

# Timeline and Checklist

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

## Immediately

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

## At least 90 days prior to your expedition start date

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

- Earthwatch Participation Form for Adults
- Travel Form

European volunteers can download forms on: [earthwatch.org/europe/volunteerforms](http://earthwatch.org/europe/volunteerforms)

U.S./North American volunteers can download forms at: [earthwatch.org/volunteerforms](http://earthwatch.org/volunteerforms)

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

Japanese volunteers can download forms on: [www.earthwatch.jp/getinvolved/condition/formdownload-i.html](http://www.earthwatch.jp/getinvolved/condition/formdownload-i.html)

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

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

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

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

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

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

# South African Penguins

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# General Information

<b>Project title</b>	South African Penguins
<b>Earthwatch scientists</b>	<b>Prof. Peter J. Barham</b> , Professor of Physics, H.H. Wills Laboratory, University of Bristol, United Kingdom <b>Dr. Leslie Underhill</b> , Director of the Animal Demography Unit, Department of Zoology, University of Cape Town, South Africa <b>Mario Leshoro</b> , Conservation Officer, Heritage Resources Department, Robben Island Museum, South Africa <b>Dr. Robert J.M. Crawford</b> , Marine and Coastal Management Branch, Department of Environmental Affairs and Tourism, South Africa
<b>Research site</b>	Robben Island, South Africa
<b>Expedition length:</b>	12 days
<b>Team size max:</b>	4 participants
<b>Minimum age of participation:</b>	18 years of age*
<b>*Note:</b> It may be possible for 16- and 17-year-olds to participate on standard teams if accompanied by a parent or guardian. Contact Earthwatch for more information and see <i>Volunteers Under 18 Years of Age</i> in the <i>Passports and Visas</i> section for traveling advice for minors.	

# Emergency Contacts

## Emergency contact number at Earthwatch headquarters in the U.S.:

**+1 (978) 461-0081**

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

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 U.S.:** ISOS Philadelphia, +1 (215) 942-8459
- For assistance **outside the U.S.:** ISOS London, +44 (0) 208-762-8008
- For assistance **within Australia:** ISOS Australasia, +61 (0) 2-9372-2468

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

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



Dear Earthwatcher,

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

**We are committed to caring for the safety of all those involved in our activities anywhere in the world.**

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

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

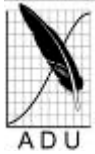
**Well-prepared volunteers are better able to enjoy the unique and exciting experiences that an Earthwatch expedition offers** and will be more helpful to the scientists' important work. Open-mindedness, the ability to work on a team, and a desire to learn are all keys to a successful and enjoyable Earthwatch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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Ed Wilson", written in a cursive style.

Ed Wilson  
President and CEO



Dear Earthwatch Volunteer,

We look forward to welcoming you to South Africa, the Cape Peninsula, and to Robben Island.

Penguins were abundant on Robben island in the 1600s, but these penguins were extinct by about 1800—exploited and disturbed to such an extent they no longer bred here. Accumulated deposits of guano were removed for fertilizer in Europe and South Africa. Things looked ominous for the penguins until 1983, when they re-colonized Robben Island. Growth of the colony was spectacular: in 2007, it was the second largest of the species, with more than 6,000 breeding pairs. However, since then, the population has declined once again. Overall African penguin populations decreased throughout the 20<sup>th</sup> century. This trend continues at nearly all colonies, including Robben Island, which now has fewer than 3,000 pairs. Recently, they were re-classified as endangered by the International Union for Conservation of Nature (IUCN).

Part of the problem is human disturbance of penguin habitat. In June 2000 this habitat was in serious trouble when the bulk ore carrier, *Treasure*, sank between Robben and Dassen Islands. Oil came ashore at both islands, threatening 40% of the world population of African penguins. A massive rescue operation was launched, removing more than 40,000 penguins. Oiled birds were collected for cleaning and rehabilitation and un-oiled penguins were relocated 800 kilometers (497 miles) to the east to prevent their becoming oiled (one of these penguins, Peter, was one of *Time* magazine's "Winners of the Week" for his 17-day swim back to Robben Island). Orphaned chicks were also collected for captive rearing. In terms of numbers of animals, it is the largest wildlife rescue ever attempted. More details on the rescue and also on the work of prior Earthwatch teams can be accessed on the Animal Demography Unit's former webpage at [www.aviandemographyunit.org](http://www.aviandemographyunit.org).

African penguins aren't the only ones in trouble. In fact, only seven of the world's eighteen penguin species are unthreatened. In order to increase their chances of survival, it is necessary to understand the dynamics of penguin populations. For example, we already know that African penguins live for considerable periods—some up to 30 years. They also show high fidelity to partners and only seek new mates when their partner can no longer be found.

The 2012 Earthwatch teams will be in the exciting position of continuing the monitoring of birds returning to breed at Robben Island from March to September (the main breeding period here). Some of these penguins will be wearing old flipper bands, and one of our goals is to continue field testing a new band designed at the University of Bristol which, if successful, will substantially reduce drag.

Many other endemic seabirds nest at Robben Island, and you can expect to see three species of antelope and the introduced European fallow deer. Robben Island is steeped in history—it has been a prison (most famously for Nelson Mandela during apartheid), a leper colony, and a naval base. Each team will also have one or two recreational days to visit the adjacent beautiful Cape Peninsula. We will have a flexible approach—if you would like more time to explore, you need only ask.

Please make sure to read this entire Expedition Briefing for all of the essential information to prepare you for your expedition. We look forward to seeing you and believe you will have a wonderful time.

Sincerely,

Peter Barham, Les Underhill, Robert Crawford and Mario Leshoro

# The Research

## South African Penguins

The overall population of African penguins is declining rapidly—it has fallen by half in the past decade alone, leading to a 2010 change in the species' conservation status from Vulnerable to Endangered. Moreover, two recent oil spills have affected a large proportion of the African penguin population, making detailed knowledge of survival rates, foraging ecology, and overall breeding productivity of this species essential to future conservation planning. Since more than 10% of the population of African penguins has at one time or another been oiled, cleaned and released, ongoing monitoring of the breeding success of these birds and their offspring is required.

Our principal concern is to help to understand the underlying causes for the population's rapid decline and to use that information to assist in the development of appropriate conservation measures. With the aid of Earthwatch volunteers, we will collect data on a range of measurable breeding and population parameters (overall breeding success rates, chick growth rates, chick condition indices, annual survival rates, etc.) so that we can accurately model how these are changing year by year. We will then attempt to relate these trends to larger scale environmental data (available prey biomass, sea surface temperatures, etc.) to determine the important factors contributing to the decline of the African penguin.

The Earthwatch project forms part of a network of monitoring projects at many of the breeding colonies. In general, the Robben Island monitoring program leads the conceptual monitoring effort, and ideas that are developed and tested on Robben Island as part of the Earthwatch project get adopted at other colonies (for example, the condition index was trialed on Robben Island and then implemented widely).

