

MAPPING CHANGE IN  
CALIFORNIA'S MOUNTAINS

Rusty Russell

US National Herbarium, Smithsonian Institution (US)

# Expedition Briefing





## Our Mission

Earthwatch engages people worldwide in scientific field research and education to promote the understanding and action necessary for a sustainable environment.

We believe that achieving a sustainable future requires objective scientific data from the field – and that the scientific process must engage the general public if it is to change the world. To that end, we involve people from all walks of life directly in global field research.

*We invite you to join us.*

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-- An international nonprofit organization founded in Boston, Massachusetts in 1971--



Dear Earthwatcher,

**Welcome to Earthwatch!** We greatly appreciate your decision to contribute to important hands-on environmental science and conservation. As an Earthwatch volunteer, you have the opportunity to create positive change for our world while having a life-changing experience. Each year we send thousands of people just like you into the field to understand and help an array of species, habitats, and cultures on approximately 85 research projects in more than 40 countries. These projects focus on: **Climate Change, Cultural Heritage, Ecosystem Services, and Oceans.**

**We place the highest priority on the health and 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, careful risk management and diligent planning means all participants can have safe, educational, and inspirational Earthwatch experiences. Our dedicated Field Management team works around the clock to assess and manage the risks of conducting field research in a variety of locations and conditions. We've been providing safe experiences **for more than 35 years**, so you're in good hands.

To keep Earthwatch teams safe and happy, **we require all expedition participants prepare for their experience by reading this Expedition Briefing and completing a number of volunteer forms, which vary by expedition and by regional Earthwatch office.** Volunteers signing up through Earthwatch offices in the UK, Australia, or Japan will receive these forms in your Expedition Briefing Pack. They are also available on [www.earthwatch.org/europe/volunteerforms](http://www.earthwatch.org/europe/volunteerforms). Volunteers signing up through the US office can find the forms online at <http://www.earthwatch.org/volforms>.

**It is essential that you carefully read your Expedition Briefing, which includes important logistical information** such as instructions for reaching the project site, what to pack, where your team will stay, what immunizations you need, how to physically prepare for your expedition, entry requirements for the project country, and more. Your Briefing 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 are also a greater help to the scientists' important work. Most expeditions do not require prior experience. Volunteers who are attentive and open-minded, can work in a team environment, and are eager to learn will be most successful. Your expedition may have fitness requirements, so please review the *Project Conditions* section. Those with photography and film skills are encouraged to share media from the expedition with Earthwatch.

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 hope you will share your experiences with others, to transfer your skills and enthusiasm to environmental conservation efforts at a more local level – in your workplace, in your community and at 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 "Anne T. Ogilvie".

Anne T. Ogilvie  
International Director of Field Management

**PS:** Upon returning from your expedition, you will receive an email welcoming you back and asking you to fill out an online Expedition Evaluation. Please take the time to complete this evaluation in order to help us improve the Earthwatch experience. Your feedback is appreciated!



# GENERAL INFORMATION

PROJECT TITLE:	<b>MAPPING CHANGE IN CALIFORNIA'S MOUNTAINS</b>
EARTHWATCH SCIENTIST(S):	Rusty Russell, Collections Manager, United States National Herbarium, Smithsonian Institution
RESEARCH SITE:	Santa Rosa and San Jacinto Mountains National Monument, Riverside County, southern California
EXPEDITION LENGTH:	8
TEAM SIZE MINIMUM/MAXIMUM:	4 / 7 volunteers
MINIMUM AGE OF PARTICIPATION:	18 years of age *

\* **Note:** It may 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 the *Before You Leave* section for traveling advice for minors.

# THE EXPEDITION

## 1. PROJECT OVERVIEW

In 2000, Congress created the Santa Rosa and San Jacinto Mountains National Monument (SRSJMNM), which is about 272,000 acres large and includes two Federal Wilderness Areas, preserving them from future harmful development. All this protected beauty is only about 100 miles away from downtown Los Angeles – less than a two hour drive – in one of the most populated areas of the country.

Cared for by the United States Forest Service and the United States Bureau of Land Management working together, the SRSJMNM is dedicated to “preserving the nationally significant biological, cultural, recreational, geological, educational, and scientific values found [there] and to secure now and for future generations the opportunity to experience and enjoy the magnificent vistas, wildlife, land forms, and natural and cultural resources in these mountains and to recreate therein” (Public Law 106-351). The management of the SRSJMNM also depends heavily on state, county, and local involvement, and on the commitment of citizens and scientists who work to better understand and protect the many natural and cultural resources of this vast and rich area of our nation.

That’s where you come in.

The SRSJMNM needs citizen volunteers and scientists to help care for it by collecting high quality, scientifically valuable information – solid data – about what’s happening within its boundaries, what used to happen, and what the likely effects of current and future policies are going to be on the overall health of its ecosystem. If the SRSJMNM is one of the great big, backyards of the American west, it needs well-informed and well-trained stewards (and residents) to make sure it stays healthy and make sure it’ll be around for future generations to enjoy.

Specifically, your Earthwatch team will work to help collect, catalogue, and analyze data about plant species in the area – and how they may have changed in the past 100 years – that will be used to create high quality, place-based land management policies for the future. You’ll be hiking through the study area each day (weather permitting) with scientists and/or experienced field guides, using the latest in Geographic Information Systems (GIS) technology to record precise location data on the plant species you’ll encounter. All of your hikes will follow canyon valleys or marked trails at higher elevations. The canyon trips (March and April/May) may gradually reach an altitude of 3,500 ft. while the mountain trip (September) will reach elevations of 9,000 ft. (Each Field Team Leader will carry a radio capable of contacting US Forest Service Headquarters.)

In the evenings and on non-hiking days, you’ll be at the research base (Deep Canyon in March and April/May and James San Jacinto Mountains Reserve in September) helping to organize and analyze the data you’ve collected, as well as historical plant data for the region from other sources. Throughout the expedition, you’ll be learning about the area and the value of the work you’re doing in it from your expedition leaders and local researchers and experts during evening presentations, trips to research centers, and organized recreational activities.

Over time, the results of the work you’ll be doing with plant specimens and historical data in the SRSJMNM will help leading scientists come up with resource management models that can benefit not only this National Monument area, but other national monuments and wilderness areas all over the country. The information you help gather about past and present plants in the SRSJMNM will guide its future.

**Note:** See *Mapping Change in California's Mountains: The Research* in the Appendix of this Expedition Briefing for information on the research objectives, methods, and results to-date of this project.

## 2. RESEARCH AREA

### **Physical Environment**

The SRSJNM occupies an area that is exceptionally diverse geographically, biologically and culturally. Like many regions in southern California, it faces serious modern problems related to air quality, water conservation, land use, and population growth. Your particular study area, which rises from the Colorado Desert floor to an elevation of over 10,000 feet at Mt. San Jacinto, has been chosen for this Earthwatch expedition because it is a good representation of the SRSJNM overall in terms of both its resources and the challenges being faced in protecting them. For more information on the research site, consult the following websites:

[http://www.blm.gov/ca/st/en/fo/palmsprings/points\\_of\\_interest.html](http://www.blm.gov/ca/st/en/fo/palmsprings/points_of_interest.html)

<http://www.fs.fed.us/r5/sanbernardino/contact/sanjacinto.shtml>

On the March and April/May trips, all work will be conducted in the desert canyons bordering the Colorado Desert on the east slopes of the mountains. The terrain is rocky and sloping, with each canyon rising gradually from the desert floor to approximately 3,500 feet elevation. On the September trip, all work will be conducted at higher elevations in the San Jacinto and Santa Rosa Mountains. The terrain is hilly and often steep. Total elevation gain (on foot) will never exceed 1,600 feet. Some climbs will be vehicle-assisted. Temperatures could range from over 90°F (32°C) along the eastern slopes at midday to 50°F (10°C) or below in the early mornings or evenings. Although most locations offer some spots of shade, the sun is *always* a threat and sunscreen must be liberally applied. In addition, humidity levels are remarkably low. Therefore, maintaining a high level of hydration is critical.

Vehicles will transport volunteers to the starting point in each canyon. The remainder of the journey is on foot, extending between 2-6 miles total depending on the location. Work is stop-and-go as specimen and data collection takes place. Volunteers will be responsible for carrying their own personal effects and will also be assigned to transport some additional material or equipment (i.e. cameras, collecting supplies, laptops, GPS units, etc.).

### **Cultural, Social, and Political Environment**

In March and April/May our study center, and accommodation, is the Philip L. Boyd Deep Canyon Desert Research Center (<http://deepcanyon.ucnrs.org/>), a part of the University of California Natural Reserve System. It is located at the mouth of Deep Canyon and 5 miles south of the city of Palm Desert, CA.

In September, our study center and accommodation is the James San Jacinto Mountains Reserve, also a part of the University of California Natural Reserve System. It is located in Hall Canyon, one mile above Lake Fulmor off Route 243, Idyllwild, CA.

Both settings are removed from general populations within the area and offer quiet, academic environments for doing research.

