



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 65 research projects in more than 35 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.

It is essential that you carefully read your Expedition Briefing and complete the Volunteer Forms. Your forms can be found at http://www.earthwatch.org/australia/expeditions/volunteer_forms/ . If you do not have access to the internet, please notify Earthwatch and forms will be sent to you in the post.

Volunteers Forms to be Returned to Earthwatch

- Scientist for a Day form

How to return your forms: Your form requires a written signature and must therefore be printed out and signed. You may return your form to your Earthwatch office by mail, fax or email (forms requiring signatures may be scanned and emailed).

Deadline: Your volunteer forms must be completed and returned to Earthwatch no later than 7 days prior to your expedition.

If you sign up within 7 days of your expedition please complete and send the form back to Earthwatch immediately.

Other Information for Your Reference

The documents listed below are for your reference only and do not need to be returned to Earthwatch. However, **it is very important that you read and understand them.**

- Earthwatch Institute Policies & Volunteer Rights and Responsibilities
- Expedition Booking Conditions and Cancellation Policy

Your Expedition Briefing includes important logistical information such as instructions for reaching the project site, what to pack, where your team will stay, what immunisations you need, how to physically prepare for your expedition, entry requirements for the project country, 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 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 cursive script, appearing to read "Anne T. Ogilvie".

Anne T. Ogilvie
International Director of Field Management

Melbourne's Microbats

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General Information

Project title	Melbourne's Microbats
Earthwatch scientist	Dr Rodney van der Ree , Australian Research Centre for Urban Ecology, University of Melbourne Dr Lisa Godinho , University of Melbourne
Research site	Royal Botanic Gardens, Melbourne
Expedition length: 1 day (overnight)	Minimum age of participation: 18 years of age, or 10 years of age on Family Teams only
Team Size Max: 6 volunteers	
*Note: Teams 2, 4, 7, 9, and 10 are reserved for families participating in an Earthwatch expedition together. For more information about Earthwatch Institute's Family Teams, visit www.earthwatch.org/family . It may also be possible for 16- and 17-year-olds to participate on standard teams if accompanied by a parent or guardian. Contact Earthwatch for more information and see <i>Volunteers Under 18 Years of Age</i> in the <i>Passports and Visas</i> section for traveling advice for minors.	

Emergency Contacts

Emergency contact number at Earthwatch headquarters in 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



EXPEDITION UPDATE:
Melbourne's Microbats
All Teams

August 29, 2011

Dear Earthwatch Volunteer,

Please note that the information on forms you need to complete in the *Timeline and Checklist* section of your Expedition Briefing is incorrect. You only need to complete the Scientist For a Day form, available here:
http://www.earthwatch.org/australia/expeditions/volunteer_forms/.

Thank you.

If you have questions as you prepare for your expedition, contact the appropriate Earthwatch office:

Australia Office

T: +61 (0) 3-9682-6828

earth@earthwatch.org

Japan Office

T: +81-(0)3-3511-3360

info@earthwatch.jp

UK Office

T: +44 (0) 1865-318-831

info@earthwatch.org.uk

US Office

T: +1 800-776-0188

info@earthwatch.org



EXPEDITION UPDATE:
Melbourne's Microbats
All Teams

December 15, 2011

Dear Earthwatch Volunteer,

Please be advised that the emergency number for Earthwatch Australia is now **+61 (3) 9483-4373**.

This replaces the emergency number that appears throughout your Expedition Briefing.

Thank you.

If you have questions as you prepare for your expedition, contact the appropriate Earthwatch office:

Australia Office

T: +61 (0) 3-9682-6828

earth@earthwatch.org

Japan Office

T: +81 (0) 3-3511-3360

info@earthwatch.jp

UK Office

T: +44 (0) 1865-318-831

info@earthwatch.org.uk

US Office

T: +1 800-776-0188

info@earthwatch.org



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

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 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.

