

# Timeline and Checklist

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

## Immediately

- Read this Expedition Briefing and all enclosed materials thoroughly.
- Book an appointment with your doctor; you'll need them to sign your Health form.
- Make sure you understand and agree to Earthwatch policies and participant responsibilities.

## At least 60 days prior to your expedition start date

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

- |   |   |
|---|---|
| <input type="checkbox"/> Personal Profile | <input type="checkbox"/> Behaviour Agreement              |
| <input type="checkbox"/> Health Form      | <input type="checkbox"/> Privacy Release Form (Australia) |
| <input type="checkbox"/> Travel Form      | <input type="checkbox"/> Minor Liability Release Form     |

Australian volunteers can download forms on [earthwatch.org/australia/expeditions/volunteer\\_forms/](http://earthwatch.org/australia/expeditions/volunteer_forms/)

- Book travel arrangements (see the *Rendezvous* sections for details).
- If you plan to purchase additional travel insurance, note that some policies require purchase when your expedition is booked (see the *Insurance* section for more information).
- If travelling internationally, make sure your passport is current and obtain a visa for your destination country (if necessary) (see the *Passports and Visas* section for more details).
- Make sure you have all the necessary vaccinations for your project site (see the *Health Information* section).
- Bring your level of fitness up to the standards required for your expedition (see the *Project Conditions* section).
- Review the packing list, ensuring you have all the clothing and any special equipment needed for the expedition.
- Obtain any necessary prescription medications that will be needed for your travels. **Note:** They must be accompanied by a doctor's note to enter Australia.

## Up to 30 days before you leave for the expedition

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

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

# Melbourne's Microbats

## Table of Contents

<b>GENERAL INFORMATION</b> .....	<b>1</b>
<b>EMERGENCY CONTACTS</b> .....	<b>1</b>
<b>PREPARING FOR YOUR EXPEDITION</b> .....	<b>4</b>
<b>THE RESEARCH</b> .....	<b>6</b>
PROJECT STAFF.....	8
<b>DAILY LIFE IN THE FIELD</b> .....	<b>10</b>
VOLUNTEER TRAINING AND ASSIGNMENTS.....	10
TEAM ITINERARY AND DAILY SCHEDULE .....	11
ACCOMMODATIONS.....	12
FOOD.....	13
<b>PROJECT CONDITIONS</b> .....	<b>14</b>
GENERAL CONDITIONS OF THE RESEARCH SITE .....	14
POTENTIAL HAZARDS.....	15
HEALTH INFORMATION .....	15
MEDICAL CONDITIONS OF SPECIAL CONCERN .....	16
EMERGENCIES IN THE FIELD .....	16
COMMUNICATIONS .....	17
<b>TRAVEL PLANNING</b> .....	<b>18</b>
RENDEZVOUS.....	18
INSURANCE .....	19
ADDITIONAL TRAVEL INFORMATION.....	19
HELPFUL RESOURCES .....	21
<b>APPENDIX</b> .....	<b>21</b>
<b>EARTHWATCH INSTITUTE POLICIES &amp; PARTICIPANT RIGHTS AND RESPONSIBILITIES</b> .....	<b>22</b>
<b>EXPEDITION PACKING CHECKLIST</b> .....	<b>25</b>

# General Information

<b>Project title</b>	Melbourne's Microbats – Student Challenge	
<b>Earthwatch scientists</b>	Dr. Rodney van der Ree, Australian Research Centre for Urban Ecology Dr. Lisa Godinho, University of Melbourne	
<b>Research site</b>	Melbourne and surrounding areas	
<b>Expedition length:</b>	8 days	<b>Minimum age of participation:</b> 16- and 17-year-olds only*
<b>Team size max:</b>	9	
<b>*Note:</b> It may also be possible for 16- and 17-year-olds to participate on standard teams if accompanied by a parent or guardian. Contact Earthwatch for more information.		

# Emergency Contacts

## Emergency contact number at Earthwatch headquarters in Australia:

**+61 (3) 9625-0822**

Someone is always on call to assist you or respond to your message 24 hours a day, 7 days a week. After business hours, leave your message with our live answering service. State that you have an emergency communication and leave a clear message with the name of the field program, your name, location from which you are calling, and, if possible, a phone number where you can be reached. An Earthwatch staff person will be contacted and will respond to your call within one hour.

## Emergency medical and evacuation assistance provider:

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) 208-762-8008
- For assistance **within Australia:** ISOS Australasia, +61 (0) 2-9372-2468

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



Dear Earthwatcher,

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

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

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

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

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Anne T. Ogilvie".

Anne T. Ogilvie

International Director of Field Management



THE UNIVERSITY OF  
MELBOURNE

Dear Earthwatcher,

Welcome to the *Melbourne's Microbats* research project. First of all, thanks for being interested in assisting with the conservation of biodiversity in urban and suburban areas. The number and size of cities and towns around the world continues to grow at an ever-increasing rate, and the consequences for native plants and animals are profound! Urbanisation is recognized in the USA as the second-most common cause of species endangerment, a trend probably reflected in Australia as well. Melbourne in particular is rapidly expanding in both area and human population, with 1.8 million people expected to join the existing 3.8 million by 2036. We need reliable scientific data on the habits and requirements of wildlife to help prevent their local extinction, which is the overall aim of this project.