### **Monitoring diet and nests**

The breeding success and diet of African penguins has been monitored on Robben Island since 1989. Since the Earthwatch project here began in 2001, large amounts of information on banded penguins have been collected (Barham *et al.* 2006, 2007, 2008).

Penguins, who forage for food in the ocean, are indicators of global climate change. The breeding success and diet of penguins and other sea birds can inform us about the abundance of food stocks in the oceans. The duration and location of foraging trips can inform us about movements of food resources. African penguins are faithful to their mates and return to their nesting colonies year after year. However, young birds breeding for the first time may emigrate from natal colonies to locations where feeding conditions are favorable. As the climate changes, some seabird colonies will become smaller and others larger. Monitoring changes in the sizes of colonies of different seabirds (penguins, cormorants, gulls, etc.) on Robben Island and at other breeding sites around the South African coast will help to provide a larger picture of the changes in the region as a whole. Banding chicks will permit this project to determine how they move to new locations as the location of food stocks is altered due to climatic changes. Additionally, by comparing the foraging behavior of the penguins with information from local fisheries, it may be possible to see whether food for penguins could be better secured by closing certain areas to fishing.

From the beginning of the 2008 breeding season, experimental closures to fisheries in some areas of the Western Cape have been undertaken. As penguins are thought to be restricted to foraging within 20 kilometers of their breeding colony while feeding chicks, it is hoped that such closures will benefit breeding birds by making more prey available to them during the crucial chick rearing stage. The closures are part of a larger project overseen by Marine and Coastal Management (MCM) monitoring the changes in the birds' ability to find food during the closed and open periods which will provide crucial information to guide future legislation. The Earthwatch project provides the basic data for the project by monitoring penguins on Robben Island.

This project also monitors the nests of African penguins in order to see whether climate changes affecting the Western Cape region are having an impact on individual penguin productivity. Birds at known nests will be monitored (using GPS data-loggers and dive depth monitors attached to the birds) to observe how foraging behavior is changing as the food sources move; Earthwatch volunteers on some teams may assist the researchers with this work.

The project aims to establish which types of nesting habitat provide the greatest chance of success for the birds, in order to inform the process of removing alien tree species and providing suitable alternatives. Differences in the success of birds at different types of nest site (burrows, open nests, nests under bushes and trees, etc.) have already been noted. However, because a specific study on the effect of nest type has not yet been conducted, it is still necessary to choose a greater variety of nests throughout the year to draw any definitive conclusions.

Also affecting the nests of penguins on Robben is a new program to remove alien vegetation, which will result in lost habitat for members of the penguin colony. Robben Island hosts a number of aggressive introduced plant species. Currently efforts are being made to remove these and restore the vegetation to a more natural state. This will mean that some of the nesting habitat of the penguins will be removed. Understanding what types of nest site are most successful will allow the project to inform the removal process and, at the same time, provide appropriate alternative nesting sites. Some Earthwatch volunteers will help by digging in artificial nest boxes to help replace lost habitat.

The data will be analyzed by the Earthwatch scientists at the end of each breeding season and published as and when it shows interesting trends. The data will also be submitted to MCM for use in the project to enforce experimental closures of fishing in some areas.

### **Chick development**

Another way to understand the overall health of the population is to see how well chicks develop. By measuring the head length and mass of chicks we can tell how well they are being fed. Each week roughly thirty chicks from nests around the colony will be measured once. These nests will not be returned to again, so as to minimize the risk of causing nest failure through disturbance. Volunteers will be trained in how to remove and return the chicks with minimal disturbance and risk to the breeding success. Chicks will be weighed and have their head measured. This data will be used to generate an index of body condition. Any chicks found to be in poor condition, to the point where it is unlikely that they will survive to fledging without intervention, will be removed for captive rearing at the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB)—a seabird rescue and rehabilitation center in Cape Town.

The data obtained will be analyzed by staff and students at the ADU and will be submitted to MCM for use in the closures project. It is hoped that the data will be used in reports to working bodies responsible for overseeing pelagic fisheries in South Africa.

### **Re-sightings of banded birds**

Re-sightings of banded birds are essential to understand overall population trends. The data gathered over previous years of the Earthwatch project have already proved invaluable in showing that the survival rates of birds that were rehabilitated and released after being oiled in the *Treasure* spill are comparable to those of other birds. The project aims to continue monitoring these and other banded birds to obtain data such as longevity and lifetime reproduction statistics.

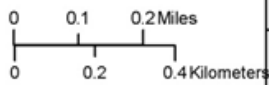
To date Earthwatch volunteers have made nearly 20,000 re-sightings of banded penguins (around 8,000 different birds). These data provide information on a range of demographic parameters and give information about the survival of birds that have been oiled or injured and released back into the wild after treatment. Continuing to record re-sightings is essential, as the data continue to be of value. For example, as the banded birds grow older, the data will provide information about longevity. Also by maintaining the database of sightings of banded birds it

will be possible to integrate the data with that obtained from the automated system. In several years, once fully functional, these integrated systems will enable researchers to make definitive comparisons between banded and un-banded birds.

Reduced breeding success has already been noted in birds oiled in the *Treasure* spill. The project must now establish whether this is permanent or temporary, and whether it is related to the increased food demands of chicks as they grow. The current project has shown that while birds that were oiled, cleaned, rehabilitated and released after the *Treasure* spill have similar survival rates to that of other birds, their breeding success has not been as good—they typically raise only 70% as many chicks as other birds. The project aims to find out if this is a permanent feature, or whether as the birds get older their success will improve.

As mentioned above, established breeding penguins are generally faithful to their breeding colonies, while young birds may move to new colonies (Crawford 1998; Crawford et al. 1995). Since the automatic recognition system can only follow birds once they have molted into their adult plumage, up to 1,000 chicks will be banded per year using the new rubber bands in order to determine how much emigration from Robben Island occurs over the next decade.

This is a long-term study. The first stage is to mark chicks before they leave the colony by fitting them with the rubber bands. Once the chicks have been banded, then re-sighting data (from Earthwatch volunteers on Robben Island and from other researchers at other localities) will build up a picture of their long-term movements. Movements of birds will be compared with survey estimates of the abundance of fish in different regions and with the diet of penguins at different localities to gauge the influence of prey distributions on movements.

