



BayEcotarium is a 501(c)(3) non-profit organization with a mission to enable climate resilience and ocean conservation globally, while inspiring actionable change locally. 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.

Our institution is the largest watershed conservation organization in northern California and focuses on enabling climate action.



Aquarium of the Bay



Bay Academy



Bay Model Alliance



Sea Lion Center



Studio Aqua



The Bay Institute

EXPLORE ENGAGE EXPERIENCE

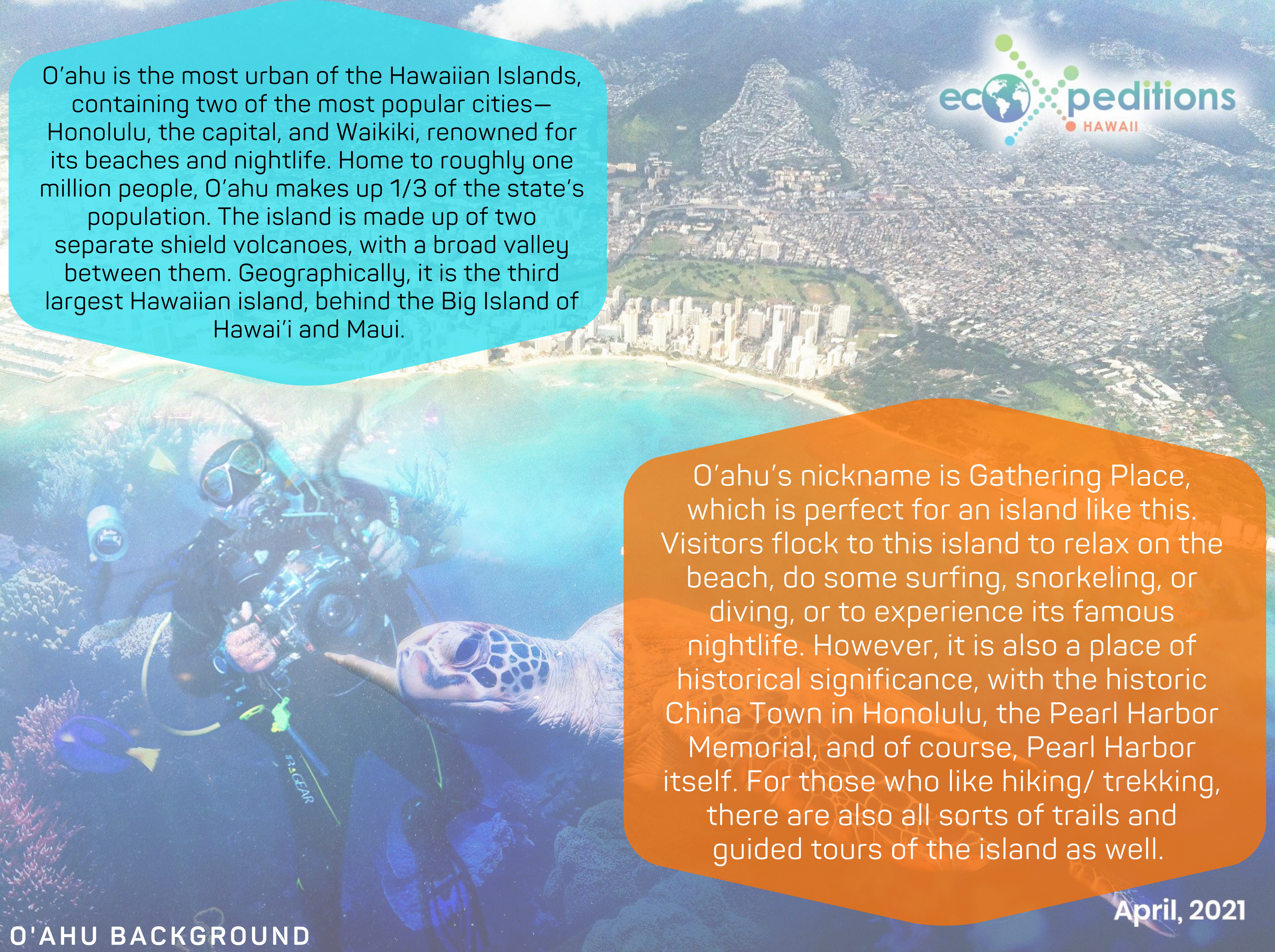


We have designed the Ecotarium Expeditions As part of our global climate and ocean conservation outreach. The main focus is to provide a hands-on and immersive experience to initiatives around the world that are making a positive impact on climate resilience and ocean conservation. This has the power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


Expeditions are led by BayEcotarium's Dr. Dayne Buddo, Marine Biologist and Director of the Bay Academy. He will be supported by local experts in Hawai'i 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.



EXPEDITIONS OVERVIEW



O'ahu is the most urban of the Hawaiian Islands, containing two of the most popular cities—Honolulu, the capital, and Waikiki, renowned for its beaches and nightlife. 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. Visitors flock to this island to relax on the beach, do some surfing, snorkeling, or diving, or to experience its famous nightlife. However, it is also a place of historical significance, with the historic China Town in Honolulu, the Pearl Harbor Memorial, and of course, Pearl Harbor itself. For those who like hiking/ trekking, there are also all sorts of trails and guided tours of the island as well.

