

Timeline and Checklist

In preparing for your upcoming Earthwatch expedition, please ensure that you:

Immediately

- Read this Expedition Briefing and all enclosed materials thoroughly.
- Book an appointment with a doctor; you will need him or her to sign the Health section of your Earthwatch Participation Form.
- Make sure you understand and agree to Earthwatch policies and participant responsibilities.

At least 90 days prior to your expedition start date

Complete and return your volunteer forms. **Below are the specific forms required for this expedition:**

- Earthwatch Participation Form for Teens
- Travel Form

European volunteers can download forms on: earthwatch.org/europe/volunteerforms

US/North American volunteers can download forms at: earthwatch.org/volunteerforms

Australian volunteers can download forms on: earthwatch.org/australia/expeditions/volunteer_forms/

Japanese volunteers can download forms on: earthwatch.jp/getinvolved/condition/formdownload-i.html

- Pay any outstanding balance on the minimum contribution for your expedition.
- Book travel arrangements (see the *Rendezvous* section for details).
- If you plan to purchase additional travel insurance, note that some policies require purchase when your expedition is booked (see the *Insurance* section for more information).
- If traveling internationally, make sure your passport is current and obtain a visa for your destination country, if necessary (see the *Passports and Visas* section for more details).
- Make sure you have all the necessary vaccinations for your project site (see the *Health Information* section).
- Purchase a guide book for your destination country.
- Bring your level of fitness up to the standards required (see the *Project Conditions* section).

At least 60 days prior to your expedition start date

- Review the packing list to make sure you have all the clothing and any special equipment needed.
- Obtain any necessary prescription medications that will be needed for your travels.

Up to 30 days before you leave for the expedition

- Read any required reading or websites recommended by the Earthwatch scientist(s) for your expedition.
- Make sure you have enough personal funds for your expedition (see the *Travel Planning* section).
- Leave the Earthwatch emergency contact number with a friend or relative (see the *Emergency Contacts* section).
- Leave a copy of your passport, visas and airline tickets with a friend or relative.
- Confirm your travel arrangements.

Note: If you have signed up for an expedition within 90 days of the start date, you must return your fully completed volunteer forms as soon as possible.

Costa Rican Coffee

From Community to Cup

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General Information

Project title	Costa Rican Coffee From Community to Cup
Earthwatch scientists	Sebastián Castro Tanzi , Ph.D. Student, Plant and Soil Science Department, University of Vermont Dr. John E. Banks , Professor of Environmental Science, Director of Undergraduate Education and Director of International Programs, University of Washington, Tacoma María del Milagro Granados Montero , Adjunct Professor and Sub-Director of the Crop Protection Research Center, University of Costa Rica
Expedition Dates	Team 7: August 4 – 11, 2012
Expedition length:	8 days
Team size max:	12 participants
Note:	This team is reserved for participants 15 to 18 years of age. (18-year-olds may only participate if they have just finished their last year of high school.) It may also be possible for 16- and 17-year-olds to participate on standard teams if accompanied by a parent or guardian. Contact Earthwatch for more information and see <i>Volunteers Under 18 Years of Age</i> in the <i>Passports and Visas</i> section for traveling advice for minors.

Emergency Contacts

Emergency contact number at Earthwatch headquarters in the United States:

+1 (978) 461-0081

+1 (800) 776-0188 **Note:** The 800-number works as a toll free call *only* for calls placed within the United States.

After business hours, leave your message with our live answering service. State that you have an emergency communication and leave a clear message with the name of the field program, your name, location from which you are calling, and if possible, a phone number where you can be reached. An Earthwatch staff person will be contacted and will respond to your call within one hour.

Medical and Security Assistance Helpline Numbers (For assistance while in the field)

When calling any of the helplines, please mention Earthwatch and policy reference number 560020011200.

CEGA Emergency Medical & Travel Assistance:

+44 (0)20 3059 8770

You may call this number collect or reverse charges if necessary in a medical emergency.

Henderson Risk Security Assistance and Advice:

+44 (0)20 3059 8772

axisenquiries@hendersonrisk.com



Dear Earthwatcher,

Welcome to Earthwatch! We greatly appreciate your decision to contribute to hands-on environmental science and conservation. As an Earthwatch volunteer, you have the opportunity to create positive change. Each year we connect thousands of people just like you with research projects—approximately 65 projects in more than 35 countries—where they can participate in the fieldwork necessary to understand and help an array of species, habitats and cultures. These projects focus on **climate change, cultural heritage, ecosystem services, and oceans.**

We are committed to caring for the safety of all those involved in our activities anywhere in the world. Although risk is an inherent part of the environments in which we work, through careful risk management and diligent planning we believe that all participants can have educational and inspirational Earthwatch experiences. We've been providing volunteer field experiences **for 40 years**, so you're in good hands.

It is essential that you carefully read your Expedition Briefing and fully complete the volunteer forms so that you are prepared. Your Expedition Briefing includes important information such as instructions for reaching the rendezvous point, what risks are present on the research project and how to avoid them, what to pack, what immunizations you need, how to physically prepare for your expedition, and more. It also explains the research being conducted on the project, why it's important, and what role you'll play as an Earthwatch volunteer.

Well-prepared volunteers are better able to enjoy the unique and exciting experiences that an Earthwatch expedition offers and will be more helpful to the scientists' important work. Open-mindedness, the ability to work on a team, and a desire to learn are all keys to a successful and enjoyable Earthwatch experience. We hope this expedition will inspire you to get more involved in conservation and sustainable development priorities—not just out in the field but also when you return home. We encourage you to share your experiences with others, and to transfer your skills and enthusiasm to environmental conservation efforts in your workplace, community, and home.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Ed Wilson", written over a light blue horizontal line.

Ed Wilson
President and CEO

Coopetarrazú R.L.

Dear Earthwatch Volunteer,

We are delighted to welcome you to *Costa Rican Coffee From Community to Cup*, the Earthwatch field research initiative taking place in the Tarrazú region of Costa Rica. We hope this experience will be transformative for you as you learn more about coffee cultivation and culture, sustainability, and the role you can play in creating a more sustainable future.

You will be participating in a large-scale research project with the Coopetarrazú farmers' cooperative in central Costa Rica. The overall goal of this project is to understand the practices that lead to more sustainable production of coffee under the risk of climate change and soil acidification. To assist in that process, you will help to collect information from 14 different coffee farms along the altitudinal gradient found in Tarrazú. You will sample coffee plants and gather data on important features of the landscape such as shade trees, soils, and coffee productivity. In addition, we will map the location of the farms using Global Positioning Systems (GPS) and Geographical Information Systems (GIS). These data, combined with existing soil fertility maps and digital elevation models, will allow us to identify farms at risk for soil degradation and those with high yielding potential. The results will also support the development of less intensive, more agroecological strategies for managing soil fertility.

As a volunteer in this project, you will also help establish ways of enhancing tree biodiversity in the landscape while avoiding outbreaks of fungal disease that affect the coffee crop. For this, you will help to develop a protocol to characterize the incidence and severity of fungal diseases, and help characterize the community of shade trees and ground cover plants.

This Expedition Briefing includes important information that will be useful to you in preparing for your trip. Please read it carefully to ensure that you are prepared for your expedition. Within this Expedition Briefing, you will find a brief description of the project, information about traveling to Costa Rica, a suggested packing list for things to take with you, and a link to forms that you must fill out prior to your expedition. Please get started on these materials right away so you will have time to resolve any issues or problems that come up.

Thank you for your passion and your commitment to this project. We look forward to working with you in Costa Rica!

Best Wishes,

Sebastián Castro Tanzi
Earthwatch scientist

Dr. John E. Banks
Earthwatch scientist

Natalia Ureña Retana
Field Center Manager

Preparing For Your Expedition

Please consider this Expedition Briefing required reading for participation in the project and bring it with you to the field.

The Expedition Briefing is presented in four main parts:

- 1) The Research
- 2) Daily Life in the Field
- 3) Travel Planning
- 4) Project Conditions

This briefing will describe the objectives and methods of the scientific research you will be contributing to on this trip, as well as the specific tasks in which you will participate. It will also answer your questions about travel, the research area, the living and working conditions that you will encounter. It is important to read this information to truly understand the work you will be contributing to and the logistics of your trip.

This Expedition Briefing includes the most accurate information available at the time of your Earthwatch scientist's project planning; however, the precise work that you do may differ somewhat. Please keep in mind that research requires improvisation. Research plans, especially in the context of field research, evolve in response to new findings, as well as to unpredictable factors such as rainstorms, equipment failures, politics, etc. The nature of research expeditions requires flexibility in plans and expectations. *To maximize the success of your experience, remember to expect the unexpected, be tolerant of repetitive tasks, and try to find humor in difficult situations.* We will keep you informed if there are any major changes in the research plan or field logistics before you go into the field.