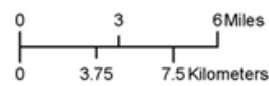
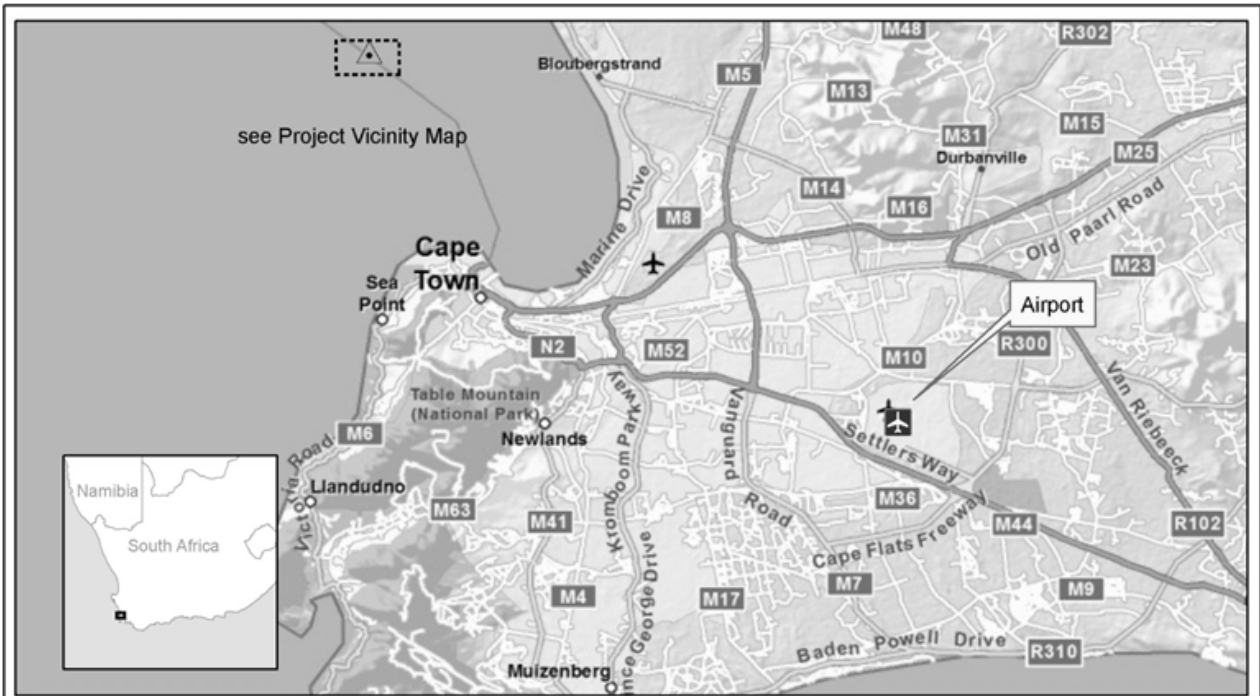


Project Vicinity Map



**South African Penguins**

background imagery courtesy of ESRI



Travel Map



**South African Penguins**

background imagery courtesy of ESRI

## Results and Opportunities

The first ten years of this project provided a test bed for penguin tagging methods, allowing project staff to develop the techniques necessary to mark and map nests so that they can be found and monitored by successive teams of Earthwatch volunteers.

Demographic studies of birds have relied on the use of identification bands for over a century. Today, the most commonly used bands are made from steel and are fixed around the birds' legs. However, in the case of penguins, leg bands are not regarded as satisfactory, largely due to visibility problems, so nearly all studies have used metal bands fixed around the top of the wing or flipper.

In the first six years of this project, improved means of identifying penguins were designed and tested, both in terms of greater ease of reading of band numbers and assuring a lower risk of any harmful effects to the penguins. As a result of those studies, the bands were redeveloped to create an optimum design. The resulting design was tested in the field for over two years with a final testing in the 2006 season. Studies to date have shown that these new bands do not have any obvious detrimental effects on birds in the wild (Barham *et al.* submitted). Modifications made to the bands include a complete redesign of the shape, producing bands in two sizes and changes to the style, color and size of lettering on the bands.

In conjunction with Bristol Zoo Gardens and others, the project will now develop similar bands for use with other species. Project staff hopes to assist in setting up, preferably in South Africa, a facility to produce bands for all penguin species on a commercial basis, thus helping both the local economy and penguin research in general.

Though the new rubber bands that will be used for this research are expected to greatly reduce the detrimental effects on penguins seen with the traditional steel bands, this project is still seeking alternative ways to identify and monitor penguins. By digitally photographing the patterns of spots on the chests of adult birds and downloading the images to a computer database, it will be possible to keep track of the penguins in a completely non-invasive way. It is hoped that this method can also be used on other species with unique markings.

Following discussions, a workshop to develop a policy for banding penguins in South Africa (including the sub-Antarctic Prince Edward Islands) was held in January 2004. In 2005, South Africa revised its Sea Birds and Seals Protection Act of 1973. Information gained by the project has fed its way into a draft national policy for seabirds, shorebirds and seals through meetings held in 2002.

This project's results will be used in advising conservation actions for South Africa's seabirds and total allowable catches for the South African purse-seine fishery. Because some Earthwatch scientists are involved, useful outcomes are incorporated in policy. Information collected will contribute towards management of the South African purse-seine fishery in a way that incorporates the "ecosystem approach" advocated by the World Summit on Sustainable Development. It will also assist with ensuring that tourism to colonies of African penguins is sustainable.

Information collected on African penguins, bank cormorants and other seabirds breeding at Robben Island will be used in the first instance to ensure conservation of these species, in the second to provide guidelines for sustainable tourism to the colonies and in the third to report on the state of health of the Benguela ecosystem in South Africa (Underhill and Crawford 2005).

# PROJECT STAFF

## Earthwatch scientists

**Dr. Peter Barham** currently holds the posts of professor of physics at the University of Bristol, U.K., and visiting professor of molecular gastronomy at the Royal Veterinary University in Denmark, Copenhagen. For this project, he is responsible for the development of new flipper bands and the new automatic recognition system. At the time of printing, it was not determined if Peter will be joining teams; this will be confirmed closer to the expedition date.

**Dr. Leslie “Les” Underhill** is director of the Animal Demography Unit and a professor in the Department of Zoology at the University of Cape Town (UCT). He received his doctorate degree from in the Department of Statistical Sciences at UCT and will be in charge of statistical aspects and running of the overall project. Les tries to join each team in the field for one or two days as his schedule allows.

**Mario Leshoro** is an environmental officer on Robben Island and holds a masters degree in environment and social development. He is responsible for logistics. Mario spends most working days with all teams in the field (he is usually only absent when the ferry doesn't run!).

**Dr. Robert Crawford** is a chief specialist scientist with the Marine and Coastal Management branch of South Africa's Department of Environmental Affairs and Tourism (MCM). He holds a doctorate from the University of Cape Town and will be responsible for biological aspects of the project.

## Earthwatch field staff

**Technical Coordinator: Sue Kuyper** is executive assistant at the Animal Demography Unit and is responsible for the administrative and logistical aspects and technical oversight of the project. Sue is also responsible for the day-to-day collection and curation of the field data. She will lead some teams and assist with others.