Microbats may be small, but they are also very cool. They differ from the larger flying-foxes or fruit bats in that they may weigh just a few grams, eat insects and navigate their way around the city using ultrasonic calls that are way above our hearing range. In contrast, the flying-foxes may weigh up to 800 grams, eat fruit and nectar, and navigate visually using well-known landmarks, such as the Yarra River. Flying-foxes in Melbourne have a single roost where they sleep during the day, while microbats may be roosting in tree hollows and other cavities right across Melbourne and the suburbs, often changing roosts from night to night. There are potentially 16 different species of microbat in Melbourne; however we know very little about their distribution, abundance or habitat requirements.

Your role in this project is to assist researchers from The University of Melbourne, the Australian Research Centre for Urban Ecology and the Department of Sustainability and Environment to 1) determine the distribution of different species of bats across Melbourne using trapping and electronic bat detectors; 2) investigate their diet; 3) quantify insect prey availability and 4) conduct repeat surveys at the Royal Botanic Gardens Melbourne to assess their population dynamics. The project is being supported by numerous industry partners, including Parks Victoria, four local councils (Monash, Melbourne, Bayside and Cardinia), Melbourne Water and the Australian Geographic Society.

Thanks again for being willing and interested to become involved in this exciting project and donate some of your time. We are really excited about this research, which is one of the first large-scale projects of its kind in urban areas anywhere in the world.

We hope you enjoy the experience!

Sincerely,

Dr. Rodney van der Ree

Deputy Director, Australian Research Centre for Urban Ecology, Royal Botanic Gardens Melbourne and the University of Melbourne

# Preparing For Your Expedition

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

The Expedition Briefing is presented in four main parts:

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

The Expedition Briefing will answer your questions about travel, rendezvous, the research area, the living and working conditions that you will encounter and the project staff with whom you will work. The overall objectives and methods of the research are described, as well as the specific tasks in which you will participate. It is important to read this information to truly understand the work you will be contributing to.

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

## Physical and Intellectual Preparation

Advance reading will enhance your understanding of the scientific questions addressed by the research. The Expedition Briefing includes an optional reading list that can shorten your training time in the field. Some Earthwatch scientists include additional reading material within the Expedition Briefing; others will send you articles and/or provide printed information at the research site. In addition, we encourage you to read novels or history books based in or near the research area of your expedition. Such stories will provide you with an interesting introduction to the location in which you will be living and working, and may help you perceive many unique features of the local culture and landscape.

Pay attention to the *Project Conditions* section! Regular exercise is especially important for volunteers who will be doing fieldwork. Your ability to quickly adapt to your project's physical demands will enhance both your enjoyment of the work and the productivity of your team. The Expedition Briefing describes the physical demands of the project and may suggest specific activities for advanced conditioning.

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

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

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

In addition to print film for snapshots of new friends and beautiful scenery, consider using slide film and/or digital images. Action photos of your teammates working on a research task, of the research site and of the research subject provide important visuals for presentations. As stories develop out of your day-to-day experience, keep an eye out for images to illustrate these stories. If your expedition inspires any artwork that you are willing to share, Earthwatch Institute welcomes the opportunity to copy and use photographs, drawings, watercolors and cartoons in its various publications and online.

## Emotional Preparation

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

The following sequence of feelings is typical:

- **Stage 1:** Everything is new and exciting; you feel terrific
- **Stage 2:** Disappointment in the reality of the situation; for instance, it has been raining for days and the work is more difficult than you expected it to be
- **Stage 3:** Your emotions reach an even plateau; things don't seem so rough, you understand the work and you feel you are making a contribution!

## Being Part of a Team

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

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

# THE RESEARCH

## Melbourne's Microbats

Most Melbournians are completely unaware of the existence of these insectivorous bats due to their nocturnal habits, lack of audible calls and small bodies (these bats can range from the size of a moth to the size of a hand). Although 16 species of microbats have been detected across greater Melbourne, so far there have not been any systematic surveys done to quantify their distribution, abundance, habitat requirements or conservation status within urban and suburban areas. Many management actions, such as habitat clearing, pruning of dead branches, planting of particular species of trees, artificial night lighting and park design are likely to disadvantage the bats, and may cause their extinction.

Through this project, we hope to identify landscape-scale habitat features, as well as the micro-scale features such as preferred nesting locations, that will enable managers of urban areas to consciously manage resources for the benefit of bats as well as humans.

## Research Objectives

Broadly, this project will investigate the habitat requirements of microbats within an urban landscape.

**The primary aim of the surveys this summer is to quantify the dynamics of an urban population of microbats.** The surveys at the Royal Botanic Gardens Melbourne (RBGM) are designed to sample a community of bats as close as possible to the city centre. We hope to discover the size of the population, the relative number of males and females, the number of females with young, and how many young are born and weaned, and, if possible, some information about death rates or the length of time that individuals remain at the RBGM.

The secondary questions are:

**1) What is the effect of urbanisation on the abundance and diversity of microbat prey (nocturnal aerial insects), and how does this influence microbat activity?**

This component of the project will determine the impact of urbanisation on microbat foraging by quantifying the availability of bat prey at different levels of urbanisation, and within habitat types of varying human modification.