Physical and Intellectual Preparation

Reading in advance will enhance your understanding of the scientific questions addressed by the research. In addition, we encourage you to read novels and/or history books based in or near the research area of your expedition. Such texts will provide you with an interesting introduction to the location in which you will be living and working, and may help you perceive many unique features of the local culture and landscape.

Also, pay attention to the *Project Conditions* section. Regular exercise is important training for doing fieldwork. Your ability to quickly adapt to your project's physical demands will enhance both your enjoyment of the work and the productivity of your team. The Expedition Briefing describes the physical demands of the project and may suggest specific activities for advance conditioning.

Consider working on skills that will help you support, broaden, and recall this research experience. For instance, we encourage volunteers who will be participating in field biology research to take walks and to pay more attention to their surroundings. Begin developing the patience and observational skills of a scientist.

Journal writing: We encourage you to bring a journal to record your daily observations, thoughts, ideas, stories, drawings, and/or feelings. You may also choose to take notes on scientific lectures, discussions, and findings. Your observations and field notes can be just as important to the research team as those gathered by more experienced staff members. And whether you can draw or not, sketches of your observations will also help you remember your experiences and describe them to others.

Photography and art: Bring along your camera and/or art materials. Though research tasks take precedence and require focus, we encourage you to record your experience through photographs or drawings whenever working conditions allow.

As stories develop out of your day-to-day experience, keep an eye out for images to illustrate these stories. Action photos of your teammates working on a research task, of the research site, and of the research subject provide important visuals for presentations. If your expedition inspires any artwork that you are willing to share, Earthwatch Institute welcomes the opportunity to incorporate your photographs, drawings, watercolors and cartoons in its various publications and online.

Emotional Preparation

Most likely, you will be working in a place you have never been before, with people you have just met, on tasks that require new knowledge and skills. Some aspects of your expedition, whether physical, social or intellectual, are bound to challenge you and prompt emotional highs and lows. Be mindful of these feelings and don't hesitate to communicate concerns to the research staff.

The following sequence of feelings is typical:

- **Stage 1:** Everything is new and exciting; you feel terrific.
- **Stage 2:** You feel disappointment in the reality of the situation; for instance, it has been raining for days and the work is more difficult than you expected it to be.
- **Stage 3:** Your emotions reach an even plateau; you understand and enjoy the work, and see that you are making a contribution.

Being Part of a Team

Your team consists of a relatively small group of volunteers and project staff. Many people are not used to the close living conditions and/or physical demands common to field research. The ability to get along with others is of paramount importance. Your expedition may include group activities, such as meal preparation and clean up, which require as much teamwork as the research itself. At the start of your project, staff and volunteers will establish ground rules that will ensure a fun, safe, respectful, inclusive, and productive experience for the whole team.

When abroad or in another part of the country, you are viewed as an ambassador of your home region. Be courteous and respectful of local customs, as well as the diverse backgrounds and customs of your teammates. Your professionalism and general demeanor are important to your Earthwatch scientist(s), Earthwatch, and all volunteers who may follow you. The poor judgment of one team member, for example violating program rules or possessing illegal drugs, could jeopardize the entire mission of this and future expeditions.

The Research

Costa Rican Coffee From Community to Cup

Introduction

Coffee is one of the most widely grown perennial crops and is a major source of export revenue for many tropical countries. It is the world's fifth most widely traded commodity, with annual sales exceeding US\$70 billion, of which only US\$5 billion remains in the producing countries. In the tropics, over 25 million farmers in 56 countries export coffee, and an estimated 100 million people are dependent on coffee for income (International Coffee Organization: ico.org).

Strategies for producing coffee crops vary globally, from the more traditional rustic practices, where coffee is grown under the natural shade canopy of the original forest cover, to polyculture systems with moderate diversity and varied tree canopy, to much more intensive farming practices involving either a limited number (one or two) of shade tree species, or no shade trees at all, with coffee bushes fully exposed to the sun.

The intensification of farming practices in suboptimal growing conditions has been compounded by a history of less desirable farm management practices. These include the use of lower-quality but higher-yielding coffee varieties, high input of fertilizer, lack of liming to increase nutrient availability in highly acidic soils, conversion to full-sun coffee, farming on excessively steep slopes, and use of highly toxic pesticides and herbicides. Currently there is increased recognition that such intensive farming practices are unsustainable for the farming community, for maintaining coffee yield, and for the environment.

Coffee production in Costa Rica exemplifies one of the most dramatic shifts toward intensive coffee production, where many farmers are producing coffee under full sun using external inputs such as synthetic fertilizers, herbicides, fungicides, and pesticides.

Most Costa Rican farms (92%) are small (less than 5 hectares) and are situated in regions with high environmental heterogeneity. Within a farm, fields can be as little as 0.2 hectare, and fields may differ greatly in altitude, exposure, and slope. In addition, it is expected that warmer temperatures will occur in this region as a consequence of climate change. These variables impact the type of land management, disease incidence, productivity, and the quality of coffee.

Research Objectives and Outcomes

Our current research project builds on our ongoing collaboration with Coopetarrazú R.L., a local coffee processing cooperative. We are developing strategies jointly with farmers to conserve the beneficial properties of soil and reduce their carbon footprint.

Specific goals coffee farmers in Tarrazú are working toward include:

1. Improving soil quality
2. Increasing and diversifying the shade tree canopy and ground cover in their coffee plantations
3. Reducing the dependence on agrochemicals
4. Maintaining or increasing the cup quality of their coffee

Earthwatch has been supporting the achievement of these goals through outreach and field research initiatives for the past 5 years.

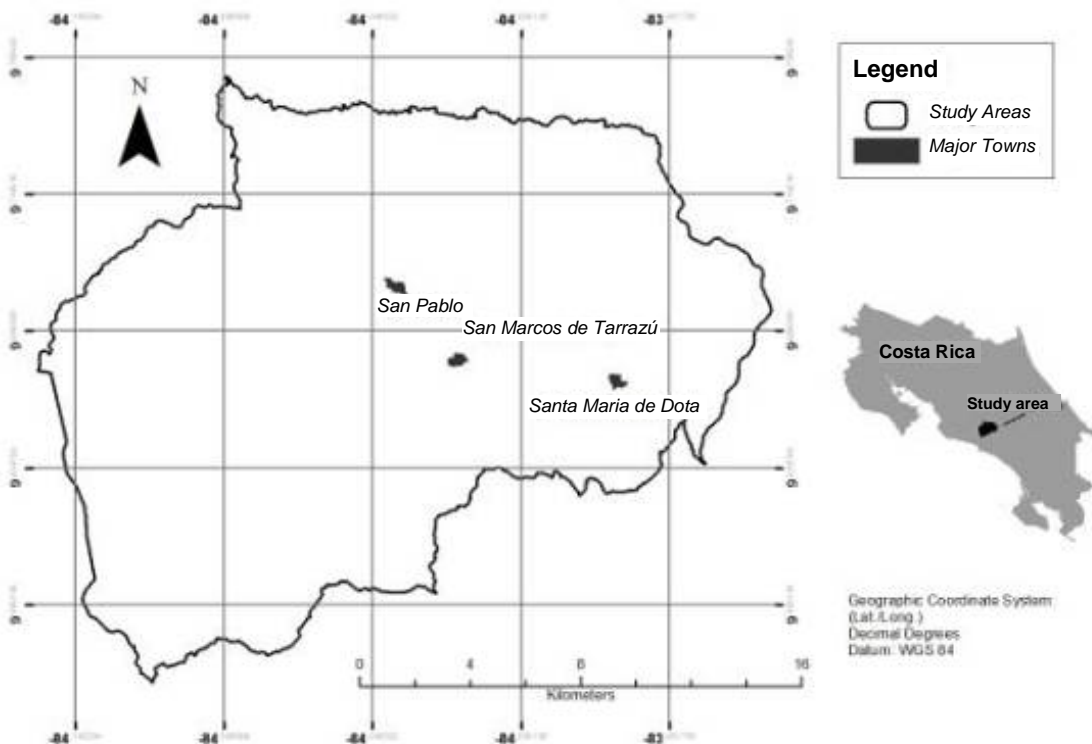
This project also investigates the impact of conserving nearby forest fragments and their potential to boost populations of native pollinators, especially bees, and to substantially improve yield. The program is participatory and includes major stakeholders (farmers, buyers, and the general public) in its design, as well as field research and dissemination components. Regional stakeholders include Tarrazú coffee farmers, Coopetarrazú, the University of Costa Rica, the Instituto Nacional de Biodiversidad (INBio), and the Starbucks Agronomy Unit, among others.

Finally, the *Costa Rican Coffee From Community to Cup* expedition is researching fungal diseases that affect the coffee plants, as these are currently considered to be among the most important constraints to coffee production in the Los Santos region. In the 2010-2011 Costa Rican coffee harvest, approximately 12% of the total national production was lost due to the American leaf spot disease (*Mycena citricolor*), known locally as *ojo de gallo*. Current management practices of the fungus rely on excessive use of fungicides and pruning of shade trees and canopy. Given the potential increase of temperature in this region associated with climate change, there is concern that epidemics of this fungal disease will only get worse. A better understanding of the development and growth of the disease will inform the design of more sustainable management strategies.