**Team leaders** will be in charge of the daily field activities during the project; however, staffing schedules will vary by team, and you will not be working with all of the team leaders listed below. The schedule of which project staff will lead which team has not yet been fully determined at the time of printing. It is possible that you will work with one team leader or Earthwatch scientist and one assistant for the first half of the expedition, and with another assistant for the second half.

**Leshia Visagia**, Marine and Coastal Management employee

**Nola Parsons**, Researcher in the Animal Demography Unit and veterinarian at SANCCOB

**Barbara Barham**, IT programmer

**Antje Steinfurth**, Post-doctoral researcher at the University of Cape Town

**Richard Sherley**, Post-doctoral researcher at the University of Cape Town

**Sally Hofmeyer**, Doctoral student at the University of Cape Town

**Shannon Hampton**, Doctoral student at the University of Cape Town

**Esther Mostert**, Masters student at the University of Cape Town

**Greg Duckworth**, Masters student at the University of Cape Town

# Daily Life in the Field

## VOLUNTEER TRAINING AND ASSIGNMENTS

### Training

Training will include a general orientation to the island and introduction to the environmental officers of the Robben Island Museum. This orientation will include a visit to the African penguin colony, where you will be shown an example of the study nests. You will be briefed on the poor conservation status of the African penguin and the reasons behind it, and on the aims and methods of the study.

Particular attention will be given to instruction on safety precautions, how to handle a penguin safely, minimizing stress to the penguin and hazards to the handler. Instruction will also be given on concurrent research programs and how to minimize disturbance to other components of Robben Island's fauna, such as breeding colonies of terns and gulls. You will be trained in observation procedures and the behavior of African penguins, so that you may record and interpret observations. Copies of all previous observations will be left on the island.

A detailed procedures manual will be available to volunteers, containing copies of all data recording sheets and detailed instructions for each task. This is intended as a reference for volunteers, as project staff will provide training on all aspects of the work whenever needed. Be aware that due to the Earthwatch scientists' schedules, you will receive training and guidance from different researchers for different parts of your expedition. In most cases there will be one lead researcher for each team, assisted by a fellow researcher for the first week of your stay, and a different assistant researcher for the second week.

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

### Assignments

Earthwatch volunteers will assist with some or all of the following project tasks:

- Regular monitoring of penguin nests, long-term population monitoring of the island's wildlife with counts of molting penguins, penguin nests in a small area of the colony, shorebirds, game animals (antelope and ostrich) and rabbits.
- Measuring the body condition of penguin chicks by taking mass and morphometric (size and shape) measurements.
- Maintaining the environment of the island by cleaning a section of coastline.
- Aiding the development of an automatic recognition system by taking digital photographs of the spot patterns on penguin chests.
- Assisting with the selection of appropriate nests; identifying adult birds at the selected nests (either by band numbers or using photographic identification from spot patterns).
- Making regular visits to monitored nests noting nest contents and the identity of adult birds present.
- Entering data into the nest monitoring database on the project computer.
- Reading the numbers on all banded birds seen at any time in the colony; this includes both casual observations while undertaking other activities and a specific activity using telescopes and binoculars to observe birds as they travel along fixed paths to and from the sea.
- Entering data in the re-sighting database on the project computer.

- Volunteers will assist with the banding of large chicks for the study (**Note:** Actual banding is more likely on later teams and will only happen when the birds are at the right stage of development. There is no guarantee that all teams will have the opportunity to be involved with banding).

Volunteers will monitor study nests of penguins every five to six days. You will work beside students and researchers noting arrival and departure times of birds at the nests and take notes on behavior. A different group of nests will be visited each day, and it may take two or three days to visit and record data from all the nests in the study group.

You will also spend a few hours each day reading the band numbers of penguins on the shore and moving about the colony. This data will enable the researchers to discover which of the previously oiled and released birds are breeding on the island. Some teams may also assist with the census of penguins and other seabirds on Robben Island and possibly at other seabird breeding sites.

Most teams will spend some time on one or two days clearing accumulated garbage (especially fishing line) from the shoreline where penguins come ashore. Birds entangled in this material can become trapped and eventually die of starvation. In addition, some days will be spent noting the numbers of penguins arriving at and leaving the colony from hides on the beaches.

The actual daily program will vary during the season as the chicks develop and the parents leave the breeding site:

**March and April** mark the beginning of the breeding season; volunteers should see many nests with eggs and a few with small chicks during this time. Usually teams in these months spend much of their time assisting in selecting nests for the study group, monitoring some of these nests, and helping with the data entry associated with setting up these nests for monitoring by later teams.

In **May and June** chicks are starting to fledge; teams do a great deal of nest monitoring. These months are also when most of the satellite tracking devices on penguins are deployed.

In **July and August**, many nests are abandoned as birds complete their breeding for the season. During this time, we generally find the greatest number of birds needing attention because of injury or oiling (there is no known reason that oiling seems to happen most in July and August). Volunteers may get the most hands-on experiences with penguins during these months, although nothing is certain when working with wild animals.

Data will be submitted to Marine and Coastal Management (MCM) and the Animal Demography Unit (ADU) for detailed analysis, though there may be some opportunities for volunteers to assist with data analysis.

Volunteers may learn more about the project, staff members, and daily life in the field by reading previous team journals available at [aviandemographyunit.org/ew\\_intro.htm](http://aviandemographyunit.org/ew_intro.htm).

# TEAM ITINERARY AND DAILY SCHEDULE

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

## Day 1: Rendezvous

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

## Days 2-11: Fieldwork

Please be aware that schedules can and do fluctuate due to weather, research needs, etc. Your cooperation and understanding are appreciated. The times also vary with the seasons and in March and April the start is likely to be earlier, especially if the weather is warm and fieldwork needs to be done during the cooler part of the day.

Time	Activity
7:00 a.m.	Wake up and eat breakfast
8:30 a.m.	Meet with Mario Leshoro or team leader and begin morning fieldwork (monitoring nests, etc.)
12:30 p.m.	Return to house for lunch
3:00 p.m.	Afternoon fieldwork (afternoon activities tend to be fairly diverse)
6:00 p.m.	Prepare dinner
7:00 p.m.	Dinner
8:00 p.m.	Recap of day's observations and briefing for following day's work; assist with data entry
9:00 p.m.	Occasional evening fieldwork
11:00 p.m.	Suggested bedtime

## Day 12

Volunteers will leave the island sometime on the last day, normally during the morning, depending on the ferry schedules and weather. If time allows, volunteers will clean up the house before departing. **Please note that if you intend to spend the night in Cape Town, you will need to arrange and pay for accommodations for this night separately.** The team may meet up at a restaurant in the evening; however, that meal and the night's lodging are not included in the cost of your expedition.