### 3. PROJECT STAFF

#### Earthwatch Scientist

**Rusty Russell**, B.S. Botany, Univ. of Maryland. Rusty came to the Smithsonian Institution 34 years ago at the age of 21, and four years later became Collections Manager of the United States National Herbarium. Since that time, he has been responsible for one of the largest research plant collections in the world. As Collections Manager, he oversees numerous programs and projects aimed at both preserving these important scientific resources and improving public accessibility to plant species information. Currently, Rusty manages programs covering such diverse subjects as ethnobotany, history of scientific exploration, natural habitat reconstruction, global change, and GIS data management in various localities such as the Pacific Islands, Liberia, northern Mexico and the San Jacinto Mountains, California. Rusty is a frequent lecturer at conferences and scientific meetings, in both national and international settings. He has been Adjunct Lecturer at George Washington University's Museum Studies Masters Program and has studied and lectured on the Lewis & Clark plant collections and those of the U.S. Exploring Expedition (1838-1842). He's worked directly with and advised scores of students in high school, university and graduate programs. Rusty has been working with Earthwatch Institute for four years on two separate projects.

#### Research Staff

**Julie A. Myers** is the owner of J.A. Myers Consulting, which provides organization development and management consulting for businesses along the East Coast. She has extensive teaching and tutoring experience and has participated in other Earthwatch Expeditions, both as a participant and as a team leader in 2009.

**Gale Famisan Robertson**, M.S. Museum Studies, Univ. of Leicester; M.S. Environmental Science, University of Arizona. Gale recently received her M.S. in Museum Studies and specializes in Museum Education. She has previously served as the Project Manager of the San Jacinto Mountains Project, acting as a Team Leader for field trips in 2008. She currently runs the classroom and study center in the Written in Bone Exhibit at the National Museum of Natural History. Gale has also taught school programs in the Discovery Room at the Museum. Gale's professional interests include science communication and the role of museums in the public understanding of science.

#### Regional Collaborators

**Tracey Albright**, Education Coordinator, Santa Rosa/San Jacinto Mountains NM, BLM, Palm Springs, CA  
Tracey will lead the team visits to US Bureau of Land Management (BLM) localities. Tracey provides an important link between research and education for your team. She will provide context for your work in both geographical and chronological terms.

**Danielle Ortiz**, Education Coordinator, USFS, Palm Springs, CA (assigned to SRSJNM Visitor Center)  
Dani Ortiz combines a strong educational background with a local's knowledge of the desert and mountain habitats in the region. She will accompany team visits to Martinez and Snow Creek Canyons.

**James Bryant**, Natural History Curator, Riverside Municipal Museum, Riverside, CA  
James will provide an introduction to the Natural History of the study site and will assist in leading different field visits.

**Mark Fisher**, Staff Biologist, Boyd Deep Canyon Research Center  
Mark will provide overviews of the region's natural history and will join the team visit up Deep Canyon.

**Jordan Zylstra**, Field Botanist, U.S. Forest Service, Idyllwild, CA  
When he's not supporting firefighting activities throughout southern California, Jordan accompanies the Earthwatch teams, offering expert knowledge of the flora of the San Jacinto Mountains.

**Staffing Schedule (Subject to Change)**

<b>Staff Member Present</b>	<b>Team I</b>	<b>Team II</b>	<b>Team III</b>
Rusty Russell	X	X	X
Julie Myers	X	X	X
Gale Famisan Robertson		X	X
Tracey Albright	X	X	X
Jordan Zylstra			X
Danielle Ortiz	X	X	X
James Bryant	X	X	X
Mark Fisher	X	X	

# DAILY LIFE IN THE FIELD

## 4. VOLUNTEER TRAINING AND ASSIGNMENTS

### Training and Assignments

During your expedition, home base will be either the Boyd Deep Canyon Research Center (located 5 miles from the city of Palm Desert, CA) or the James San Jacinto Mountains Reserve (located 6 miles NW of Idyllwild, CA along Rt. 243). Each day a combined team of volunteers and project staff, with accompanying program leaders, will visit a different location and will carry an up-to-date version of the assembled plant species data for the region (specimen and species data, images, maps, etc.) on specially adapted hand-held computing devices. Each team will collect new data during a daily hike, noting specific locations and recording GPS coordinates, taking digital images and (as appropriate) making new plant species observations and taking soil samples.

Back at home base, these new data will be analyzed with the thousands of existing data points from historical records of plant specimens in the region. We'll be able to assess the precision and accuracy of the new data as compared to the old, and will, over time, be able to determine and map out any changes in plant distribution that may have occurred over the last 100 years.

This map could be key to understanding what changing conditions in the area (such as those caused by global warming and/or by more local human impacts) have done to the plants in the region and to its larger ecosystem. With that understanding, we will in turn be able to make better recommendations for how the area should be managed in the future, especially in light of continuing environmental changes and pressures.

Volunteers must be sufficiently fit to endure the rigors of desert and mountain hikes. As much as possible, each person's skills will be matched with the needs of each hike. The Earthwatch Scientist and other expedition staff are flexible, and some base camp tasks may be available to volunteers if necessary. Your health, safety, and enjoyment of the expedition experience are the top priorities of all the researchers involved, and there are many ways for you to contribute. Please don't hesitate to talk to one of the staff if you feel you need to have your particular assignment adjusted on any given day.

Upon returning to the home base, and depending on the evening program, you'll be assigned various tasks supporting data management and analysis. You can also look forward to a "Team Game Night" during your expedition, during which you'll be encouraged to deepen your bonds as a working team and think a bit "outside the box" about the nature and value of the work you're doing; your creative side will get a chance to shine during this event.

The Earthwatch Scientist will give the team a more detailed onsite project briefing when you arrive.

## 5. TEAM ITINERARY

The Earthwatch Scientist will give the team a more detailed on-site project briefing when you arrive, but here's an overview of what you can expect to do in some average days during your experience.

### March and April/May Trips

- Day 1:** Rendezvous Day. Meet at Terminal 4, Ontario, CA International Airport. Proceed to vehicles and drive to Boyd Deep Canyon Research Center. Evening orientation to natural history of the region (Rusty Russell, James Bryant and Mark Fisher)
- Day 2:** Fieldwork orientation and training (Deep Canyon). Visit to SRSJNM Visitor Center.
- Day 3-6:** Fieldwork days in various desert canyons
- Day 7:** Fieldwork day in Deep Canyon, prepare for departure
- Day 8:** Departure

### September Trip

- Day 1:** Rendezvous Day. Meet at Terminal 4, Ontario, CA International Airport. Proceed to vehicles and drive to James Reserve. Evening orientation to natural history of the region (Rusty Russell, James Bryant and Becca Fenwick, Director of the James San Jacinto Mountains Reserve)
- Day 2:** Fieldwork orientation and training (Hall Canyon). Visit to SRSJNM Visitor Center.
- Day 3-6:** Fieldwork days in various mountain locations.
- Day 7:** Fieldwork day in Deep Canyon, prepare for departure
- Day 8:** Departure

Each field day will begin early so that we can be in the field by 8 a.m. The completion of each hike will vary by location and distance to be covered. Upon returning to home base, we will first prepare all data, images, and specimens before any personal time is provided. Some evening programs will be organized, but otherwise you are free to enjoy some recreational time after dinner.

Volunteers should consult a travel guidebook for information on local attractions. See the *Helpful Resources* section for suggested guidebooks.

### Earthwatch Recreational Time Policy

Earthwatch has a duty of care to our participants from the rendezvous to the end of the expedition. In order to ensure you are as safe during your recreational time as you are during research time, we have put a number of measures in place.

- If there is a recreational day during the expedition, the project staff will offer either a planned team activity or a small choice of 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. All participants are strongly encouraged to take part in the group activity, but if you are determined to pursue other options you will be asked to sign a release before doing so, stating that Earthwatch is not responsible for your welfare.
- When there is a period of free time scheduled into a regular research day, the staff will ask you to sign out of the project (using a means which may vary by project and project location) if planning to leave the group. This will include your destination and estimated time of return. If participants do not show up to the next activity the project staff will then know where to begin a search.
- In the evenings if you can go out at night, you will again be asked to sign out of the project as above. The project staff will give you 24-hour contact information for them should assistance be needed. The sign-out is informational only and will not be used to enforce a curfew. Please be aware that project staff would not start a search until the following morning or the next scheduled activity unless contacted for help sooner.

## 6. DAILY SCHEDULE AND TASKS

Please be aware that schedules can and do fluctuate due to weather, research needs, etc. Your cooperation and understanding are appreciated.

### Field Day Schedule

<b>6:00am</b>	Wake, breakfast, pack up for the day
<b>7:00am</b>	Vehicles depart Reserve
<b>8:00am</b>	Arrive at day's fieldwork location
<b>Mid-afternoon</b>	Return from field location (time will vary); unpack, organize data and specimens
<b>5:30</b>	Dinner at accommodations
<b>7:00</b>	Evening activities

## 7. ACCOMMODATIONS

March and April/May teams will be housed at the Philip L. Boyd Deep Canyon Desert Research Center in Palm Desert, California. The Boyd Canyon center is a part of the University of California Natural Reserve System, and was established in 1959. Visit [http://deepcanyon.ucnrs.org/boyd\\_center.htm](http://deepcanyon.ucnrs.org/boyd_center.htm) for additional information.

Volunteers and staff will stay in the main residence facility. Shared rooms offer either two or four bunks per room. Volunteers' desires regarding sharing rooms will be accommodated as much as possible, but are dependent on team size and make-up. There are shared bathroom facilities. Because we will occupy a desert environment, water conservation is a very important issue. Participants must bring their own bed linen, pillows, and bath towels.

Cell phone reception is good at Boyd Center, but deteriorates rapidly to the south of the buildings. In most canyon areas, our only connection will be via the USFS radio carried by the Team Leader. The Deep Canyon Reserve has wireless LAN connectivity and fast wireless internet access. Please keep your cell phone use to a minimum, and always out of earshot of fellow volunteers and staff.