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. 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 identify if bats are present by transmitting audible clicking noises, which can later be downloaded to assist in the identification of species of microbats.

TEAM ITINERARY AND DAILY SCHEDULE

Below is an approximate timetable for the evening. Please be aware that schedules can and do fluctuate due to weather, research needs, etc. Your cooperation and understanding are appreciated.

Time of Day	Activity
6:30 p.m.	Rendezvous
6:30-7:00 p.m.	Introduction to project and safety briefing
7:00-8:30 p.m.	Set up harp traps
8:30-10:30 p.m.	Moonlight cinema (dependant on moonlight cinema conditions)
10:30pm-1 a.m.	Monitor traps and process bats as they are collected
1:00-5:00 a.m.	Sleep!
5:00-5:30 a.m.	Quick snack and preparation for field work
5:30-8:00 a.m.	Check traps, process animals and pack up equipment
8:00-9:00 a.m.	Breakfast and depart.

Earthwatch Recreational Time Policy

Earthwatch will generally accompany participants from the rendezvous to the end of the expedition with the exception of recreation time.

- For days when no research activities are scheduled, referred to as recreational days, Earthwatch scientists 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 camp or 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, adult 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 assess the general risks of adult participants leaving the project site on their own at night after work hours, but cannot guarantee participant safety or an awareness of all issues.
- In some cases, due to local conditions, it may be advisable to restrict adult participants to the project camp or accommodation after dark. This will be clearly communicated in the on-site safety briefing. However, if the local conditions are such that adult participants can go out at night under their own recognizance, there will be a sign-out process through which participants should state their proposed destination and estimated return time. Participants will be given twenty-four-hour contact information for project staff should assistance be needed. The sign-out is informational only and will not be used to enforce a curfew on adult participants. Adult participants should understand that unless contacted for help, project staff will not start a search for a missing participant unless he or she fails to appear the following morning or for the next scheduled research activity.
- For Family Teams: Parents and/or guardians are responsible for supervision of their children at all times during the expedition.

Additional Policies Relevant to the Melbourne's Microbats Expedition

Participants who have driven themselves to the project may not drive whilst on the project. This includes during time that has been designated as non-research time. Participants who ignore this policy and do drive or ride in another participant's vehicle during the project will be doing so at their own risk and will not be covered under the Earthwatch insurance policy for the expedition.

ACCOMMODATIONS

Sleeping

Participants will be sleeping at the staff mess hall in the Royal Botanic Gardens. There is one large room where volunteers will stay. Each participant will be provided with a sturdy camp stretcher/bed.

Volunteers should bring their own sleeping bag and pillow.

Bathrooms

There are male and female bathrooms inside staff mess hall, which include toilets and showers. Volunteers should bring their own bath towel if they wish to shower.

Electricity

There is electricity at the staff mess hall if volunteers need to charge batteries or mobile phones.

Internet and Communications

Internet is not available within the staff mess hall or the gardens. There is mobile phone coverage if you wish to take your mobile phones with you, but we ask that you keep them on silent during the team and limit your calls.

Facilities and Amenities

There is an operational kitchen, where breakfast will be prepared in the mornings. There are also rooms that will be used as a makeshift lab, where bats can be processed before release.

Distance to Field Site

The staff mess hall is located within walking distance of the microbat trapping sites, which will be spread throughout the Royal Botanical Gardens. Trapping sites will be a 5- to 15-minute walk from the accommodations.

Services and Restaurants in Walking Distance

There are convenience stores and cafes nearby to the accommodation, either along St. Kilda Road or Domain Road. It is advisable to purchase required snacks and drinks prior to the start of the project, as once the field work begins participants should stay with the group.

FOOD

Snacks during the evening and a cooked breakfast in the morning will be provided—please remember to indicate any dietary requirements on your health form. It is advised that you eat dinner before the rendezvous time and bring along a filled water bottle for use in the field.

Project Conditions

General Conditions

The weather is expected to vary within the limits below.