## Recreational Time:

A tour of the Robben Island prison is arranged during the time the team is on the island. Additionally, the team will have one or two recreational days during which you may participate in group activities or relax on the island. During the recreational day(s), volunteers will have the option of taking one or two half-day tours (at their own expense) with a commercial operator; a list of approved operators and tours is kept on Robben Island. These tours will involve taking the ferry into Cape Town in the morning and returning to Robben Island in the

afternoon/evening. The recreational day(s) is usually the Saturday and/or Sunday in the middle of the expedition but may be changed due to weather.

Volunteers traveling to the mainland must take a mobile phone with them and carry both the phone numbers of the Team Leader and an emergency contact on the mainland. Volunteers who do not have their own phone will be lent one. Project staff will keep a record of the tour and tour operator that each volunteer is with. Please note in the event of the ferry being unable to return to Robben Island due to inclement weather or any other reason, volunteers will be responsible for the cost of their own meals, lodging and any other incurred expenses while in Cape Town.

## **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.

## **Additional Policies Relevant to the *South African Penguins Expedition***

Please note that SCUBA diving is not permitted on the recreational day(s); if you would like to SCUBA dive during your visit to Cape Town, please do so before or after your Earthwatch expedition.

# ACCOMMODATIONS

## Sleeping

The house contains one large bedroom and two smaller bedrooms, with a total of six single beds. There is also a lounge, which can be used as another bedroom, and an outside room with one single bed. Volunteers may be asked to share rooms depending on the number of people working on the island at any given time. The maximum number of people in any one room is normally three. Private accommodations for couples are not always possible, as rooms may be divided by gender.

## Bathrooms

The house has one bathroom with one flush toilet and hot and cold running water. Laundry facilities (a washing machine and a small dryer) are available at the house for free. Bedding is provided and there is a small supply of towels left by previous volunteers.

## Electricity

Robben Island has a fairly reliable electricity supply of 240 volts and uses South African sockets (three-pin plug required). Adaptors are necessary for U.S., Australian and European equipment. Adaptors can be purchased at stores in Cape Town and there may be a spare one at the house for general use. U.S. electronics (excluding laptop computers) may also require a transformer to protect the equipment from the higher voltage in South Africa.

## Internet and Communications

Internet access is intermittently available on the island but capacity is limited. However, volunteers may send and receive limited emails via Mario Leshoro if needed (see the *Communications* section).

## Facilities and Amenities

There is a small shop on the island that carries a very basic selection of foodstuffs; there is another small shop selling curios and a few cold drinks.

## Distance to Field Site

The house is located about a 15-minute walk from the edge of the penguin colony and about 30 minutes from the main study site.

## Services and Restaurants in Walking Distance

There are no restaurants or other services on Robben Island.

Please note that smoking is not allowed in the field or in the team house; smoking is permitted only in designated areas outside of the house.



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# FOOD

The house on Robben Island is equipped with basic cooking facilities: a stove, microwave, crockery, cutlery, pots and pans, refrigerator and deep freezer. Food will be bought by the team leader ahead of the start date. All members of the team are expected to assist with the preparation of meals as well as the clean-up afterward.

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

<b>Breakfast</b> is usually do-it-yourself and includes toast, cereal, yogurt and fruit.
<b>Lunch:</b> Cold meats, cheese, quiche, bread, salads and fruit.
<b>Dinner:</b> Each team normally has at least one <i>braai</i> (South African for barbecue) with traditional meats. Other dinners include fish, stews and pasta dishes. Enough fresh vegetables to last a week are sent out with the team and the supply is replenished when possible.
<b>Snacks/Other:</b> A good range of biscuits (cookies) and savory snacks are provided.
<b>Beverages:</b> Tea (leaf tea, tea bags, herbal teas and rooibos, a South African specialty), coffee, hot chocolate, fruit juices and other beverages will be provided.
<b>Water:</b> Drinking water from a desalination plant on the island will be provided.

## Special Dietary Requirements

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

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

# Travel Planning

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

You are encouraged to register your travel itinerary with your embassy. For information on embassies around the world, see [embassyworld.com](http://embassyworld.com).

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

## RENDEZVOUS

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

## PASSPORTS AND VISAS

### Visa Information

Citizens of the U.S., EU, Australia, Canada and Japan **do not** 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 traveling.

### Passport Information

All visitors to South Africa must be in possession of a passport valid for at least six months past the date of entry and which must contain at least two consecutive blank (unstamped) pages, not including the "endorsement" pages at the very back. **You may be refused entry if you do not comply with these requirements.**

### For Volunteers Requiring Visas ONLY: Essential Information

<b>Type of Visa</b>	Volunteers requiring a visa must get a <b>TOURIST VISA</b> .
<b>Where to Get a Visa</b>	Contact the nearest <b>South African embassy or consulate</b> to find out how to apply for your visa. Please note that this process can take weeks or more. We strongly recommend using a <b>visa agency</b> , which can both expedite and simplify the process. See below for a list of visa agencies.
<b>Required Information</b>	You will need to send your <b>passport</b> (valid for at least six months beyond your stay), a <b>Visa Application and Immigration Form</b> , <b>2-4 passport-size photos</b> , and <b>payment</b> to the embassy or visa agency (if applicable). Please be sure that your passport is valid for at least six months beyond your stay. Your passport must also contain at least two consecutive blank (unstamped) pages, not including the “endorsement” pages at the very back.
<b>Cost of a Visa</b>	Generally between US\$40-100, but varies from country to country and can potentially cost <b>up to US\$180</b> . A visa agency will charge an additional fee.

**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: <a href="http://www.trivisa.com">www.trivisa.com</a> (*See the website for additional offices)	CIBT, Inc. U.K. 25 Wilton Road Lower Ground Floor Victoria SW1V 1LW Tel: 0844-736-0211 Fax: +44 (0) 207-828-5411 Calling from Europe outside U.K.: +44 (0) 207-802-1000 Email: <a href="mailto:info@uk.cibt.com">info@uk.cibt.com</a> Web: <a href="http://www.uk.cibt.com">www.uk.cibt.com</a> (has alternate address for urgent requests)	Ask your travel agency if it can send your visa application on your behalf.

## Volunteers Under 18 Years of Age

### Entry to Foreign Countries

It may be possible for 16- and 17-year-olds to participate on standard Earthwatch teams *if* accompanied by a parent or guardian. However, in an effort to prevent international child abduction, many governments have initiated procedures at entry/exit points to protect minors. Thus, if a minor will be traveling with only one guardian, or if for any reason they will be traveling alone (such as for a Teen Team), it may be necessary to have a notarized letter from all legal guardians stipulating that they may travel unaccompanied or in the presence of a single guardian. This letter must give an explanation for why only one parent or someone other than a parent is signing the letter. For example, if one parent is deceased, only one parent has legal guardianship, or someone other than the parents are legal guardians, the letter should state that.