On field days, field staff will be transported directly from Deep Canyon Research Center to the selected field site using rental vehicles driven by Project Staff. A Project Staff member will always be present in every vehicle. Each team will have a radio that puts them in direct contact with the Situation Desk at USFS Headquarters in San Bernardino.

The September team will be housed at the James Reserve. The James Reserve is a part of the University of California Natural Reserve System. Visit <http://jamesreserve.edu> and <http://nrs.ucop.edu/James-San-Jacinto.htm> for additional information.

Volunteers and staff will stay in the main residence facility. Depending on how many researchers are sharing facilities, sleeping may be in open dormers or shared rooms offering either two or four bunks per room. Volunteers' desires regarding sharing rooms will be accommodated as much as possible, but are dependent on team size and make-up. There are shared bathroom facilities. Because we will be in an arid environment, water conservation is a very important issue. Participants must bring their own bed linen, pillows, and bath towels.

Cell phone reception at the James Reserve is spotty. In most field locations, our only connection will be via the USFS radio carried by the Team Leader. The James Reserve has wireless LAN connectivity and fast wireless internet access. Please keep your cell phone use to a minimum, and always out of earshot of fellow volunteers and staff.

On field days, field staff will be transported directly from James Research to the selected field site using rental vehicles driven by Project Staff. A Project Staff member will always be present in every vehicle. Each team will have a radio that puts them in direct contact with the Situation Desk at USFS Headquarters in San Bernardino

## 8. FOOD

Meals will be a combination of self-prepared, restaurant, and backpack food. 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:** Cold cereals, bagels, pastries, fruit, hard-boiled eggs, milk, juices, coffee

**Lunch:** Trail mix, hard-skin fruit, sandwiches, cookies, juice boxes, water

**Dinner:** Evening meals will be planned and volunteers and staff will share cooking responsibilities. It is imperative that special dietary needs are communicated to Earthwatch at the earliest possible time.

**Snacks/Other:** Volunteers may bring whatever snacks or other consumables they desire...to share.

**Beverages:** Water, juices, sodas, milk, tea and coffee will always be available at each location.

**Water:** Tap water at both Reserve locations is potable.

### **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 and strict vegetarians may have a problem avoiding animal products altogether. If this poses a problem, then participation on this Earthwatch expedition should be seriously reconsidered.

# TRAVEL PLANNING

## 9. BEFORE YOU LEAVE

**Note:** Earthwatch Institute's international emergency medical and evacuation assistance provider, International SOS, has a wealth of useful information available at their website, including visa, passport, currency, medical, etc. information for the country in which this project takes place. See [www.internationalsos.com](http://www.internationalsos.com) and enter Earthwatch's member identification number: 14ACPA000075. Under "Select Resource" choose "English Country Guide," and then select this project's country from the list. For a listing of other useful websites for passport and visa requirements, see the *Helpful Resources* section.

### Passport Information

Travelers to the United States from other countries will need passports valid for at least six months beyond the dates of travel. Note that as of January 2007, under the Western Hemisphere Travel Initiative, citizens of Canada (which previously only needed proof of citizenship) will be required to present a passport when traveling to and from the Americas, the Caribbean, Bermuda and the US.

### Visa Information

**Note:** 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 27 countries eligible for the US Visa Waiver Program (see below). Visitors are required to provide details including their passport number, country of residence and any involvement in criminal or terrorist activities to the ESTA **at least three days before traveling to the US**. Once approved, the authorization will be valid for up to two years if the individual's passport does not expire in the meantime. Applications can be submitted through the ESTA website (<https://esta.cbp.dhs.gov>).

**Note that if you are traveling to Canada, Mexico, Latin America, South America, the Bahamas, or the Caribbean and have a stopover in the US, you are required to register through the ESTA program.**

Travelers are advised to check visa regulations well in advance of traveling. Citizens of countries covered by the Visa Waiver Program (VWP) traveling to the US for tourism or business for 90 days or less do not need to obtain a visa provided they have a valid passport. Passports for VWP countries issued on or after October 26, 2006 must include biometric information (so-called e-passports include a chip with the relevant information); otherwise, the holder is required to obtain a visa. VWP citizens with passports issued between October 26, 2005 and October 25, 2006 do not require a visa as long as they have machine-readable passports with a digital photograph of the holder. Citizens with valid but older machine-readable passports (issued prior to October 26, 2005) that do not have a digital photograph are still allowed into the US without a visa.

Currently, the following countries participate in the Visa Waiver Program: Andorra, Australia, Austria, Belgium, Brunei, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Liechtenstein, Luxembourg, Monaco, the Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom. Citizens of other countries should check with a travel or visa agency for specific visa and entry requirements. Entry requirements are subject to change, so please check for updates in advance of your travel. If you do need a visa, the chart below should be helpful.

## Essential Information for Volunteers Requiring Visas

<b>Type of Visa</b>	You must get a <b>TOURIST VISA</b> .
<b>Where to Get a Visa</b>	Contact the nearest United States <b>embassy or consulate</b> to find out how to apply for your visa. Please note that this process can take weeks or more. If you have less than six weeks or wish to save yourself trouble, we strongly recommend using a <b>visa agency</b> , which can both expedite and simplify the process. See below for a list of visa agencies.
<b>Required Information</b>	You will need to send your <b>passport</b> (valid for at least six months beyond your stay), a <b>Visa Application and Immigration Form, 2-4 passport-size photos plus payment</b> to the embassy or visa agency (if applicable). Please be sure that your passport is valid for at least six months beyond your stay.
<b>Contact Information</b>	You may be required to list contact information on your Visa Application and Immigration Form. This information is provided in the printed version of this briefing.
<b>Cost of a Visa</b>	Generally between US\$40-100, but varies from country to country and can potentially cost <b>up to US\$180</b> . A visa agency will charge an additional fee (depending on the amount of time it takes to process the application), which you can inquire about directly.

**Reminder:** 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 even “volunteering.” Words such as “working”/“volunteering,” “research” or a “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

<b>In the United States</b>	<b>In Europe</b>	<b>In Australia</b>
PassportVisaExpress.com 1911 North Fort Myer Drive, Suite 104 Arlington, VA 22209 Tel: +1 888 596-6028, +1 703 351-0992 Fax: +1 703 351-0995 Email: <a href="mailto:info@passportvisaexpress.com">info@passportvisaexpress.com</a> Web: <a href="http://www.passportvisasexpress.com">www.passportvisasexpress.com</a>	CIBT, Inc.-UK 25 Wilton Road Lower Ground Floor Victoria SW1V 1LW T: 0844 736 0211 Fax: +44 (0) 207 828 5411 Calling from Europe outside UK: +44 (0)207 802 1000 Email: <a href="mailto:info@uk.cibt.com">info@uk.cibt.com</a> Web: <a href="http://www.uk.cibt.com">www.uk.cibt.com</a> (has alternate address for urgent requests)	Ask your travel agency if they 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. It may be possible for 16- and 17-year-olds to participate on standard Earthwatch teams *if* accompanied by a parent or guardian. In this case, if the minor will be traveling with only one guardian or if for any reason they 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 they 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 someone other than the parents are legal guardians, the letter should state that.

In addition, 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. There is nothing Earthwatch Institute can do to help in this circumstance.

### **Insurance**

Emergency medical and evacuation insurance (MedEvac) is automatically included in the project cost you pay to Earthwatch. This coverage is valid in the country of your Earthwatch expedition and during international travel to and from your expedition. If the expedition takes place in your home country, coverage begins at the official rendezvous date and time for the expedition and ends at the official departure date and time described in this briefing document, and is incremental to your existing health insurance.

**Please note that due to different governing laws in each country, policies are specific to each regional Earthwatch office:**

#### **For Volunteers Who Sign Up Through the Earthwatch UK/Europe Office or Earthwatch Japan**

Emergency medical and evacuation (MedEvac) insurance, plus trip cancellation/curtailment insurance is included in the contribution you pay to Earthwatch. Cover for personal property is also included. Details of this insurance policy, including the duration for which you are covered are included in your Expedition Briefing Pack. Please refer any queries regarding this policy to Michelle Ralph at Sutton Winson in the UK. You can email her on [michelle.ralph@swib.co.uk](mailto:michelle.ralph@swib.co.uk) or call her on +44 (0)1444 251164.

#### **For Volunteers Who Sign Up Through the Earthwatch US Office**

Emergency medical and evacuation (MedEvac) insurance, plus trip cancellation/curtailment insurance is included in the contribution you pay to Earthwatch. Details of this insurance policy, including the duration for which you are covered can be found at [www.earthwatch.org/insurance](http://www.earthwatch.org/insurance). Please refer any queries regarding this policy to Michelle Ralph at Sutton Winson in the UK, [michelle.ralph@swib.co.uk](mailto:michelle.ralph@swib.co.uk). Or, from the US, dial 011-44-1444-251164. Please note the time difference between the US and the UK, and call during UK business hours, which are from 08:45 to 17:00 GMT (from November to April) and GMT +1 (from April to November). You may also leave a message and request that she call you back.

