Costa Rica Big Cats Conservation

Journey into the Costa Rican jungle and keep a keen eye out for the various big cats which prowl their leafy domain.

On this conservation research programme you will have the opportunity to gain valuable field-based experience in the pristine coastal rainforests of Costa Rica. With a focus on big cat species found on the Osa Peninsula, you'll carry out field sign surveys that are being used to find out how species are dispersing from Corcovado National Park into the surrounding reserve area and how climate change is affecting these species and their threatened habitats.

At first glance, Corcovado National Park on Costa Rica's Osa Peninsula is a mere pin prick on the world map, covering a measly 0.03% of the world's landmass. This makes it even more astonishing that an incredible 4% of the world's species call the park home and that it is, as described by National Geographic, 'one of the most biologically intense places on the planet'.

Located in Central America, Costa Rica is nestled between the Caribbean Sea and the Pacific Ocean and is home to over 500,000 different species of animals, giving it the highest species density of any country in the world. Over 50% of species found in the country call the Osa Peninsula home, meaning this project is located in the most biodiverse region of one of the most biodiverse countries on the globe – truly a hotspot within a hotspot!

The Osa Peninsula at a glance:

- The largest remaining tract of lowland rainforest in Pacific Mesoamerica
- 2-3% of flora are found nowhere else in the world
- At least 323 endemic species of plants and vertebrates
- The largest population of scarlet macaws in Central America call the peninsula home
- More than 10,000 types of insects
- 700 species of trees, which is more than all of Europe and North America combined
- 463 species of birds
- 140 species of mammal, including 25 species of dolphins and whales.

Sadly, the region and its inhabitants are being gravely challenged by habitat fragmentation and destruction, pollution, poaching and climate change more broadly. Over the past several years, Frontier has been working on the peninsula to carry out groundbreaking survey work and vital data collection in an attempt to combat the effects of these challenges and to preserve this environmentally significant area.

Frontier's research camp itself is based amongst dense tropical forest on the edge of Corcovado National Park, close to the shores of the Pacific Ocean. Volunteers live and work with other enthusiastic and energetic conservationists, working together to carry out surveys and data collection activities.

PROJECT HIGHLIGHTS

- Gain practical research and conservation field experience
- Assist with the conservation of vital habitats and their resident species
- Learn about big cat ecology and biology and the various threats that these species are under

- Train in field methods related to big cat field sign surveys
- Work within one of the world’s most biodiverse forest ecosystems
- Work to improve the conservation status of some of the world's most endangered species
- Vocational qualification (available at an additional cost)

FAST FACTS

Location	Costa Rica
Activities	Big cats and other mammal monitoring using field sign surveys and camera traps Turtle patrols to monitor nesting and predation (seasonal) Bird surveys in the forest and lagoon Amphibian and reptile surveys Butterfly surveys (seasonal) Self-tailored BTEC research project opportunities Forest trails, river walks and beach walks Recreational sports Trail creation and maintenance Games nights Nocturnal forest walks Awareness-raising and recreation activities in the local community Extra activities and excursions (subject to availability and may involve extra cost)
Transport	Pick-up from Puerto Jimenez weekly on a Monday before 12:00pm. Pick-ups available at all other times for $40
Accommodation	Frontier forest research station in communal eco-cabins

WHAT WILL I BE DOING?

You will be working in the Pacific rainforests and beaches bordering Corcovado National Park, one of the most remote National Parks in the country which has been described by National Geographic as “one of the most biologically intense places on the planet”. Home to one of the largest tropical primary lowland rainforests in the world, Corcovado National Park is also home to a large range of endangered plant and animal species. Dense rainforest creates a dramatic habitat for hundreds of bird and mammal species, along with a high population of marine turtles nesting on the beaches each year.

BIG CAT MONITORING: CAMERA TRAPPING &MAMMAL TRACKS AND SCATS

Jaguars, pumas, and ocelots are all present in the region. In addition to the surveys which use direct observations, we also record indirect evidence of mammals through camera trapping and the identification of tracks and scats. All these signs are recorded in order to build a better understanding of the abundance and distribution of big cats in the area. This data is crucial in order to assess the effectiveness of conservation measures, and in particular whether wildlife corridors between protected areas are sufficient to ensure the long-term survival of big cat populations in Costa Rica.