Volunteers will assist in the collection of data toward these objectives by visiting 14 coffee farms strategically located across seven sites that characterize the elevation and soil gradients found in the Los Santos region. At these farms, volunteers may collect soil samples; characterize the shade tree, coffee canopy, and ground cover plants; estimate coffee production in plots receiving different nitrogen rates, and identify site and environmental factors associated with the survival of *ojo de gallo*.

These data will help scientists, cooperative managers, and farmers to make comparisons and draw conclusions about how to better manage their land sustainably.

Study area in Los Santos Region, Costa Rica



PROJECT STAFF

Earthwatch scientists

Sebastián Castro Tanzi is originally from Costa Rica and is the lead field scientist for the project. After finishing studies in agronomical engineering with an emphasis on plant production sciences, Sebastián worked in the commercial landscaping industry, where he became aware of the negative impact of development on land resources. He later went on to obtain a professional master's degree in geo-information sciences and Earth observations with an emphasis on planning and coordination in natural resource management at the International Institute for Geo-information Science and Earth Observation in The Netherlands. He is currently enrolled in the Ph.D. program in the Agroecology and Rural Livelihood Group in the Plant and Soil Science Department of the University of Vermont in the United States. Sebastián's current interests include the integration of information technologies in natural resource management to improve monitoring and further planning toward sustainability. He believes Tarrazú offers an ideal setting for this, due to the farmers' capabilities and interest in improving the way they manage their coffee farms. He hopes that participants in these Earthwatch expeditions will have the chance to experience how state-of-the-art information technologies can be combined with traditional cropping practices to procure more sustainable coffee production.

Dr. John E. Banks is a professor of environmental science and the director of international programs at the University of Washington in Tacoma. He earned a Ph.D. in zoology at the University of Washington in Seattle, a master's degree in applied mathematics at the University of Southern California, and a bachelor's degree in mathematics from Pomona College in California. Dr. Banks has been using a mixture of field experiments and mathematical models to explore issues among insects and managed and natural vegetation for the past several years. He is particularly interested in the effects of integrating natural vegetation into agro-ecosystems in order to bolster crop production, insect pest control, and biodiversity. His recent research projects include conservation studies in Yucatán, Costa Rica, and Kenya, and collaborations with colleagues in Sweden and the United States using mathematical models to explore population dynamics in biological control and ecotoxicology. Dr. Banks plans to lead Team 2 of the *Costa Rican Coffee From Community to Cup* expedition in April, 2012.

María del Milagro Granados Montero is an adjunct professor at the Universidad de Costa Rica (UCR) where she received her bachelor's degree in agronomy and her master's degree in crop protection. She is also the subdirector of the Crop Protection Research Center at UCR. Milagro is currently in the second year of a doctoral program in sustainable tropical agricultural systems with UCR and Iowa State University in the United States. Her work focuses on the American leaf spot disease (*Mycena citricolor*), a fungal disease that affects coffee plants and can have a significant impact on success of coffee production in the region. Milagro plans to lead the first and last teams (Teams 1 and 9) of the 2012 season.

Earthwatch field staff

Natalia Ureña Retana is the field center manager for the *Costa Rican Coffee From Community to Cup* project, and has been working at the Earthwatch Field Center in Tarrazú since its inception in 2007. In addition to running all volunteer teams, Natalia works throughout the year with regional stakeholders, including the general managers of the coffee cooperatives, agronomists, and farmers. She also leads farmer engagement programs, such as the Sustainable Coffee Leadership Program, in four coffee cooperatives in Los Santos Coffee Region. She is a tropical biologist and a specialist in integrated watershed management from the Tropical Agricultural Research and Higher Education Center (CATIE), located in Turrialba, Costa Rica. Natalia received her B.S. from the National University of Costa Rica in 2002 and her M.Sc. from CATIE in 2004.

Natalia hails from the Los Santos region in the small mountain valley of Santa María de Dota, which borders San Marcos de Tarrazú. Her father and many other members of her family are coffee farmers in this region. Natalia loves coffee and is passionate about promoting sustainable coffee production in Los Santos. She works with local schools, leading educational programs for children about conservation, the environment, and natural resources. She enjoys working and coordinating activities with stakeholders, especially farmers, and is excited to show expedition participants the many beautiful things about the area's culture, natural resources, and more.

Earthwatch field staff

An Earthwatch Teen Team facilitator will provide additional guidance, supervision, and activity organization for the expedition. Your facilitator will be there to help from the time you step off the plane for the team rendezvous to the end of the expedition. He or she will encourage team spirit by planning events such as team building exercises, presentations and recreational and cultural activities. If you have any questions or problems during your expedition, such as issues with another volunteer, homesickness, or an emergency back at home, you should feel comfortable talking to your facilitator. You should also follow the advice and expectations set by your facilitator regarding safety and personal conduct. All Teen Team facilitators have experience teaching and leading groups of teenagers and are familiar with the team dynamics necessary to make each expedition a success. (Teen: Facilitator ratio: approx. 6:1)

Staffing Schedule (Subject to Change)

Staff Member Present	Team 7
Sebastián Castro Tanzi	x
Dr. John E. Banks	
Maria del Milagro	
Natalia Ureña Retana	x
Teen Team Facilitator	x

Daily Life in the Field

VOLUNTEER TRAINING AND ASSIGNMENTS

Training

The Earthwatch scientists and research staff will provide training on the history and culture of the Tarrazú region and Costa Rica, as well as on potential hazards and how to stay safe in the field. On the first evening, volunteers will introduce themselves and share their expectations for the trip. Throughout the expedition, volunteers will work in groups with different staff in order to allow team members to share their expertise and experiences.

Coopetarrazú staff will also speak to the group, and volunteers will have the opportunity to talk with local farmers about issues and concerns in the region.

Over the course of the expedition, volunteers will have the opportunity to become immersed into the coffee community, and to gain an understanding of how people live in the region and how vital coffee production is to their livelihoods. Volunteers may also visit two of the most important coffee mills in the region in order to learn how coffee is processed. All data collection methods will be demonstrated during the second day of the expedition, and work will be carefully supervised in the field. Most of the methods used are fairly straightforward, and volunteers who pay attention to detail should be able to learn them quickly. The Earthwatch scientists will give the team a more detailed on-site project briefing when you arrive.

Assignments

Volunteers will visit between five and eight farms throughout the expedition. You will be organized in small groups, usually pairs, to conduct research tasks. Below are the tasks to be carried out by volunteers. *Note:* Not all teams will conduct all tasks. Each team will conduct a combination of the tasks below, depending on research needs.

- *Coffee plant productivity and health assessment:* You will sample random coffee plants to model their productivity and assess their health. This includes counting the number of nodes with fruits in specific branches and noting spores and wound counts of fungal diseases in leaves and pests in roots.
- *Shade tree and ground cover plant characterization:* You will note different characteristics of shade trees, such as species, height, diameter at breast height (DBH), presence of epiphyte plants, etc. The community of ground cover plants will also be described by recording species abundance and biomass. Microclimatic data may also be tracked using dataloggers.
- *Mapping coffee fields:* Using GPS receivers, you will map fields to accurately estimate their area.
- *Foliar and soil sample collections:* Volunteers will collect foliar (leaf) and soil samples to estimate the nutrient conditions both in the plant and in the soil. Some vegetation samples will be collected for incubation in the lab in order to investigate initial inoculums of fungal diseases.
- *Pollinator studies:* Team 2 will help collect observational data on pollinators visiting coffee flowers and help capture and identify pollinators from coffee farms and nearby forests.

Volunteers should be in fairly good physical condition and able to walk on steep, often slippery slopes. Because it often rains during summer afternoons, volunteers usually spend the mornings working outdoors, and the afternoons may contain a mixture of outdoor and indoor activities; indoor activities will include lectures, data entry, and preparation for the following day. On some afternoons the team will work outdoors or go on outings, as weather permits. The ability to speak some Spanish is helpful but not required.

TEAM ITINERARY AND DAILY SCHEDULE

Please be aware that weather and research needs can lead to changes in the daily schedule. Should this situation arise, your cooperation and understanding are appreciated.