#### **Optional Additional Insurance for US and Canadian Volunteers**

Earthwatch is offering comprehensive optional travel insurance through CSA Travel Protection as a service to our US and Canadian volunteers. We are not able to offer this optional insurance to Earthwatch Europe volunteers due to UK laws. While our inclusive insurance (see above) covers your emergency medical needs and trip cancellation/curtailment up to £3000, the optional CSA policy covers lost luggage, pre-existing conditions, travel delays, etc. For more information on this optional additional insurance policy, call CSA Travel Protection at 1-800-348-9505 or visit [www.csatravelprotection.com](http://www.csatravelprotection.com). **Please note:** Some coverage is dependent on purchasing insurance within 24 hours of paying in full for your expedition. Should you decide to purchase our optional insurance, please **use the following producer code to indicate your affiliation with Earthwatch: 83534816.**

#### **Emergency Medical and Evacuation Assistance (For All Volunteers)**

The emergency medical and evacuation assistance provider for Earthwatch is International SOS (ISOS). ISOS is a 24-hour international operation that provides medical assistance and evacuation, a 24-hour medical help line and other travel-related services such as international health and security information in advance of your trip.

To contact International SOS in the event of an emergency, dial:

- For assistance **within the US:** ISOS Philadelphia, +1 215 942 8459
- For assistance **outside the US:** ISOS London, +44 (0) 208 762 8550

State that you are on an Earthwatch expedition. The following information must be provided:

1. The Insured Person's name
2. The Assured is EARTHWATCH, the Certificate No: GP 0010214 and SOS reference #14ACPA000075
3. The telephone number and facsimile number where the Insured Person can be reached
4. The Insured Person's address abroad
5. The nature of the emergency

### **Travel Agencies**

Earthwatch is pleased to partner with **Fly for Good** ([www.flyforgood.com](http://www.flyforgood.com)), and we strongly suggest you book your airfare for your expedition through them whenever possible; they are our recommended provider. Below are some Frequently Asked Questions about using Fly for Good as an Earthwatch volunteer:

#### Who is Fly for Good?

Fly for Good negotiates airfare discounts, known as "humanitarian rates," for non-profit volunteers. As part of this new partnership, Earthwatch volunteers will be able to take advantage of Fly for Good's negotiated airfare contracts, which allow for discounts of up to 50% on international flights. You can also book domestic flights at normal published fares.

#### Are there any special requirements I must fulfill in order to take advantage of Fly for Good's airfare?

Any volunteer traveling on a Fly for Good airfare must be able to prove affiliation with a non-profit organization conducting volunteer work overseas. Volunteers must be able to produce written proof of affiliation if asked at the airport. Your Earthwatch Expedition Briefing and your copy of your confirmation email from Earthwatch are all that is needed as written proof of your Earthwatch volunteer affiliation.

#### How do I get started?

Before you can access Fly for Good's discounted rates you must set up a profile. Go to "[Sign in](#)" and enter your information. When asked to enter an Approval code, enter: "EW360". "List Earthwatch Institute" as your affiliated non-profit. At this point your account will be approved and you will be sent an e-mail confirmation. You now have access to Fly for Good's humanitarian fares.

#### What is the Login for?

The [sign-in](#) is required to satisfy the airline carriers that are offering excellent deals through Fly for Good. This step protects you, Fly for Good, and the airlines from fraud. It's completely secure, and Fly for Good does not share your information with anyone.

#### How can I contact Fly for Good?

If you are not finding the best rates, have complicated itineraries, or need to talk through your purchase with someone you can call Fly for Good toll free in the US at: 877 FLY 4 GOOD (877 359 4466). Mention Earthwatch Institute and EW360 when asked for an approval code. E-mail inquiries can be sent to [info@flyforgood.com](mailto:info@flyforgood.com)

Earthwatch volunteers have 24-7 access to Fly for Good staff in the event that flight issues cannot be resolved with your airline by calling 800.440.4242 (US) or 402.548.6277 (International).

#### **Please Note:**

- Humanitarian discounts are on International Airfare only.
- Humanitarian discounts are on select routes (see below for the most popular ones).
- On routes that do not have a discounted fare, Fly for Good offers the lowest published fare.
- The humanitarian discounted airfare is only for Earthwatch volunteers or Earthwatch staff traveling for an Expedition.
- The humanitarian discounted airfare is marked with a "HUM" below the price on the booking engine – in the absence of a humanitarian discounted fair, it will say "Adult".

To learn more about humanitarian discounts visit [www.flyforgood.com](http://www.flyforgood.com)

### Some of Fly for Good's more popular discounted airlines and routes:

- Air France to Europe, the Middle East, Africa and the Asia/Pacific region.
- British Airways from the US to Africa, the Gulf and Middle East, India, the Far East & Australia.
- Delta to Central America, South American, Mexico, the Caribbean, Europe, the Middle East, and Africa. Ethiopian Airlines to Africa and India.
- Northwest/KLM to Africa, Europe, the Middle East, Asia, Africa, and India.
- United/Lufthansa from the US to Europe, Africa, the Middle East and Asia.

The Fly for Good partnership with Earthwatch also offers volunteers superior cancellation policies on humanitarian discount airfares. Though these policies vary according to both routes and airlines, as a general rule the benefits include:

- Being able to make changes to tickets with reduced fees, often 50-75% less than regular ticket-changing fees.
- Securing refundable fares with reduced penalties, often 50-75% less than regular tickets.
- Free stopovers to cities while traveling internationally.
- Being able to bring an additional piece of luggage beyond the normal 2 piece limit. (Please confirm with airline.)

A list of other suggested travel agents can be found in the *Helpful Resources* section. Be sure to give your rendezvous details to your travel agent as soon as possible so they can plan your trip accordingly.

### Other Advice / Information

- *Local currency:* US dollars (US\$). See the International SOS website (see the beginning of the *Travel Planning* section) and [www.xe.com/ucc](http://www.xe.com/ucc) for currency information and exchange rates.
- *Language:* English
- *Telephone dialing codes:* When calling the US from another country, dial the country's international dialing code, followed by (1) and the number. When calling another country from the US, dial (011), followed by the other country's country code and the number. **PLEASE 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.
- *Electricity:* 110/120 volts, 60 hertz, plug Type A (two flat prongs) and Type B (two flat prongs and a round grounding pin)



Plug Type A



Plug Type B

- *Time zone:* Pacific Time (GMT/UTC -8, -7 during Daylight Savings Time)
- *Personal funds:* Volunteers may bring approximately US\$150-200 with them for snacks (ice cream stops, etc.) or souvenirs during the expedition. Expenses incurred during recreational time such as dining and entertainment will be at your own expense, so you may wish to budget another few hundred dollars, depending on your spending habits. Cash, credit cards, and debit cards are accepted almost everywhere. ATMs will be accessible in the field.
- *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.

# 10. PROJECT CONDITIONS

Please show this section to your physician when he/she is completing your health statement. Be sure to discuss inoculation requirements with your physician well in advance of your departure date. See the Health Information section for inoculation information.

### To the examining physician:

Your patient has volunteered to join a field research team that has specific physical demands of which you and your patient should be aware. **We need your accurate evaluation of your patient’s ability to meet the conditions detailed below in order to safeguard his/her health and safety and ensure that he/she can participate fully and effectively.**

### General Conditions of the Research Site

This project will be conducted in a region of southern California that can range in elevation from 500-3500 feet on the March and April/May trips to 9000 feet in the upper mountain areas on the September trip. During the expedition, the temperature can range from below 50°F (32°C) in the early morning and evenings, to between 80-95°F (27 - 35°C) in mid-afternoon. The humidity is always low. Precipitation is infrequent. During the week, each volunteer will participate in five site visits including hikes of two to six miles (round trip total, per day) from and returning to supporting vehicles with elevation gain of no more than 800 feet (March and April/May) or 1600 feet (September trip) per day. The terrain varies, but is certainly difficult in many places. Many trails are uneven and rocky in the desert canyons and steep in the mountains. Team members will carry back packs with up to ~15 lbs of field supplies – both into the field (water) and out of the field (samples). These walks will be at a pace relative to the group; we will never rush ahead of the last person. In fact, higher quality observations are often accomplished at slower paces. **We strongly recommend good-fitting, broken-in hiking boots that cover the ankle.** Walking sticks or poles may also be used to improve balance.

It is inevitable that each person will have to eliminate body waste during a long hike. Rarely, there will be outdoor facilities available (although without plumbing), but most times you will be expected to urinate and defecate outdoors. All body waste elimination must take place well off any walking trail, and all solid waste must be buried. If you have any concerns about this, or would like some tips on handling this activity cleanly and efficiently – particularly if you haven’t had comparable field experiences – please check with a member of the Project Staff.

<b>Conditions during (March - early May)</b>			
Humidity	moderate	to	Very dry
Temperature range	54°F / 12°C	to	87° F / 30.5°C
Altitude	500 ft/153 m	to	2000 ft /615 m
Rainfall	2 in/5 cm	per	Month in March to May

<b>Conditions during (September)</b>			
Humidity	moderate	to	Very dry
Temperature range	45°F / 7°C	to	87° F / 30.5°C
Altitude	4000 ft/1220 m	to	9000 ft /2745 m
Rainfall	1 in/2.5 cm	per	Month in September

## Physical Demands

The information provided below is as accurate as possible, but please keep in mind that conditions may change once in the field and the project could potentially be more or less strenuous than the chart indicates.

All data collecting trips will be out-and-back trips, from vehicle drop-off locations. These trips will involve semi-strenuous hiking up gradual sloping canyons, while transporting all necessary equipment, food, water and personal supplies.

