

# Entomology & Conservation Options in Peru, Costa Rica & Ecuador

# Peru - Entomology in the Cloud Forest

## Overview

### Includes;

- Accommodation in shared room at combination of hostels and volunteer guest houses
- 3 meals daily during program, unless otherwise noted
- English-speaking, on-site group leader
- Airport transfers
- All transportation to project sites
- Group excursions and tours of Cloud Forest, Cusco City
- US \$3Million liability insurance to protect the Your University and your participants

### Does not include:

- International flights
- Medical Insurance (can be included for additional fee)
- Visas (not required for US citizens, may apply for other nationals)
- Tips and Gratuities
- Airport departure taxes or fees
- Personal expenses and baggage fees

## The Project

During your visit to Peru, you will be working on a project that is located outside of Cusco in the Cloud Forest in the Manu Biosphere Reserve, in remote South Peru. The project was established as a way to support ongoing initiatives for a sustainable Amazon rainforest through better understanding the value and impact of the rainforest. In addition the project helps locals to access the resources of the Amazon in ways that preserve the forest for the future but help to sustain their livelihood. There are multiple projects happening at one time and, as with the Amazon rainforest everything is highly connected. So while the focus will be entomology project roles will help to support various aspect of the project, a few projects may include;

### Colpa

Record activity from bird hide, which looks out onto a key clay lick on the edge of the Madre de Dios river. You will be taught how to identify species of birds and understand which insects attract which birds.

### Butterfly Research

Butterflies are sensitive to their environment and so are a great indicator of species when it comes to forest types. There are two different surveys happening that include; butterfly trapping and species identification for catch and release, and butterfly transacts which are methods of obtain information about different groups of species.

### Amphibians and Reptiles

The herpetological surveys include visual encounter surveys where amphibians and reptiles are searched for along a 100m long transect in the forest at night. Pitfall traps catch amphibians and reptiles that live in the leaf litter. Individuals caught are identified, weighed and measured before releasing them.

### Biodiversity Monitoring & Date Collection

Contribute to the long term biodiversity monitoring plan to monitor the species richness, diversity, distribution and composition of birds, butterflies,

amphibians, reptiles, specific insects and mammals over different forest habitat types.

## Itinerary

### Day 1: Friday, Arrive in Cusco (L,D)

Overnight: Cusco Hostel

The group will fly into Cusco's Alejandro Velasco Astete International Airport (CUZ). At the airport upon arrival you will be welcomed by your group leader who will escort you for the duration of your trip. From here we will drive a short 10 minute ride to our accommodation, where we will be for the rest of the program.

We will enjoy a welcome dinner together on the first night.

### Day 2: Saturday, Orientation (B,L,D)

Overnight: Cusco Hostel

Today we will have an orientation to the program and the city. We will learn more about the culture of Peru, the importance of the project and the impact it has on those in the community. We will have a tour of Cusco, including colourful markets and then will have a nice sit down lunch. Following this we will be free to explore the city for the rest of the afternoon.



### Day 3: Sunday - Travel through Cloud Forest

Overnight: Cloud Forest Lodge

We will leave bright and early in the morning, out of the bustling city and into the cloud forest. In the late afternoon we will reach the lodge in the heart of the cloud forest. We will have a free afternoon to explore the area, with its amazing hiking paths and native species, including the woolly monkey and the

large white-fronted capuchin monkey.

### Day 4: Monday - Cloud Forest and Arrival and MLC

Overnight: Manu Learning Center

An early morning start takes us deeper into the cloud forest to see one of the main attractions, the native bird of Peru - the Cock of the Rock. We will make a short stop at Pillcopata, before heading on to the port town of Atalaya, where we will board a motorized canoe. It will be a one hour ride to the Manu Learning Center where the project is based.

On arrival we will be shown round the lodge and will enjoy some lunch. In the afternoon we will explore the local trail system with the naturalist guide, before relaxing at the lodge before dinner.

### Day 5-8: Tuesday-Friday, Project Work (B,L,D)

Overnight: Manu Learning Centre

For the rest of the week we will be introduced to the rainforest and learn more about the techniques and methods used on



the projects. We will learn how ecosystem health and biodiversity are monitored and will work alongside the permanent onsite team to support their research. We will work on an array of projects expand our understanding of rainforest and the effects of climate change, biodiversity, sustainability and conservation. There will be evening presentations and workshops to take part on related to the areas we are most interested in and the research and findings.

On our final night, Friday, there will be a large celebratory dinner with the project teams.

### Day 9: Saturday, Travel (B,L)

Overnight: Cusco

Today we will head back to Cusco, which will take most of the day. We will arrive back to the city in the late evening, and will check into our hostel. This will be a free night for us to explore the area and grab dinner on our own at one of the amazing, local restaurants.

### Day 10: Sunday, Departure (B)

Today we will be transferred back to the airport in Cusco to begin our travels back to the US.



### Accommodation

We will be staying in a range of places throughout the trip, including;

#### Cusco Hostel

We will stay in a centrally located hostel in the Incan capital. The rooms will be single-sex, dorm style and basic bed linens will be provided but it is recommend you bring your own towel.

