



MAPPING BIODIVERSITY IN CUBA



PLANNING CHECKLIST

PLANNING CHECKLIST

IMMEDIATELY

- Make sure you understand and agree to Earthwatch's **Terms and Conditions** and the **Participant Code of Conduct**.
- If you plan to purchase additional travel insurance, note that some policies require purchase at the time your expedition is booked.

6 MONTHS PRIOR TO EXPEDITION

- Log in at earthwatch.org to complete your participant forms.
- If traveling internationally, make sure your passport is current and, if necessary, obtain a visa for your destination country.
- Bring your level of fitness up to the standards required (see the Project Conditions section).

90 DAYS PRIOR TO EXPEDITION

- Pay any outstanding balance for your expedition.
- Book travel arrangements (see the Travel Planning section for details).
- Make sure you have all the necessary vaccinations for your project site.

60 DAYS PRIOR TO EXPEDITION

- Review the packing list to make sure you have all the clothing, personal supplies, and equipment needed.

30 DAYS PRIOR TO EXPEDITION

- Leave the Earthwatch 24-hour helpline number with a parent, relative, or friend.
- Leave copies of your photo ID and flight reservation number with a parent, relative, or friend.

READ THIS EXPEDITION BRIEFING THOROUGHLY. It provides the most accurate information available at the time of your Earthwatch scientist's project planning, and will likely answer any questions you have about the project. However, please also keep in mind that research requires improvisation, and you may need to be flexible. Research plans evolve in response to new findings, as well as to unpredictable factors such as weather, equipment failure, and travel challenges. To enjoy your expedition to the fullest, remember to expect the unexpected, be tolerant of repetitive tasks, and try to find humor in difficult situations. If there are any major changes in the research plan or field logistics, Earthwatch will make every effort to keep you well informed before you go into the field.

Expedition Update



Team 3 2018 (June 18-28, 2018)

February 9, 2018

Dear Earthwatch Participants,

We hope you are getting excited about your upcoming expedition on *Mapping Biodiversity in Cuba*. We are writing with an update to the itinerary for your team.

Banao Ecological Reserve is hosting several large groups throughout the month of June, which is a popular time to visit. Due to a scheduling conflict, your team will start your expedition at La Sabina field station and spend the second half of the expedition at Jarico field station. La Sabina field station is located up the mountain, and requires a 4 hour hike to arrive. Since you may be weary from the long drive from Havana the morning of day 2, mules will be available to transport the team to Sabina upon arrival to Banao.

If you have any questions please contact us at 1.800.776.0188

Thank you,
The Earthwatch Team

Expedition Update



All Teams 2018

February 9, 2018

Dear Earthwatch Participants,

We hope you are getting excited for your upcoming expedition, *Mapping Biodiversity in Cuba*. Our staff member just returned from visiting the field site and we would like to share some tips to make your expedition a success. As you have probably already read in your briefing, you will be required to cross several rivers and streams while hiking. Please bring rubber boots, which will allow you to enter the water to cross more safely. The river crossings were sometimes rocky and slippery without a clear option across without entering the water, so rubber boots will keep your feet dry and comfortable. We also recommend bringing warm layers for evenings and nights spent at La Sabina, where it can be quite windy.

If you have any questions please contact us at 1.800.776.0188

Thank you,
The Earthwatch Team

Expedition Update



Mapping Biodiversity in Cuba: All Teams 2018

November 1, 2017

Dear Earthwatch Participants,

We are writing with an update regarding your Earthwatch expedition, *Mapping Biodiversity in Cuba*.

The United States State Department has advised against U.S. citizens traveling to Cuba due to sporadic sonar attacks on embassy employees and their families in their residences or hotels. You can read this advisory here:

<https://travel.state.gov/content/passports/en/alertswarnings/cuba-travel-warning.html>

Earthwatch has been monitoring this situation closely and is in frequent communication with lead scientist, Natalia Rossi at the Wildlife Conservation Society. We have consulted the UK Foreign Commonwealth Office and Australia Smart Traveler, which do not have any travel warnings for Cuba and advise normal safety precautions at this time.

Lead scientist, Natalia Rossi, will be travelling to Cuba in mid-November to meet with local partners. During this visit she will be discussing the current advisory, as well as assessing some damage to the field center caused by Hurricane Irma. Despite the hurricane hitting Cuba last month, gathering the necessary personnel and resources to assess this type of damage is a slow process, especially in a remote area. Therefore, an in-field visit is necessary to ensure we are able to operate as planned.