**2) Are there temporal changes in microbat activity and habitat selection in an urban environment?**

We will determine if hourly and nightly microbat and insect activity change at different levels of urbanisation and among habitat types of varying modification. We will also use a smaller subset of sites to observe monthly changes in microbat and nocturnal aerial insect activity at different levels of urbanisation. This information on monthly activity will determine whether Melbourne's higher temperatures affect seasonal microbat activity. It is thought that, due to human activities, Melbourne is now warmer than the surrounding rural areas, creating a heat island effect (Parris & Hazell, 2005). As a result, there may be higher levels of winter activity in more urbanised areas due to the warmer climate; there may also be an earlier onset of post-winter bat activity.

**3) Are there changes in microbat prey selection along an urban-rural gradient?**

Diet analysis will be used to determine changes in microbat prey selection at different levels of urbanisation, and whether or not this varies seasonally. We will also determine whether changes in microbat diet are related to prey availability. Microbats may change their diet to adapt to an urban environment, where there could be lower insect diversity.

**4) Which elements in the urban landscape provide microbat roosting habitat, and what is the spatial relationship between roosting and foraging habitats?**

We will examine factors affecting roost tree selection by microbats. We will look at the biophysical characteristics of roost trees as well as characteristics of the surrounding landscape. Information on microbat roosting

requirements can be used to guide land-use decisions that affect the availability and quality of potential bat roosts in urban and suburban landscapes.

## Methods

The study will be conducted within and adjacent to the Royal Botanic Gardens (RBGM), South Yarra. The RBGM has been selected as the primary study site because it has a high diversity of bats, with at least 6 species having been detected, and it is a secure environment conducive to catching microbats. Surveys of the microbat community will be conducted fortnightly between November and April, with the aim of documenting how the population structure (adults vs. juveniles, males vs. Females, etc.) changes over the summer.

Additional surveys may be conducted elsewhere across Melbourne within selected 'green' habitat patches. In urban landscapes, 'green' habitat patches are interspersed amongst a built environment (buildings, bridges, roads, etc.) and can range from cultivated parks and gardens to remnant bushland, all of which vary in size, shape and condition (Garden *et al*, 2006). The relative contribution of each of these areas at providing critical resources for insectivorous bats is unknown. Study sites will have varying degrees of urbanisation and will be distributed along an urban-rural gradient.

The primary survey methods will be a combination of harp trapping and acoustic monitoring to survey the microbat community. Depending on timing, some radio-tracking may be conducted to identify roost trees.

## Relevance to Conservation

This project will provide information on the critical roosting and foraging requirements of insectivorous bats within urban and suburban areas. Roosting and foraging requirements are an important consideration for the conservation of bats, particularly in human dominated landscapes where natural habitats have been extensively cleared, fragmented or modified. The paucity or absence of suitable roosting and foraging sites may limit the distribution of species, while the relative abundance of these areas may affect the size of local populations. Information gained from this research will allow governments and developers to design cities and towns that also support viable populations of microbats.



## Project Location

Victoria's capital, Melbourne, has an approximate population of three and a half million within its urban area. Settled first in 1835, the city experienced rapid growth after the Victorian gold rush beginning in the 1850s. In 1901, Melbourne was Australia's largest city and its capital until 1927. After World War II, immigration provided a population boost to the city resulting in significant outwards suburban growth.

The picturesque setting of the Royal Botanic Gardens Melbourne extends over 36 hectares and contains more than 50,000 plants. Diverse plant collections, year-round events, unique tours, and a reputation as one of the world's finest gardens has made the Royal Botanic Gardens one of Melbourne's most popular tourist attractions.

## Why field research?

As an Earthwatch participant, you will spend a significant amount of time each day assisting scientists with data collection. Some of this work will be repetitive, but it is fundamental to our scientific understanding of nature. Ecosystems are incredibly complex. The only way to begin to unravel this complexity is by designing good experiments, and carefully collecting as much data as possible. Without the work of thousands of dedicated scientists, we would know nothing about climate change, the effects of pollution, the thinning of the ozone layer, the extinction of species, or how to find cures for diseases or improve crops. Without science we would be blind to the world. This is your chance to be part of the scientific effort, to find solutions to pressing environmental and cultural problems, and to enjoy the beauty and diversity of nature as you work.

# PROJECT STAFF

## Earthwatch scientists

**Dr Rodney van der Ree** is the principal advisor for the project. Rodney is the Australian Research Centre for Urban Ecology's (ARCUE) deputy director at the Royal Botanic Gardens. He obtained his PhD in 2000 from Deakin University, where he studied the impacts of habitat fragmentation on arboreal marsupials in north-eastern Victoria. He used the principles of landscape ecology to investigate the response of fauna to a landscape where the habitat was arranged as a network of linear strips along roads and streams.

Rod now investigates the response of mammals to urbanisation and will be investigating the distribution and abundance of mammals within the greater Melbourne area, with a focus on the rate of species decline, their habitat requirements and survival prospects. Rod may only visit one or two teams during 2011/2012.

**Dr Lisa Godinho** is a tutor and lecturer in the Biology and Zoology Departments at the University of Melbourne. She completed her PhD in 2009 at the University of Melbourne. Her research focused on the roosting habits of two species of Melbourne microbats using artificial roosts (bat boxes). She investigated the influence of parasites, roost microclimate and the social structure of populations on roosting behaviour.