Activity	Workload/Intensity	Time (~hours per day)
Sitting	Sitting on ground to make detailed observations in the field, travel in vehicle, data entry and lectures	1-3 hours
Standing	Field sampling will include standing on rocky slopes, taking notes/photographs, collecting specimens and acquiring data	1-3 hours
Hiking	Uneven, rocky, desert/mountain terrain, sometimes on steep slopes, up to 6 miles per day	2-6 hours
Walking	Hard packed gravel roads and dirt trails	1-3 hours
Carrying	Up to 15 lbs for ~6 mi	2-6 hours

## Potential Hazards

Below are potential hazards associated with the project, research area, etc. Project staff ensure safety in a number of ways. First, they assess the physical capabilities of the participants before allowing them to begin work in the field or go on difficult hikes. Second, dangerous locations are avoided. Third, team members are accompanied at all times, and staff will terminate activities that are too demanding. If an accident does occur, First Aid and transportation to a medical facility are available.

Hazard Type	Associated Risks and Precautions
Transportation	Staff will drive the speed limit or below. On narrow canyon roads we use pull offs to give way to faster following traffic. Volunteers are not permitted to drive, and seatbelts will be required at all times.
Walking/ Hiking/ Climbing	Teams will be hiking over rough, often steep terrain, where slips, twists and trips are possible. Volunteers are reminded to walk slowly and carefully and to bring and wear proper footwear (sturdy, broke- in hiking boots with ankle support). The project will travel well marked, well trodden trails where possible. The pace will accommodate all volunteers and obstacles will be pointed out. Feel free to use a walking stick if needed.
Animals/ Plants	There are venomous and non-venomous snakes in the project area. Volunteers should point out snakes they see to staff and avoid all snakes. Staff will impress upon volunteers the need to visually confirm the safety of areas where snakes might lie before approaching (especially reaching under rocks and bushes, in crevices, etc.) Volunteers will be instructed to stay tuned to other hikers' encounters and gather information on location. Hanta virus and plague are found in rodents in the area; contact with rodents and their urine and/or feces will be avoided.
Climate/ Weather	Hot dry weather can lead to sunburn or dehydration. Wear proper clothing; wide brimmed hat, sunglasses, light pants and long sleeve shirts are encouraged. High SPF factor (30+) sunscreen application should be regular. The team will take regular water breaks, so be sure to drink plenty of water throughout the day. A supply of water will be kept in the project vehicle for refills. <b>Altitude-</b> The September team will work at potentially challenging altitudes. Please alert Earthwatch staff if you have previously experienced any degree of altitude sickness and at what elevations. Again, hydration and good nutrition will promote good health at higher altitudes. Please alert field staff immediately if you are feeling unwell.

Insects	Using insect repellent and wearing long sleeves and pants minimizes the risk of insect bites. If you are allergic to bites or stings consult your physician about bringing appropriate medications such as antihistamines or an Epi-pen. Inform project staff of all serious allergies.
Cacti	Avoid touching cacti unless wearing proper protective equipment (work gloves).
Wildfires	The project's close ties with the US Forest Service and Bureau of Land Management allow staff to be regularly updated on any fires in the area and to plan accordingly. In the event of a wildfire, follow any instructions from staff and local authorities.
Personal Security	All valuable effects should be secured with personal gear, or can be locked up at each Reserve. It is always best practice to leave unnecessary valuables at home.
Disease	Most diseases are prevented with basic safety cautions. Please see the CDC ( <a href="http://www.cdc.gov">www.cdc.gov</a> ) or WHO ( <a href="http://www.who.int">www.who.int</a> ) websites for more information. Please see the <i>Health Information</i> section for inoculation recommendations.
Traveler's diarrhea	Traveler's diarrhea affects 20-50% 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 anti-diarrheal medication in your personal First Aid kit. Speak to your doctor about other options for treating traveler's diarrhea and see the ISOS or CDC websites for advice on avoiding this condition.

We will constantly remind people to drink water, to wear sunscreen and insect repellent, to be on the look out for snakes and mouse droppings, and to watch other team members for any signs of distress. We will not conduct field work during periods of lightening strikes within a ~10 mile radius of the field site (~45 seconds between the strike and thunder). Team members are required to wear hats, hiking boots, and long pants during field work. We strongly suggest that team members wear lightweight and light colored long sleeve shirts during field work.

There will be plenty of time to relax. There will also be plenty to eat and drink and opportunities to remain indoors during inclement weather.

### **Medical Conditions of Special Concern**

Participants who experience the following conditions may wish to carefully consider their participation in this particular expedition, as these conditions may make participation on the project uncomfortable, difficult or impossible.

<b>Condition</b>	<b>Concerns and Precautions</b>
Generally poor physical health/fitness	The more physically fit a person is, the more enjoyable the work will be. Volunteers should be confident spending many days in a row in the heat, outside, all day, working with equipment and hiking up to six miles a day to elevations of 2,000 feet over rocky terrain.
Limited mobility	Volunteers must be able to walk to, from, and within the field sites on their own, up to six miles per day over rough terrain, without the assistance of other people or devices, often while carrying equipment. Anyone with limited mobility (e.g. back, knee, ankle, joint, etc. problems; severe asthma; wheelchair-bound, etc.) should reconsider participation in this expedition.
Breathing, poor circulation or cardiovascular limitations	Individuals with poor circulation, difficulty breathing, requiring the use of an inhaler, or with any cardiovascular limitations should reconsider participation.
Sensitivity to sun/heat	If you have any condition that might be affected by increased sun exposure or if you are sensitive to heat, please consult a physician. Be aware that many common prescriptions can increase your sensitivity to sun and heat.

## 11. HEALTH INFORMATION

See [www.internationalsos.com](http://www.internationalsos.com) for information on the current health conditions in the United States. At the homepage, enter Earthwatch's member identification number: 14ACPA000075. Under "Select Resource" choose "English Country Guide," and then select the United States from the list.

### **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 chicken pox). Please be sure your tetanus shot is current.

### **Project Inoculations**

Medical decisions are the responsibility of each volunteer. Note that health conditions around the world are constantly changing, so keep informed and consult your physician, a local travel health clinic, the US Center for Disease Control ([www.cdc.gov](http://www.cdc.gov)), the World Health Organization ([www.who.int](http://www.who.int)), International SOS (see above), and/or the resources in the *Helpful Resources* section for the latest health information for travelers.

### **Other Advice / Information**

- *Tuberculosis*: The WHO estimates that one-third of the world's population is infected with the bacterium (*M.tuberculosis*) that causes tuberculosis (TB). 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 TB during their lifetimes. TB 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.

## 12. PACKING CONSIDERATIONS

**PLEASE SEE THE PACKING CHECKLIST AT THE BACK OF THIS BRIEFING AND REMEMBER TO TAKE YOUR BRIEFING WITH YOU ON YOUR EXPEDITION.**

### **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. Field clothes may be worn more than once because we're all in this together! Past volunteers have tended to pack more than they needed.

**Note:** Many airlines have strict baggage policies. Please check with your airline(s) on baggage weight limits, liquid restrictions, fees for checked baggage, etc.

### **Weather Considerations**

Please take weather conditions into consideration when packing for your expedition. Climate information can be found in the *Project Conditions* section.

Early mornings can be cool, so the variety of temperatures should be taken into account. Therefore, clothing that can be layered is a must. Pack shorts and long pants, short-sleeve and long-sleeve shirts, a wide-brimmed hat, a kerchief (optional), light-weight socks above the ankle, and sturdy hiking boots. Also bring a pair of sandals or tennis shoes to wear when you kick your boots off after a long hike.

### Essential Items

**Make sure to bring your Earthwatch Expedition Briefing with you!** It includes essential information to which you may need to refer during your expedition, as well as during your journey to and from the project site.

#### EQUIPMENT:

**Mandatory:** Hiking Boots (well-fitted, good quality, broken in), daypack, sunhat, sunglasses, personal water bottle(s).

**Recommended:** Lightweight/light-reflective clothing, walking stick.

**Optional:** Camera, binoculars.

Please see the **Expedition Packing Checklist for a complete list of what you will need to take with you.** You are encouraged to go through the list and mark off each required item right before you leave for your expedition.

## 13. RECOMMENDED READING

Please read *Mapping Change in California's Mountains: The Research* in the Appendix of this Expedition Briefing. This document was prepared by the Earthwatch Scientist(s) and Earthwatch and explains the research conducted through this project as well as some results to date. Below are additional recommended materials for those interested in further preparing for the expedition. Many can be purchased online through popular vendors. See the *Helpful Resources* section for suggested vendor websites.

### Government Articles

- Bureau of Land Management [http://www.blm.gov/ca/st/en/fo/palmsprings/points\\_of\\_interest.html](http://www.blm.gov/ca/st/en/fo/palmsprings/points_of_interest.html)
- US Forest Service <http://www.fs.fed.us/r5/sanbernardino/contact/sanjacinto.shtml>

### 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 may be available online through <http://www.earthwatch.org/exped/russellr.html>. Note that reports are not available for all projects.

## 14. RENDEZVOUS

This information is provided in the printed version of this briefing.

## 15. EMERGENCIES IN THE FIELD

In the event of a medical emergency, project staff will administer First Aid treatment and, if necessary, will immediately take the volunteer to the nearest medical facility. There will always be a vehicle available onsite for these purposes but it may be miles away depending on the day's field activity. If necessary, emergency responders (USFS, CalFire) will hike to the group's location. Project staff will carry mobile phones and VHF radios that put them in direct contact with the Situation Desk at USFS Headquarters in the event of an emergency.