We will provide another update on or before November 20th. In the meantime, if you are considering booking your travel, we encourage you to hold off until we have more information, or to book travel insurance. We recommend travel insurance for all Earthwatch expeditions, but it is strongly advised in this case.

If you have any questions please contact us at 1.800.776.0188

Thank you,
The Earthwatch Team

Expedition Update



All Teams 2018

May 20, 2018

Dear Earthwatch Participants,

We hope you are getting excited for your upcoming expedition, *Mapping Biodiversity in Cuba!* We are writing with a slight change to the arrival logistics for your team.

The transportation company will no longer be collecting volunteers at the airport for transport to the hotel. Upon arrival to the airport, you will now need to take a taxi to the rendezvous:

Hotel Colina
Calle L No. 23 e/ 27 y
Jovellar Plaza de la Revolución
Havana
Cuba

You can arrive at the hotel at any time the day before your expedition begins. Don't forget, there is an optional dinner at Hotel Colina that is included in your hotel booking. The field staff will meet you in the lobby of Hotel Colina at 9:00 a.m. on Day 1 of your expedition in order to take you and the rest of the team to the field site.

If you have any questions please contact us at 1.800.776.0188

Thank you,
The Earthwatch Team

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NOTE FROM THE PI

DEAR EARTHWATCHER

Perhaps you have heard that Cuba is called the crown jewel of the Caribbean, with its pristine coral reef ecosystems and its incredibly high levels of terrestrial species that occur nowhere else in the world. Or maybe you have not heard of Cuba's biodiversity at all? The truth is that Cuba's astounding richness in ecosystems and species makes this place a global priority for biodiversity conservation. It is also the case that information flow has been limited between Cuba and the rest of the world. To preserve this island's natural treasures it is now critical to support the research and close monitoring of plant and animal populations. As we face a historical time of transition into a more-developed Cuba, how can we best safeguard the country's rich biodiversity? How can we detect ecosystem-level changes early enough to prevent the loss of species and habitats?

We will explore these questions and more as we embark together on an exciting journey into the world of montane forests of the central cordillera of Cuba. The cordillera is a stronghold of biodiversity and endemism comprising important habitats for migratory, resident, and endemic birds and many of the country's unique reptiles and amphibians. Central Cuba is also home to the island's fastest growing agriculture and tourism sectors, with most rural communities living near protected areas and relying on natural ecosystems and their wildlife. We will follow the Banao river and map biodiversity in mountainous forest ecosystems from its source in the highlands of Lomas de Banao Ecological Reserve to the coastal wetlands of Tunas de Zaza Wildlife Refuge where the river flows into the Caribbean Sea. We will explore core habitats where Cuban parrots and Cuban parakeets thrive, and investigate species composition and the health of amphibian populations. Through this expedition, we will not only learn and explore part of Cuba's biodiversity, but also exchange knowledge and experiences with our expert Cuban scientific team and the rural communities of the area.

We are very excited to have you as part of our team, and can't wait to have you on our research project!

Sincerely,

Dr. Natalia Rossi
Lead Earthwatch Scientist





THE RESEARCH

MAPPING BIODIVERSITY IN CUBA



THE STORY

Despite Cuba's importance as a biodiversity hotspot, long-term political complexities with the U.S. and other nations stymied collaborative international research. This is a critical moment in history for this island nation, with the potential for significant economic development around the corner and the unique opportunity to help protect this island's outstanding biodiversity (Boom 2011; Davalos 2004; Fritsch and McDowell 2003; Iturralde-Vinent and MacPhee 1999; Savage 1991).

The mountainous forests of Lomas de Banao Ecological Reserve (LBER) and the fresh wetlands of Tunas de Zaza Wildlife Refuge (TZWR) are home to species only found in the Caribbean—including the vulnerable Cuban Parakeet and the near threatened Cuban Amazon Parrot (Garrido et al. 2011; González et al. 2014; Cañizares-Morera et al. 2005; Cañizares-Morera and Berovides 2008). This region faces many conservation challenges, including the illegal extraction of flora and fauna from protected areas (Muñoz 2014), and the presence of the amphibian chytrid fungus that threatens endemic frog populations in the nearby locality of Topes de Collantes (Díaz et al. 2007).



There is a great need to strengthen the management of these reserves to better protect their biodiversity, better understand conservation threats, and integrate rural communities into natural resource protection schemes. By intensive monitoring of biodiversity with the help of citizen scientists, specifically birds, trees, and amphibians species that are indicators of habitat quality, scientists hope to gain a better understanding of the overall ecosystem during a pivotal moment for Cuba.