Day 1

Time of Day	Activity
Afternoon	Meet; travel to San Marcos
6:30 p.m.	Dinner
Evening	Orientation and introduction to the project

Day 2

Time of Day	Activity
6:00 a.m.	Breakfast at the accommodations
6:30 a.m.	Depart for the field center
7:00 a.m.	Training sessions in the morning, including a health and safety briefing, orientation to the project site and daily schedule, and an introduction to farming practices, sustainability issues, and the research program
12:00 noon	Lunch
1:00 p.m.	Training sessions
7:00 p.m.	Dinner
8:00 p.m.	Discussion in the evening

Days 3–6

Time	Activity
5:00 a.m.	Rise and get ready for fieldwork
6:00 a.m.	Breakfast
7:00 a.m.	Fieldwork (lab work in the event of rain)
12:00 noon	Lunch in the field/lab
1:00 p.m.	Continue fieldwork or return to Coopetarrazú for lab work in the event of rain
6:00 p.m.	Return to accommodations for a short break before dinner
7:00 p.m.	Dinner
Evening	Evenings will consist of relaxation time, lab work, presentations, and/or discussions. A visit to and tour of a coffee cooperative will take place on one or two afternoons. One evening, the team will be invited to dinner at the home of a local coffee farmer.

Day 7

Time of Day	Activity
6:00 a.m.	Breakfast
7:00 a.m.	Final day of fieldwork
12:00 noon	Lunch in the field or lab
1:00 p.m.	Volunteers will finish data entry and organize the lab. Research staff will present a summary of the team's contributions to the project.
7:00 p.m.	Final celebratory dinner in the evening
9:00 p.m.	Return to accommodations to pack up

Day 8

Time of Day	Activity
7:00 a.m.	Breakfast at the accommodations
8:30 a.m.	Departure just after breakfast in order to reach the airport in time for afternoon flights

Recreational Time: Volunteers will have down time during some afternoons and evenings. Activities during these times may include discussions about coffee sustainability, documentaries and videos related to coffee production, presentations on the results of the research, and learning and training programs conducted with farmers from the coffee cooperatives to date.

Possible additional optional activities may include:

- Visit Los Quetzales National Park
- Go to a barista show in Coopedota R.L.
- Visit an organic and biointensive farm in León Cortés
- Visit an artisanal cheese farm in Copey de Dota
- Walk through the cloud forest in Santa María de Dota (diurnal or nocturnal walk)
- Visit a butterfly garden at the technical high school in Santa María de Dota
- Other options may be pursued depending on volunteer preferences

Optional activities will be at the volunteer's own expense; average costs range from US\$5 to US\$10 for each activity. Volunteers may wish to bring spending money for optional activities and the purchase of souvenirs, coffee, and other personal items (US\$100 to US\$150 is generally recommended, but you may need more or less depending on your spending habits).

The team accommodations are within walking distance of the town of Santa María de Dota. Santa María de Dota is generally considered safe and peaceful, but walking in groups of two or more is always highly recommended.

Earthwatch Recreational Time Policy

Earthwatch will accompany teen participants from the rendezvous to the end of the expedition.

If there is a recreational day during the expedition, the project staff and/or Teen Team facilitator will supervise a planned team activity or a small choice of supervised recreational activities that have been vetted and comply with Earthwatch standards. You will also have the option of remaining at the project accommodations to rest, provided supervision is possible.

ACCOMMODATIONS

Sleeping



Volunteers will stay at the Cabinas de Cecilia (Cecilia's Cabins) in the quiet and quaint town of Santa María. The cabins are rustic but comfortable, and each has its own décor and layout with a combination of single and double bedrooms, or a triple bedroom. Single and double rooms will be assigned at random, but can also be requested on a first-come, first-served basis (please contact Earthwatch with this request, and note that no room assignments can be guaranteed). Shared rooms will be occupied by people of the same gender. At times, there may be dogs in the area that bark at night, so it is recommended that volunteers bring ear plugs.

Bathrooms

Each cabin has a bathroom with toilet, sink, and warm showers.

Internet and Communications

The cabins are equipped with Wi-Fi, so it is possible to access the Internet. One computer will be made available for the use of volunteers.

Facilities and Amenities

There is a common area where volunteers may gather, which is partially enclosed to allow guests to enjoy the breezes and surrounding gardens while staying out of the rain. Cecilia's offers breakfast on site. There is also an area for checking email and watching movies; we recommend that, if you like, you bring movies, such as interesting documentaries, to share and watch in group.

For a small additional fee, volunteers may request laundry services directly from the accommodations. Visit their website at cabinascecilia.com.

Distance to Field Site

The accommodations are located in Santa María de Dota, one of the three towns in Los Santos coffee region. The Earthwatch Field Center office is located in San Marcos de Tarrazú, where Coopetarrazú and many of the fields that we visit to collect data are located. The distance between Santa María and San Marcos is about 15 minutes driving, on average, or approximately 10 kilometers.

Services and Restaurants in Walking Distance

The town center has various restaurants, one bank with an ATM, small shops, supermarkets, and an Internet café, and is about a 15-minute walk from the cabins.

FOOD

On a typical day, breakfast will be provided at the accommodations. Lunch is usually served at noon in the lab facilities, but may also be packed and taken to the field. The team will eat a homemade dinner together at the cabins in the evenings. The team may also be invited to have dinner at the home of a local farmer.

A staple of Costa Rican cuisine is rice and beans. In general, meals often include starches (rice, potatoes, plantains, etc.) with meat (chicken, beef, pork, seafood) and are usually not too spicy. While vegetarians may get meatless meals, these meals will likely be heavy on starches, and/or lacking in variety. Plenty of fresh fruits, such as mangos, papaya, pineapple, bananas, and oranges, will be available throughout the day. Volunteers are welcome to request changes to the breakfast menu if they have particular preferences.

Below are examples of the foods you might expect in the field. Please bear in mind that variety depends on availability. This list is intended to provide a general idea of food types, but it is very important that volunteers be flexible.

Breakfast: Bread, cereal, eggs, fruit, <i>gallo pinto</i> (Costa Rican rice and beans)
Lunch: Rice, beans, seafood, chicken, sausage, pork, beef, tortillas, pizza. Packed lunches in the field, will generally consist of sandwiches.
Dinner: Rice, beans, seafood, chicken, sausage, pork, beef, tortillas, pizza
Snacks/Other: Fruit, bread, cheese
Beverages: Coffee, tea, juice. Soda may be purchased at your own expense to drink with dinner.
Water: Bottled water will be available, though the tap water is fine to drink.

Special Dietary Requirements

Please alert Earthwatch to any special dietary requirements (e.g., diabetes, lactose intolerance, nut or other serious food allergies) as soon as possible, and note them in the space provided on your volunteer forms. Accommodating special diets is not guaranteed and can be very difficult due to availability of food, location of field sites, and other local conditions.

Special note to vegans and strict vegetarians: Please be aware that it is often difficult to accommodate strict vegetarians and vegans. It may be possible to get meatless meals but vegans may have a problem avoiding animal products altogether. If this is an issue, then participation on this Earthwatch expedition should be carefully considered.

Travel Planning

You are encouraged to register your travel itinerary with your embassy. For information on embassies around the world, see embassyworld.com.

- Citizens of Australia may register online at: ora.o.dfat.gov.au.
- British citizens may register online at: fco.gov.uk/en/travel-and-living-abroad/staying-safe.
- Citizens of the United States may register online at: travelregistration.state.gov.
- Citizens of other countries are encouraged to check with their appropriate embassy or consulate regarding registration.

RENDEZVOUS

The rendezvous information for this project has been removed from this web version of the expedition briefing. It is only available in the printed version of the briefing. Please do not make any travel arrangements to join an expedition without having full and up-to-date rendezvous information from Earthwatch. Full rendezvous details, including places and times are available from Earthwatch upon request prior to registration for an expedition. Please use the “Contact Us” button on the top right-hand corner of the website to get in touch with an Earthwatch representative, who will be very happy to help you.

PASSPORTS AND VISAS

Visa Information

Citizens of the United States, EU, Australia, Canada and Japan **do not** need a tourist visa for entry (for stays of less than 90 days). Citizens of other countries should check with their travel agent or a visa agency for specific visa and entry requirements. Travelers are advised to check visa regulations well in advance of traveling.

Note: If you are traveling from outside the United States to Canada, Mexico, Latin America, South America, the Bahamas or the Caribbean and have a stopover in the United States, you are required to register through the ESTA program.

Passport Information

Most volunteers traveling from outside the host country will require a passport valid for at least six months beyond the dates of travel.

Electronic System for Travel Authorization (ESTA)

Online registration is now mandatory for all visitors traveling to the United States without a visa. The Electronic System for Travel Authorization (ESTA) is used to screen short-term visitors who are citizens of the 36 countries eligible for the US Visa Waiver Program (for a list of participating countries, see http://travel.state.gov/visa/temp/without/without_1990.html).

Visitors are required to complete ESTA **at least 3 days before traveling to the United States**. Once approved, the authorization will be valid for up to 2 years if the individual’s passport does not expire in the meantime.

Applications can be submitted through the ESTA website esta.cbp.dhs.gov/esta. **Note:** As of September 2011, ESTA costs approximately US\$14.00.

Citizens of countries covered by the Visa Waiver Program (VWP) traveling to the United States for tourism or business for 90 days or less do not need to obtain a visa provided they have a valid passport (for exceptions see the VWP Quick Reference Guide on travel.state.gov/pdf/VWP-QuickReferenceGuide.pdf).