November / December
Humidity: 35% – 80%
Temperature range: 13°C – 26°C (55°F – 79°F)
Rainfall: 102 mm (4 in) total average per month

January / February
Humidity: 40% – 90%
Temperature range: 15°C – 30°C (59°F – 86°F)
Rainfall: 60mm (2 in) total average per month

March
Humidity: 50% – 65%
Temperature range: 13°C-24°C (55°F – 75°F)
Rainfall: 56mm (2.2 in) total average per month

Physical Demands

Participants will be doing night work, which will include setting up harp traps, monitoring the traps and processing bats that are caught. The research will require plenty of patience and you will be expected to stay up rather late.

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	Whilst waiting for bats to arrive
Bending	Frequently when monitoring harp traps
Walking	Up to 1 hour, but 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
Wildlife	<p>Poisonous snakes are present in Victoria, including in Melbourne. 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.</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 participants do not carry valuables or large amounts of money.
Terrain	Some traps will be located in poorly lit areas of the park where there may be vegetation or uneven pathways which can cause slips and trips. Use the head torches provided and carefully watch where you step.
Equipment	A safety briefing will be given at the start of the evening highlighting specific risks and methods to increase safety. The harp traps when packed up are heavy, so care must be taken when lifting them to and from the research sites. Be careful when walking with the traps and mind who is in front and behind you in order to avoid injury. Project staff will instruct participants on proper set up and safe use of equipment.

Climate	Long sleeves, high factored sun-block, a hat and sunglasses are essential on sunny evenings and should be worn even when the sky turns overcast during the start of the team. Participants should ensure they bring these items with them. Working for long periods in warm conditions can result in rapid fluid loss, so 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 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.

Australian residents only: Please bring your Medicare card and (if applicable) your private health insurance and ambulance cover policy numbers.

Routine Immunisations

All volunteers should make sure to have the following up-to-date immunisations: 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), the World Health Organization (www.who.int), and International SOS (see above) for the latest health information for travelers. Please consult your physician for guidance on inoculations if you intend to travel to other parts of the country.

	Required for Entry	Recommended for Health Reasons
Yellow Fever	X - if travelling from countries or region where it is endemic, a Certificate of Vaccination is required.	
Hepatitis A		Many travel health professionals recommend hepatitis A vaccination for all travelers and expatriates, regardless of destination.
Hepatitis B		Many travel health professionals recommend hepatitis B vaccination for all travelers and expatriates, regardless of destination.

MEDICAL CONDITIONS OF SPECIAL CONCERN

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 will 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.

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 is 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 Alfred Hospital Commercial Rd, Prahran VIC 3181, Australia +61 (0) 3 9276 2000
Distance	2.5 km, approximately 10 minutes

COMMUNICATIONS

Emergency Communications in the Field

There is good mobile phone coverage in Melbourne. 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 minimise 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.

If necessary, volunteers can be reached via Earthwatch Australia on 03 9682 6828.

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.

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 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.

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

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

RENDEZVOUS

While Earthwatch may be able to suggest resources to aid volunteers with travel planning, it is important to 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.

PASSPORTS AND VISAS

Visa Information

Citizens of the US, EU, Australia, Canada and Japan **do** need a tourist visa for entry. Citizens of other countries should check with their travel agent or a visa agency for specific visa and entry requirements. Travelers are advised to check visa regulations well in advance of travelling.

Passport Information

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

For Volunteers Requiring Visas ONLY: Essential Information

Type of Visa	Volunteers requiring a visa must get a TOURIST VISA .
Where to Get a Visa	Contact the nearest Australian embassy or consulate to find out how to apply for your visa. Please note that this process can take weeks or more. We strongly recommend using a visa agency , which can both expedite and simplify the process. See below for a list of visa agencies.
Required Information	You will need to send your passport (valid for at least six months beyond your stay), a Visa Application and Immigration Form, 2-4 passport-size photos, and payment to the embassy or visa agency (if applicable). Please be sure that your passport is valid for at least six months beyond your stay.
Contact Information	You may be required to list the following contact information on your Visa Application and Immigration Form: Richard Gilmore Earthwatch Australia 126 Bank Street South Melbourne VIC 3205
Cost of a Visa	Generally between US\$40-100, but varies from country to country and can potentially cost up to US\$180 . A visa agency will charge an additional fee.