RESEARCH AIMS

Researchers seek to merge scientific research, ecological teaching, and community outreach with the goal of establishing a mid- to long-term research and monitoring program in LBER to generate data and information critical to the conservation of biodiversity and sustainable management of the Banao River Basin. The overarching research question focuses on the extent of changes in species compositions and abundances of indicator taxa through time at the LBER, and the linkages between these potential changes and increasing human impact in this area of Cuba.

In alignment with this question, researchers have three scientific objectives:

1. Investigate the composition and structure of avian, amphibian, and plant communities at the edge and core zones of the LBER.
2. Examine the presence and incidence (if any) of chytrid fungus in amphibian species of LBER and TZWR.
3. Develop a community outreach program to implement with the rural communities of Banao, where targeted taxa is well managed and survive.

Project research hypotheses will guide the research and monitoring of critical species and conservation threats, as well as assist in the early detection of potential new threats (e.g. amphibian chytrid fungus). The strong community outreach component will strengthen the participation of local communities in the management of LBER and TZWR, and contribute to the reduction of species extraction from these reserves.

HOW YOU WILL HELP

- Led by the scientists and a team of local experts, citizen scientists will:
- document bird and amphibian species through sightings and audio recordings
- monitor amphibian species for the presence of the chytrid fungus
- record temperature and relative humidity at monitoring stations
- survey flower and tree abundance and composition
- record signs of human disturbance (e.g. logging, parrot nest destruction)
- input data into datasets
- Assist with educational activities in rural communities

Volunteers may also have the opportunity to:

- learn to use statistical analysis to test project scientific research hypotheses
- present on survey results at end of expedition
- participate in ongoing conservation efforts including the construction and placement of artificial nests for Cuban parrots
- plant nurseries located in protected areas to aid reforestation efforts, including the planting of mangroves and critical forest species



DAILY LIFE IN THE FIELD

PLANS FOR YOUR TEAM

Fieldwork will take place at Lomas de Banao Ecological Reserve (LBER) and Tunas de Zaza Wildlife Refuge (TZWR). After two initial days of trainings, teams will work together as a group each day to conduct bird surveys in the early mornings and measure trees and looking for amphibians in the evenings. We will have short lectures before lunch and have daily debriefings to review surveys and compile data in the late afternoons before dinner. Teams will have short talks in the evenings (about 20 minutes each) about the reserve, the community, target species, and staff history.

POLICIES

Smoking is not allowed inside the accommodations.

DAILY ACTIVITIES

Weather and research needs can lead to changes in the daily schedule. We appreciate your cooperation and understanding.

ITINERARY

DAY 1

Arrival to the field station in Jarico, in the lowlands of the Lomas de Banao Ecological Reserve (LBER). Introductions and orientation. Short afternoon hike. You will have time to rest, adjust, and get comfortable.

DAY 2

Training, brief lectures on methods and target species, and a review of field guides. In the first half of the day, you will practice surveying, bird recognition and using recorders. After lunch at the field station and a short rest, you will learn about amphibians and be trained on data entry.

DAYS 3-5

Fieldwork based at the field station in Jarico. In the afternoons you will do amphibian work and visit local communities for talks (some of the days). During one of these days, the team will travel to Tunas de Zaza Wildlife Refuge to do surveys for the day. At the halfway point in the week, the team will move to the upper station in La Sabina.

DAY 6

The team will pack their luggage and hike approximately 4 hours up the mountain to the second field site for the remainder of the team. For those who prefer not to hike, we will have mules available to move up to the second field site.

DAYS 7-9

Fieldwork at second field site near La Sabina field station, in the highlands of the Lomas de Banao Ecological Reserve (LBER).

DAY 10:

Team wrap-up and review of achievements, completion of outstanding data entry and departure.

