Roundtrip airfare to Hawai'i (HNL) and departure taxes

#### **Cost: \$7,000 USD**

#### Includes:

- All confirmed activities in the program
- Lodging as per the program
- On-ground transportation by air-conditioned motor coach
- Domestic flight

- Airport transfers or pick up and drop off on arrival and departure days only (folks that arrive early will take a taxi). One group transfer only.

- One full-time in-country leader in Hawaii
- Expedition Lead Scientist (from BayEcotarium) and local scientific experts working with the group for the program
- Preparatory reading and orientation materials
- Admission to all programed activities
- Funds for group donations and honoraria to NGOs, projects and speakers
- Accommodation and meals for guide and driver in the provinces
- Tips for group meals
- All meals as per the itinerary

- Luggage transfer (at owner's risk throughout). Baggage allowance depends on the airline.





# GOLFO DE PAPAGAYO

The Golfo de Papagayo is a large lagoon located off the northwest coast of Costa Rica. Made up of dozens of virgin beaches along the Pacific Ocean, the Golfo de Papagayo is most famous for community based marine conservation.

There is plenty to do, from sailing and surfing to sport fishing. But what perhaps what brings most people to this place is the world class diving opportunities. Two of the best places to dive are the main islands; Catalina and the Bat Islands. These have crystal clear water and great visibility even during the rainy season from May to November. Some of the marine animals present here are white tip reef sharks, sting rays, eagle rays, manta rays, eels, octopuses, and a wide variety of reef fish.

Three national parks, Santa Rosa, Rincon de la Vieja, and Marino Las Baulas are also within driving distance. The lush rainforest is close by with waterfalls, hot springs, and nine volcanic sites to explore.

DOS MAS



#### **GOLFO DE PAPAGAYO**



## **PROGRAM ACTIVITIES**

#### Hands-on Training

-Shark and Ray identification -Tagging techniques -Ecological monitoring -Population Tracking -Community/School Outreach

#### **Underwater Surveys**

identification ecosystem

Total immersion in shark research and conservation along the Eastern Tropical Pacific coastline.

Local biologists from NGO MISIÓN TIBURÓN would lead some activities including:



-Minimum 6 dives to conduct visual shark surveys -General fish & coral -Use of underwater photography to assess the

#### **Field Tagging**

-Safe capture, measurement, tagging and relsease of sharks -Analysis of data from tags to monitor populations



# ITINERARY

## JUNE 13, 2021

| TIME    | ACTIVITY   |  |
|---------|--|--|
| ALL DAY | Participants arrive into Costa Rica,<br>and airport transfers to hotel -<br>Hotel Presidente   |  |
| 5 pm    | Welcome Cocktail and overview of pro-<br>gram with BayEcotarium and AltruVis-<br>tas; Costa Rica Economic+Environmen-<br>tal issues presentation |  |
| 6:30 pm | Welcome dinner with guests from Na-<br>tional System of Conservation Areas<br>and Foundation of Friends of<br>Cocos Island                       |  |

## JUNE 14, 2021

| TIME     | ACTIVI  |
|----------|---|
| 8 am     | Breakfast   |
| 9:30 am  | City Tour<br>Culture S<br>the Cour<br>tain and<br>the Unive<br>Lunch en |
| 12:30 pm | Transfer t<br>del Coco  |
| 3 pm     | Check int   |
| 4 pm     | Presenta<br>overview<br>environn<br>shark cou<br>mation                 |

#### JUNE 16, 2021

| TIME            | ACTIVITY                         | TI      |
|-----------------|----------------------------------|---------|
| 7 am            | Breakfast                        | 7       |
| 8 am -<br>12 pm | Underwater visual surveys        | 8<br>12 |
| 1 pm            | Lunch                            |         |
| 2 - 3 pm        | Dive de-briefing and data review | 2-      |
| 3-5 pm          | Dive de-briefing and data review |         |

#### JUNE 17, 2021

| TIME            | ACTIVI    |
|-----------------|-----------|
| 7 am            | Breakfast |
| 8 am -<br>12 pm | Underwa   |
| 1 pm            | Lunch     |
| 2 - 3 pm        | Dive de-k |