For Volunteers Requiring Visas ONLY: Essential Information

Type of Visa	Volunteers requiring a visa must get a TOURIST VISA .
Where to Get a Visa	Contact the nearest Costa Rican embassy or consulate to find out how to apply for your visa. Please note that this process can take weeks or more. We strongly recommend using a visa agency , which can both expedite and simplify the process. See below for a list of visa agencies.
Required Information	You will need to send your passport (valid for at least 6 months beyond your stay), a Visa Application and Immigration Form, two to four passport-size photos, and payment to the embassy or visa agency (if applicable). Please be sure that your passport is valid for at least 6 months beyond your stay.
Contact Information	You may be required to list the following contact information on your Visa Application and Immigration Form: This information is available in the print version of the briefing only.
Cost of a Visa	Generally between US\$40 and US\$100, but varies from country to country and can potentially cost up to US\$180 . A visa agency will charge an additional fee.

Note: The purpose of your visit is for vacation, holiday or travel. Foreign immigration officials do not always understand the concept of a “working vacation” or “volunteering.” Words such as “working,” “volunteering,” “research,” or “scientific expedition” can raise questions concerning the country’s foreign labor laws and/or prompt questions about official scientific research permits and credentials, etc., to which volunteers on their own will not be equipped to respond. All required research permits for the project are in place and have been approved by the proper authorities.

Visa Agencies

In the United States	In Europe	In Australia
Trivisa* 290 5th Avenue, 4th Floor New York, NY 10001 Tel: (212) 613-2223 Fax: (212) 613-2287 Hours: 9:00 AM to 5:00 PM EST Web: trivisa.com (*See the website for additional offices)	CIBT, Inc.-UK 25 Wilton Road Lower Ground Floor Victoria SW1V 1LW Tel: 0844-736-0211 Fax: +44 (0) 207-828-5411 Calling from Europe outside UK: +44 (0) 207-802-1000 Email: info@uk.cibt.com Web: uk.cibt.com (has alternate address for urgent requests)	Ask your travel agency if it can send your visa application on your behalf.

Volunteers Under 18 Years of Age

Entry to Foreign Countries

In an effort to prevent international child abduction, many governments have initiated procedures at entry/exit points to protect minors. Thus, if a minor will be traveling with only one guardian, or if for any reason he or she will be traveling alone (such as for a Teen Team), it may be necessary to have a notarized letter from all legal guardians stipulating that the minor may travel unaccompanied or in the presence of a single guardian. This letter must give an explanation for why only one parent or someone other than a parent is signing the letter. For example, if one parent is deceased, only one parent has legal guardianship, or people other than the parents are legal guardians, the letter should state that.

Airline Documentation Requirements

Airlines may also have documentation requirements for unaccompanied minors. Parents of minors are responsible for checking with each airline that their child will be flying to ensure that sufficient documentation is provided. This could include a copy of a birth certificate or a notarized letter stating that the minor has his or her parent's permission to travel alone or with only one parent.

Note: Requirements by specific countries and airlines vary and change frequently. You **MUST** keep informed of the requirements on your own to avoid problems at immigration. If a letter is not available, the volunteer under 18 can be refused entry into the country or on a flight. There is nothing Earthwatch Institute can do to help in this circumstance.

Additional Passport and Visa Resources

- For Japanese citizens: rainbowt.jp/travel/visa_top.html
- For Australian citizens: passports.gov.au and dfat.gov.au/visas/index.html
- For US citizens: passportvisasexpress.com
- Travel Document Systems: traveldocs.com/index.htm

INSURANCE

Trip cancellation and your travel medical risks, including medical expenses and emergency medical evacuation, while you are traveling. This coverage is valid in the country of your Earthwatch expedition (**Note:** For US volunteers, as long as the expedition is over 100 miles from your place of residence) and during travel to and from your expedition. Please see the Earthwatch website for more information on insurance provision.

If you have additional vacation time before and/or after your Earthwatch expedition that forms part of your overall time away from your place of residence, this additional vacation time is not covered under this policy. If you are in any doubt as to whether your travel plans before and/or after your Earthwatch expedition constitute additional vacation time, please contact the insurance provider.

This insurance policy is secondary to your existing health insurance policy (e.g. the NHS in the UK).

If you signed up through Earthwatch UK/Europe, or Earthwatch Japan:

Details of the included insurance policy can be found at earthwatch.org/europe/insuranceinfo.

Please refer any queries regarding this policy to Earthwatch's Operations department at +1 978 450 1232 or insurance@earthwatch.org.

You can find information about additional insurance available to UK residents for coverage before or after your Earthwatch project at earthwatch.org/europe/insuranceinfo. Should you have any questions about whether you require coverage for your travel plans, please review the policy summary and the FAQs at the website above.

If you signed up through Earthwatch US:

Details of the US insurance policy can be found at earthwatch.org/insurance.

Please refer any queries regarding this policy to Earthwatch's Operations department at +1 978 450 1232 or insurance@earthwatch.org.

You can find information about additional insurance available for coverage before or after your Earthwatch project at earthwatch.org/insurance. Should you have any questions about whether you require coverage for your travel plans, please review the policy summary and the FAQs at the website above.

Emergency Medical and Evacuation Assistance (For All Volunteers)

Emergency medical and evacuation assistance is available for all Earthwatch participants from CEGA Medical, a twenty-four-hour international emergency medical and evacuation service. Please see the contact information on the *General Information* page.

For non-emergency information from CEGA, such as advice on visa and vaccine requirements, you may call the CEGA Non-Emergency Medical & Travel Advice helpline at **+44 (0) 20 3059 8770**.

ADDITIONAL TRAVEL INFORMATION

Luggage

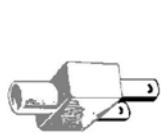
- *General considerations:* Do not bring more luggage than you can carry and handle on your own. If traveling by air and checking your luggage, you are advised to pack an extra set of field clothing and personal essentials in your carry-on bag in case your luggage is lost and/or takes several days to catch up with you. Many airlines have strict baggage policies. Please check with your airline(s) on baggage weight limits, liquid restrictions, fees for checked baggage, etc.
- *Checking luggage:* Please note that if you will be taking an international flight that has one or more connections within the country of your destination, it will be necessary to collect any checked bags at the airport where you first arrive in the destination country. After proceeding through customs, you will have to recheck your luggage before flying on to your final destination.

Money Matters

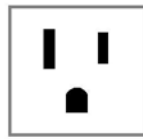
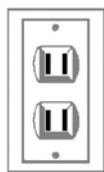
- *Local currency:* Costa Rican colones (CRC). US dollars are also often accepted both in San José and in the field. See xe.com/ucc for currency information and exchange rates.
- *Personal funds:* During the expedition, you may wish to purchase snacks or beverages, and/or buy souvenirs. Depending on how much you wish to spend on personal items, US\$100–200 or the equivalent should be plenty. In Los Santos Coffee Region, you can purchase high-quality coffee and souvenirs related to coffee, so please bring extra money for that if you would like to do so.
- *Airport fees and/or departure taxes:* Be prepared to pay the departure tax of US\$26 in cash (US dollars or Costa Rican colones) or by VISA credit card (processed as a cash advance) at the airport upon checking in for your flight home.

Your Destination

- *Language:* Spanish. In San José and other cities, many people speak some English. The project will be conducted in English.
- *Cultural considerations:* Costa Rica is a somewhat conservative country with great pride and respect for traditions. Even in warm months, rural Costa Ricans do not generally wear revealing shorts and tank tops. Volunteers should respect the Costa Rican culture by dressing appropriately and avoiding overly revealing clothing.
- *Electricity:* 240 volts, 60 hertz, Type A and Type B plugs (as in the United States). For additional information, see kropla.com/electric2.htm.



Plug Type A



Plug Type B

- *Time zone:* GMT/UTC -6. For time worldwide with GMT/UTC, see worldtimeserver.com.

- *Telephone Dialing codes:* When calling Costa Rica from another country, dial the home country's international dialing code, followed by (506) and the number. You will need to add a "2" after the "506" for all Costa Rican landline numbers and an "8" after the "506" for all Costa Rican cell phone numbers. When calling within Costa Rica, omit the (506) and dial the eight-digit number (i.e. including 2 or 8 for landline and cell phone numbers respectively). When calling another country from Costa Rica, dial (00), followed by the other country's country code and the number. **Note:** you should check with your cell phone provider to obtain any carrier-specific dialing codes you may need; many providers have dialing procedures that may differ in whole or in part from these directions. For additional information [see kropla.com/dialcode.htm](http://see.kropla.com/dialcode.htm).