### Airline Documentation Requirements

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

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

### Additional Passport and Visa Resources

- For Japanese citizens: [www.rainbowt.jp/travel/visa\\_top.html](http://www.rainbowt.jp/travel/visa_top.html)
- For Australian citizens: [www.passports.gov.au](http://www.passports.gov.au) and [www.dfat.gov.au/visas/index.html](http://www.dfat.gov.au/visas/index.html)
- For U.S. citizens: [www.passportvisasexpress.com](http://www.passportvisasexpress.com)
- Travel Document Systems: [www.traveldocs.com/index.htm](http://www.traveldocs.com/index.htm)

## INSURANCE

MedEvac assistance, advice and insurance are included in the contribution you pay to Earthwatch. It covers your travel medical risks, including medical expenses and emergency medical evacuation, while you are traveling, as well as trip cancellation 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 U.S. volunteers, the coverage is valid only when the expedition is over 100 miles from your place of residence). Please see [earthwatch.org/europe/downloads/Insurance/post15Jan\\_FAQs.pdf](http://earthwatch.org/europe/downloads/Insurance/post15Jan_FAQs.pdf) for information about when coverage starts and ends, and answers to other frequently asked questions.

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 U.K.).**

### **If you signed up through Earthwatch U.K./Europe, or Earthwatch Japan:**

Details of this insurance policy are included in your expedition briefing pack and can be found at [earthwatch.org/europe/insuranceinfo](http://earthwatch.org/europe/insuranceinfo). Please refer all queries regarding this policy to Sutton Winson in the U.K. at +44 (0) 1444 251 164 or on [earthwatch@swib.co.uk](mailto:earthwatch@swib.co.uk).

Information about additional insurance available to U.K. residents can be found at [earthwatch.org/europe/insuranceinfo](http://earthwatch.org/europe/insuranceinfo). Should you have any questions about whether you require additional 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 U.S.:**

Details of the U.S. insurance policy can be found at [earthwatch.org/insurance](http://earthwatch.org/insurance). Please refer any queries regarding this policy to Sutton Winson in the U.K. From the U.S., dial 011 44 1444 251 164, or email [earthwatch@swib.co.uk](mailto:earthwatch@swib.co.uk). Please note the time difference between the U.S. and the U.K. and call during U.K. 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 [earthwatch.org/volunteerresources](http://earthwatch.org/volunteerresources). Should you have any questions about whether you require additional 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 traveling by air and checking your luggage, you are advised to pack an extra set of field clothing and personal essentials in your carry-on bag in case your luggage is lost and/or takes several days to catch up with you. Many airlines have strict baggage policies. Please check with your airline(s) on baggage weight limits, liquid restrictions, fees for checked baggage, etc.
- *Checking luggage:* Please note that if you will be taking an international flight that has one or more connections within the country of your destination, it will be necessary to collect any checked bags at the airport where you first arrive in the destination country. After proceeding through customs, you will have to recheck your luggage before flying on to your final destination.

### **Money Matters**

- *Local currency:* South African rand.
- *Personal funds:* You will be able to change money at the airport or at a bank in Cape Town. There are ATMs located throughout Cape Town, and credit and debit cards are widely accepted there. There are no banking

facilities on the island, so it is advisable to take a small amount of South African rand with you over from the mainland for purchasing personal items or souvenirs.

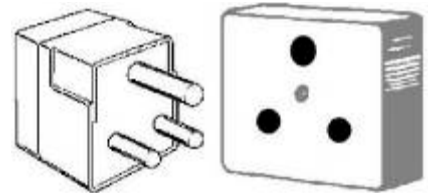
About US\$200 spending money is suggested. When budgeting, it is a good idea to plan for at least one extra night in Cape Town at the end of the expedition. There is also a range of souvenirs available on the island and in Cape Town, and prices are generally reasonable.

- *Local currency:* South African Rand.
- *Tipping:* Wait staff and specialist guides are generally tipped 10% of the cost of the service.

## Your Destination

- *Language:* There are 11 official languages in South Africa; the project will be conducted in English and most people you encounter will speak fluent English.

- *Electricity:* 240 volts, 50 Hz, three-pin Type M plug (see right). Adaptors can be purchased in South Africa's international airports and at the Waterfront in Cape Town if you arrive in time to buy one before the rendezvous. There may also be spare ones at the house for U.S.-style plugs; there are adapters available for European-style two prong plugs at the house. For additional information, see [kropla.com/electric2.htm](http://kropla.com/electric2.htm).



- *Time zone:* +2 GMT/UTC. For time worldwide with GMT/UTC, see: [www.worldtimeserver.com](http://www.worldtimeserver.com).
- *Telephone Dialing codes:* When calling South Africa from another country, dial the country's international dialing code, followed by 27 and the number. When calling within South Africa, omit the 27 and dial 0. When calling another country from South Africa, dial 00, followed by the other country's country code and the number. **Note:** You should check with your cell phone provider to obtain any carrier-specific dialing codes you may need; many providers have dialing procedures that may differ in whole or in part from these directions. For additional information, see [kropla.com/dialcode.htm](http://kropla.com/dialcode.htm).

## Country Information

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

## RECOMMENDED READING

Below are additional recommended materials for those interested in further preparing for the expedition. Some may be purchased online through popular vendors.

### Books

- Mandela, Nelson. *Long Walk to Freedom*. New York: Little Brown and Co., 1995.
- Williams, Tony D. *The Penguins: Spheniscidae*. Oxford: Oxford University Press, 1995. **Note:** This book is out-of-print, but you may find a copy at the library.
- Whittington, Phil. *Peter the Penguin*. Cape Town: Animal Demography Unit, 2001.
- Spencer David, Lloyd. *Penguins: The ultimate question and answer book*. New York: Harper Collins, 2007.

### Field guides

- Sinclair, Ian, Phil Hockey and Warwick Tarboton. *Sasol Birds of Southern Africa*. Cape Town: Struik Publishers, 1995.
- *Oceans of Life off Southern Africa*. Edited by A.I.L. Payne and R.J.M. Crawford. Cape Town: Vlaeberg, 1989.

### Films

- *City Slickers*. **Note:** This is not the Billy Crystal movie, but “a wonderful wildlife film with a very humorous twist”; available at [sanccob.ic3lovetheweb.com/home.asp?m=10&s=8](http://sanccob.ic3lovetheweb.com/home.asp?m=10&s=8).
- Jacquet, Luke. *March of the Penguins*. Warner Home Video, 2005. **Note:** A popular documentary on the emperor penguins of Antarctica; available at [www.Amazon.com](http://www.Amazon.com))
- August, Billie. *Goodbye Bafana* or *The Color of Freedom*. DVD. Image Entertainment, 2008. **Note:** Based on a book of the same name, it tells the story of an unlikely friendship that developed between a former prison guard at Robben Island and Pollsmoor Prison—James Gregory—and one of his prisoners, Nelson Mandela; available at [www.Amazon.com](http://www.Amazon.com) and renamed *The Color of Freedom* in the U.S.).