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. They are also 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".

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.

APRIL 2

TIME

ACTIVITY

2PM

Arrival, lei greeting, transfer to Waikiki hotel the Queen Kapiolani

3PM

Welcome Cocktail and overview of program with Dr. Dayne Buddo, and AltruVistas

5:30PM

Interactive, place-based & celestial orientation mapping experience with Ho Mai Ka Pono

7:30PM

Dinner and guest speaker from the PVS (the Polynesian Voyage Society)

APRIL 3

TIME

ACTIVITY

8AM

Breakfast and depart hotel

9:30AM

Guest speaker - UH Manoa, School for Hawaiian Studies

11AM

Tour of UH Manoa, School for Hawaiian Studies garden

12PM

Lunch

1:30PM

Tour of Arboretum

3:30PM

Discussion with City of Honolulu representative to discuss climate change, sea level rise and conservation

5:30PM

Dinner with special guest

APRIL 4

TIME

ACTIVITY

8AM

Breakfast and depart hotel

9AM

Sailing experience with Holokino, Austin Kino (Hokule'a)

12:30PM

Lunch

2PM

Visit to Moku o Lo'e - Institute for Marine Biology. Visit the coral nursery in Kaneohe. Complete lab on Coral Restoration/Ocean Acidification

6PM

Dinner at restaurant

APRIL 5

TIME

ACTIVITY

7AM

Breakfast and depart hotel

8AM-12PM

Underwater Reef Surveys 2 dives

1PM

Lunch

2PM

Dive de-briefing and data review

6PM

Dinner

APRIL 6

TIME

ACTIVITY

7AM

Breakfast and depart hotel

8AM-12PM

Coral Restoration (2 dives)

1PM

Lunch

2PM

Dive de-briefing and data review

6PM

Dinner

APRIL 7

TIME

ACTIVITY

7AM

Breakfast and depart hotel

8AM-12PM

Snorkeling with sharks

1PM

Lunch

2PM

Snorkeling with sharks

6PM

Dinner

APRIL 8

TIME

ACTIVITY

7AM	Breakfast and departure
8AM-12PM	Underwater Reef Surveys 2 dives
1PM	Lunch
2PM	Dive de-briefing and data review
6PM	Dinner

APRIL 9

TIME

ACTIVITY

8AM	Breakfast and departure
9AM	Observations of Lo'i kalo - ancient agriculture systems
12:30PM	Lunch
2PM	Hike to Ka'ena Point Field assignments (Albatross banding and nest checking)
5:30PM	Arrival at hotel
7:30PM	Wrap-up and Farewell Dinner

APRIL 10

TIME

ACTIVITY

8AM	Breakfast, check out and Airport transfers
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DOES NOT INCLUDE (Each participant is responsible for these charges):

- Roundtrip airfare to Hawaii (HNL) and departure taxes
- Scuba gear rental
- 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 will be available and there will be a supplemental fee for the 9 nights or \$500.

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 BayEcoarium) and local scientific experts working with the group for the program
- Preparatory reading and orientation materials
- Admission to all programmed 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.

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 not only its unforgettable sunsets, but kind and welcoming people.



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 creatures you might meet underwater are white tip reef sharks, sting rays, eagle rays, manta rays, eels, octopuses, and a huge variety of marine fish. Dozens of dive shops offer courses and trips for every level—from beginners to experts.

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.



GOLFO DE PAPAGAYO BACKGROUND

Program Activities

Total immersion in shark research and conservation along the Eastern Tropical Pacific coastline. The activities include:

Hands-on Training

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

Underwater Surveys

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

Field Tagging

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

JUNE 13

TIME

ACTIVITY

All Day

Participants arrive into Costa Rica, and airport transfers to hotel - Hotel Presidente

5PM

Welcome Cocktail and overview of program with BayEcoarium and AltruVistas; Costa Rica Economic+Environmental issues presentation

6:30PM

Welcome dinner with guests from National System of Conservation Areas and Foundation of Friends of Cocos Island

JUNE 14

TIME

ACTIVITY

8AM

Breakfast

9:30AM

City Tour including the Democracy and Culture Squares, the National Museum, the Courts, Los Yoses, Hispanidad Fountain and the Rodrigo Facio Campus in the University of Costa Rica; Lunch en route

12PM

Transfer to Guanacaste-in Playas del Coco: Lunch en Route

3PM

Check into Hotel La Puerta del Sol Hotel

4PM

Presentation by Misión Tiburón on overview shark and ray identification, environmental and biological data, shark counts and individual size's estimation