Country Information

- UK Foreign and Commonwealth Office: fco.gov.uk/en/travel-and-living-abroad/
- Country information from around the world: countryreports.org
- National Geographic Map Machine: plasma.nationalgeographic.com/mapmachine
- US State Department: state.gov
- Online unit conversions: onlineconversion.com
- Worldwide weather: wunderground.com or tutiempo.net/en
- ATM locator: visa.via.infonow.net/locator/global/ or mastercard.com/atmlocator/index.jsp

RECOMMENDED READING

Below are additional recommended materials for those interested in further preparing for the expedition.

Project-Related Websites

- Coope Tarrazú: cafeTarrazú.com
- Cabinas Cecilia: cabinascecilia.com/

Project Field Report

Each Earthwatch Institute-supported project submits a report on the past year's research and results to Earthwatch, generally on an annual basis. The most recent field report for this project is available online through earthwatch.org/FieldReportPDF/Tarrazu_FieldReport2009.pdf. **Note:** Reports are not available for all projects.

HELPFUL RESOURCES

Please see Earthwatch's Volunteer Resources pages for additional information on:

- Travel agencies with whom Earthwatch volunteers can get preferential rates
- Recommended kit and clothing providers
- Recommended travel booksellers

Volunteers who sign up through our US office, visit: earthwatch.org/volunteerresources

Volunteers who sign up through our UK office, visit: earthwatch.org/europe/volunteerresources

Project Conditions

Please show this section to a doctor when he/she is completing the Health section of your Earthwatch Participation Form. Be sure to discuss vaccination requirements with the doctor well in advance of your departure date. See the Health Information section for vaccination information.

To the doctor:

This patient has volunteered to join a field research team that has specific physical demands of which you and the patient should be aware. **We need your accurate evaluation of this patient's ability to meet the conditions detailed below in order to care for his or her health and safety, and to assess that he or she can participate fully and effectively.**

General Conditions

Costa Rica is a small, mountainous country, and the terrain is generally steep. The climate can vary significantly, from arid lowlands to cooler but humid highlands to hot and humid areas. It is usually mild at San Marcos de Tarrazú. The area is 1,350 meters (4,400 feet) above sea level, and average daily temperatures are around 71°F/22°C. During the rainy season, from late April to December, nights can be chilly. The sun rises at approximately 5:00 am and sets at approximately 6:00 pm each day.

The weather is expected to vary within the limits below.

Rainy season: April – December	
Humidity	75% to 83%
Temperature range	55°F (13°C) to 80°F (27°C)
Altitude	4429 feet to 5,906 feet (1,350 m to 1,800 m)
Rainfall	118 in/ 300 cm per year

Essential Eligibility Criteria

All participants must be able, independently or with the assistance of a companion, to:

- Follow verbal and or visual instructions.
- Enjoy being outdoors all day in all types of weather in the potential presence of wild animals and insects.
- Tolerate approximately 27°C (80°F) heat, direct sun, high humidity levels, and cooler temperatures down to approximately 18°C (34°F) at night.
- Traverse uncleared, steep, rocky, often muddy or wet terrain, possibly through thick underbrush. Total time hiking is less than approximately 5–6 hours per day; total distance is less than approximately 5 miles/8 kilometers per day.
- Tolerate working at an altitude of up to approximately 5,906 feet/1,800 meters above sea level.
- Tolerate working on agricultural lands, in the potential presence of pollens and insects, and where pesticides and fertilizers may be in use.
- Carry personal daily supplies such as lunch, water, and some small field equipment.
- Get low enough to access and collect samples on the ground and in the brush up to 20 times a day.
- Get oneself up into and down out of a four-wheel-drive vehicle, minibus or car and ride, seated with seatbelt fastened, for up to approximately an hour at a time, for a total of about approximately 2 to 3 hours a day.

POTENTIAL HAZARDS

If you feel ill once you return from your trip, make sure you inform your doctor that you have recently returned from a tropical region.

Hazard Type	Associated Risks and Precautions
Transportation	Volunteers will be transported in vehicles by project staff or professional drivers; volunteers are not permitted to drive. Four-wheel-drive vehicles will be used when appropriate. Seatbelts must be worn when the vehicle is in motion. Transportation risks include unsafe driving, poorly maintained roads (in particular, large potholes), poor visibility due to lack of lighting and fog or rain, the possibility of landslides in some areas during heavy and/or persistent rains, and the use of roads by pedestrians, bicyclists, and farm animals. Roads in urban areas are paved, but in rural and beach areas roads will likely be unpaved. Volunteers are advised to use only taxis that are licensed: official licensed taxis are red with yellow triangles, and at the airport the licensed taxis are orange.
Terrain/Walking/Hiking	Costa Rica is mountainous and rocky. The coffee farms where we will work are on steep slopes. Risks include tripping over rocks or holes and slipping on muddy, wet, or unstable surfaces. Be aware of your surroundings, heed staff instructions, wear appropriate footwear, walk slowly and carefully, and always watch where you are stepping.
Animals/Plants	Volunteers should watch where they place your hands and feet to avoid touching harmful animals and plants. Volunteers will be instructed on the identification and avoidance of plants and animals that could cause harm. There are four species of venomous snake in Costa Rica; three of these are only mildly venomous, and though one can be fatal, it is not aggressive towards people. There are fuzzy caterpillars that may appear cute, but if the hairs are touched, they can be extremely painful. Costa Rica has several species of ant with painful bites as well. Volunteers should also avoid stray animals, particularly dogs.
Climate/Weather	Although the altitude may moderate the heat at times, the teams will be working in direct sun and high humidity in the tropics. Volunteers must protect themselves from the sun with appropriate clothing (wide-brimmed hat, sunglasses, etc.) and high-factor sunscreen and drink plenty of water throughout the day to avoid dehydration. High humidity, heavy rain, and strong wind can be uncomfortable, particularly in the rainy season (April to December). Do not overexert yourself, and inform a staff member right away if you feel tired or ill. A warm jacket or fleece is essential, as is a waterproof layer.
Working on farms	<p>The teams will be working on agricultural land, and even those without known allergies may find themselves sensitive to some of the plants or pollens in the area. Bees and wasps may also be present. Participants with allergies to biting and/or stinging insects should bring medications as appropriate (anti-histamines, at least two EpiPens, etc.), indicate their specific allergy and treatment needs on their health form, and inform staff on site as to their treatment needs and medication location.</p> <p>Some farmers use pesticides and fertilizers on their farms. Although volunteers will not be involved in the application or handling of these substances, please be aware that you may be in areas where they are in use or have been stored.</p>
Personal Security	Team members should take careful precautions for personal safety and use common sense due to the risk of petty and/or violent crime, particularly in urban centers (e.g., San José) and while traveling both before and after the expedition. Tourists may be targeted by thieves. It is best to travel in pairs or groups, to avoid displays of money or other valuables, to take taxis, and to avoid traveling at night. It is always best practice to leave unnecessary valuables at home. During the team, volunteers should stay in groups of two or more when walking in Santa María de Dota.

Disease	Diseases found in Costa Rica include malaria, dengue fever, filariasis, leishmaniasis, American trypanosomiasis (Chagas disease), hepatitis, rabies, and typhoid. Please see the <i>Health Information</i> section for inoculation recommendations. Most diseases are prevented with basic safety cautions. Please see the US Centers for Disease Control and Prevention (CDC) (cdc.gov) or World Health Organization (WHO) (who.int) websites for more information. If you feel sick after returning home, be sure to tell your doctor that you have traveled to a tropical region. See additional advice regarding diseases below.
Traveler's diarrhea	Traveler's diarrhea affects 20% to 50% of all international travelers. Always wash your hands with soap and water or a hand sanitizer before eating, and drink filtered or bottled water. You should also carry an over-the-counter antidiarrheal medication in your personal first aid kit. Speak to your doctor about other options for treating traveler's diarrhea and see the CDC website for advice on avoiding this condition.

HEALTH INFORMATION

Routine Immunizations

All volunteers should make sure to have the following up-to-date immunizations: DPT (diphtheria, pertussis, tetanus), polio, MMR (measles, mumps, rubella) and varicella (if you have not already had chickenpox). Please be sure your tetanus shot is current.

Project Vaccinations

Medical decisions are the responsibility of each volunteer and the following are recommendations only. While Earthwatch can provide details regarding suggested vaccinations, we are not a medical organization and decisions about which vaccinations to receive should be made between you and a doctor. Health conditions around the world are constantly changing, so keep informed and consult your physician, a local travel health clinic, the CDC (cdc.gov), or the WHO (who.int) for the latest health information for travelers. Please consult a physician for guidance on vaccinations if you intend to travel to other parts of the country.