Lisa now spends the majority of her time educating the next generation of scientists and is currently completing a graduate diploma in education at Monash University. She remains actively involved in microbat research through strong links developed with research students following up on her PhD work. Lisa will be leading all of the Earthwatch microbat research teams in this 2011/2012 season.

## Field staff

**Ms Joanna Saaich** is an ecologist over from the UK on a four-year working visa. She has worked in both the voluntary and consultancy sectors with the 16 UK microbats species for the last 7 years. She has volunteered with both national and local bat groups, and attends surveys, conferences, talks, radio-tracking projects and house visits. As a consultant ecologist for an engineering firm, she has worked on both large- and small- scale development projects, from house conversions to road projects. Over the past 2 months in Melbourne, she has volunteered with several biodiversity projects to gain experience with Victorian bat species.

**Caroline Wilson** is a PhD student at the University of Melbourne and the principal investigator for the research project. Caroline completed a bachelor's of science (first class honours) at Deakin University in 2007. Prior to commencing her PhD, Caroline worked on a number of research projects with ARCUE, and has been involved with a long-term monitoring program of the grey-headed flying-fox in Melbourne. For her PhD, Caroline is investigating the foraging and roosting requirements of microbats across Melbourne. This summer Caroline will be radio-tracking bats to find out where they are roosting in Melbourne, in order to identify important roosting habitats so they can be managed and conserved appropriately.

## Earthwatch Teen Team Facilitator

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

**Rachel Maitland** graduated from Sydney University with a degree in marine science and then completed her honours year with James Cook University, which involved assessing the risk of boat impacts on dugong populations in Hervey Bay, Queensland, and then proposing management recommendations to alleviate this risk. After university she worked for the Marine and Coastal Community Network based at the Sydney Institute of Marine Science, managing communications and participant liaison. She has also worked as an environmental education officer at the local government level. Rachel works in the Earthwatch Australia Sydney office coordinating Earthwatch's ClimateWatch program, assisting with the Sydney Scientist for a Day programs and managing the Sydney office.

# Daily Life in the Field

## VOLUNTEER TRAINING AND ASSIGNMENTS

### Training

The research team will provide training in setting up harp traps, light traps and the use of the bat detector. Although participants will not be allowed to handle the microbats due to safety and licensing regulations, the research team will involve the team in the processing of the bats, which will include weighing, measuring and possibly fitting radio-tracking transmitters.

Participants are not expected to have any previous skills in bat identification, scientific process or data recording. All tasks will be explained in detail, and if you have any queries the research team is there to help.

The only thing expected is that participants are patient and understand that field work is not always predictable. Therefore, an ability to be flexible due to weather or other unforeseen circumstances is appreciated.

Participants will receive an overview and safety briefing upon arrival. If participants have any concerns or questions about the schedule of the evening they should address them to the project staff.

### Assignments

Tasks will involve setting up harp traps and monitoring the traps for caught bats. Once bats are found in the traps they will be removed by the research staff, and participants will assist in weighing and measuring them. Depending on timing, selected bats will be fitted with a radio transmitter to allow researchers to locate the daytime roost of the bat and the night-time foraging areas.

We are also studying the diet of these microbats, and will therefore collect a faecal sample from some bats. These bats will be kept in bags for approximately an hour to see if they will produce a sample. All bats will be released by the team once they are processed. Faecal samples collected will be brought back to the University of Melbourne to be analysed in the lab the following day.

The light traps are designed to catch flying insects. What is caught in the traps will inform the researchers about the availability of food in comparison to what is found in the faecal samples. Participants will assist with setting up the light traps and with collecting the insects, which will be analysed in the lab the following day.

One or two bat detectors will be with the team, and will be used to help find out if bats are present by transmitting audible clicking noises, which can later be downloaded to assist in the identification of species of microbats.

Day time activities will include data entry, downloading the bat calls from the bat detector, sorting the insects caught and identifying them, and analysing faecal samples collected. There may also be a need to set out more traps in the day and to collect bats from nest boxes.

Grey-headed Flying-foxes are much larger than the microbats (600 – 800 grams, versus up to 20 grams for the microbats) and also call Melbourne home. A colony became established in Melbourne in the mid-1980s, and the summer population is around 30,000 bats. As part of this expedition, you will visit the colony, learn about the flying-foxes and participate in a flyout count at dusk with a large group of regular volunteers from the community.

# TEAM ITINERARY AND DAILY SCHEDULE

Be aware that schedules can and do fluctuate as weather and work conditions can affect the daily schedule. Should this situation arise, your cooperation and understanding are appreciated.

**Day 1:** Rendezvous. Safety and orientation briefings. Night trapping.

**Days 2 – 7:** Lab work and assisting in setting up traps or visiting nest boxes. Night trapping. A typical schedule is as follows:

Time	Activity
9:00 a.m.	Breakfast
10:00 a.m.	Lab Work
12:00 p.m.	Lunch
1:00 p.m.	Field / Lab work
3:00 p.m.	Recreational Time
5:00 p.m.	Dinner
7:00 p.m.	Field Work
1:00 a.m.	Bed Time

On one of the days there will be a visit to the grey-headed flying-fox camp at Yarra Bend Park, as well as to a local attraction. There may also be presentations from visiting scientists throughout the week.