### Proximity to Medical Care

Staff certified in safety training	Rusty Russell is certified in CPR. Tracey, Danielle and the USFS staff have been trained in mountain and desert survival.
Nearest hospital and/or clinic	Eisenhower Medical Center 39000 Bob Hope Drive Rancho Mirage, CA Tel: +1 760 340-3911  Hemet Valley Medical Center 1117 E. Devonshire Ave. Hemet, CA 92543 (951) 652-2811
Distance from accommodations	Between 3 -8 miles

## 16. COMMUNICATIONS

**PLEASE NOTE:** you should check with your cell phone provider to obtain any carrier-specific dialing codes you may need while on your expedition or en route there or home; many providers have dialing procedures that may differ in whole or in part from directions listed in this Briefing. All volunteers are asked to remember that Earthwatch expeditions offer a rare chance to "unplug" from hearing ringing phones and having to hear others' phone conversations, and to regulate their cell-phone with respect for fellow volunteers and staff.

### Emergency Communications in the Field

US Forest Service Radios will provide coverage and immediate contact with the USFS Situation Desk at headquarters when mobile phone coverage is unavailable

**The emergency contact number at Earthwatch headquarters in the US is +1 978 461-0081.** After business hours, leave your message with the live answering service. State that you have an emergency communication and leave a clear message with the name of the expedition, 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.

### Personal Communications

**PLEASE NOTE:** 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.

Volunteers may bring and use their own mobile phones, but reception in the field will be dependent on the team's location at the time. Cell phone reception is decent at the Boyd Research Reserve and less dependable at the James Reserve. Each Center has wireless LAN connectivity and fast wireless internet access. Volunteers are

asked to be considerate of the researchers, staff, and other team members, and restrict personal communications to times when not involved in project tasks or activities.

If necessary, volunteers can be reached via the contact information below.

Address	Boyd Deep Canyon Center P.O. Box 1738 Palm Desert CA 92261 Phone: 760-341-3655 Fax: 760-779-8076 deepcanyon@mindspring.com	Please note that mail arriving after the team's departure will not be forwarded, so please plan accordingly.
Address	University of California James San Jacinto Mountains Reserve PO Box 1775 20950 HWY 243 at Lake Fulmor Idyllwild, California 92549 951-827-6835 fax: 951-659-0553 information@jamesreserve.edu	
Email	Volunteers' own email addresses	Wireless Internet is available at the accommodations site.

## 17. HELPFUL RESOURCES

### Project-related Websites

- Boyd Deep Canyon Desert Research Center <http://deepcanyon.ucnrs.org/>
- James Reserve <http://www.jamesreserve.edu>
- BLM National Monument Site [http://www.blm.gov/ca/st/en/fo/palmsprings/points\\_of\\_interest.html](http://www.blm.gov/ca/st/en/fo/palmsprings/points_of_interest.html)
- U.S. Forest Service Site <http://www.fs.fed.us/r5/sanbernadino/contact/sanjacinto.shtml>

### Passport and Visa Information

- Embassies around the world: <http://www.embassyworld.com>
- For Japanese citizens: [http://www.rainbowt.jp/travel/visa\\_top.html](http://www.rainbowt.jp/travel/visa_top.html)
- For Australian citizens: <https://www.passports.gov.au> and <http://www.dfat.gov.au/visas/index.html>
- Passport Visa Express (for US citizens): [www.passportvisasexpress.com](http://www.passportvisasexpress.com)
- UK-based visa service [www.uk.cibt.com](http://www.uk.cibt.com)
- Travel Document Systems: <http://www.traveldocs.com/index.htm>

### Travel Guidebooks and Booksellers

- Lonely Planet: <http://www.lonelyplanet.com>
- Rough Guide: <http://travel.roughguides.com>
- Amazon: <http://www.amazon.com>
- Barnes and Noble: <http://www.bn.com>

### Travel Agencies and Advice

- Fly for Good: [www.flyforgood.com](http://www.flyforgood.com)  
511 East Travelers Trail  
Burnsville, MN 55337 USA  
Tel: +1 877.359.4466 (877.FLY.4.GOOD)

Earthwatch has an official partnership with Fly for Good and strongly recommends volunteers use their services to book airfare for Expeditions and take advantage of Fly for Good's humanitarian discount rates on several international airlines and routes; see the *Before You Leave* section for more information.

- Travelocity: [www.travelocity.com](http://www.travelocity.com)  
3150 Sabre Dr.  
Southlake, TX 76092  
E-mail: [travelocity@travelocity.com](mailto:travelocity@travelocity.com)

Earthwatch is a partner with Travelocity in their Travel For Good/Change Ambassadors Grant Program, which allows would-be volunteers to apply for funding that can be used to cover the costs of an Earthwatch expedition and its associated travel costs. Visit [www.travelocity.com/travelforgood.com](http://www.travelocity.com/travelforgood.com) for more details.

- STA Travel: <http://www.statravel.com>  
65 Mt. Auburn St.  
Cambridge, MA 02138  
Tel: +1 617 576.4623  
Fax: +1 617 576.2740  
Email: [cam@statravel.com](mailto:cam@statravel.com)
- STA Travel (UK): <http://www.statravel.co.uk>  
Tel: +44 (0) 1865 792800  
Fax: +44 (0) 1865 792911  
Email: [manager.oxford@statravel.co.uk](mailto:manager.oxford@statravel.co.uk)  
Quote code: EWE01/02
- Wexas International (Europe): <http://www.wexas.com>  
Tel: +44 (0) 20 7581 8761  
Fax: +44 (0) 20 7581 7679  
Email: [southern@wexas.com](mailto:southern@wexas.com)  
Quote code: EWE01/02
- Democracy Travel (contact Jean S. West, Assistant Manager)  
4818 MacArthur Blvd NW  
Washington DC 20007  
Tel: 202 965 7200 or 866.557.9968 (toll free US and Canada)  
Fax: 202 342 0471  
Email: [jean@democracytravel.com](mailto:jean@democracytravel.com)
- World Travel Guide: <http://www.worldtravelguide.com>
- UK Foreign Office travel advice: <http://www.fco.gov.uk/travel>
- Third World Traveler: [http://www.thirdworldtraveler.com/Travel/Travel\\_Links.html](http://www.thirdworldtraveler.com/Travel/Travel_Links.html)

### **Airline/Airport Resources**

- Flight comparison tools: <http://www.bookingbuddy.com> and <http://www.1800-fly.com>
- Airport codes worldwide: <http://www.logisticsworld.com/airports.asp>

### **Country Information**

- Country information from around the world: <http://www.countryreports.org>
- Travel Document Systems: <http://www.traveldocs.com/index.htm>
- National Geographic Map Machine: <http://plasma.nationalgeographic.com/mapmachine>
- US State Department: <http://www.state.gov>
- Time worldwide with GMT/UTC: <http://www.worldtimeserver.com>
- Currency converter: <http://www.xe.com>
- Electrical current converter: <http://kropla.com/electric2.htm>
- Telephone dialing codes: <http://kropla.com/dialcode.htm>
- Online unit conversions: <http://www.onlineconversion.com>
- Worldwide weather: <http://www.wunderground.com> or <http://www.tutiempo.net/en>

- ATM locator: <http://visa.via.infonow.net/locator/global/jsp/SearchPage.jsp> or <http://www.mastercard.com/atmlocator/index.jsp>

### **Health Information**

- Travel health website: <http://www.mdtravelhealth.com>
- Center for Disease Control: <http://www.cdc.gov>  
Tel: +1 800 311-3435 or +1 888 232-3228
- World Health Organization: <http://www.who.int>
- The Travel Doctor: <http://www.tmvc.com.au>
- Disease outbreaks: <http://www.who.int/csr/don/en>
- Hospital for Tropical Diseases: <http://www.thehtd.org>
- Travellers Healthline Advisory Service  
Tel: 020 7950 7799
- MASTA Travelers' Healthline (UK)  
Tel: 0906 8 224100 (within UK)

# APPENDIX

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## MAPPING CHANGE IN CALIFORNIA'S MOUNTAINS: THE RESEARCH

The following information was taken from the research proposal submitted by the Earthwatch Scientist(s) to Earthwatch Institute. Included is a description of the research conducted through this project, some results to date, and other information regarding the accomplishments of the project and the staff. Specific details regarding research sites, methods, etc. is subject to change slightly from year to year and such changes may not be incorporated into this document.

### BACKGROUND, OBJECTIVES, AND METHODS

Agencies working on land management issues across the country are trying to figure out the best ways to measure both the cultural and natural resources of a region, and how to communicate this information among managers, scientists, students, and the general community. Your team gets to be part of helping figure out one of the most important environmental issues of our time: getting the public more involved in wilderness preservation and conservation by letting them know more about what's at stake in any particular area.

In the Santa Rosa and San Jacinto Mountains National Monument (SRSJMNM), The United States National Herbarium (Smithsonian), collaborating with regional institutions, including the University of California-Riverside and the Riverside Metropolitan Museum, is leading the effort to demonstrate how historical biological data can be used to construct tools for science, land management, education and communication.

Our primary goals include:

1. Development of effective GIS tools for land management and education that incorporate historical data from biological specimens and cultural objects.
2. Creation of education programs (both on-site and distance learning) that take advantage of the rich history of the area to teach students at all levels the principles of ecologically sensitive stewardship of our precious natural resources.
3. Construction of an information and communication framework that encourages citizen participation in the collection and analysis of data, establishes a clearinghouse for information pertinent to the subject area, and promotes a multi-directional dialogue between land managers, scientists, teachers, and students, and the citizenry of Riverside County and southern California.

