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 an extra 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 800g, 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.

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, ARCUE, Royal Botanic Gardens Melbourne & the University of Melbourne
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General Information

Melbourne’s Microbats

EXpedITION DATES
Team 01: Oct. 26, 2013 *
Team 02: Nov. 09, 2013 *
Team 03: Nov. 15, 2013
Team 04: Nov. 23, 2013 *
Team 05: Nov. 29, 2013
* Family Teams

Team 06: Feb. 01, 2014 *
Team 07: Feb. 07, 2014
Team 08: Feb. 15, 2014 *
Team 09: Feb. 21, 2014

Earthwatch Scientists:
Dr Rodney van der Ree, Australian Research Centre for Urban Ecology (ARCUE)
Caroline Wilson, University of Melbourne
Tanja Starka, University of Melbourne

Research Site:
Royal Botanic Gardens, Melbourne, Victoria, Australia.

Rendezvous Locations:
Trades Entrance to the Works Yard, Birdwood Avenue, the Royal Botanic Gardens, Melbourne.

Arrival time:
06:30 p.m. on Day 1
09:00 a.m. on Day 2

Expedition length: 1 day (overnight)
Team size max: 6
TRIP PLANNER

TO DO IMMEDIATELY

☐ Make sure you understand and agree to Earthwatch policies and participant responsibilities (see pg. 16).

30 DAYS PRIOR TO EXPEDITION

☐ Complete and return your volunteer forms. Below are the specific forms required for this expedition:
  ▶ Earthwatch One Day Participation Form for Adult/Child

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

Note: If you have signed up for an expedition within 30 days of the start date, you must return your fully completed volunteer forms as soon as possible.

15 DAYS PRIOR TO EXPEDITION

☐ Review the packing list (pg. 4) to make sure you have all the clothing, personal supplies, and equipment needed.

1 DAY PRIOR TO EXPEDITION

☐ Leave the Earthwatch 24-hour helpline number with a friend or relative (see the inside back cover).
☐ Confirm your travel arrangements.

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

GENERAL
☐ This expedition briefing
☐ Medicare card and (if applicable) your private health insurance and ambulance cover policy numbers.

CLOTHING/FOOTWEAR FOR FIELDWORK
☐ Closed in footwear, sturdy for walking in. Runners are sufficient.
☐ Long trousers and shirt
☐ Light waterproof jacket in case of wet weather
☐ Warm layer, fleece or jacket in order to keep warm in the evening
☐ Wide brimmed hat, for sun protection (before nightfall)
☐ Sunglasses for sun protection (before nightfall)

FIELD SUPPLIES
☐ Small daypack (large enough to hold water, jacket, rain gear, personal items)
☐ Water bottle(s)
☐ Sunscreen lotion with SPF 30 or higher (before nightfall)
☐ Insect repellent spray

BEDDING (STRETCHERS PROVIDED)
☐ Sleeping bag
☐ Pillow
☐ Change of clothes for sleeping

PERSONAL SUPPLIES
☐ 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
☐ Toiletries
☐ Towel

SUGGESTED ITEMS
☐ Camera, film or memory card(s), extra camera battery
☐ Hardware for sharing digital photographs at the end of the expedition
☐ Head torch (some will be provided but ideal to bring your own)
☐ Book, cards or games for when waiting to check traps

Note: Required and suggested items lists are accurate to the best of Earthwatch’s knowledge at the time of publication.

WHY FIELD RESEARCH?
As an Earthwatch participant, you will spend a significant amount of time on the 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.
Melbourne's Microbats

THE STORY
Ranging from the size of a moth to a hand, most Melbournians are completely unaware of the existence of these insectivorous bats due to their nocturnal habits, lack of audible call and small body size.

Although 16 species of microbats bats have been detected across greater Melbourne, so far there have not been any systematic surveys of insectivorous bats 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 and cause extinction of bats.