JUNE 15

TIME

ACTIVITY

7AM

Breakfast

8AM-12PM

Underwater visual surveys

1PM

Lunch

2-3PM

Dive de-briefing and data review

JUNE 16

TIME

ACTIVITY

7AM

Breakfast

8AM-12PM

Underwater visual surveys

1PM

Lunch

2-3PM

Dive de-briefing and data review

3-5PM

Shark-tagging techniques workshop

JUNE 17

TIME

ACTIVITY

7AM

Breakfast

8AM-12PM

Underwater visual surveys

1PM

Lunch

2-3PM

Dive de-briefing and data review

JUNE 18

TIME

ACTIVITY

7AM

Breakfast

8AM-12PM

Tagging Expeditions in Golfo Papagayo; Lunch on vessel

JUNE 19

TIME

ACTIVITY

7AM

Breakfast

8AM-12PM

Tagging Expeditions in Golfo Papagayo

12-1PM

Lunch

1-3PM

Shark outreach activity with community

6PM

Dinner and wrap-up of shark expedition

JUNE 20

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



JULY 22

<u>TIME</u>	<u>ACTIVITY</u>
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8AM	Breakfast, Check-out and Airport Transfers
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JUNE 21

<u>TIME</u>	<u>ACTIVITY</u>
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8AM	Breakfast
9AM	Hiking, horseback riding and exploration
12:30PM	Lunch
1:30PM	Depart and travel to San Jose, stop at Rescate Wildlife Rescue Center and Artisan Coop
6PM	Check-in
7:30PM	Farewell 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 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.

DOES NOT INCLUDE (Each participant is responsible for these charges):

- Roundtrip airfare to Hawaii (HNL) and departure taxes
- Scuba gear rental
- 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 will be available and there will be a supplemental fee for the 9 nights or \$500.

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. This gulf was announced a Mission Blue Hope Spot in 2019 through Sylvia Earle's Mission Blue Organization 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 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.

GOLFO DULCE BACKGROUND

Program Activities

Total immersion in shark research and conservation along the Eastern Tropical Pacific coastline. The activities include:

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

Field Tagging

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



JULY 8

TIME

ACTIVITY

All Day

Arrive to Costa Rica, airport transfers to Hotel Presidente

5PM

Welcome Cocktail and overview of program with BayEcotarium and AltruVistas; Costa Rica Economic+Environmental issues presentation

6:30PM

Welcome dinner with guests from National System of Conservation Areas and Foundation of Friends of Cocos Island

JULY 10

TIME

ACTIVITY

8AM

Breakfast

10AM

Training Workshop by Misión Tiburón on shark and ray identification, underwater monitoring, environmental and biological data, shark counts and individual size estimation.

1PM

Lunch

2PM

Community Excursion TBD

6PM

Dinner

JULY 9

TIME

ACTIVITY

8AM

Breakfast

9:30AM

Overview of Expedition, Intro into Shark Conservation in Costa Rica

11AM

City Tour including the Democracy and Culture Squares, the National Museum, the Courts, Los Yoses, Hispanidad Fountain and the Rodrigo Facio Campus in the University of Costa Rica; Lunch en route

2PM

Check in for flight to Golfito: 3:40pm departure

5:30PM

Check in and dinner

JULY 11

TIME

ACTIVITY

7AM

Breakfast

8AM-12PM

Underwater Visual Surveys

1PM

Lunch

2-3PM

Dive de-briefing and data review

3-5PM

Shark tagging techniques workshop

JULY 12

TIME

ACTIVITY

7AM

Breakfast

8AM-3PM

Tagging Expedition in Golfo Dulce; Lunch on vessel

6PM

Dinner

JULY 13

TIME

ACTIVITY

7AM

Breakfast

8AM-3PM

Tagging Expedition in Golfo Dulce; Lunch on vessel

6PM

Dinner

JULY 14

<u>TIME</u>	<u>ACTIVITY</u>
7AM	Breakfast
8AM-12PM	Underwater Visual Surveys
1PM	Lunch
2-3PM	Dive de-briefing and data review

JULY 15

<u>TIME</u>	<u>ACTIVITY</u>
7AM	Breakfast
9AM-12PM	Exploration of various coastal marine ecosystems
12PM	Lunch
1-3PM	Shark Outreach Activity with school/community group with Misión Tiburón
6PM	Dinner and Wrap-up of Shark Expedition (with Misión Tiburón)

JULY 16

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

JULY 17

<u>TIME</u>	<u>ACTIVITY</u>
6AM	Bird watching hike
8AM	Breakfast
9AM	Hiking and Exploration of National Park
12:30PM	Lunch
2PM	Check-out, travel to San Jose
3:30PM	Meet with Costa Rica Wildlife Foundation
6PM	Check-in
7:30PM	Farewell Dinner and Celebration

JULY 18

<u>TIME</u>	<u>ACTIVITY</u>
8AM	Breakfast, check-out and airport transfers

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 Hawaii
- Expedition Lead Scientist (from BayEcoarium) 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 (Each participant is responsible for these charges):

- Roundtrip airfare to Hawaii (HNL) and departure taxes
- Scuba gear rental
- 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 will be available and there will be a supplemental fee for the 9 nights or \$500.

PARTICIPANT REQUIREMENTS

Scuba Diving

1. Participants should have at least PADI Advanced Open Water Diver certification (or equivalent) 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

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

Email sales@bay.org to register today or for more information