Your Earthwatch team will let us make progress toward our first goal.

#### **SIGNIFICANCE OF RESEARCH:**

The study of change requires two kinds of data: current and historic. However, historic data either already exists or it doesn't and, where it does exist, it may not be in a useable form. For more than 200 years, botanists have been collecting plant specimens to document the flora of North America. Digitization has made it possible to quickly assemble data from these historic records, many of which date back more than 100 years. Analysis of locality data over this period of time, though, presents a greater problem. The geographic origin of a plant specimen is a powerful factor in determining its significance to both environmental history and natural resources management planning, and thus general geography provides a useful point of departure for the interpretation of and access to botanical data sets and specimens. But the potential for historic locality data to contribute to our project goals and, thus, the scientific, management and educational impacts we hope to achieve is just that...potential.

The vast majority of historic plant collections lack GIS-compatible data. The data we collect in this phase of the project will allow us to better evaluate the precise locality of these specimens. Our analysis of these data in a clearly defined geographic region will lead to improved accuracy of locality data sets and tools to automate the process of enhancing locality data on historic records. The potential of 60 million historic plant records in herbaria across the United State to contribute to change studies can be realized. They will become powerful tools in the study of plant cover change in the United States instead of curiosities locked in a museum or university.

#### **METHODS AND TECHNIQUES:**

We have assembled more than 25,000 historic plant records from 12 different herbaria. Each of these has been evaluated to determine their precise locality. A gazetteer of almost 1,000 place names and physical features has been assembled from current and historic reference maps, historic collections and online databases. These are currently being correlated with the specimen data. A National Science Foundation-supported undergraduate student is analyzing these data and addressing numerous questions regarding the plant cover change in the study area since 1900. During 2009, we plan to test these locality data by revisiting and documenting the reported locations.

#### **TECHNOLOGY:**

WAAS enabled GPS units will fix localities. Digital photography of habitats and plant species will include creation of panoramic 360° images. Data in field will be transmitted to GIS and Web in real-time. In the lab at the Boyd Center, we will work with data obtained by infrared, multiple spectral and hyper-spectral sensors to correlate species distributions with species preferences. An experimental plant species image recognition system, called the Instant Image Identification System (IIS), is being developed at the Smithsonian and a prototype is expected to be ready for use during your expedition.

## **RESULTS AND OPPORTUNITIES**

Since the project began in 2004 with a workshop in Redlands, CA that attracted major Federal, State, municipal, university and private stakeholders in the region, we have identified major mileposts in our effort to develop a National model for regional management of biodiversity. The first task has been to assemble a baseline of data from which to move forward. From 16 different herbaria in California and the big three in the East (Smithsonian, Harvard and the New York Botanical Garden), we have assembled more than 40,000 historic records of plant species in the region reported since 1890. These have been studied and the species identifications confirmed.

Two years ago, a student from Howard University conducted a test study of the sunflower family (Asteraceae) and determined that there had been a 30% change in the plant species composition (losses and gains) of the region between the first half and last half of the 20<sup>th</sup> century. These results were surprisingly high, so we are currently endeavoring to establish a current baseline by 2010 for the entire area. A collaborator at the Rancho Santa Ana Botanic Garden is producing a complete list of plant species for the study area based on all available data. Our fieldtrips for the next 18 months are aimed at establishing both new records for the area and confirming the presence of plant species not collected since 1960.

The completion of this work will launch us into the next phase of the project, i.e. incorporating these data and results into useable tools for land managers in their efforts to find the appropriate balance between land preservation and land use. Also, and for my interests more importantly, this project will initiate a regional effort aimed at improving understanding of natural systems among the population of the area, especially middle school and high school students, and establishing another model of citizen science, this time based on and using historic plant species records.

# Earthwatch Institute Policies & Participant Rights and Responsibilities

*(Revised October 10, 2008)*

This document contains important information concerning Earthwatch Institute (EW) policies and Participant rights and responsibilities for inclusion on an Earthwatch expedition. Please read this document thoroughly and sign and return the release forms that have been provided to you (either online or by mail from your regional Earthwatch office) to indicate that you understand the risks inherent to your expedition and the policies, rights, and responsibilities enumerated in this document. **You will not be permitted to partake in an expedition until Earthwatch has received the signed release form.**

## **Contents:**

1. Consent to Inherent Risks
2. Intellectual Property Rights (IPR)
3. Sexuality, Sexual Behaviour, and Drug and Alcohol Policies
  - Fraternization
  - Sexual Harassment
  - Drugs
  - Alcohol Policy
4. Recreational Time
5. In the Event of an Emergency: "Good Samaritan" Actions
6. Participants and Driving
7. Right of Refusal
8. Removal from an Expedition
9. Responsible Behavior
  - Cultural and Community Interactions
  - Sustainable Field Practices

## **1. Consent to Inherent Risks**

An Earthwatch expedition can be an enjoyable, enlightening, and potentially life-changing experience, but some of the characteristics that may make an expedition attractive to you may also put you or your property at risk. All true expedition work involves a degree of risk which varies from expedition to expedition. The expedition Briefing describes some of the foreseeable inherent risks involved in the activities that you are choosing to participate in. You must review and consider these risks carefully before signing and returning the Liability Release and accepting a Participant position. By signing the Liability Release, you are accepting the potential consequences of these risks. The conditions present for field research projects, many of which take place in remote areas of the world, include limited access to emergency and health services and limited or nonexistent communication facilities or other local infrastructure or services. Participants on Earthwatch Institute expeditions experience the whole range of climate, terrain and temperature extremes, bivouac living, physical work and other potential hazards including (but not limited to) political instability, war, transport difficulties and risks such as lack of vehicular safety standards commonly found in developed countries (for example, the absence of seatbelts) and increased incidence and severity of vehicular accidents, strikes, sickness, quarantine, natural disasters, wildlife behaviour and movements and other forces beyond the control of Earthwatch Institute and its associates.

## **2. Intellectual Property Rights (IPR)**

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 during the research portion of your expedition become the intellectual property of the Earthwatch Scientist(s). Co-opting or plagiarizing data, images or information gathered during an expedition for use in a scientific thesis, masters or Ph.D. work, for profit,

or for the academic or business use of a third party without the permission of the Earthwatch Scientist(s) is strictly prohibited. Please be aware that data gathered during interviews of local people becomes the intellectual property of the Earthwatch Scientist(s). Earthwatch Scientists have the right to place additional restrictions on your ability to share data or images.

Conversely, an Earthwatch Scientist(s) 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(s).

### **3. Sexuality, Sexual Behaviour, and Drug and Alcohol Policies**

EW does not discriminate on the basis of race, religion, ethnicity, sex, gender identity, or sexual orientation, and respects Participants' right to privacy. However, Participants must be aware that sexual behaviour and/or open displays of their sexual orientation and/or gender identity *may* offend or clash with the sensibilities of local residents in an expedition's area of operations, and may even potentially violate local laws.

Further, Participants must remember that their actions have impacts on fellow Participants, on the Earthwatch Scientist(s) and the research team, and on local partners, and could, in certain contexts, result in an uncomfortable, hostile and/or unproductive work environment.

To ensure enjoyable and productive work conditions and smooth relations with local peoples, EW has defined the following code of conduct. Beyond practicing cultural sensitivity and showing common courtesy, please be mindful of the following limitations.

#### ***Fraternization***

Earthwatch Scientists, Earthwatch staff, research staff, their colleagues, and their associates are prohibited from becoming romantically or sexually involved with Participants during the entire duration of the period that the team is in the field.

#### ***Sexual Harassment***

Sexual harassment of Participants by the Earthwatch Scientist(s), research staff, or EW staff is prohibited. Likewise, sexual harassment of the Earthwatch Scientist(s), research staff, fellow Participants, EW staff, or local peoples by Participants is also prohibited.

Sexual harassment infringes on an individual's right to an environment free from unsolicited and unwelcome sexual overtones or 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 EW expedition teams; such conduct is prohibited. Lewd or vulgar remarks, suggestive comments, displaying derogatory posters, cartoons or drawings, pressure for dates or sexual favours 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 your fellow Participants, the local population, EW staff members, or the Earthwatch Scientist(s).

Any individual who feels subject to sexual harassment or has any knowledge of such behaviour should report it at once to his or her Earthwatch Scientist(s) or to EW staff members. All Earthwatch Scientists and Field Team Leaders (FTLs) will notify EW immediately when an accusation of sexual harassment or abuse is made or when such behaviour is 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 removed from his or her expedition.

#### ***Drugs***

The manufacture, possession, use, purchase and/or sale of illegal drugs as defined by Australia, Japan, the United Kingdom, the United States *and* the host country of the expedition, is strictly forbidden while working or participating on an EW expedition. Prescription drugs may only be purchased and used by the individual indicated on the prescription, in keeping with the intended-use guidelines and local laws in the area of the expedition.

### ***Alcohol Policy***

Participants in EW 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, restrictions on the use, possession, sale, or purchase of alcohol may be set by the Earthwatch Scientist(s) or Earthwatch staff. 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.

Local statutes, customs, practices, ordinances, and regulations with regard to the use, possession, sale, or purchase of alcohol are applicable to all participants in EW expeditions.

Note: Any and all 16-20 year old Participants on Earthwatch Teen Teams or Family Teams are NOT permitted to consume or possess alcohol, regardless of local law.

Excessive consumption of alcohol by staff or participants is not acceptable on any Earthwatch expedition. 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.