**Day 8:** Research wrap up and departure.

## 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.

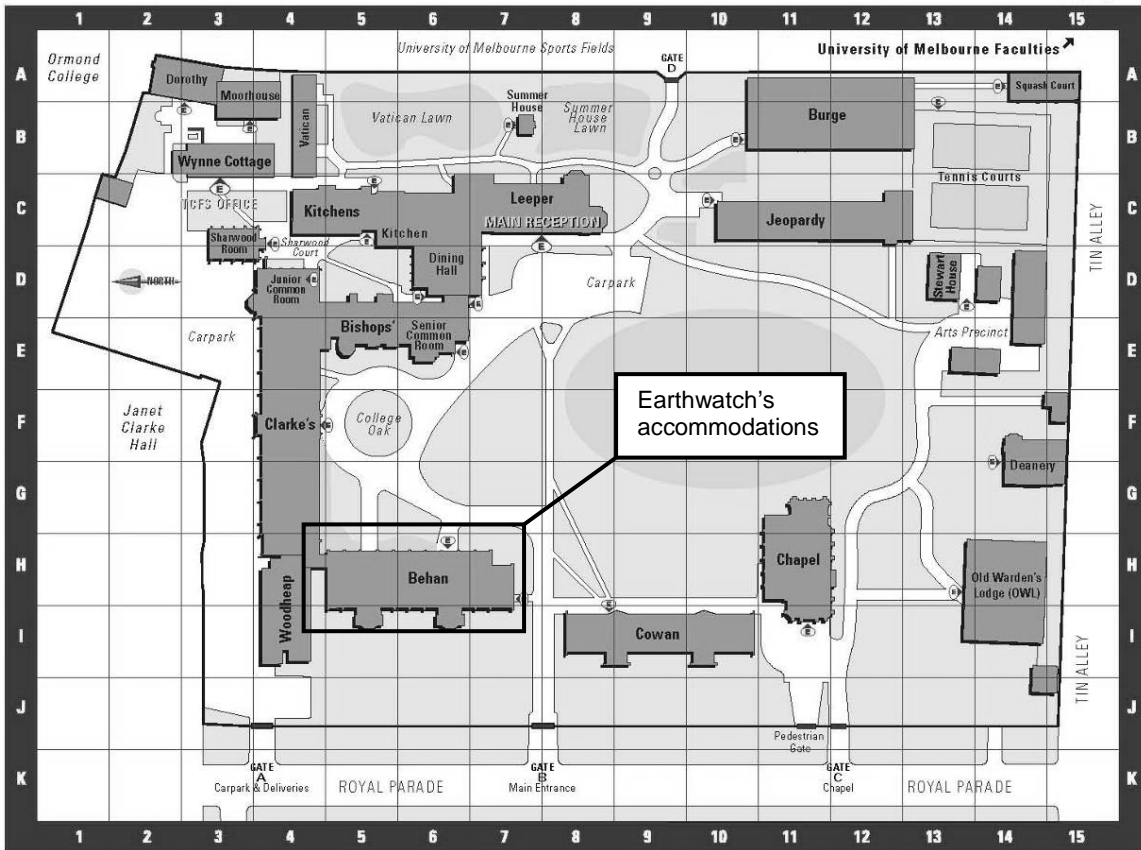
- If there is a recreational day during the expedition, the project staff and/or Earthwatch Team Leader will supervise a planned team activity or a small choice of supervised recreational activities that have been vetted and comply with Earthwatch standards. You will also have the option of remaining at the project accommodations to rest, provided supervision is possible.
- When there is a period of free time scheduled into a regular research day, the staff will ask you to let them know where you are going (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. The buddy system must always be used, and no one is permitted to wander off from the group on their own or without permission from the facilitator.

# ACCOMMODATIONS

## Trinity College Main Campus

Entrance points to buildings

After Hours Caretaker 0417 034 396 or Ext 8003 on building keypads



As teams will be occurring outside of university school term, participants will have the unique experience of staying at the University of Melbourne in Trinity College. Trinity College was founded by the first Anglican Bishop of Melbourne in 1872, and is modelled after the English colleges of Oxford and Cambridge. Trinity has many distinguished alumni and 36 Rhodes Scholars, including Bishop Peter Hollingsworth, Sir Rupert Hamer and Rob Sitch.

### Sleeping and Bathrooms

Participants will stay at the Behan Building and each will have their own room, but will be expected to share bathrooms. All linen and towels will be provided.

### Electricity

Electronic equipment, such as camera batteries, mobile phones or laptop computers will be able to be charged at the accommodation, as long as you bring the appropriate chargers.

### Internet and Communications

Internet access is available in the rooms for a fee of \$10 per week. If participants want to use internet in their rooms they must bring a laptop and Ethernet cable. Otherwise there is Internet access in the campus computer lab.

## Facilities and Amenities

There are two common rooms on Trinity campus, with big screen televisions and DVD players where participants can watch television or movies during recreational time.

Laundry facilities are available free of charge, but participants are expected to bring their own detergent

## Distance to Field Site

Travel to field sites will take anywhere from 15 minutes to an hour, depending on the field site location and time of day.

