



EXPLORE ENGAGE EXPERIENCE

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. 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.

George Jacob, President & CEO, BayEcotarium

"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!"



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



Dr. Dayne Buddo, Director of the Bay Academy



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

WAIKIKI

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 hotel the Queen Kapiolani
3 pm	Welcome Cocktail and overview of program with Dr. Dayne Buddo, and Altru-Vistas
5:30 pm	Interactive, place-based & celestial orientation mapping experience with Ho Mai Ka Pono
7:30 pm	Dinner and guest speaker from the PVS (the Polynesian Voyage Society)

APRIL 5, 2021

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

APRIL 3, 2021

TIME	ACTIVITY
8 am	Breakfast and depart hotel
9:30 am	Guest speaker – UH Manoa, School for Hawaiian Studies
11 am	Tour of UH Manoa, School for Hawaiian Studies garden
12 pm	Lunch
1:30 pm	Tour of Arboretum
3:30 pm	Discussion with City of Honolulu representative to discuss climate change, sea level rise and conservation
5:30 pm	Dinner with special guest

APRIL 6, 2021

TIME	ACTIVITY
7 am	Breakfast and depart hotel
8 am – 12 pm	Coral Restoration (2 dives)
1 pm	Lunch
2 pm	Dive de-briefing and data review
6 pm	Dinner

APRIL 4, 2021

TIME	ACTIVITY
8 am	Breakfast and depart hotel
9 am	Sailing experience with Holokino, Austin Kino (Hokule’a)
12:30 pm	Lunch
2 pm	Visit to Moku o Lo’e – Institute for Marine Biology. Visit the coral nursery in Kaneohe. Complete lab on Coral Restoration/-Ocean Acidification
6 pm	Dinner at resturant

APRIL 7, 2021

TIME	ACTIVITY
7 am	Breakfast and depart hotel
8 am – 12 pm	Snorkeling with sharks
1 pm	Lunch
2 pm	Snorkeling with sharks
6 pm	Dinner

ITINERARY | COST

APRIL 8, 2021

TIME	ACTIVITY
7 am	Breakfast and depart hotel
8 am – 12 pm	Underwater Reef Surveys (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 Airport transfers

APRIL 9, 2021

TIME	ACTIVITY
8 am	Breakfast and depart hotel
9 am	Observations of Lo'i kalo – ancient agri-culture systems
12:30 am	Lunch
2 pm	Hike to Ka'ena Point Field assignments (Albatross banding and nest checking)
5:30 pm	Arrival at hotel
7:30 pm	Wrap-up and Farewell Dinner

DOES NOT INCLUDE :

- Roundtrip airfare to Hawai'i (HNL) 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 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

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.

COSTA RICA

June/July 2021

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.



GOLFO DE PAPAGAYO



PROGRAM ACTIVITIES

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

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

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



ITINERARY

JUNE 13, 2021	
TIME	ACTIVITY
ALL DAY	Participants arrive into Costa Rica, and airport transfers to hotel – Hotel Presidente
5 pm	Welcome Cocktail and overview of program with BayEcotarium and AltruVistas; Costa Rica Economic+Environmental issues presentation
6:30 pm	Welcome dinner with guests from National System of Conservation Areas and Foundation of Friends of Cocos Island

JUNE 16, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am – 12 pm	Underwater visual surveys
1 pm	Lunch
2 – 3 pm	Dive de-briefing and data review
3 – 5 pm	Dive de-briefing and data review

JUNE 14, 2021	
TIME	ACTIVITY
8 am	Breakfast
9:30 am	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
12:30 pm	Transfer to Guanacaste–in Playas del Coco: Lunch en Route
3 pm	Check into Hotel La Puerta del Sol Hotel
4 pm	Presentation by Misión Tiburón on overview shark and ray identification, environmental and biological data, shark counts and individual size’s estimation

JUNE 17, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am – 12 pm	Underwater visual surveys
1 pm	Lunch
2 – 3 pm	Dive de-briefing and data review

JUNE 15, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am – 12 pm	Underwater visual surveys
1 pm	Lunch
2 – 3 pm	Dive de-briefing and data review

JUNE 18, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am – 12 pm	Tagging Expeditions in Golfo Papagayo; Lunch on vessel

JUNE 19, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am – 12 pm	Tagging Expeditions in Golfo Papagayo
12 – 1 pm	Lunch
1 – 3 pm	Shark outreach activity with community
6 pm	Dinner and wrap-up of shark expedition

ITINERARY | COST

JUNE 20, 2021

TIME	ACTIVITY
8 am	Breakfast
9 am	Check out of Hotel and depart for Arenal Volcano
12 pm	Arrival and lunch at Fortuna Waterfalls
3 pm	Explore the area with a guided tour by local expert showcasing unique micro-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 Airport Transfers

JUNE 21, 2021

TIME	ACTIVITY
8 am	Breakfast and depart hotel
9 am	Hiking, horseback riding and exploration
12:30 am	Lunch
1:30 pm	Depart and travel to San Jose, stop at Rescate Wildlife Rescue Center and Arti-san Coop
6 pm	Check-in
7:30 pm	Farewell Dinner and Celebration

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 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

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). Bag-gage 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

The background of the entire slide is a vibrant underwater scene. A woman with blonde hair, wearing a blue wetsuit and a snorkel mask, is smiling and swimming towards the camera. She is surrounded by several sharks of various sizes. The water is clear and blue, with sunlight filtering through from above, creating a bright and lively atmosphere.

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

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

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

ITINERARY

JULY 8, 2021	
TIME	ACTIVITY
ALL DAY	Arrive to Costa Rica, airport transfers to Hotel Presidente
5 pm	Welcome Cocktail and overview of program with BayEcotarium and AltruVistas; Costa Rica Economic+Environmental issues presentation
6:30 pm	Welcome dinner with guests from National System of Conservation Areas and Foundation of Friends of Cocos Island

JULY 11, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am - 12 pm	Underwater Visual Surveys
1 pm	Lunch
2 - 3 pm	Dive de-briefing and data review
3 - 5 pm	Shark tagging techniques workshop

JULY 9, 2021	
TIME	ACTIVITY
8 am	Breakfast
9:30 am	Overview of Expedition, Intro into Shark Conservation in Costa Rica
11 am	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
2 pm	Check in for flight to Golfito: 3:40pm departure
5:30 pm	Check in and dinner

JULY 12, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am - 3 pm	Tagging Expedition in Golfo Dulce; Lunch on vessel
6 pm	Dinner

JULY 10, 2021	
TIME	ACTIVITY
8 am	Breakfast
10 am	Training Workshop by Misión Tiburón on shark and ray identification, underwater monitoring, environmental and biological data, shark counts and individual size estimation.
1 pm	Lunch
2 pm	Community Excursion TBD
6 pm	Dinner

JULY 13, 2021	
TIME	ACTIVITY
7 am	Breakfast
8 am - 3 pm	Tagging Expedition in Golfo Dulce; Lunch on vessel
6 pm	Dinner

ITINERARY | COST

JULY 14, 2021

TIME	ACTIVITY
7 am	Breakfast
8 am - 12 pm	Underwater Visual Surveys
1 pm	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 the National Park to learn about tropical biodiversity
6 pm	Check-in and dinner

JULY 18, 2021

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

JULY 15, 2021

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

JULY 17, 2021

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

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

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- Room service charges.
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- Travel Insurance (We advise that each participant arrange for their own travel insurance especially for CFAR - Cancel for Any Reason).
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- 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 preferred) 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!**

For registration and more information contact:

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