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

THE RESEARCH
The broad aim of this project is to determine 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 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 changes 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 (study species will be decided based on pending results from the pilot study and the three other PhD chapters listed above). 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.

HOW YOU WILL HELP

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 radiotransmitter to allow researchers to locate the daytime roost of the bat and the night-time foraging areas.

The Principal Investigator is also studying the diet of these microbats and therefore in order to collect a fecal sample, some bats will be kept in bags for approximately an hour to see if they will produce a fecal sample. All bats will be released by the team once they are processed. Fecal 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 fecal samples. Participants will assist with setting up the light traps, and also 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.
Your Destination

About Melbourne

Victoria’s capital, Melbourne, has an approximate population of 4.25 million. 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. It is now the second largest city within Australia.

The expedition will be based inside the picturesque setting of the Royal Botanic Gardens Melbourne, which extends over 38 hectares and displays 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.

Life in the Field

Volunteer Training and Policy

TRAINING
The expedition will begin with an overview and safety briefing upon arrival. If participants have any concerns or questions about the schedule of the day they should address them with the project staff.

The research team will provide training in setting up harp traps, and the use of the bat detector. Although participants will not be allowed to handle the micobats 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.

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.

ACCOMMODATION
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 towel if required.

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

DAY 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>06:30 p.m.</td>
<td>Rendezvous</td>
</tr>
<tr>
<td>06:30 - 07:00 p.m.</td>
<td>Introduction to project and safety briefing</td>
</tr>
<tr>
<td>07:00 - 09:30 p.m.</td>
<td>Set up harp traps</td>
</tr>
<tr>
<td>10:00 p.m. - 01:00 a.m.</td>
<td>Monitor traps and process bats as they are collected</td>
</tr>
<tr>
<td>01:00 - 05:00 a.m.</td>
<td>Sleep!</td>
</tr>
<tr>
<td>05:00 - 05:30 a.m.</td>
<td>Quick snack and preparation for field work</td>
</tr>
<tr>
<td>05:30 - 08:00 a.m.</td>
<td>Check traps, process animals and pack up equipment</td>
</tr>
<tr>
<td>08:00 - 09:00 a.m.</td>
<td>Breakfast and depart Royal Botanic Gardens</td>
</tr>
</tbody>
</table>
Project Conditions

The Field Environment

GENERAL CONDITIONS
The information that follows is as accurate as possible, but please keep in mind that conditions may change.

During the summer months, temperatures can be extremely hot (as high as 40°C to 46°C have been recorded in Nov and Feb) and high rainfall can cause flash flooding. Weather will be monitored daily and if necessary, field work will be ceased if temperatures or rainfall is too high. The weather is expected to vary within the limits below:

<table>
<thead>
<tr>
<th></th>
<th>November</th>
<th>February</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Humidity</td>
<td>63%</td>
<td>66%</td>
</tr>
<tr>
<td>Mean Temperature Range (min-high)</td>
<td>11.2°C - 21.9°C</td>
<td>14.6°C - 25.8°C</td>
</tr>
<tr>
<td>Rainfall</td>
<td>60.1 mm</td>
<td>47.9 mm</td>
</tr>
</tbody>
</table>

ESSENTIAL ELIGIBILITY REQUIREMENTS
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.

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

☐ Follow verbal and/or visual instructions.
☐ Enjoy being outdoors all day in all types of weather (see above), in the potential presence of wild animals and insects.
☐ Tolerate 30°C and higher daily temperatures.
☐ Carry field equipment, such as harp traps.