#### ITY

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r including the Democracy and Squares, the National Museum, rts, Los Yoses, Hispanidad Founthe Rodrigo Facio Campus in ersity of Costa Rica; n route

to Guanacaste-in Playas b: Lunch en Route

to Hotel La Puerta del Sol Hotel

ation by Misión Tiburón on v shark and ray identification, mental and biological data, ounts and individual size's esti-

# JUNE 15, 2021TIMEACTIVITY7 amBreakfast8 am-<br/>12 pmUnderwater visual surveys

Lunch

1pm

2-3 pm

| JUNE            | 18, 2021   |
|-----------------|--|
| TIME            | ACTIVITY   |
| 7 am            | Breakfast  |
| 8 am -<br>12 pm | Tagging Expeditions in Golfo Papago<br>Lunch on vessel |

Dive de-briefing and data review

ITY

t

ater visual surveys

briefing and data review

#### JUNE 19, 2021

| TIME            | ACTIVITY                            |
|-----------------|-------------------------------------|
| 7 am            | Breakfast                           |
| 8 am -<br>12 pm | Tagging Expeditions in Golfo Papaga |
| 12 - 1 pm       | Lunch                               |
| 1-3 pm          | Shark outreach activity with commu  |
| 6 pm            | Dinner and wrap-up of shark expedit |



# ITINERARY | COST

#### JUNE 20, 2021

| TIME  | ACTIVITY   |
|-------|--|
| 8 am  | Breakfast  |
| 9 am  | Check out of Hotel and depart for Arenal<br>Volcano  |
| 12 pm | Arrival and lunch at Fortuna Waterfalls  |
| 3 pm  | Explore the area with a guided tour by<br>local expert showcasing unique micro-<br>climates and native flora and fauna |
| 5 pm  | Relaxation in geothermal hotsprings  |
| 6 pm  | Check-in/Dinner  |

#### **JUNE 22, 2021**

| TIME | ACTIVITY                                      |
|------|---|
| 8 am | Breakfast, Check-out and<br>Airport Transfers |

| JUNE 21, 20 |
|-------------|
|-------------|

| TIME     | ACTIV                          |
|----------|--------------------------------|
| 8 am     | Breakfas                       |
| 9 am     | Hiking, h                      |
| 12:30 am | Lunch                          |
| 1:30 pm  | Depart a<br>Rescate<br>san Coo |
| 6 pm     | Check-ir                       |
| 7:30 pm  | Farewell                       |

#### **DOES NOT INCLUDE:**

- Expenses of a purely personal nature.
- Passport or visa fees
- Room service charges.
- CFAR Cancel for Any Reason).
- itinerary
- Dive gear rental

#### 21

#### ΤY

- t and depart hotel
- orseback riding and exploration

ind travel to San Jose, stop at Wildlife Rescue Center and Arti-

Dinner and Celebration

- Roundtrip airfare to Costa Rica and departure taxes

- Gratuities to hotel staff, and to your guide and driver - Travel Insurance (We advise that each participant arrange for their own travel insurance especially for

- Extra beverages or snacks, and extra meals not on the

- Single rooms available for \$500 supplemental fee

#### Cost: \$7,500 USD

#### Includes:

- All confirmed activities in the program
- Lodging as per the program
- On-ground transportation by air-conditioned motor coach
- Domestic flight

- Airport transfers or pick up and drop off on arrival and departure days only (folks that arrive early will take a taxi). One group transfer only.

- One full-time in-country leader in Costa Rica - Expedition Lead Scientist (from BayEcotarium) and local scientific experts working with the group for the program

- Preparatory reading and orientation materials

- Admission to all programed activities
- Funds for group donations and honoraria to NGOs, projects and speakers
- Accommodation and meals for guide and driver in the provinces
- Tips for group meals
- All meals as per the itinerary

- Luggage transfer (at owner's risk throughout). Baggage allowance depends on the airline.



## **GOLFO DULCE**

Golfo Dulce is on the Pacific Coast of Costa Rica. Considered a tropical fjord, it is an extremely rare biome that is home to 17 reserves which amount to 3% of Costa Rica's land area. The northeast part of the gulf is the rainforest. This tropical lowland wet rain forest is one of the most threatened in the world and is therefore heavily protected by the government of Costa Rica. The area receives 4-5m of rainfall per year and contains 50% of the flora and fauna of Costa Rica.