DAILY SCHEDULE

6:00 a.m.	Breakfast at field station, review daily instructions
6:30-11:30 a.m.	Bird surveys in elevational transects
11:30-12:30 a.m.	Lecture
12:00 p.m.	Lunch at field station
1:30-3:00 p.m.	Rest, downtime
3:00-5:30 p.m.	Tree surveys
6:00-7:00 p.m.	Group review of daily surveys analysis, data entry
7:00 p.m.	Dinner at field station
8:00 p.m.	Films, downtime
9:00-11:30 p.m.	Amphibian surveys





ACCOMMODATIONS AND FOOD

ABOUT YOUR HOME IN THE FIELD



Each team will stay at two different field stations. For the first half of your time in the field, you will stay at Cabanas in Jarico. The cabanas are located in the lowlands of the Lomas de Banao Ecological Reserve (LBER), in the middle of a hotspot for parrot nesting- you may see lots of them around the station. For the second half of your time in the field, you will stay at La Sabina, a more remote field station in a mountainous cloud forest area of the reserve at a high elevation (650 meters above sea level). There is a beautiful view of the Caribbean Sea from the mountain top when the view is clear.

SLEEPING

At Jarico, rooms will be shared by three people. At La Sabina, rooms will be shared by two people. All rooms will be separated by gender. Couples rooms can be accommodated depending on team make-up and size. Single rooms are difficult to accommodate because the capacity at both accommodations is limited. Single rooms are not available on fully booked teams. There are no mosquito nets available, but volunteers and project staff can bring their own mosquito nets.



BATHROOMS

Jarico: There are showers, toilets and hot water available.

La Sabina: There are showers and toilets available, but no hot water.

Both locations have one shared bathroom per shared room.

ELECTRICITY

At Jarico, electricity is stable and constant. At La Sabina electricity works with solar panels, so can be intermittent. All teams stay in both accommodations during each team, so it is possible each team could experience some intermittent electricity during the second half of the expedition. Both sites have refrigeration.

The majority of outlets in Cuba are 110-volt current with standard U.S.-style two- or three-prong outlets. However, some outlets are rated 220 volts, particularly in hotels that cater to European clientele.

PERSONAL COMMUNICATIONS

There is no internet available at either site. There is cellular service at both sites, but in some field locations, it may be spotty. Pls and staff will have cell phones and regular phone access, as well as VHF radios for emergency communications.

FACILITIES AND AMENITIES

The sites are remote, but we encourage volunteers to bring binoculars and enjoy the nature around you.

DISTANCE TO THE FIELD SITE

Lomas de Banao Ecological Reserve (LBER) is 73 miles from the town of Santa Clara, which is the largest town in the area. While teams are doing field work in Lomas de Banao Ecological Reserve (LBER), all research sites are reached by foot. During the first half of the expedition, the team will conduct surveys at Tunas de Zaza for one day. This is about a 20 minute drive away by bus from LBER. The hike between the two accommodations in LBER, from Jarico to La Sabina, is about 4 hours up the mountain (7.5 miles). Mules will be available primarily for transporting field equipment and luggage, but can also be used to ride should the hike prove difficult for some participants. The mules will also be used for emergencies.

FOOD AND WATER

All breakfasts and dinners will be typical Cuban fare prepared by a local cook and eaten at the accommodations. Lunch will be prepared and packed by the team and brought into the field.

The following are examples of foods you may find in the field. Variety depends on availability. We appreciate your flexibility.

TYPICAL MEALS

BREAKFAST	Eggs, toast, cheese, plantains, fruit, fruit juices, coffee
LUNCH	Rice, beans, plantains, pork, chicken, vegetables, soup, fresh fruits
DINNER	Chicken, pork, fish, vegetables, rice, beans, pasta
DESSERT	Flan, fruit
BEVERAGES	Fresh juice, water, sodas, coffee

SPECIAL DIETARY REQUIREMENTS

Please alert Earthwatch to any special dietary requirements (e.g., diabetes, lactose intolerance, nut or other food allergies, vegetarian or vegan diets) as soon as possible, and note them in the space provided on your volunteer forms.

We will be able to accommodate vegans and vegetarians, but not gluten free diets. Food variety and availability in Cuba can be limited. We can accommodate lactose free and nut allergy diets.



PROJECT CONDITIONS

THE FIELD ENVIRONMENT

Cuba is a hotspot for biodiversity, with 70% of its lands and 25% of its marine platforms protected. The average annual temperature is 79° F (26° C), and the average precipitation is 39 in (978 mm), with most rain occurring during May and June. Lomas de Banao Ecological Reserve (LBER) is comprised of low, karstic hills in the municipalities of Sancti Spiritus, Fomento and Trinidad, and includes the uppermost part of the Banao and Higuanajo river basins. The landscape is one of canyons, valleys, and sinkholes. LBER supports 72% (77 species) of Cuba's breeding resident birds. Adjacent to LBER is Tunas de Zaza Wildlife Refuge (TZWR), at the delta of the Zaza River. TZWR encompasses 6649 hectares of riparian forest, salt marshes, mangroves, and coastal lagoons flowing into the Caribbean Sea. Teams will do fieldwork in both of these locations.