	Required for Entry	Recommended for Health Reasons
Typhoid		X
Yellow fever	X - if traveling from countries or region where it is endemic, a Certificate of Vaccination is required.	
Hepatitis A		X
Hepatitis B		X

Advice Regarding Diseases

- *Malaria* is present in Costa Rica in Limón Province, and in rare cases in other parts of the country. The research project takes place in San José Province, with a possible recreational trip to Puntarenas Province. Although malaria is not considered a risk in the areas in which you will be traveling, please consult your physician to discuss the risks, especially if you are considering traveling elsewhere in the region or country before or after the expedition. The CDC recommends the use of chloroquine as a malarial prophylaxis for travelers to those areas of Costa Rica where malaria may be a risk.
- *Rabies* vaccinations are not required for this expedition, as contact with animals is not expected. However, volunteers are cautioned to avoid stray animals, particularly dogs. Any bites or scratches should be

immediately reported to project staff and thoroughly washed with soap and clean water, and a topical povidone-iodine solution or ethanol applied. Jogging increases your risk of being bitten by a dog.

- *Tuberculosis*: The WHO estimates that one-third of the world’s population is infected with the bacterium (*Mycobacterium tuberculosis*) that causes tuberculosis. The incidence of tuberculosis is higher in developing countries, particularly in Asia, Africa, the Caribbean, and Latin America. In general, approximately 10% of persons infected with *M. tuberculosis* are at risk for developing active tuberculosis during their lifetimes. Tuberculosis is considered highly treatable with medications that are of relatively low toxicity and cost. Volunteers returning from developing countries are encouraged to have a (PPD)-tuberculin skin test to screen for potential infection.
- *Dengue fever* is endemic in more than 100 countries in Africa, the Americas, the Eastern Mediterranean, Southeast Asia, and the Western Pacific, and can occur throughout the year. Globally there has been a 30-fold increase in the number of reported cases of dengue fever over the past 50 years. Dengue fever is a flu-like virus spread primarily by day-biting mosquitoes. It is characterized by fever, headache, rash, vomiting, and severe muscle pains. There is no vaccine, and mosquito bites should be avoided whenever possible. Insect repellent and long sleeves and pants are highly recommended. There is no treatment for standard dengue fever other than acetaminophen (avoid aspirin and ibuprofen), fluids, and rest. It is usually resolved after about 2 weeks. However, hemorrhagic dengue fever, characterized by bleeding and shock, can occasionally occur and requires medical care.

Additional Health Information Resources

- Travel health website: mdtravelhealth.com
- The Travel Doctor: tmvc.com.au
- Australian Department of Health and Aging: health.gov.au
- Hospital for Tropical Diseases: thehtd.org
- Traveller's Healthline Advisory Service Tel: (020) 7950-7799
- MASTA Travelers' Healthline (UK) Tel: (0906) 8-224100 (within the UK)

EMERGENCIES IN THE FIELD

If a volunteer needs to leave the project early due to an emergency, he or she may take a taxi from San Marcos de Tarrazú to San José; it will cost approximately \$100, and be at the volunteer’s expense.

Proximity to Medical Care

Physician, nurse, or EMT on staff	Project staff are not medical professionals
Staff certified in safety training	Natalia Ureña Retana and Sebastián Castro Tanzi are both trained in first aid and CPR (cardiopulmonary resuscitation).
Nearest hospital and/or clinic	San Marcos Clinic (Dr. Iván Brenes) 100 m Este de la Iglesia de San Marcos de Tarrazú Tel: +506 (2) 546-6850
Distance	From the accommodations in San Marcos, the clinic is just 15 minutes away. From some of the field sites it can take about an hour to reach the clinic, driving off-road over rough terrain. Fully equipped hospitals are located in Cartago and San Jose, within a 1-hour or 90-minute drive from the accommodations, respectively.

COMMUNICATIONS

Emergency Communications in the Field

The project staff will carry cell phones, and coverage in the area is quite extensive. If the team breaks up into groups working out of sight or hearing range of one another, staff will also have two-way radios that may be used to communicate between the groups.

Police may be reached by dialing 117 or +506 (2) 541-1233, and fire services may be reached at +506 (2) 546-6444.

The emergency contact number at Earthwatch in the United States is +1 (978) 461-0081 or +1 (800) 776-0188 (see *Emergency Contacts* for calling instructions).

Personal Communications

Volunteers will be able to access the wireless Internet at the Earthwatch office at El Marqués de Tarrazú in Coopetarrazú R.L, the project accommodations, or at a local Internet café. Please keep in mind that the office computer is mainly for business and should not be relied on for personal email. You may also use your own cell phone if possible, as Costa Rica has coverage in many areas. Please contact your cell phone service provider to determine what you might need to do and expect to pay in order to send or receive calls or messages on your cell phone. Please note that international rates may be very expensive. It is also possible to rent a cell phone for use while you are in Costa Rica. In San Marcos de Tarrazú there is an office of the Electricity and Communication Institute, where you can get a temporary cell phone if it is needed.

Family and friends of Earthwatch volunteers should be aware that personal communication with outsiders is not always possible while participating in an expedition. Earthwatch encourages volunteers to minimize outgoing calls; likewise, family and friends should restrict calls to urgent messages only. Measures have been taken to ensure that appropriate communication tools are available in cases of emergency.

All volunteers are asked to remember that Earthwatch expeditions offer a rare chance to escape from hearing ringing phones and others' phone conversations, and to regulate their cell-phone use with respect for fellow volunteers and staff accordingly.

Contact Information

This information is available in the print version of the briefing only.

Earthwatch Institute Policies & Participant Rights and Responsibilities

This document contains important information concerning Earthwatch Institute policies and participant rights and responsibilities for inclusion on an Earthwatch expedition. Please read this document thoroughly and sign the Liability Release section of your Earthwatch Participation Form to indicate that you understand and accept the risks inherent to your expedition and the policies, rights, and responsibilities enumerated in this document. Participants will not be permitted to partake in an expedition until Earthwatch has received the signed release form.

Intellectual Property Rights

It is permissible to share photos, videos, and stories of your expedition with family, friends, local media, and in a public forum. Sharing your new perspectives and experiences is welcomed and encouraged.

However, please recognize that all information, data, and images shared or gathered in the course of your expedition's field work become the intellectual property of the Earthwatch scientist (ES). Co-opting or plagiarism of data, images or information gathered during an expedition for use in a scientific thesis, masters or PhD work, or for profit or for the academic or business use of a third party without the permission of the ES is strictly prohibited. Please be aware that data gathered during the interviewing of local people becomes the intellectual property of the ES. Earthwatch scientists have the right to place additional restrictions on your ability to share data or certain research-related images.

Conversely, an Earthwatch scientist may give written permission to use data and images for academic or profitable activity. Please be sure to ask what is acceptable to the Earthwatch scientist.

Fellows or scholarship recipients are sometimes required to submit a written report reflecting what they have learned on a project, sometimes as a step toward developing a curriculum. Earthwatch scientists have the right but not obligation to review and edit materials involving information gathered on one of their expeditions.

Discrimination

Earthwatch does not discriminate on the basis of race, religion, ethnicity, national origin, gender, sexual orientation, or any other reason prohibited by applicable law and respects participants' right to privacy. However, you must be aware that local laws in countries in which Earthwatch operates may not be antidiscriminatory and that the possibilities exist that local residents may not have an awareness of best practice regarding discrimination.

Discrimination on the basis of race, religion, ethnicity, or sexual orientation will not be tolerated on Earthwatch teams. Disruptive behavior, or verbal, physical or any other type of abuse or harassment will also not be tolerated. Violation of Earthwatch's non-discrimination policy is grounds for expulsion from the program without a refund.

Intimate relationships

Earthwatch scientists, their staff, their colleagues, and their associates are prohibited from becoming romantically involved with participants during the entire duration of the period that the team is in the field. Romantic relationships that may otherwise seem permissible may eventually create an unpleasant or unproductive work environment and are therefore strongly discouraged for the duration of an Earthwatch project.

Sexual Harassment

Please recognize that the relationship that exists between Earthwatch scientists and staff and participants is analogous to the student-teacher relationship. Therefore, please be aware of the following policies.

Sexual harassment of participants by the Earthwatch scientist or Earthwatch staff is prohibited. Likewise, sexual harassment of other participants, Earthwatch field staff, or local people by participants is also prohibited.

Sexual harassment infringes on an individual's right to an environment free from unsolicited and unwelcome sexual overtones of conduct either verbal or physical. Sexual harassment does not mean occasional compliments of a socially acceptable nature.

Sexual harassment refers to conduct which is offensive, which harms morale, or which interferes with the effectiveness of Earthwatch expedition teams; such conduct is prohibited. Lewd or vulgar remarks, suggestive comments, displaying derogatory posters, cartoons or drawings, pressure for dates or sexual favors and unacceptable physical contact or exposure are examples of what can constitute harassment. No one should be touched in areas that otherwise would be covered by a bathing suit. It is important to realize that what may not be offensive to you, may be offensive to participants, the local population, and Earthwatch field staff.

Any individual who feels subjected to sexual harassment or has any knowledge of such behavior should report it at once to his or her PI or to Earthwatch staff members. All Earthwatch scientists and Field Team Leaders (FTLs) will notify Earthwatch immediately when an accusation of sexual harassment or abuse is made or witnessed.