Frequently sighted prints include those of pumas, agoutis, peccaries, armadillos, coatis and the rare neotropical river otter. This data is collected on transect walks, both along the forest trails and along the river. The GPS location, size and abundance of the tracks are recorded, and this information can then be used to map the presence of many mammals which are rarely observed in the forest. This

also contributes to our knowledge of the use of the area as a biological corridor for mammals with large ranges, such as the big cats.

WHAT ELSE CAN I GET INVOLVED IN?

FOREST AMPHIBIAN SURVEYS

Costa Rican amphibians are a diverse and fascinating group – including such species as poison dart frogs and until recently the golden toad. However, they are also extremely sensitive to climate change due to the porous nature of their skin and their use of small microhabitats. Reduction in pool sizes, shorter rainy seasons, and increased temperatures have all contributed to widespread amphibian decline, increasing bacterial growth and disease transmission. The sensitive nature of amphibians to altered climatic variables makes them an excellent indicator group for studying the effects of changing climates.

The primary forest blocks where the Frontier camp is situated have a range of leaf litter frog species. As these groups lay their eggs in leaf litter, increasing decomposition rates due to increasing temperature can eliminate their breeding habitat to the point that the reproduction cycle of an entire population can be threatened. Our survey study aims to determine the species composition across an altitudinal gradient. In the long term, the effects of rising temperatures on forest amphibians could also be assessed.

POINT SURVEYS FOR BIRD SPECIES

Bring your binoculars and set your alarm early and you can join in our bird surveys which take place at the lagoon on Pejeperro beach. Many of Costa Rica’s beautiful birds can be found here, as well as several migratory species. Frequently sighted are pink roseate spoonbills, herons, egrets, scarlet macaws and, with luck, ospreys!

Bird counts are a commonly used method of identifying avian species composition in an area. A pilot study was recently initiated to carry out bird call counts along trails throughout the forest in order to get a better idea of species diversity and abundance.

SEA TURTLE MONITORING

Sea turtles are a flagship species for conservation due to their iconic nature, and being an excellent indicator species for climate change. This is due to their temperature-dependant sex determination, whereby increased temperatures create a sex bias skewed toward females, which could cause entire populations to collapse. Additionally, temperature-induced changes in plant community composition, together with rising sea levels, may result in increased incidences of beach erosion and inundation of nests. This, in conjunction with anthropogenic threats, such as beach development, long line fishing and pollution, mean that turtle populations are highly vulnerable and often unstable. Poaching, and the illegal trade of turtle eggs causes further reductions in turtle populations, which may result in entire clutches being destroyed.

The aim of this project is to help conserve the olive ridley and Pacific green turtles on the Osa Peninsula through monitoring the frequency and health of the local nesting turtle populations, managing nest relocations, recording nest preference and success and prevention of the poaching and predation of nests.

Volunteers patrol two beaches close to camp. The patrols not only help to gather valuable population data of the endangered marine turtles, but also serve to discourage poachers and predators trying to raid nests and collect eggs. The two species of turtle most frequently observed are the Olive Ridley

and the Pacific Green Turtle. During peak nesting season (July-October), turtles found nesting on the beach at night are tagged and given a health check. In the mornings we also conduct nest excavations which involve checking the hatched nests to assess reproductive success after the hatchlings have emerged. Total clutch size, number of successfully hatched eggs and the number and stage of development of un-hatched eggs are recorded. Any hatchlings that might have remained trapped in the nest chamber are freed and placed on the beach to allow them to reach the sea. Outside of peak nesting time vital work is still carried out but at a reduced level.

PLEASE NOTE: *the peak turtle nesting season of Olive Ridley turtles begins in June and ends in November. After this period the Pacific Green Turtles come in to nest until March; sightings outside this period (March-May) are expected to be a lot less frequent.*

In addition to these wildlife research projects you will also be involved in other activities which play a key part in conservation. For example, typically once per week all project participants assist with the creation and maintenance of trails which facilitate the majority of the surveys we conduct. We will also aim to show you the wonders of the jungle, with regular walks to find rare and endangered species and night walks to discover what happens in the jungle when the sun goes down!

Though there is enough downtime to get yourself stuck into a good book, swim in the rivers and take part in horse riding, canopy tours, dolphin and whale tours and a trip to Corcovado National Park (not included in the price) among others, the project boasts a busy schedule focusing on its broad range of high conservation impact science for which participants will receive full training in the field. You will receive a wide range of lectures designed to complement the practical research programme to provide background knowledge about the species we are working with, based around their biology and ecology and understand the conservation needs of these species.