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:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting</td>
<td>Whilst waiting for bats to arrive</td>
</tr>
<tr>
<td>Bending</td>
<td>Frequently when monitoring and setting up/packing up harp traps</td>
</tr>
<tr>
<td>Walking</td>
<td>Up to 1 hour, but will be starting and stopping and not continuous walking. Walking will also be mainly on paved footpaths</td>
</tr>
<tr>
<td>Carrying</td>
<td>0.5-1 hr. When setting up traps, monitoring traps and packing up traps. Traps are approximately 5kg each and about 2m long, Traps can be carried by two people or put on your shoulder.</td>
</tr>
</tbody>
</table>
## POTENTIAL HAZARDS

<table>
<thead>
<tr>
<th>Hazard Type</th>
<th>Associated Risks and Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working at night</td>
<td>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.</td>
</tr>
<tr>
<td>Disease</td>
<td>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.</td>
</tr>
<tr>
<td>Terrain</td>
<td>The terrain is mostly flat and on paved footpaths, but uneven in some places. 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.</td>
</tr>
<tr>
<td>Wildlife</td>
<td>Poisonous snakes are present in Victoria, including 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. Mosquitoes can be a nuisance in summer, therefore participants are advised to wear insect repellant. 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.</td>
</tr>
<tr>
<td>Equipment</td>
<td>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.</td>
</tr>
</tbody>
</table>
Safety

Health Information

ROUTINE IMMUNISATIONS
All volunteers should 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 his or her doctor, and the following are recommendations only. Earthwatch can only provide details regarding suggested vaccinations, and we are not a medical organisation. 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 Organisation (www.who.int), and International SOS for the latest health information for travellers. Please consult a physician for guidance on inoculations if you intend to travel to other parts of the country.

MEDICAL CONDITIONS OF SPECIAL CONCERN

<table>
<thead>
<tr>
<th>Condition</th>
<th>Concerns and Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Night Vision</td>
<td>Participants 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.</td>
</tr>
<tr>
<td>Walking</td>
<td>The project involves a fair amount of walking, so participants should have good mobility/agility and a moderate fitness level</td>
</tr>
</tbody>
</table>

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.

Staff certified in safety training:
Caroline Wilson: Applied First Aid
Tanja Straka: Applied First Aid

Nearest medical treatment:
The Alfred Hospital (2.5km, approximately 10 minutes)
Commercial Rd,
Prahran VIC 3181, Australia
+61 (0) 3 9276 2000

INSURANCE
MedEvac assistance, advice, and insurance are included in the contribution you pay to Earthwatch. The insurance covers your travel medical risks, including medical expenses and emergency medical evacuation, while you are travelling. It also provides trip cancellation insurance 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 Australia volunteers, the coverage is limited if the expedition is less than 50 kilometres from your place of residence).

This insurance policy is secondary to your existing health insurance policy (e.g. Medicare in Australia). Because of 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.

For more information visit: earthwatch.org/australia/expeditions/insurance/ or contact Earthwatch Australia.

EMERGENCY MEDICAL AND EVACUATION ASSISTANCE
Emergency medical and evacuation assistance from CEGA Medical, a 24-hour international service, is also included in your contribution. Please see the contact information in the Medical and Security Assistance Helpline Numbers section on the inside back cover.

You can also call CEGA for non-emergency information before your trip, such as advice on visas and vaccine requirements.

ADDITIONAL HEALTH INFORMATION RESOURCES
- Travel health website: www.mdtravelhealth.com
- The Travel Doctor: www.tmvc.com.au
- Australian Department of Health and Aging: www.health.gov.au
- Hospital for Tropical Diseases: www.thehtd.org
Project Staff
Your Resources in the Field

Earthwatch scientist Rodney Van Der Ree (BSc, MEnvStudies, PhD) is the Principal Advisor for the project. Rodney is ARCUE’s (Australian Research Centre for Urban Ecology). Deputy Director at the Royal Botanic Gardens Rodney 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 during 2013/14 teams.

Earthwatch field staff Caroline Wilson (Bsc, Hons) is a PhD student at the University of Melbourne and the Principal Investigator for the project.