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

Visa Agencies

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

INSURANCE

Australian Participants:

Limited insurance coverage is automatically included in the project cost you pay to Earthwatch; however it is **compulsory that Australian participants have up-to-date Ambulance Insurance** if travelling less than 50 km from place of residence to the project site. Your policy provider and policy number will be required by Earthwatch before your participation on the expedition.

Ambulance Insurance in Victoria is available through Ambulance Victoria (<http://www.ambulance.vic.gov.au/>) as well as Private Health Insurance providers. For more details or questions regarding the insurance coverage please read our FAQ's (http://www.earthwatch.org/australia/downloads/PDF_files/expeditions/Travel_-_Under_50KM_FAQs.PDF) or contact Earthwatch.

International Participants:

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 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 (**Note:** For US volunteers, the coverage is valid only when the expedition is over 100 miles from your place of residence). 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).

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

Details of this insurance policy are included in your expedition briefing pack and can be found at www.earthwatch.org/europe/insuranceinfo. Please refer all queries regarding this policy to Sutton Winson in the UK at +44 (0) 845 688 9088.

Information about additional insurance can be found at www.earthwatch.org/europe/insuranceinfo. Should you have any questions about whether you require coverage for your travel plans, please contact Sutton Winson. Earthwatch is not authorized by the FSA to give advice on any additional travel insurance you might require.

If you signed up through Earthwatch US:

Details of the US insurance policy can be found at www.earthwatch.org/insurance. Please refer any queries regarding this policy to Sutton Winson in the UK. From the US, dial 011 44 845 688 9088. 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).

Information about additional insurance can be found at www.earthwatch.org/volunteerresources. Should you have any questions about whether you require coverage for your travel plans, please contact Sutton Winson. Earthwatch is not authorized by the FSA to give advice on any additional travel insurance you might require.

Emergency Medical and Evacuation Assistance (for all volunteers)

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 travelling 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.

Your Destination

- *Local currency:* Australian Dollars. See the International SOS website and www.xe.com/ucc for currency information and exchange rates.
- *Language:* English
- *Electricity:* 240 volts, 50 Hz, three-pronged plug with flat blades. For additional information see kropla.com/electric2.htm.
- *Time zone:* UTC/GMT +10 hours. For time worldwide with GMT/UTC, see: www.worldtimeserver.com.



- *Telephone Dialing codes:* When calling Australia from another country, dial the country's international dialing code, followed by 61 and the number. When calling within Australia, omit the 61. When calling another country from Australia, dial 0011, 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 dialling codes you may need; many providers have dialling procedures that may differ in whole or in part from these directions. For additional information [see kropla.com/dialcode.htm](http://see.kropla.com/dialcode.htm).

HELPFUL RESOURCES

Project-Related Websites

- <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>

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

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

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

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

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.

(November 2010)

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)
- Australian residents only: Please bring your Medicare card and (if applicable) your private health insurance and ambulance cover policy numbers.

Required Items

Clothing/Footwear for Fieldwork

- 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
- Comfortable sturdy walking shoes/boots with good ankle support

Bedding and Bathing

- Sleeping bag
- Pillow
- Change of clothing for sleeping

Field Supplies

- Small pack/rucksack
- Insect repellent spray
- Water bottle filled with water

Personal Supplies

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

Optional Items

- Thermos and hot drink during evening field work
- Head torch (head torches will be supplied, but you may prefer to use your own)
- Camera, film/memory card(s), extra camera battery
- Change of clothes for departure or in case of wet weather
- Towel