GENERAL CONDITIONS

The following are averages. Please check weather resources for your team dates for more accurate weather predictions. Projects have experienced unseasonable weather at all times of year.

Annual Averages

TEMPERATURE RANGE: 68–71°F (20–22°C)

RAINFALL: 62–86 in (1600–2200 mm)

November–February

HUMIDITY: 80–90%

TEMPERATURE RANGE: 71–74°F (22–24°C)

RAINFALL: .4–1.5 in (10–40 mm)

March–September

HUMIDITY: 80–90%

TEMPERATURE RANGE: 72–80°F (23–27°C)

RAINFALL: 1.5–2.75 in (40–70 mm)

ESSENTIAL ELIGIBILITY REQUIREMENTS:

All participants must be able to:

- Follow verbal and/or visual instructions independently or with the assistance of a companion.
- Enjoy being outdoors all day in all types of weather and in the potential presence of wild animals and insects.
- Endure tropical (hot and humid) work conditions.
- Hike on flat and sometimes hilly or steep slopes in densely wooded forest on uneven, muddy terrain up to five miles a day.
- Be comfortable hiking and conducting field work at night.
- Be willing to walk in/through the shallow rivers in the valley as often as instructed to conduct general herpetological surveys.
- Get down low to the ground to search for frogs, lizards, and plants for up to six hours a day (not continuous).
- Be comfortable around mules, and/or riding mules in the event you need assistance



POTENTIAL HAZARDS

MAPPING BIODIVERSITY IN CUBA

HAZARD TYPE	ASSOCIATED RISKS AND PRECAUTIONS
Transportation:	We may encounter poor road conditions including landslides. Only qualified, experienced drivers will transport volunteers in project vehicles; we ensure project vehicles are well maintained. Seatbelts must be worn at all times. Volunteers are not permitted to drive. Driving after dark will be avoided, except in cases of emergency.
Hiking:	Terrain is the main risk. It can be slippery, so good shoes are necessary. The hike from Jarico to La Sabina is about 4 hours up the mountains. If requested, citizen scientists could ride mules to La Sabina. All fieldwork will involve walking, up to 10 miles/day (16km), possibly uphill in rainforest covering, sand, rough terrain, or high altitude; on and off trails; carrying equipment weighing up to 10lbs (5kg). on and off trails. River crossings are part of the hike.
Animals:	There will be mules present on this project that will be used to transport luggage and field equipment. They may also be used to transport people should the field research prove too difficult or someone sustains an injury. Helmets must be worn when riding a mule and will be provided for volunteers. Snakes are present in the field research locations. Volunteers should remain designated work areas and listen to field staff instructions for avoiding snakes and bites. There are no poisonous snakes in Cuba, but if you have a phobia, you could be assigned more hours with bird surveys and data processing, during which you are less likely to encounter a snake.
Insects and disease:	Mosquitoes are present in Cuba and at the research locations and can carry diseases such as chikungunya, dengue and zika virus. Volunteers will be reminded to wear protective clothing, such as long sleeves and long pants, and to wear insect repellent. Volunteers with bee sting allergies should carry 2 epipens with them and be sure to describe their allergy/reaction on their medical forms.
Climate/ Weather:	Sun exposure and heat exposure are possible on this expedition. Volunteers will be reminded to use sunscreen, wear protective clothing, and maintain hydration by drinking plenty of water. There is also the possibility of rain and hurricanes. Both reserves experience intense rainfall during the rainy season (May-October). Hurricane season is June to November, when landslides, mudslides, flooding may occur. Research sites are located inland away from coastline. Field staff will monitor local weather and plan activities accordingly. If local authorities or field staff deem it necessary to evacuate the location, follow all instructions. Because of the high humidity, people who use a hearing aid device may find it doesn't work properly. Consider purchasing a hearing aid dehumidifier. You must be able to stay outside in the rain for extended periods of time.
Personal Security:	We advise volunteers to be vigilant with personal belongings while in Havana to avoid any potential thievery.
Swimming and/ or water crossing:	Research activities may require volunteers to cross rivers and streams. Teams will practice thorough water crossing safety procedures, such as using spotters, crossing at low points in the river, and using ropes or harnesses if necessary, and only cross in designated areas. Recreational activities may include swimming in waterfall pools, and possibly the Caribbean Sea.
Distance from Medical Care:	Depending on where the team is when medical care is required, it may take up to 3-4 hours to reach care. The closest clinics are in Sancti Spiritus (30 minutes by car), Trinidad (50 minutes by car) and Santa Clara (60 minutes by car), but departing the field may require a long hike or mule ride to access the road. .