## Services and Restaurants in Walking Distance

There are a variety of shops, cafes, restaurants, supermarkets and tourist attractions within walking distance of the accommodation; however, participants are not allowed to leave the group alone or without permission from the facilitator.

# FOOD

Breakfast will be provided in the dining hall. As participants will be working late at night, lunch will be the main meal of the day and will generally be served at the dining hall as well. On some occasions there may be possibilities for a lunch outing. Before leaving for the field in the evenings, food will be provided for participants to prepare a sandwich to be eaten in the field.

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** Continental breakfast – cereal, toast, fruit; 7 a.m.-10:30 a.m., Buffet cooked breakfast; 8 a.m.-9 a.m.

**Lunch:** Cafeteria-style hot meal in the dining hall or lunch outing, such as a BBQ or pizza.

**Dinner:** Self-prepared sandwich to be eaten in the field

**Snacks/Other:** Fruit and biscuits will be taken into the field.

**Beverages:** Drinking water and facilities for making hot drinks are always available in the dining hall

## 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.

# Project Conditions

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

## To the doctor:

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

## GENERAL CONDITIONS OF THE RESEARCH SITE

### General Conditions

The weather is expected to vary within the limits below.

#### December / January

Humidity	40-70%
Temperature range	13°C - 27°C
Rainfall	December: 60mm total January: 48 mm total

### Physical Demands

Participants will be doing night and day work, with most field work happening at night. During the day participants will either be working in the lab, helping to set up traps or assisting with collecting bats from nest boxes. Night work will include setting up harp traps, monitoring the traps, and processing bats that are caught. Light traps will also be set up and assistance will be needed to monitor the traps and collect the insects caught.

The research will require plenty of patience and you will be expected to stay up rather late. Therefore, during free time in the day, it is recommended that you take time to rest.

Below are the expected demands of the project, but please keep in mind that conditions may change and the project could potentially be more or less strenuous than the chart indicates.

#### Activity

#### Workload/Intensity

Sitting	2-4 hours per day for lab work
Bending	Frequently when monitoring harp and light traps
Walking	Up to 1 hour a day, but it will be starting and stopping and not continuous walking
Carrying	Participants will be expected to carry their own backpacks and assistance with carrying the research equipment will be appreciated.

## POTENTIAL HAZARDS

Hazard Type	Associated Risks and Precautions
Transportation	Transportation during the project will be either two or three (depending on the team size) medium-sized hired vehicles or one twelve-seat people carrier. Participants are not permitted to drive at any time during the project. Licensed project staff with experience driving in Melbourne will drive the project vehicles and will strictly follow the rules of the road. Seatbelts are to be worn at all times.
Wildlife	<p>Poisonous snakes are present in Victoria, including in Melbourne and its suburbs. Participants must wear appropriate footwear and be mindful of where they step. Snakes are normally shy and can hear you coming so it is unlikely that we will have an encounter.</p> <p>Mosquitoes can be a nuisance in summer; therefore participants are advised to wear insect repellent. If participants are allergic to bee or wasp stings or insect bites, they should bring the necessary medication with them and alert Earthwatch before their team goes into the field</p>
Working at night	Participants will be walking around at night and therefore should always stay in their groups and not wander off. If areas look unsafe the project staff will avoid them. It is recommended that valuables and large amounts of money be left back at the locked accommodation.
Terrain	Some research sites will be located in poorly lit parks where there might be vegetation or uneven pathways which can cause slips and trips. Participants should use the head torches provided and carefully watch where they step.
Equipment	A safety briefing will be given on the first day to familiarize volunteers with specific risks and methods to increase safety. The harp traps are heavy when packed up, so care must be taken when lifting and carrying them to and from the research sites. Participants must be careful when walking with the traps in order to avoid injury. Project staff will instruct participants on proper set up and safe use of equipment.
Climate	Long sleeves, high-factor sun-block, a hat and sunglasses are essential and should be worn even when the sky turns overcast. Participants should ensure they bring these items with them. Working for long periods in warm conditions can result in rapid fluid loss, so participants should drink plenty of water to avoid dehydration, even during night research.
Disease	Australian bat lyssavirus is closely related to common rabies, and has been found in most of the states of Australia, including Victoria. Australian health authorities suggest lyssavirus poses a low public health risk. However they strongly recommend that anyone scratched or bitten by a bat should immediately wash the affected area with soap and water for 10 minutes and contact their local doctor. It has been proven that the vaccine for common rabies can protect against lyssavirus. You must have the correct permits and license to handle bats in Australia, and for all these reasons only the research staff will handle bats during this project.

## HEALTH INFORMATION

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

While Earthwatch can provide details regarding suggested inoculations, we are not a medical organization and decisions about which inoculations to receive should be made between you and your doctor. 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)), and International SOS (see above) for the latest health information for travellers. Please consult your physician for guidance on inoculations if you intend to travel to other parts of the country.

## MEDICAL CONDITIONS OF SPECIAL CONCERN

Extreme sensitivity to heat/sun could cause a problem for day work. Volunteers should have reasonably good eyesight. Participants who have problems with night vision may find this project difficult. Participants who find it difficult to stay awake at night may struggle with the field work. The project involves a fair amount of walking, so participants should have good mobility/agility and a moderate fitness level.