### Project-related websites

- The Animal Demography Unit’s former webpage: [aviandemographyunit.org](http://aviandemographyunit.org)
- Earthwatch field report: [earthwatch.org/FieldReportPDF/Barham\\_FieldReport2009.pdf](http://earthwatch.org/FieldReportPDF/Barham_FieldReport2009.pdf)

## HELPFUL RESOURCES

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

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

Volunteers who sign up through our U.S. office, please visit: [earthwatch.org/volunteerresources](http://earthwatch.org/volunteerresources)

Volunteers who sign up through our U.K. office, please visit: [earthwatch.org/europe/volunteerresources](http://earthwatch.org/europe/volunteerresources)

# Project Conditions

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

## To the doctor:

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

## General Conditions

The island is fairly flat with rocky shores, grassy areas and dense shrub woodland. In March and April, conditions can be hot; from May to September it is generally cool and wet. Winter days (June through August) in Cape Town can be very wet and teams during this period should expect at least one day of heavy rain. You may also be caught out in light rain during fieldwork.

Temperatures may vary significantly between day and night, and weather in general can be highly variable. You may find yourself working in hot conditions during the day and in quite cool conditions in the morning or late afternoons/evenings.

Keep in mind the seasons are reversed relative to the Northern Hemisphere.

## Physical Demands

Volunteers should be:

- reasonably fit and capable of walking ten kilometers (seven miles) or more a day.
- able to kneel down and get up easily without assistance.

The walk from the house to the colony is about 2.4 kilometers (1.5 miles) and to walk around the study area is about another 3.2 kilometers (two miles). As you will visit the colony twice each day, you can expect to walk up to 4-5 kilometers (three miles) a day on dirt roads and tracks; more if field vehicles are not operational.

The house is at the highest part of the island, but no steep hills are involved. A small field vehicle is available for transporting goods and, when possible, it will be used to transport volunteers to the colony. Penguins nest on relatively flat ground, often in dense woodland, and their nests may be hard to access—crawling through brush is often necessary. Most nest monitoring requires volunteers to bend down to look under penguins at ground level.

The weather is expected to vary within the limits below.

Month	Temperature			
	Highest recorded	Average daily max.	Average daily min.	Lowest recorded
Mar.	41°C 106°F	25°C 77°F	14°C 57°F	5°C 41°F
Apr.	39°C 102°F	23°C 73°F	12°C 53°F	2°C 36°F
May	34°C 93°F	20°C 68°F	9°C 48°F	1°C 34°F
Jun.	30°C 86°F	18°C 64°F	8°C 46°F	-1°C 30°F
Jul.	29°C 84°F	18°C 64°F	7°C 45°F	-1°C 30°F
Aug.	32°C 89°F	18°C 64°F	8°C 46°F	0°C 32°F
Sept.	38°C 100°F	21°C 70°F	11°C 52°F	3°C 38°F

Month	Precipitation		
	Monthly average	Average days with 1 mm/0.04 in or more	Highest 24-hour rainfall
Mar.	20 mm 0.8 in	5 days	42 mm 1.7 in
Apr.	41 mm 1.6 in	8 days	39 mm 1.5 in
May	69 mm 2.7 in	11 days	65 mm 2.6 in
Jun.	93 mm 3.7 in	13 days	58 mm 2.3 in
Jul.	82 mm 3.2 in	12 days	61 mm 2.4 in
Aug.	77 mm 3.1 in	14 days	56 mm 2.2 in
Sept.	51 mm 2 in	10 days	48 mm 1.9 in

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	Up to six hours per day observing and recording data on passing penguins, etc.
Bending	Up to two hours per day looking into penguin nests to record contents
Walking	Up to 16 km/10 mi per day to and from the site and between nests
Carrying	Small daypack with water, binoculars, notebook, etc. (around 4-5 kg/10 lbs) for up to eight hours per day; sometimes you may carry a spotting scope and tripod.

## POTENTIAL HAZARDS

Hazard Type	Associated Risks and Precautions
Transportation	Transport to the island is on a ferry (approximately an hour trip each way). Bring appropriate medication if you are prone to seasickness. Travel to and from the island by ferry is highly dependent on local weather conditions; this is a particular risk during the Austral winter months (June – August). Unfavorable weather conditions may delay access to medical attention during an emergency. Furthermore, poor weather conditions can lead to delays in getting out to the island at the start of the team or may necessitate the team to leave the island a day (or more) early at the end of the team. On the island a bakkie (small pickup with a cap over the bed) will be used. You will often ride in the back of the truck without safety restraints. You are advised to stay seated on the floor of the truck bed and hold on to the sides at all times. Volunteers are not permitted to drive.
Walking/Terrain	You will usually walk on dirt roads and tracks with reasonably flat surfaces. However, parts of the colony are heavily burrowed by penguins and in other places you may need to walk over loose stones. Please be sure to walk slowly and carefully over uneven terrain. If you are not sure of your footing, you are advised to use a walking stick or hiking pole to avoid

	<p>slipping and injuring yourself. There is rusty barbed wire (remnants from the prison) throughout parts of the colony. Please pay attention to your surroundings and be sure your tetanus vaccination is up to date. Wear long pants and appropriate footwear (hiking boots, etc.) when walking through long brush and grass to avoid scratches.</p>
Animals/Plants	<p>Project staff will instruct participants on proper handling techniques in order to avoid injury to handlers or animals. Penguins can inflict a painful bite, so protective gloves will be provided. Care must be taken and goggles must be worn when handling penguins. If frightened, penguins may attempt to peck your hand, arms, face or eyes.</p> <p>There are mole snakes in some parts of the island. These are non-venomous and generally docile but can inflict a painful bite. They are large snakes and may startle some volunteers. Under no circumstances should they be disturbed or attempts be made to handle them.</p> <p>There are also wild African bees. If you are allergic to stings, it is important to note this on your Earthwatch Participation Form and to inform the project staff. You must also carry the necessary medications (antihistamines and/or at least two emergency Epi-pens/kits) and inform staff of their location.</p> <p>Two male ostriches also live on the island. In 99% of encounters, ostriches will run away from people. Be wary of birds that do not show signs of running away and take evasive action if necessary. Stay at least fifty meters away from them.</p>
Climate/Weather	<p>Most of the project work is conducted outdoors. Sunburn, dehydration and other heat-related illnesses are possible. Be sure to wear high-factor sunscreen and dress appropriately (including a wide-brimmed hat and sunglasses). Carry and drink plenty of water throughout the day. Take rest breaks as needed and inform a staff member if feeling tired or ill.</p>
Bush Fire	<p>Vegetation on the island is very dry, so there is a risk of bush fire due to careless behavior such as smoking in the <i>veldt</i>, etc. Project staff will instruct participants in appropriate behavior to avoid this risk. Smoking is not allowed in the field or in the team house; smoking is permitted only in designated areas outside of the house.</p>
Personal Security	<p>If you will be traveling in urban areas in South Africa before and/or after the expedition, you are advised to stay alert and use sensible precautions. Avoid dark areas, don't walk alone at night, and do not obviously display cash, cameras or jewelry. It is always good practice to leave any unnecessary valuables at home.</p>
Traveler's diarrhea	<p>Traveler's diarrhea affects 20-50% of all international travelers. Always wash your hands with soap and water or a hand sanitizer before eating, and drink only filtered or bottled water. You should also carry an over-the-counter anti-diarrheal medication in your personal first aid kit. Speak to your doctor about other options for treating traveler's diarrhea and see the ISOS or CDC websites for advice on avoiding this condition.</p>