HEALTH & SAFETY

MAPPING BIODIVERSITY IN CUBA



EMERGENCIES IN THE FIELD

The project will have mobile phones and VHF radios for communication while conducting field work.

For emergency assistance in the field, please contact Earthwatch's 24-hour emergency hotline number on the last page of this briefing. Earthwatch is available to assist you 24 hours a day, 7 days a week; someone is always on call to respond to messages that come into our live answering service.

IMMUNIZATIONS & TRAVEL VACCINATIONS

Please be sure your routine immunizations are up-to-date (for example: diphtheria, pertussis, tetanus, polio, measles, mumps, rubella and varicella) and you have the appropriate vaccinations for your travel destination. Medical decisions are the responsibility of each volunteer and his or her doctor, and the following are recommendations only. Visit the [cdc.gov](https://www.cdc.gov) or [who.int](https://www.who.int) for guidance on immunizations.

If traveling from countries or region where yellow fever is endemic, you must have a certificate of vaccination.



TRAVEL TIPS

SUGGESTIONS FOR THE ROAD

SPECIAL CONSIDERATIONS FOR THOSE TRAVELLING FROM THE US, OR AMERICAN CITIZENS AND RESIDENTS TRAVELING FROM ELSEWHERE

The activities of this Earthwatch environmental project are authorized under the Office of Foreign Assets Control (OFAC) General License pertaining to Cuba (31 CFR) under article 515.575 on Humanitarian Projects. Our activities are consistent with a full-time schedule and participants should consult with Earthwatch if planning additional activities before or after their trips to make sure these comply with authorized OFAC activities. Project participants need to travel from/to the US with a printed schedule of activities (this briefing) and a note provided by Earthwatch certifying your trip.

YOUR DESTINATION

LANGUAGE: The official language spoken in Cuba is Spanish. The research staff speak Spanish and English, and the project will be conducted in English, however, reserve staff and support staff may not always speak or understand English.

TIME ZONE: GMT/UTC -4.

CULTURAL CONSIDERATIONS: Photographing military or police installations or personnel, or harbor, rail, and airport facilities is illegal in Cuba. There is a variety of political beliefs in Cuba, and one should always use discretion when speaking about these matters. Conservative dress is appropriate, especially when visiting small communities.

LOCAL CURRENCY: Cuba has two official currencies: the Cuban convertible peso (CUC) and the national peso (moneda nacional or MN). Transactions involving foreigners almost always take place in Cuban convertible peso (CUC). To exchange U.S. dollars, there is a 13% fee and this is a country-wide rate. Money will be exchanged at the airport upon arrival. If coming from the US, please be aware that it is not possible to use American credit/debit cards in country, and you will need to thoroughly calculate the amount in cash for the entire duration of your trip. European, Asian, African and Latin American credit/debit cards work in Cuba, and you can use ATMs and banks to withdraw money. When leaving Cuba, keep in mind that the export of Cuban convertible pesos (CUC) is prohibited, regardless of the amount, and they can not be exchanged into other currencies once out of the Cuba

COUNTRY AND PROJECT ENTRY REQUIREMENTS

Entry visa requirements differ by country of origin, layover, and destination, and do change unexpectedly. For this reason, please confirm your visa requirements at the time of booking and, again, 90 days prior to travel. Please apply early for your visa (we recommend starting 6 months prior to the start of your expedition). Refunds will not be made for volunteers cancelling due to not obtaining their visa in time to meet the team at the rendezvous. You can find up to date visa requirements via the following site:

www.travisa.com

Typically, visas are purchased at the airport when you check in, but be sure to double check with your airline. Cost of visas range from 50USD to 100USD depending on the airline you are travelling with. You will be able to purchase your ticket online under the Humanitarian Projects category of authorized travel to Cuba. Travel restrictions to Cuba from the United States have been changing through 2016 and 2017 at the time of printing this expedition briefing. Please double check visa requirements before traveling, as requirements are subject to change.

In order to enter Cuba, passports must be valid for at least six months from the date of entry and a return ticket is required.