#### Cloud Forest Lodge

The lodge will be similar standards to the hostel in Cusco, with dorm style rooms and bed linens provided.

The bathroom will be communal and will only have cold water.

### Manu Learning Center

While doing our project work we will be staying at the Many Learning Center lodge. The lodge is built with sustainable materials and is nestled in the rainforest.

The bathrooms have an environmentally sound septic system and gravity fed water pumps in order to keep within the centre's aims to minimize its impact on the environment and reduce its carbon footprint.

Rooms are twin or triple share. Bedding and linens (including mosquito nets) are provided and changed once a week. Due to the remote location of the MLC and the open design of the buildings there can be a lot of insects around. Each volunteer is provided with a mosquito net over their bed to keep out insects and a plastic storage box under their bed which should be used to store items that may be easily damaged by the insects and humidity.



# Costa Rica - Tropical Entomology in Monte Verde

## Overview

### Includes;

- Accommodation in shared room at volunteer house and hostels
- 3 meals per day throughout program, unless otherwise noted
- English-speaking, on-site group leader
- Airport transfers
- All transportation to project sites and excursions
- Group Excursions to: Poas Volcano, Coffee plantation, Waterfall Garden and Rainforest Canopy Tour
- US \$3Million liability insurance to protect Your University and your participants

### Does not include:

- International flights
- Medical Insurance
- Visas (US Citizens no visa needed)
- Tips and Gratuities
- Personal expenses and baggage fees
- Airport departure tax, which is paid upon departure at the airport

## The Project

Costa Rica contains 6% of the world's biodiversity, and has 34,000 known species of insects, which increases monthly as new species are discovered. On this project the group will work alongside local experts in the field to help with data collection, monitoring and curation - all which help to understanding changes in environment, water quality and insect species in the rainforest.



## Itinerary

### Day 1: Sunday, Arrive to San Jose (D)

Overnight: San Jose

The group will fly into Juan Santamaria Airport (SJO). We will be greeted by our group leader who will accompany the group for the duration of the trip. We will be transferred to our hostel in San Jose and will then have some free time in the afternoon to explore the area or relax.

### Day 2: Monday, Poas Volcano & Waterfall Garden(B,L,)

Overnight: San Jose

We will take a group excursion to Poas Volcano today. We will meet the group after breakfast with our host families before heading outside the city.

Poas Volcano is an active volcano that is located in central Costa Rica. It has erupted 39 times since 1828 and is famous for its two crater lakes near its summit. It is a breathtaking site with its hot lagoons and steam billowing out. We will also have an opportunity to stop and grab some tropical fruit at a local fruit stand before walking to the volcano. We will enjoy a picnic lunch, and hike to Botos laguna in the Cloudforest.

On our way back we will stop at a local, sustainable, fair trade coffee plantation. We will have a tour of the coffee plantation and learn more about the production of coffee from bean to cup. In addition, we will learn more about the importance of coffee for the culture and economy of Costa Rica.

After a full day we will take our bus back to San Jose for dinner.



### Day 3: Tuesday, Transfer to Monteverde & Orientation (B,L,D)

Overnight: Monteverde

In the morning we will meet up to take a bus to Monteverde, which is about 3-4 hours. We will have lunch in Monteverde before having a project orientation, and healthy and safety check. This will include a tour of the area and the sustainability initiatives. We will also receive a presentation on

the ongoing sustainability issues of Costa Rica and the area, and how they are affecting the rainforest.

We will have free time in the afternoon before having a group dinner.

### Day 4: Wednesday, Dragonflies and Aquatic Macro-invertebrates (B,L,D)

Overnight: Monteverde

After breakfast we will meet a local terrestrial ecologist who will give a presentation on dragonfly ecology and the importance of dragonflies in the ecosystem. There are 270 species of dragonflies, or Odonata as their scientific name, in the Monteverde region. They are known as an aquatic macro-invertebrates and by studying them researchers can determine the water quality of nearby lakes and rivers.

In the afternoon we will do our field work by testing water quality, and monitoring macro-invertebrates as bioindicators with a local freshwater ecologist.

In the afternoon we will have down time before dinner.

### Day 5: Thursday, Moths & Butterflies (B,L,D)

Overnight: Monteverde

After breakfast we will start our day with fieldwork focused on lepidoptera which are insects including moths and butterflies. We will be led by a local expert to monitor activity and species in a region.

Since



butterflies react to small variances in their ecosystem it is used as a way to monitor the ecosystem and the subtle changes, and more importantly how this can have a larger scale effect. We will tour a coffee farm and discuss pest control with the owner - investigating the methods used and how this can impact the environment.

There will be an optional night walk with a local naturalist guide to search for nocturnal species and do some data collection.

### **Day 6: Friday, Insect Curation (B,L,D)**

Overnight: San Jose

Today we will visit a butterfly garden and discuss the role of insects in ecotourism. This will include a visit to a local insect museum and will help us to understand more about insect curation and species identification.

We will return to San Jose in the afternoon and will have the afternoon free to do as we please.