All reports of sexual harassment will be handled with discretion and will be promptly and thoroughly investigated. Any participant who is found to have engaged in conduct constituting sexual harassment will be immediately removed from the expedition at his or her own expense. If a minor is immediately involved in allegations of sexual harassment, his or her parents will be contacted.

Drugs

Laws on drug use in most countries are severe and may carry lengthy imprisonment or death penalties. I understand and accept that the manufacture, possession, use, purchase and/or sale of illegal drugs or other illegal substances while on an Earthwatch expedition is strictly prohibited. Prescription drugs may only be purchased and used by the individual indicated on the prescription in keeping with their intended use guidelines.

Alcohol

Local statutes, customs, practices, ordinances, and regulations with regard to the use, possession, sale, or purchase of alcohol are applicable to all participants and project staff in Earthwatch expeditions. Participants and project staff on Earthwatch expeditions must comply with the law of the country in which a project is located regarding the minimum age required to consume alcohol. In addition, restriction on the use, possession, sale, or purchase of alcohol may be set by the Earthwatch scientist. Any restrictions on the consumption of alcohol should be clearly outlined by the project staff in the briefing to participants at the start of the project, and in the Expedition Briefing.

Consumption or possession of alcohol or smoking is not permitted on any Earthwatch Teen Team, regardless of local law.

Excessive consumption of alcohol by staff or participants is not acceptable on any Earthwatch project. Intoxication can jeopardize personal safety, in addition to the safety of the team. It can also cause delay, and hinder response in the event of a crisis or emergency situation.

Earthwatch staff and the Earthwatch scientist have the discretion to remove individuals from the project who consume alcohol in a time and manner that endanger the safety and/or productivity of the expedition.

Minors

Earthwatch considers participants under eighteen (18) years of age to be minors. Minors are not permitted to participate on any of Earthwatch's standard teams unless accompanied by a parent or guardian in which case the minimum age is sixteen (16). Minors on regular teams do not receive additional guidance or supervision from Earthwatch beyond what is offered to the adult participants. The number of minors on regular teams is limited to two (2) per team. Earthwatch has developed teams specifically for 16 and 17 year olds ("Teen Teams") as well as teams specifically for families ("Family Teams") with children as young as 10 years old. These teams focus on the same research activities and have the same expectations as our regular teams, but with more facilitation and support. Exceptions for some projects are made at the discretion of Earthwatch and the Earthwatch scientist. Due to a more in-depth screening process for certain programs that select candidates based on school year rather than age, there may be 18 year olds fielding on the same team as 16 and 17 year olds. Please be aware that some Earthwatch projects do not allow participation by minors in any circumstance.

Participants and Driving

Participants are not allowed to drive project vehicles or aircraft during an expedition. In select circumstances, participants may be able to drive boats under the direct supervision by project staff. These circumstances are pre-determined by project staff in collaboration with Earthwatch. Participants must respect the restrictions for boat driving in place for each project.

If a project environment is such that participants can drive their own vehicles to the rendezvous, those who have driven themselves to the project may not drive their own vehicles to, from or for project activities, including the transport of project equipment after arriving at the site.

Participants who have driven themselves to the project may choose to utilize their own vehicle during recreational time, but project staff will brief them on the driving restrictions. All driving during recreational time is done at your own risk.

Please be advised that the only exception to the above driving restrictions is emergency situations.

Riding in other participants' vehicles is not covered under the participants' insurance policy for the expedition. Riding in another participant's vehicle is done at a participant's own risk.

In the Event of an Emergency

In the event of emergencies, judgments must be made by Earthwatch field staff and participants. While Earthwatch makes an effort to ensure that qualified people make the most informed decisions possible, occasionally first aid may be administered and other immediate steps taken by expedition participants who are not licensed medical providers.

Each Earthwatch expedition has safety protocols and emergency procedures in place. Earthwatch encourages team members (the field staff and participants) to exercise their best judgment with regard to their own safety and the safety of other team members. Other participants may perform "Good Samaritan" actions, or actions taken to assist fellow participants during emergency situations in the field. However, Earthwatch does not encourage or expect you to jeopardize your own safety or that of others in attempting to rescue or assist your fellow team members.

Right of Refusal

Earthwatch reserves the right to refuse an applicant's participation on Earthwatch projects at any time and to terminate any work being done by a participant and require the participant to vacate the project site if any of the Earthwatch Expedition Team in his or her absolute discretion considers it appropriate. In this event, the participant (and his/ her parent/ guardian, if appropriate) will be responsible for arranging and paying for any accommodation, travel or other arrangements which may be necessary following the termination of a participant's involvement in a project, for whatever reason and may not be eligible for a refund.

Earthwatch and the project staff may not refuse a participant for discriminatory reasons (race, religion, ethnicity, national origin, sexual orientation, or any other reason prohibited by applicable law). However, participants may be denied in the interest of team compatibility. Earthwatch will make reasonable efforts to accommodate participants with disabilities and the organization endeavors to find appropriate expeditions for those participants that have physical limitations. Refusal of a participant is an unusual event and is generally due to either an applicant's failure to meet the essential eligibility requirements of a particular project, or in the interest of team compatibility. In the event that an applicant is refused participation for health reasons, Earthwatch will refund in full any deposit or payment made toward the expedition.

Earthwatch scientists have the right to refuse special requests, such as media visits (film, photography or print), special groups or teams (students, donors, etc.), if they conflict with Earthwatch scientist schedules, safety, research objectives or general performance of the team.

Any participant found in violation of any of the policies described in this document ("Earthwatch Institute Policies & Participant Rights and Responsibilities") is subject to removal from the team at their own expense. By signing the Liability Release section of your Earthwatch Participation Form, participants are indicating that they have read and understand the policies in this document. Removal of a participant from a team is at the discretion of the Earthwatch scientist or Field Team Leader and Earthwatch staff. In addition, Earthwatch will support the right of the scientist to send participants away from a project once in the field should their behavior compromise the safety, research objectives or general performance of the team, or if the participant has violated a stated policy. In the event that a minor is dismissed from a project, Earthwatch will contact the participant's parents or legal guardian prior to their dismissal. Should a participant be removed from a team, he/she is responsible for any or all costs associated with departure from the team and will receive no refund of the share of costs of the expedition nor any expenses incurred in participation on the expedition.

(November 2010)

Expedition Packing Checklist

Required Items

- This Expedition Briefing
- Photocopies of your passport, flight itinerary and credit cards in case the originals are lost or stolen; the copies should be packed separately from the original documents
- Passport and/or visa (if necessary)
- Certification of vaccination (if necessary)
- Documentation for travel by minors (see *Volunteers Under 18 Years of Age* in the *Travel Planning* section)
- Calling card/mobile phone (with international calling capabilities if applicable)
- Credit card that may be used (internationally, if applicable) in the event of an emergency (travel delays, etc.)

Clothing/Footwear for Fieldwork

- Be sure to bring your Earthwatch T-shirt and remember to wear it, as appropriate, throughout your expedition
- Lightweight, quick-drying long-sleeved shirts
- Lightweight, quick-drying trousers
- One warm jacket, fleece, or sweatshirt (it will be cool in the mountains)
- Well worn-in, comfortable, waterproof hiking boots and waterproof gaiters (overshoes)
- Rain poncho/jacket
- Long socks that can be pulled up over your trousers
- Hat with a wide brim to protect face, neck, and head from the strong sun

Clothing/Footwear for Leisure

- One set of clothing to keep clean for end of expedition
- One set of clothing to keep clean for evenings, visits to town, etc.
- Sandals to wear around the accommodations
- Spare shoes to change into when others are wet and muddy
- Warm pajamas (it can get quite chilly at night)

Field Supplies

- Small daypack or rucksack
- Dry bag or plastic sealable bags (good for protecting equipment such as camera from dust, humidity, and water)
- Insect repellent spray
- Two 1-liter water bottles
- Headlamp or flashlight (torch) with extra batteries and extra bulb

Bedding and Bathing

Note: Blankets, pillows and towels will be provided by the accommodations.

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., antidiarrhea pills, antibiotics, antiseptic, itch-relief, pain reliever, bandages, blister covers, etc.) and personal medications
- Sunscreen lotion with SPF 30 or higher

Miscellaneous

- Spending money in colones for any personal expenses and the airport US\$26 departure tax (see *Additional Travel Information* in the *Travel Planning* section)
- Camera, film/memory card(s), extra camera battery (if you bring a digital camera, bring your interface cables for downloading)

Optional Items

- Earplugs
- Travel guide
- Books, games, journal, art supplies, etc. for recreational or rest time and travel
- Field guide on the birds or wildlife of Costa Rica
- Spanish/English dictionary
- Binoculars
- GPS (Global Positioning System) receiver
- Waterproof trousers/rain pants
- Blank CD or DVD for sharing digital photographs at the end of the expedition

Note: *Required and Optional Items lists are accurate to the best of Earthwatch's knowledge at the time of publication.*