CONTACT INFORMATION

You may be required to list the following contact information on your immigration form, or if your luggage does not make it to baggage claim at your destination:

Maikel Cañizares Morera

Sociedad de Zoología de Cuba

Calzada 1053. Apto 42 e/ 12y 14. Plaza, Habana, Cuba **PHONE:** +53-7831-7224 Cell:+53-5827-0827

EMAIL (Cuba): maikcaniz@gmail.com

EMAIL (US): nrossi@wcs.org



EXPEDITION PACKING LIST

WHAT TO BRING

EXPEDITION PACKING CHECKLIST

GENERAL

- This expedition briefing—**This is REQUIRED under OFAC regulation.**
- Your travel plans (travel itinerary), rendezvous details, and Earthwatch's emergency contact information
- If travelling from the US, or American citizens and residents travelling from elsewhere: Copy of OFAC General Licence article 515.575 (provided by Earthwatch)**
- Photocopies of your passport, flight itinerary, in case the originals are lost or stolen; the copies should be packed separately from the original documents
- Passport and visa
- Documentation for travel by minors (if necessary)

CLOTHING/FOOTWEAR FOR FIELDWORK

ALL TEAMS:

- Earthwatch T-shirt
- Soft luggage (easiest for mules to carry)
- 2–3 lightweight, quick-drying, long-sleeved shirts
- 2–3 pairs of quick-drying long pants
- Wide-brimmed sun hat or baseball hat
- Lightweight raincoat or poncho
- 4–5 pair of thick hiking socks (wool or synthetic—NOT cotton)
- Bandana
- Hiking boots with ankle support

CLOTHING/FOOTWEAR FOR LEISURE

- At least one set of clothing to keep clean for end of expedition
- Sandals
- Light weight pants
- Shorts
- T-shirts / tank tops
- Sweatshirt / light jacket
- Tennis shoes / casual shoes

FIELD SUPPLIES

- Binoculars
- Small daypack or rucksack with waterproof cover
- Sunscreen lotion with SPF 45
- Lip balm with sunscreen
- Field notebook (Rite in the Rain All-Weather Paper) and pencils
- 2 one-liter water bottles, OR 1 two-liter water bottle or reservoir
- Insect repellent
- Sunglasses

- Drybag or plastic sealable bags (good for protecting equipment like cameras from dust, humidity, and water)
- Headlamp
- Rechargeable batteries

BEDDING AND BATHING

NOTE: bedding is provided at the research stations.

- Quick dry, light weight bath towels
- Window bug screens are provided, but not mosquito netting over beds. If you wish to purchase a net they should be for twin size and no-see-ums mesh size.

PERSONAL SUPPLIES

- Personal toiletries (biodegradable soaps and shampoos are encouraged)
- Antibacterial wipes or lotion (good for cleaning hands while in the field)
- Personal first aid kit (e.g., anti-diarrhea pills, antibiotics, antiseptic, itch-relief, pain reliever, bandages, blister covers, etc.) and medications
- Baby powder (recommended by field staff to relieve chafing in the hot, humid environment)
- Small Bottle of Aloe Vera or equivalent skin calming cream (good for bug bites and sunburn)
- Spending money and money to cover the non-field component of your trip
- Flashlight or headlamp with rechargeable batteries (don't forget your charger!)

OPTIONAL ITEMS

- Flip flops or sandals for the shower
- Camera, film or memory card(s), extra camera battery
- Hardware for sharing digital photographs at the end of the expedition
- Dry bag or plastic sealable bags (e.g. Ziploc) to protect equipment like cameras from dust, humidity, and water
- Books, games, art supplies, etc. for free time
- Earplugs for light sleepers
- Mosquito net
- Swimsuit for recreational activities

NOTE: Do not bring more luggage than you can carry and handle on your own. If traveling by air and checking your luggage, we advise you to pack an extra set of field clothing and personal essentials in your carry-on bag in case your luggage is lost or delayed.



PROJECT STAFF

YOUR RESOURCES IN THE FIELD



NOTE: The specific staff scheduled to run your team is subject to change.

DR. NATALIA A. ROSSI is the Cuba Country Manager for the Mesoamerica and Western Caribbean Program at the Wildlife Conservation Society. Natalia has a Ph.D. in Ecology, Evolution and Environmental Biology, a Master of Philosophy in Ecology and Evolutionary Biology, and a Master of Arts in Conservation Biology from Columbia University. She also has a Licenciatura en Ciencias Biológicas from the Universidad de Buenos Aires, Argentina. Since 2009, Natalia Rossi has carried out conservation projects in Cuba in collaboration with WCS, Columbia University, and AMNH, leading numerous expeditions—including the Zapata and Birama Swamps in Southern Cuban archipelago, and the Alejandro de Humboldt National Park—as well as facilitating expert-workshops and other types of academic exchanges between the US and Cuba.