EW staff and the Earthwatch Scientist(s) have the discretion to remove individuals from the project who consume alcohol in a time and manner that endangers the safety and/or productivity of the expedition.

### **4. Recreational Time**

Earthwatch has a duty of care for the health and safety of Participants from the rendezvous to the end of the expedition. For days when no research activities are scheduled, referred to as recreational days, Earthwatch will offer either a planned team activity or a range of recreational activities that have been vetted and comply with Earthwatch standards. Participants will also have the option of remaining at the project accommodations to rest. Participants who are determined to pursue options other than those recommended by the project staff will be required to sign a release before doing so. If there is a period of time during a regular research day when no research activities are scheduled, Participants may have the opportunity to leave the project site on their own; they will be asked to sign out of the project giving their intended destination. Not appearing for the next scheduled activity will trigger the Emergency Response Plan (ERP) regarding missing people. Earthwatch will determine the relative safety of Participants leaving the project site on their own at night after work hours. In some cases, due to local conditions, it may be advisable to restrict Participants to the project accommodations after dark. This will be clearly communicated in all project materials and reinforced in the on-site safety briefing. However, if the local conditions are such that Participants can go out at night under their own responsibility there will be a sign-out process through which participants will state their proposed destination and estimated return time. Participants will be given 24 hour contact information for field staff should assistance be needed. The sign-out is informational only and will not be used to enforce a curfew on Participants. Participants should understand that unless contacted for help, field staff will not start a search for a missing Participant unless they fail to appear the following morning or for the next scheduled research activity.

### **5. In the Event of an Emergency: Good Samaritan Actions**

In the event of emergencies, judgments must be made by Earthwatch Scientists, EWI staff, and Participants. While EW makes an effort to ensure that qualified people make the most informed decisions possible, occasionally first aid must be administered and other immediate steps taken by expedition participants who are not officially certified to make these decisions.

Each EW expedition has safety protocols and emergency procedures in place. However, in rare, unforeseeable emergency situations, EW does not restrict participants (the Earthwatch Scientist(s), staff, and Participants) from exercising their best judgment with regard to their own safety. EW does not restrict "Good Samaritan" actions, or actions taken to assist fellow participants during emergency situations in the field. However, EW neither encourages nor expects you to jeopardize your own safety or that of others in attempting to rescue or assist your fellow team members.

## **6. 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 direct supervision by project staff. These circumstances are predetermined 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.

Participants who have driven themselves to the project may choose to use their own vehicle during recreational time, but project staff must brief them on the driving restrictions and advise Participants that all driving during recreational time is done at their own risk.

Participants are actively discouraged from driving other Participants during recreational time. Riding in another Participant's vehicle is done at the Participants' own risk. Riding in other Participants' vehicles is not covered under the Participants' insurance policy for the expedition.

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

## **7. Right of Refusal**

EW reserves the right to refuse an applicant's participation on EW projects. Earthwatch and the project staff may not refuse a Participant for discriminatory reasons (race, religion, sex, sexual orientation, etc.). Earthwatch will make every reasonable effort to accommodate participants with disabilities and the organization endeavours to find appropriate expeditions for those participants who have physical limitations. Refusal of a participant is an unusual event and is generally due to either an applicant's failure to meet the health requirements of a particular expedition, or in the interest of team efficiency.

Project and field staff 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 project schedules, safety, research objectives or general performance of the team.

## **8. Removal from the Expedition**

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. By signing the "Liability Release" form, participants are indicating that they have read and understand these policies. Removal of a Participant from a team is at the discretion of the Earthwatch Scientist(s) and EW staff. In addition, EW will support the right of the scientist to send Participants away from a project once in the field should their behaviour compromise the safety, research objectives or general performance of the team, or if the Participant has violated a stated policy.

## **9. Responsible Behaviour**

### ***Cultural and Community Interactions***

Earthwatch is committed to working closely with communities. Participants and project staff are encouraged to engage and interact with local communities wherever possible. Our aim is to support projects which leave a lasting legacy with local communities and which form partnerships with local organizations.

Being culturally sensitive is important when visiting a foreign country. Patience, good humour, an acceptance of differences, using common sense, and showing respect will help visitors enjoy cultural differences and make them part of a rich experience wherever they travel. Participants are often guests of the country and as such are obliged to consider the culture of the local people and minimize disturbance to their daily routine. Racism and other forms of prejudice will not be tolerated on any Earthwatch project. After consultation with Earthwatch staff, Participants who display racist or other discriminatory behavior will be asked to leave the expedition.

Earthwatch stresses the need for responsible behavior and common courtesy when travelling, particularly in rural areas. When in doubt about what may cause offense when working in areas you are not familiar with, be sure to ask your Earthwatch Scientist(s) or Earthwatch field staff. Try wherever possible to learn and respect the local customs and appropriate dress codes before you join the team as being involved with the local community is one of the rare privileges of joining an Earthwatch project. Be aware of the natural curiosity that your presence will create and be mindful not to impose your own cultural beliefs or value systems on the people you meet and the places you visit.

Particular sensitivity is required when it comes to photography and gifts. Earthwatch expeditions feature many authentic encounters with local communities and the opportunities for photography or video are endless, but it is important to always ask permission before taking photos. Many local people find being photographed or videotaped intrusive or even threatening, so always ask your Earthwatch Scientist(s) or field staff if it would be appropriate. When it comes to gifts, please ask the advice of the Earthwatch Scientist(s) or field staff as to the type and value of the gift in order to avoid any embarrassment or the creation of unrealistic expectations within the community.

### ***Sustainable Field Practices***

As an environmental organisation, Earthwatch recognizes our leadership role in conducting activities as responsible stewards of the social and physical environment and using our resources to promote social and environmental awareness, local action, and global thinking.

Every attempt should be made to minimize your impact on the environment you are working in. Please avoid leaving any litter or non-natural waste. Be aware of the risks of fires and follow directions of the field staff when it comes to camping in order to avoid creating a larger impact than is necessary. Be particularly mindful of using any rivers, streams or wells as the local communities may be dependent on those as vital sources of drinking water. When in doubt ask the field staff.

# EXPEDITION PACKING CHECKLIST

## Essential 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 inoculation (if necessary)

## Required Items

### *Clothing/Footwear for Fieldwork*

- Lightweight, quick drying, long-sleeved shirts and pants/trousers
- Sun Hat to protect forehead and back of neck
- Sturdy hiking boots, ankle high, broken in (or you will get blisters)
- Sunglasses with strap
- Lightweight sock liner and heavier weight hiking sock, above ankle

### *Clothing/Footwear for Leisure*

- One set of clothing to keep clean for end of expedition
- Sandals or light-weight tennis shoes
- Shorts, short-sleeve shirts, T-shirts
- One sweater/sweatshirt for cool evenings

### *Field Supplies*

- Small daypack/rucksack
- Drybag or plastic sealable bags (good for protecting equipment such as camera from dust, humidity, and water)
- Water bottles (minimum 2 one-liter bottles)

### *Bedding and Bathing*

Note: Blankets, pillows and towels will NOT be provided by the project.

- Bedding or sleeping bag (rated to 32°F)
- Pillow
- Towel(s)

### ***Personal Supplies***

- Personal toiletries (biodegradable soaps and shampoos are encouraged)
- Antibacterial wipes or lotion (good for “washing” 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 personal medications
- Sunscreen lotion with SPF 30 or higher

### ***Miscellaneous***

- Spending money (see *Other Advice/Information* in the *Before You Leave* section.)
- Camera, film/memory card(s), extra camera battery (if you bring a digital camera, bring your interface cables for downloading)

### **Optional Items**

- Flashlight or headlamp with extra batteries and extra bulb
- Earplugs for light sleepers
- Blank CD or DVD for sharing digital photographs at the end of the expedition
- Travel guide
- Books, games, journal, art supplies, etc. for recreational/rest time and travel
- Walking stick
- Kerchief
- Binoculars

## Before you leave...

- Did you read your ENTIRE Expedition Briefing?
- Have you paid the entire balance of your contribution for the project?
- Have you turned in all your forms to Earthwatch (see the *Volunteer Forms Overview* at the beginning of your Expedition Briefing)?
- Is your passport current and have you obtained a visa for your destination country (if necessary)?
- Have you had all the necessary vaccinations for your project site and obtained all necessary medications?
- Have you reconfirmed your airline ticket?
- Do you have enough cash and/or traveler's checks?
- Have you made a photocopy of your airline ticket and passport in the event they get lost or stolen?
- Did you pack your Earthwatch t-shirt?
- Did you pack some extra clothing in your carry-on bag in case your luggage is lost and takes a day or two to catch up with you?
- Did you pack all prescription medications and bring copies of the prescription?
- Did you pack extra eyeglasses/contact lenses?
- Did you pack a small personal first-aid kit? (e.g. bandages, antibacterial ointment, aspirin, anti-diarrhea medication, laxative, moleskin for blisters, sun block, etc.)
- Do you have everything on your packing list? \*Remember to break in new footwear beforehand!
- Have you brought your level of fitness up to the standards required for your project as stated in the Project *Conditions* section?
- Did you pack your Expedition Briefing? Bring it with you! It has valuable information pertaining to the project, rendezvous, and contact information.
- Did you purchase a guidebook for your destination country?
- Have you purchased additional travel insurance?
- Have you left the Earthwatch Emergency Hotline number (+1 978 461-0081) with a family member or friend? \*This is for emergencies ONLY. An Earthwatch staff member is on-call 24 hours a day, seven days a week.