In May 2018, Costa Rica created a sanctuary for the scalloped hammerhead shark. These 4,000 hectares were the first shark sanctuary created in Costa Rica. Scientists with the Misión Tiburón have tagged sharks and recorded them migrating from pelagic waters in the Cocos Islands back into the sanctuary to raise their young. This sanctuary protects them from threats like bottom long-lines, bycatch, and finning practices.

Golfo Dulce was designated a Hope Spot in 2019 by Sylvia Earle's organization Mission Blue because it is home to scalloped hammerheads, humpback whales, and four species of dolphin. It is considered one of the top places to dive in the world due to its incredible biodiversity.





#### **GOLFO DULCE**



# PROGRAM ACTIVITIES

#### Hands-on Training

- -Shark and Ray identification
- -Tagging techniques
- -Ecological monitoring
- -Population Tracking
- -Community/School Outreach

#### **Underwater Surveys**

-Scuba dives to conduct visual shark surveys -General fish & coral identification -Use of underwater photography to assess the ecosystem

**Total immersion** in shark research and conservation along the Eastern Tropical Pacific coastline.

Local biologists from NGO MISIÓN TIBURÓN would lead some activities including:

#### **Field Tagging**

-Safe capture, measurement, tagging and relsease of sharks -Analysis of data from tags to monitor populations



# ITINERARY

## JULY 8, 2021

| STrees  |  |   |
|---------|--|---|
| TIME    | ACTIVITY   | * |
| ALL DAY | Arrive to Costa Rica, airport<br>transfers to Hotel Presidente   | 9 |
| 5 pm    | Welcome Cocktail and overview of pro-<br>gram with BayEcotarium and AltruVis-<br>tas; Costa Rica Economic+Environmen-<br>tal issues presentation |   |
| 6:30 pm | Welcome dinner with guests from Na-<br>tional System of Conservation Areas<br>and Foundation of Friends of Cocos<br>Island                       | 5 |

#### JULY 9, 2021

|   | TIME    | ACTIVI   |
|---|---------|--|
|   | 8 am    | Breakfast  |
|   | 9:30 am | Overview<br>Shark Cor  |
|   | 11 am   | City Tour i<br>Culture Sc<br>the Courts<br>tain and t<br>the Univer<br>route |
|   | 2 pm    | Check in f<br>parture  |
| 1 | 5:30 pm | Check in a   |

#### JULY 11, 2021

| TIME            | ACTIVITY                          | TIME         |
|-----------------|-----------------------------------|--------------|
| 7 am            | Breakfast                         | 7 ar         |
| 8 am -<br>12 pm | Underwater Visual Surveys         | 8 am<br>3 pr |
| 1pm             | Lunch                             | 6 pr         |
| 2 - 3 pm        | Dive de-briefing and data review  |              |
| 3-5 pm          | Shark tagging techniques workshop |              |

#### JULY 12, 2021

| TIME           | ACTIVI              |
|----------------|---------------------|
| 7 am           | Breakfas            |
| 8 am -<br>3 pm | Tagging<br>on vesse |
| 6 pm           | Dinner              |

of Expedition, Intro into nservation in Costa Rica

including the Democracy and quares, the National Museum, s, Los Yoses, Hispanidad Founthe Rodrigo Facio Campus in ersity of Costa Rica; Lunch en

for flight to Golfito: 3:40pm de-

and dinner

| JULY 10, 2021 |  |  |
|---------------|--|--|
| TIME          | ACTIVITY   |  |
| 8 am          | Breakfast  |  |
| 10 am         | Training Workshop by Misión Tiburón or<br>shark and ray identification, underwate<br>monitoring, environmental and biologi-<br>cal data, shark counts and individual<br>size estimation. |  |
| 1pm           | Lunch  |  |
| 2 pm          | Community Excursion TBD  |  |
| 6 pm          | Dinner   |  |