M.SC. LUCIA HECHAVARRÍA SCHWESINGER and **M.SC. MAIKEL CAÑIZARES MORERA** are experts from the Institute of Ecology and Systematics of Havana, and have advised several undergraduate and graduate students in their theses focusing on animal and plant ecology. In addition, they have led numerous field practices for students of biology and natural sciences from Cuban universities and research centers. Maikel is the President of the Cuban Zoological Society, and has studied parrot ecology and behaviour for over a decade, pioneering efforts to use artificial nests to aid the recovery of parrot populations across Cuba. He has led dozens of expeditions with expert ornithologists, bird watching groups, and was co-instructor of more than 15 courses on conservation to young researchers, protected area technicians, rangers, and campesinos throughout Cuba since 2002. In addition, Luci and Maikel have been involved in the organization of environmental festivals and annual counts of parrots in Central Cuba involving volunteers from local rural communities (both children and adults).



RECOMMENDED READING

YOUR RESOURCES AT HOME

RESOURCES

ARTICLES

- <https://www.lonelyplanet.com/cuba/havana>
- <http://www.birdscaribbean.org/2016/04/on-the-caribbean-birding-trail-in-cuba/>
- <http://cubaexplorer.com/birds-of-cuba/>
- https://www.nytimes.com/2016/07/16/opinion/cuba-a-country-frozen-in-time.html?rref=collection%2Ftimestopic%2FCuba&action=click&contentCollection=world®ion=stream&module=stream_unit&version=latest&contentPlacement=1&pgtype=collection
- http://fm2.fieldmuseum.org/rbi/results_cub09.asp
- <http://datazone.birdlife.org/userfiles/file/IBAs/CaribCntryPDFs/cuba.pdf>
- <http://fieldguides.fieldmuseum.org/guides/guide/155>

BOOKS

- “Cuba Travel Guide” by the Lonely Planet
- “A Field Guide to the Birds of Cuba” by Orlando H. Garrido, Arturo Kirkconnell
- “Endemic Birds of Cuba: A Comprehensive Field Guide. Including West Indian endemics residing in Cuba” by Nils Navarro

PROJECT-RELATED WEBSITES

- <http://earthwatch.org/Expeditions/Mapping-Biodiversity-in-Cuba>

EARTHWATCH SOCIAL MEDIA

- FACEBOOK: [facebook.com/Earthwatch](https://www.facebook.com/Earthwatch)
- TWITTER: twitter.com/earthwatch_org
- INSTAGRAM: [instagram.com/earthwatch](https://www.instagram.com/earthwatch)
- BLOG: <https://blog.earthwatch.org/>
- YOUTUBE: [youtube.com/earthwatchinstitute](https://www.youtube.com/earthwatchinstitute)



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YOUR RESOURCES AT HOME

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- Iturralde-Vinent MA, MacPhee RD (1999) *Paleogeography of the Caribbean region: implications for Cenozoic biogeography*: American Museum of Natural History.
- Muñoz AH (2014) *Loros de Cuba y su conservación*, Lulu Press, Inc.
- Savage JM (1991) *Biogeography of the West Indies. Past, Present and Future*. *Systematic Biology* 40: 110-111.



EMERGENCY NUMBERS

AROUND-THE-CLOCK SUPPORT



MESSAGE FROM EARTHWATCH

DEAR EARTHWATCHER,

Thank you for joining this expedition! We greatly appreciate your decision to contribute to hands-on environmental science and conservation. It is volunteers like you who fuel our mission and inspire our work.

While at Earthwatch, I've had the opportunity to field on a few expeditions, most recently in Kenya with one of my daughters. Each expedition has touched me deeply, and made me proud to be able to roll up my sleeves alongside my fellow volunteers and contribute to such meaningful work.

As an Earthwatch volunteer, you have the opportunity to create positive change. And while you're out in the field working toward that change, we are committed to caring for your safety. Although risk is an inherent part of the environments in which we work, we've been providing volunteer field experiences with careful risk management and diligent planning for nearly 45 years. You're in good hands.

If you have questions as you prepare for your expedition, we encourage you to contact your Earthwatch office. Thank you for your support, and enjoy your expedition!

Sincerely,



Scott Kania
President and CEO, Earthwatch





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