### Additional Health Information Resources

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

## EMERGENCIES IN THE FIELD

In the event of a medical emergency an ambulance will be called to the research site. The research sites are close to road access. Medical evacuation teams using helicopters are also present in Victoria should there be a major emergency. A vehicle will always be available should there be a minor accident. Each vehicle carries a first aid kit sufficient to deal with minor injuries, and project staff members are first-aid certified.

**In an emergency, you can contact Earthwatch during office hours on (03) 9682 6828, or after hours on 03 9625 0822.**

### Proximity to Medical Care

Physician, nurse, or EMT on staff	Project staff are not medical professionals
Staff certified in safety training	First aid: Lisa Godinho
Nearest hospital and/or clinic	The Royal Melbourne Hospital Grattan Street Parkville VIC 3053 Tel: +61 (0) 3 9342 7022
Distance	Less than a km from the University of Melbourne, and within 1 hour from the research sites

# COMMUNICATIONS

## Emergency Communications in the Field

**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 Expedition Briefing.

There is good mobile phone coverage in Melbourne and its suburbs. The project staff will carry a mobile phone in the field and will often be near a public telephone in the event that emergency services need to be contacted.

**The emergency contact number at Earthwatch headquarters in Australia is +61 3 9625 0822.** 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

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

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

## Contact Information

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

Address                    Earthwatch Australia  
                                 126 Bank Street  
                                 South Melbourne VIC 3205

Phone                    +61 (0) 3 9692 6828

Fax                        +61 (0) 3 9686 3652

Email                    [earth@earthwatch.org.au](mailto:earth@earthwatch.org.au)

# Travel Planning

**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.

## RENDEZVOUS

The rendezvous information for this project has been removed from this web version of the Expedition Briefing. Please do not make any travel arrangements to join an expedition on this project without receiving full and up-to-date rendezvous information from Earthwatch. Full rendezvous details including places and times are available from Earthwatch upon request prior to registration for an expedition. Please use the "Contact Us" button on the top right hand corner of our website to get in touch with us and we will be very happy to help you. This information is provided in the printed version of this Expedition Briefing.

## Volunteers Under 18 Years of Age

### Entry to Foreign Countries

It may be possible for 16- and 17-year-olds to participate on standard Earthwatch teams *if* accompanied by a parent or guardian. However, in an effort to prevent international child abduction many governments have initiated procedures at entry/exit points to protect minors. Thus, if a minor will be traveling with only one guardian or if for any reason they will be travelling 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.

### Airline Documentation Requirements

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

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

# INSURANCE

MedEvac assistance, advice and insurance are included in the contribution you pay to Earthwatch. It covers your travel medical risks, including medical expenses and emergency medical evacuation, while you are travelling, as well as trip cancellation insurance (see [www.earthwatch.org/downloads/Insurance/post15Jan\\_TravelFAQs.pdf](http://www.earthwatch.org/downloads/Insurance/post15Jan_TravelFAQs.pdf) for more details), and baggage and personal money insurance. It doesn't provide personal liability insurance. This coverage is valid in the country of your Earthwatch expedition and during travel to and from your expedition. Please see [the FAQ](#) for information about when coverage starts and ends.

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

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

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 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 document, and is incremental to your existing health insurance.

If you are Australian and living less than 50km away from the research site, please alert Earthwatch, as restricted insurance coverage applies.

**Please note that due to different governing laws in each country, policies are specific to each regional Earthwatch office. Please check with your sign up office about your insurance coverage.**

## **Cancellation Insurance**

We highly recommend trip cancellation insurance, which will help cover your airfare if you are unable to travel, or the expedition is cancelled. Earthwatch does not reimburse airfare. Ask your travel agent for details on cancellation insurance.

## **Emergency Medical and Evacuation Assistance**

Emergency medical and evacuation assistance is available for all Earthwatch participants from International SOS (ISOS), a twenty-four-hour, independently operated international emergency medical and evacuation service. Please see the contact information and card on the *General Information* page. Participants should carry the card with them on the expedition.

# ADDITIONAL TRAVEL INFORMATION

## **Luggage**

- *General considerations:* Do not bring more luggage than you can carry and handle on your own. If traveling by air and checking your luggage, you are advised to pack an extra set of field clothing and personal essentials in your carry-on bag in case your luggage is lost and/or takes several days to catch up with you. Many airlines have strict baggage policies. Please check with your airline(s) on baggage weight limits, liquid restrictions, fees for checked baggage, etc.

- *Checking luggage:* Please note that if you will be taking an international flight that has one or more connections within the country of your destination, it will be necessary to collect any checked bags at the airport where you first arrive in the destination country. After proceeding through customs, you will have to recheck your luggage before flying on to your final destination.

## Money Matters

- *Personal funds:* Participants are recommended to bring between \$50 – \$100 with them to cover additional expenses during the week such as snacks, soft drinks, souvenirs, tram or taxi fares, and other ‘luxury’ items that are not included in the project cost. There are ATM machines in Melbourne’s city centre and most credit cards are widely accepted.
- *Local currency:* AU Dollar. See [www.xe.com/ucc](http://www.xe.com/ucc) for currency information and exchange rates.