Caroline completed a Bachelor of Science (honours) at Deakin University in 2007, for her honours research project she studied the breeding behaviour of seabirds in Port Phillip Bay. Prior to commencing her PhD, Caroline has worked on a number of research projects with ARCUE, and has been involved with a long-term monitoring program for the Grey-headed Flying-fox in Melbourne. Caroline is in the final stages of completing her PhD, where she investigated the foraging and roosting requirements of microbats across Melbourne, this included: prey availability, foraging behaviour, foraging habitat use, roosting behaviour and the characteristics of preferred roost sites. Caroline is in the process of writing up the findings of her PhD for publication in scientific journals.

Earthwatch field staff Tanja Starka (Bsc, Masters) Tanja completed a “German Diplom” in Biology (equal to a Masters Degree) in 2008 at the Ludwig-Maximilians-University in Munich, Germany.

Since 2007, Tanja has worked in bat conservation projects in several parts of the world. For her PhD research, which she started in 2011 at the University of Melbourne, Tanja is investigating insectivorous bats and emergent aquatic insects at water bodies in an urban environment. By including a social research component in her PhD project, she aims to contribute to management tools which can benefit both insectivorous bats and people in urban areas.

Besides bat ecology and conservation, her broader research interests are in conservation biology, urban ecology and socio-ecological systems.

Note: Caroline & Tanja plan to be present for all teams.
Recommended Reading

Your Resources at Home

RESOURCES

TRAVEL-RELATED BOOKS
We encourage you to buy a guide book to your chosen destination, as well as any other books that may be of interest. One excellent resource is The Travel Bookshop (http://www.thetravelbookshop.com/).

Think of Longitude Books (http://www.longitudebooks.com/) as a bookstore organised geographically! Here you’ll find travel guides, maps, field guides, accounts of exploration, travel narratives, books on culture, art and archaeology, in addition to academic books on anything from the tropical rainforest to the polar ice cap.

EARTHWATCH’S VOLUNTEER RESOURCES
Please see Earthwatch’s Volunteer Resources pages (earthwatch.org/volunteerresources) for additional information on:

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

SOCIAL MEDIA
Find Earthwatch on Facebook at https://www.facebook.com/EarthwatchAustralia, follow us on Twitter at @earthwatch_aus, and see videos of many Earthwatch expeditions on YouTube at http://www.youtube.com/earthwatchaus. If you’re on Twitter, use the hashtag “#ecopulse” when in the field with Earthwatch to help literally put your work on the map of worldwide volunteering efforts.
Participant Rights and Responsibilities

This document contains important information concerning Earthwatch Institute policies and participant rights and responsibilities for inclusion in an Earthwatch expedition. Please read this document thoroughly and sign the Liability Release section of your Earthwatch Participation Form to indicate that you understand and accept the risks inherent to your expedition and the policies, rights, and responsibilities enumerated in this document. You will not be permitted to participate 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. Co-opting or plagiarism of data, images, or information gathered during an expedition for use in a scientific thesis, master’s, or Ph.D. work, or for profit or for the academic or business use of a third party without the permission of the Earthwatch scientist is strictly prohibited. Please be aware that data gathered during the interviewing of local people become the intellectual property of the Earthwatch scientist. 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 the obligation to review and edit materials involving information gathered on one of their expeditions.

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

Discrimination on the basis of race, religion, ethnicity, national origin, gender, 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 nondiscrimination 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 prohibited 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 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, or Earthwatch field staff.

Any individual who feels subjected to sexual harassment or has any knowledge of such behavior should report it at once to the Earthwatch scientist, Field Team Leader, or other Earthwatch staff member. The Earthwatch scientist or Field Team Leader will notify Earthwatch when an accusation of sexual harassment or abuse is made or when such conduct is witnessed.

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

**DRUGS**

Laws on drug use in most countries are severe and may impose lengthy prison terms or the death penalty. The manufacture, possession, use, purchase, 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 on 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 on-site briefing to participants at the start of the project and in the expedition briefing.