WHAT HAPPENS WHEN I ARRIVE?

If you arrive on a Monday before 12:00pm, you will be greeted at Puerto Jimenez airport or bus station by a Frontier staff member and escorted by local bus to the project camp. If arriving after 12:00pm on a Monday or at any time on any other day, a pick-up can be arranged for an additional US$85.

WHERE WILL I BE STAYING?

Life on camp is a unique experience. You will be staying in simple, shared, mixed-sex eco-cabins amidst the jungles near to Carate. This is a jungle research camp, so you may sometimes find yourself sleeping in a tent or in a hammock – a mosquito net is an absolute must! We have tried to keep the camp in harmony with its pristine surroundings, so conditions are simple, but environmentally friendly and comfortable.

The camp is situated about 5 minutes walk from Playa Carate, a beach which stretches for over 20 miles all the way into Corcovado National Park. There are cool, refreshing showers and environmentally friendly, composting toilets on camp too. You'll be feeling one with the jungle before you know it!

Check out our camp tour video!

WHAT WILL I BE EATING?

We feel it is very important to support the local economy, so most of our supplies are sourced locally. This means we do not have access to everyone's preferred foods and much of what we eat is seasonal and fresh. Costa Rican food is delicious, with a focus on rice, beans and good quality fruit and vegetables.

Cooking and cleaning are carried out communally on a rotational basis, so everybody will be responsibility for meal preparation. You will have the opportunity to learn how to cook the national staple food, gallo pinto, consisting of fried rice and black beans. Another dish that is simple to prepare with local ingredients and is often eaten on camp is light and crispy tortillas stuffed with refried beans and vegetables.

There are no refrigeration facilities for meat, fish and dairy, so the team takes the environmentally friendly option of vegetarianism during their time on project. If this sounds worrying to you, not to worry, as volunteers regularly make delicious comfort foods such as pizza, falafel-style burgers, curries with homemade chapattis and ginger and cinnamon cakes to name but a few. There is also powdered milk to satisfy avid tea-drinkers.

Much of the fresh water in the streams surrounding the camp and on the peninsula are safe to drink and it's important to remember to keep hydrated. Just be sure to check with staff first.

Costa Rica is also world famous for its coffee and it represents the country's biggest export, so coffee lovers will have plenty of opportunities to get their hands on some. Luxuries like chocolate and packet soup are available in the town nearby, but it is worth bringing some of your favourite treats out with you as well as any herbs or spices. It is recommended that you buy snacks when in town (cereal bars, biscuits etc) for mid-morning sugar dips or to give you energy on long treks.

COSTS

1 week	US$ 945
2 weeks	US$ 1,445
3 weeks	US$ 1,995
4 weeks	US$ 2,445
5 weeks	US$ 2,845
6 weeks	US$ 3,095
7 weeks	US$ 3,395
8 weeks	US$ 3,695
10 weeks	US$ 4,245
20 weeks	US$ 6,495
Extra week	US$ 395
Christmas week	US$ 295

DEPARTURE DATES

Weekly on a Monday (please enquire with one of our Volunteer Advisors for more information)

DURATION

You can join this project for a minimum of 1 week.

CHRISTMAS OFFER

This project is available for the special price of US$255 per week over the Christmas period. Placements starting on the 24th or 31st of December 2018 are eligible for this price, subject to availability. Please apply using the orange button below and then tell your volunteer advisor that you wish to take part over Christmas.

WHAT'S INCLUDED

Before you go

- Pre-departure support &documentation
- Travel advice &documentation
- Kit advice
- Discounted medical kit (avilable to purchase directly from Frontier)
- Free Frontier t-shirt (UK &US)
- UK residential briefing weekend including food, accommodation and training (extra cost applies)

In-country

- Accommodation
- 3 meals daily (while on project)
- Project orientation and training
- Airport pick-up, Mondays before 12:00pm
- In-country emergency support
- 24-hour international HQ backup
- BTEC and CoPE qualifications available (at an additional cost)

AIRPORT INFORMATION

Nearest airport(s): Puerto Jimenez (PJM)

CONTACT INFORMATION

Call us on 020 7613 2422 (UK) / 1 949 336 8178 (US)

Mail us on info@frontier.ac.uk

Check out our social media here:

Project details were correct at the time this document was generated. Price, dates and other details are subject to change. Please see our website for current details for this project.