#### TΥ

Expedition in Golfo Dulce; Lunch

#### JULY 13, 2021

| TIME           | ACTIVITY   |
|----------------|--|
| 7 am           | Breakfast  |
| 8 am -<br>3 pm | Tagging Expedition in Golfo Dulce; Lu<br>on vessel |
| 6 pm           | Dinner   |



# ITINERARY | COST

#### JULY 14, 2021

| TIME            | ACTIVITY                         |
|-----------------|----------------------------------|
| 7 am            | Breakfast                        |
| 8 am -<br>12 pm | Underwater Visual Surveys        |
| 1pm             | Lunch                            |
| 2-3 pm          | Dive de-briefing and data review |

#### JULY 16, 2021

| TIME  | ACTIVITY   |
|-------|--|
| 8 am  | Breakfast  |
| 9 am  | Check-out, depart to Tapantí   |
| 12 pm | Lunch followed by exploration/hiking of<br>the National Park to learn about tropical<br>biodiversity |
| 6 pm  | Check-in and dinner  |

#### JULY 18, 2021

| TIME | ACTIVITY                                   |  |
|------|--|--|
| 8 am | Breakfast, Check-out and Airport Transfers |  |

## JULY 15, 2021

| TIME      | ACTIVI                            |
|-----------|-----------------------------------|
| 7 am      | Breakfast                         |
| 9 - 12 pm | Exploratic<br>ecosyster           |
| 12 pm     | Lunch                             |
| 1- 3 pm   | Shark Out<br>school/cc<br>Tiburón |
| 6 pm      | Dinner an<br>Expeditior           |

## JULY 17, 2021

| ACTIVI     |
|------------|
| Bird watc  |
| Breakfast  |
| Hiking and |
| Lunch      |
| Check-ou   |
| Meet with  |
| Check-in   |
| Farewell [ |
|            |

#### TΥ

on of various coastal marine ms

treach Activity with ommunity group with Misión

nd Wrap-up of Shark n (with Misión Tiburón)

#### ΤY

hing hike

t

d Exploration of National Park

ut, travel to San Jose

n Costa Rica Wildlife Foundation

Dinner and Celebration

## Cost: \$7,500 USD

#### Includes:

- All confirmed activities in the program
- Lodging as per the program
- On-ground transportation by air-conditioned motor coach
- Domestic flight
- Airport transfers or pick up and drop off on arrival and departure days only (folks that arrive early will take a taxi). One group transfer only.
- One full-time in-country leader in Costa Rica
  Expedition Lead Scientist (from BayEcotarium) and local scientific experts working with the group for the program
- Preparatory reading and orientation materials
- Admission to all programed activities
- Funds for group donations and honoraria to NGOs, projects and speakers
- Accommodation and meals for guide and driver in the provinces
- Tips for group meals
- All meals as per the itinerary
- Luggage transfer (at owner's risk throughout). Baggage allowance depends on the airline.

#### **DOES NOT INCLUDE**

- Roundtrip airfare to Costa Rica and departure taxes
- Expenses of a purely personal nature.
- Passport or visa fees
- Room service charges.
- Gratuities to hotel staff, and to your guide and driver
- Travel Insurance (We advise that each participant ar-
- range for their own travel insurance especially for CFAR Cancel for Any Reason).
- Extra beverages or snacks, and extra meals not on the itinerary
- Single rooms available for \$500 supplemental fee
  Dive gear rental



# **REQUIREMENTS NEXT STEPS**

#### **PARTICIPANT REQUIREMENTS**

#### Scuba Diving

1. Participants should have at least PADI Open Water Diver certification or equivalent (Advanced perferred) with at least 20 logged dives; last dive should be within the previous 3 months prior to the Expedition.

2. Additional Training and dive experience can be provided by Bay Academy at an additional cost, if required

#### Health and Medical Insurance

1. Have insurance to cover diving emergencies, such as Divers Alert Network (DAN) Insurance, or similar

2. Complete a Diving Medical to confirm Fitness to Dive

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#### TAKE THE NEXT STEP AND MAKE A HANDS-ON **DIFFERENCE IN MARINE SCIENCE & OCEAN CONSERVATION!**



For registration and more information contact:

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Expedition Leader Director of Bay Academy

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