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

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

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

MINORS
Earthwatch considers participants less than 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 fifteen (15). Guardians accompanying minors on standard teams must be 21 years of age or over. Minors on standard teams do not receive additional guidance or supervision from Earthwatch beyond what is offered to the adult participants. The total number of minors on standard teams may be limited on a project by project basis; this will be noted in the expedition briefing. A maximum of two minors may accompany each parent or guardian on a standard or Family Team. Earthwatch has developed teams specifically for 15-, 16- and 17-year-olds (“Teen Teams”) as well as teams specifically for families (“Family Teams”) with children as young as 10 years. 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 may be 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 15-, 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 (including motorcycles or all terrain 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 predetermined by project staff in collaboration with Earthwatch. Participants must respect the restrictions for boat driving in place for each project.

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

Participants who have driven themselves to the project may choose to utilize their own vehicles during recreational time, but project staff will brief them on any 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 in an Earthwatch project at any time and to terminate any work being done by a participant and require the participant to vacate the project site if the Earthwatch scientist, Field Team Leader, or other Earthwatch staff member in his or her absolute discretion considers it appropriate. In this event, the participant (and his or her parents or guardians, 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 will not be eligible for a refund.

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

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

Any participant found in violation of any of the policies described in this document (“Participant Rights and Responsibilities”) is subject to removal from the team at his or her own expense. By signing the Liability Release section of your Earthwatch Participation Form, you are indicating that you have read and understand the policies in this document. Removal of a participant from a team is at the discretion of the Earthwatch scientist, Field Team Leader, or other Earthwatch staff. In addition, Earthwatch will support the right of the Earthwatch scientist, Field Team Leader, or other Earthwatch staff to send a participant away from a project once in the field should his or her 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 guardians prior to his or her dismissal. Should a participant be removed from a team, he or she is responsible for any and all costs associated with departure from the team and will receive neither refund of the minimum contribution for the expedition nor any expenses incurred by participation on the expedition.

(November 2012)
Communications

Contact Information

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.

Caroline Wilson: +61 (0) 408 668 070
Tanja Straka: +61 (0) 415 314 226

The 24-hour contact number at Earthwatch in Australia is +61 (0) 8508 5537 (see next page for calling instructions).

During office hours, Earthwatch Australia can be reached at +61 (0) 9016 7590.

EMERGENCY COMMUNICATIONS

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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.

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 mobile phone use with respect for fellow volunteers and staff accordingly.
MESSAGE FROM EARTHWATCH

DEAR EARTHWATCHER,

Thank you for joining our expedition! We do appreciate your decision to be involved in hands-on environmental science and conservation, as a significant personal contribution to a sustainable planet.

As an Earthwatch volunteer, you have the opportunity to create positive change. While you’re out in the field working toward that change, we are committed to caring for your safety. Although risk is an inherent part of the environments in which we work, we’ve been providing volunteer field experiences with careful risk management and diligent planning for over 40 years. You’re in good hands.

We hope this expedition will inspire you to get more involved in conservation and sustainable development priorities—not just out in the field, but also when you return home. We encourage you to share your experiences with others, and to transfer your skills and enthusiasm to environmental conservation efforts in your workplace, community and home.

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

Best regards,

Professor David McInnes
Chief Executive Officer, Earthwatch Australia

Earthwatch’s 24-Hour Helpline

If you need help at any time, call Earthwatch’s 24-hour emergency hotline in Australia:

+61 (0) 3 8508 5537

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

Medical and Security Assistance Helpline Numbers

(For assistance while in the field)

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

CEGA Emergency Medical & Travel Assistance:
+44 (0)20 3059 8770

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

Henderson Risk Security Assistance and Advice:
+44 (0) 20 3059 8772
axisenquiries@hendersonrisk.com
Earthwatch US
114 Western Ave.
Boston, MA 02134
info@earthwatch.org
www.earthwatch.org
Phone: 1-978-461-0081
Toll-Free: 1-800-776-0188
Fax: 1-978-461-2332

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