## Your Destination

- *Language:* English
- *Electricity:* Type 1, 240V Check <http://users.pandora.be/worldstandards/electricity.htm#plugs> and list the appropriate plug type here. For additional information, see [kropla.com/electric2.htm](http://kropla.com/electric2.htm).



## Country Information

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

# HELPFUL RESOURCES

## Project-Related Websites

- Trinity College – The University of Melbourne: <http://www.trinity.unimelb.edu.au/>
- <http://www.theage.com.au/national/the-secret-life-of-microbats-to-be-revealed-20091209-kk2d.html>
- <http://www.thatsmelbourne.com.au/Pages/Home.aspx>

## Travel Agencies and Advice

- STA Travel is the preferred travel supplier for Earthwatch Australia. Every booking made through STA Travel will benefit Earthwatch's research programs. STA Travel services all types of travel requirements and one of their biggest strengths is in complex travel requirements. In addition, STA Travel offers unique Student, Teacher and Youth airfares that are not available through any other travel agent.
- To find out how STA Travel can help you please contact either Matthew Forster or Worasak Triprasertant on:
  - Phone: 03 9207 5908
  - Fax: 03 9347 0547
  - Email for reservations: [nccc@statravel.com.au](mailto:nccc@statravel.com.au)
  - Branch Postal Address: 235 Faraday Street, Carlton, Vic 3053

# APPENDIX

## REFERENCES:

- Garden, J., C. McAlpine, A. Peterson, D. Jones and H. Possingham. "Review of the ecology of Australian urban fauna: A focus on spatially explicit processes." *Austral Ecology*, 31 (2006): 126 – 148.
- Parris, K. M. and D.L. Hazell. "Biotic effects of climate change in urban environments: The case of the grey-headed flying-fox (*Pteropus poliocephalus*) in Melbourne, Australia." *Biological Conservation*, 124 (2005): 267 – 276.
- van der Ree, R. and M.A. McCarthy. "Inferring persistence of indigenous mammals in response to urbanisation." *Animal Conservation*, 8 (2005): 309 – 319.

# Earthwatch Institute Policies & Participant Rights and Responsibilities

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

## **Intellectual Property Rights**

It is permissible to share photos, videos, and stories of your expedition with family, friends, local media, and in a public forum. Sharing your new perspectives and experiences is welcomed and encouraged; however, please recognize that all information, data, and images shared or gathered in the course of your expedition's field work become the intellectual property of the Earthwatch scientist (ES). Co-opting or plagiarism of data, images, or information gathered during an expedition for use in a scientific thesis, masters or PhD work, or for profit or the academic or business use of a third party without the permission of the ES is strictly prohibited. Please be aware that data gathered during the interviewing of local people becomes the intellectual property of the ES. Earthwatch scientists have the right to place additional restrictions on your ability to share data or certain research-related images.

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

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

## **Discrimination**

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

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

## **Intimate relationships**

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

## **Sexual Harassment**

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

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

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

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

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

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

### **Drugs**

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

### **Alcohol**

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

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

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

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

### **Minors**

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

### **Participants and Driving**

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

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

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

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

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

### **In the Event of an Emergency**

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

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

### **Right of Refusal**

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

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

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

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

# Expedition Packing Checklist

## Required Items

- This Expedition Briefing
- Photocopies of your passport, flight itinerary and credit cards in case the originals are lost or stolen; the copies should be packed separately from the original documents
- Passport and/or visa (if necessary)
- Certification of vaccination (if necessary)
- Documentation for travel by unaccompanied minors (if necessary) (See *Volunteers Under 18 Years of Age*) in the *Travel Planning* section.
- Australian residents only: please bring your Medicare card and (if applicable) your private health insurance and ambulance cover policy numbers.

### ***Clothing/Footwear for Fieldwork***

- Be sure to bring your Earthwatch t-shirt and remember to wear it, as appropriate, throughout your expedition
- Lightweight, quick drying, long-sleeved shirts and pants/trousers
- Warm layer, fleece or jacket in order to keep warm in the evenings
- Light waterproof jacket in case of wet weather
- Wide brimmed hat, for sun protection
- Sunglasses

### ***Clothing/Footwear for Leisure***

- One set of clothing to keep clean for end of expedition
- Shorts and t-shirts
- Comfortable sturdy walking shoes/boots with good ankle support
- Casual footwear for wearing at the accommodation, or in recreational time

### ***Field Supplies***

- Small daypack/rucksack
- Drybag or plastic sealable bags (good for protecting equipment such as camera from dust, humidity, and water)
- Insect repellent spray
- Water bottle(s)
- Pen(s) and Pencil(s)—spares will likely be available from the research staff

### ***Personal Supplies***

- Personal toiletries (biodegradable soaps and shampoos are encouraged)
- Antibacterial wipes or lotion (good for cleaning hands while in the field)
- Personal first aid kit (e.g. anti-diarrhea pills, antibiotics, antiseptic, itch-relief, pain reliever, bandages, blister covers, etc.) and personal medications
- Sunscreen lotion with SPF 30 or higher

### ***Miscellaneous***

- Spending money
- Camera, film/memory card(s), extra camera battery (if you bring a digital camera, bring your interface cables for downloading)

### **Optional Items**

- Thermos for hot drinks during evening field work
- Head torch (head torches will be supplied, but you may prefer to use your own)
- Earplugs
- 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