### **Day 7: Saturday, Canopy Tour (B,L,D)**

Overnight: Monteverde

Today the group will meet up bright and early as we head back into the rainforest, a short drive away for a rainforest canopy tour. We will zipline across the rainforest canopy as we take in the natural beauty and biodiversity of Costa Rica. If we are lucky we may see some native species like the sloth, parrots or howler monkey.

The afternoon will be ours to explore San Jose and do some last minute shopping before enjoying a group farewell dinner.

### **Day 8: Sunday, Departure (B)**

Just like all good things they must come to an end and we will enjoy breakfast, depending on our flights, before departing our hostel for the airport.

### **Accommodation**

We will be staying at a hostel in San Jose, and one in Monteverde. They will both be very similar in quality and standards. Basic bed linens will be provided but students should bring their own towels. The rooms will be single-sex, dorm style.

# Ecuador- Conservation & Entomology

## Overview

### Includes;

- Accommodation in shared room a hostel
- 3 meals per day throughout program, unless otherwise noted
- English-speaking, on-site group leader
- Airport transfers
- All transportation to project sites
- Group excursion to Historical Center and Middle of the World, Animal Reserve, Ecological Park (entrance fees)
- US \$3Million liability insurance to protect the Your University and your participants

### Does not include:

- International flights
- Medical Insurance (can be included for additional fee)
- Visas (not required for US citizens, may apply for other nationals)
- Tips and Gratuities
- Personal expenses and baggage fees

## The Project

There are more than 3 million species of insects in Ecuador, that have been identified so far. They are by far the most abundant and widely distributed terrestrial animal in Ecuador. The program will take place in the upper area of the Ecuadorian Amazon, specifically in the Pastaza province and will be divided into two focus areas;



## Ecological Reserve

Set on 235 acres of land established for conservation efforts, the research and rehabilitation center focuses on Amazon wildlife. Close to the buffer zone of the Llangantes National Park, the area has little human intervention, which means it enjoys a lush and infinite wealth of native flora, fauna and wildlife.

## Wildlife Rescue Center

Also referred to as the biopark, the reserve works with more than 45 species and 250 specimens which receive care and attention by specialists in the field of veterinary, biology, and ecology. The reserve has developed various programs aimed at conservation, rehabilitation, research, environmental education and scientific studies enabling society to integrate directly into the development of policies that benefit and respect the rainforest.

## Itinerary

### Day 1: Sunday- Arrive in Quito (D)

Overnight: Quito

The group will fly into Mariscal Sucre International Airport (UIO) in Quito. At the airport upon arrival you will be welcomed by your group leader who will escort you for the duration of your trip. From here we will be transferred to our hostel in central Quito and will have the rest as an orientation to Quito and Ecuador - we will get a chance to visit the Center of the World monument!

### Day 2: Monday, Transfer & Orientation (B,L,D)

Overnight: Puyo

In the morning we will head to Puyo which sits on the banks of the tributary of the Pastaza River, which eventually leads into the Amazon River. The term Puyo is a Kichwa word for 'cloudy' as the local climate is often overcast and rainy.

We will stop at the biopark, called the Animal Rescue Center for a guided tour to learn more about the conservation work being done. The center receives animal victims of trafficking and helps to rehabilitate them. It helps to enhance the understanding of biodiversity in the region and the important of balancing the ecosystem.

We will then transfer to our hostel and begins our field work and collection of data. This will be led by the onsite team who will go over different techniques and methods for this. They will provide us with more in depth knowledge the area and the forest we are working in.

In the evening we will have a group dinner.

### Day 3: Tuesday, Biopark (B,L,D)

Overnight: Puyo

We will continue our work at the biopark today, helping to support the local staff through various activities such as data processing, data collection

and fieldwork such a monitoring the health of species and the environments they are placed in.

We will have dinner together in the evening.

### Day 4: Wednesday, Travel to Ecological Reserve (B,L,D)

Overnight: Ecological Reserve

In the morning we will assist the local team with more data processing and equipment preparation which will go with us to the ecological reserve. In the afternoon we will transfer to the reserve, and check into our dorm style, volunteer house accommodation. We will have a small orientation to the project work being done specifically in the reserve and meet the onsite team.

We will have some free time in the afternoon to relax before dinner. After dinner we will do a bit of field work that is focused on nocturnal species.



### Day 5-6: Thursday- Friday, Project Work (B,L,D)

Overnight: Ecological Reserve

We will continue our project work for the remainder of the week focusing on data processing, collection and field work. We will assist in the preparation and placement of beetle traps to help monitor the species and focus on light trapping in the evenings.

The onsite team will help to identify the areas of most need and where the group can help to make the biggest impact.

### **Day 7: Saturday, Departure (B, L,D)**

In the morning we will help to evaluate and identify a few species and why their conservation is so vital to the ongoing stability of the rainforest. In the afternoon we will enjoy a picnic lunch before heading back into Quito.

We will have a transfer back to the airport in the afternoon/evening depending on our flight schedule.

### **Accommodation**

Throughout the program we will be staying in several hostels of similar quality and standards. Each one will be single-sex dorm style with shared bathrooms. All basic bed linens will be provided but students should bring their own towels.