# HEALTH INFORMATION

See [www.internationalosos.com](http://www.internationalosos.com) for information on the current health conditions in South Africa. At the homepage, enter Earthwatch’s member identification number: 14ACPA000075. Under “Select Resource” choose “English Country Guide,” and then select South Africa from the list.

## Routine Immunizations

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

## Project Vaccinations

**Medical decisions are the responsibility of each volunteer and the following are recommendations only.** While Earthwatch can provide details regarding suggested vaccinations, we are not a medical organization and decisions about which vaccinations to receive should be made between you and a doctor. Health conditions around the world are constantly changing, so keep informed and consult your physician, a local travel health clinic, the U.S. Center for Disease Control ([www.cdc.gov](http://www.cdc.gov)), the World Health Organization ([www.who.int](http://www.who.int)), and International SOS (see above) for the latest health information for travelers. Please consult a physician for guidance on vaccinations if you intend to travel to other parts of the country.

Vaccination chart available on ISOS member site (English Country Guide, medical summary).

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

## Advice Regarding Diseases

Diseases which may be present in South Africa include malaria, rabies, schistosomiasis, filariasis, chikungunya, tick bite fever, West Nile Virus, HIV/AIDS, hepatitis, cholera and typhoid fever. Presence or risk of these diseases may be rare to non-existent on Robben Island and in Cape Town, though they may be present and therefore pose greater risk in other areas of South Africa and the region. Most diseases are prevented with basic safety cautions. Please see the CDC ([www.cdc.gov](http://www.cdc.gov)) or WHO ([www.who.int](http://www.who.int)) websites for more information.

- *Malaria* is not present at the research site or in the Western Cape. Chloroquine-resistant malaria is found elsewhere in South Africa, generally in the north and east of the country. Speak to your doctor about malarial prophylaxis if you plan to travel elsewhere in South Africa.
- *Tuberculosis*: The WHO estimates that one-third of the world’s population is infected with the bacterium (*M. tuberculosis*) that causes tuberculosis (TB). Incidence of tuberculosis is higher in developing countries, particularly in Asia, Africa, the Caribbean and Latin America. In general, approximately 10% of persons infected with *M. tuberculosis* are at risk for developing active TB during their lifetimes. TB is considered highly

treatable with medications that are of relatively low toxicity and cost. Volunteers returning from developing countries are encouraged to have a (PPD)-tuberculin skin-test to screen for potential infection.

- *Dengue fever* is endemic in more than 100 countries in Africa, the Americas, the Eastern Mediterranean, Southeast Asia and the Western Pacific, and can occur throughout the year. Globally there has been a 30-fold increase in the number of reported cases of dengue fever. Dengue fever is a flu-like virus spread primarily by day-biting mosquitoes. It is characterized by fever, headache, rash, vomiting and severe muscle pains. There is no vaccine and mosquito bites should be avoided whenever possible. Insect repellent and long sleeves and pants are highly recommended. There is no treatment for standard dengue fever other than acetaminophen (avoid aspirin), fluids and rest. It is usually resolved after about two weeks. However, hemorrhagic dengue fever, characterized by bleeding and shock, can occasionally occur and requires medical care.

## MEDICAL CONDITIONS OF SPECIAL CONCERN

Condition	Concerns and Precautions
Lack of physical fitness or mobility restrictions	Any condition that could reduce your ability to walk up to ten kilometers (seven miles) in a day, with occasional bending, kneeling and carrying, should be seriously considered prior to participation in this expedition.
Heat/sun sensitivity	March-May teams will likely experience very hot conditions. If you have any condition that might be affected by increased sun exposure or if you are sensitive to heat, please consult a physician. Be aware that many common prescriptions can increase your sensitivity to sun and heat.
Reduced or limited eyesight	Volunteers must have good eyesight (with glasses and contact lenses is fine) in order to be able to read the penguin band numbers through binoculars or a spotting scope.
Conditions requiring immediate medical care	As the ferry to and from Robben Island is highly dependent on weather, poor weather conditions can lead to delays in access to medical care. If you have a chronic condition which may require immediate medical care (e.g. heart conditions, kidney problems, severe asthma, etc.), please discuss your participation on this expedition with your physician.
Pregnancy	This project site is remote with limited emergency response in case of medical concerns. If you are pregnant, you should discuss with your physician prior to considering this project.

### Additional Health Information Resources

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

# EMERGENCIES IN THE FIELD

## Proximity to Medical Care

Physician, nurse or EMT on staff	None
Staff certified in safety training	None
Nearest medical clinic	<b>Robben Island Clinic (limited resources)</b> Main Road Robben Island Tel: +27 (0) 21-409-5126 and +27 (0) 82-414-8408
Distance	Approximately 200 m from team accommodations; two km from research site
Nearest hospital and/or clinic	<b>Christiaan Barnard Memorial Hospital</b> (twenty-four-hour emergency) 181 Longmarket Street, Cape Town Tel: +27 (0) 21-480-6111 Trauma: +27 (0) 21-423-4835 Free call within South Africa: 0801222222
Distance	Approximately ten km away; twenty-five minutes by helicopter (may not always be available), longer by boat (approx. ninety minutes once aboard). Both may take some time to arrange.

## COMMUNICATIONS

### Emergency Communications in the Field

**A cellular phone is available at the house on Robben Island for emergencies only.** Team Leaders and field assistants usually carry their own personal cell phones to allow communication between groups. Cell phone reception is available throughout the area, but can be erratic.

**The emergency contact number at Earthwatch in the U.S. is +1 (978) 461-0081-752 or +1 (800) 776-0188 (see *Emergency Contacts* for calling instructions).**

### Personal Communications

Cell phone communications work reasonably well on Robben Island, so volunteers wishing to keep in touch by phone can either bring their own phone with them (assuming it has international roaming access), or rent a local cell phone at the airport or the waterfront. Local SIM cards can be purchased at the waterfront and can be used with some mobile phones. These can cost as little as R2, but may cost more. They are recharged by vouchers obtainable at supermarkets, kiosks and the post office in the waterfront. Occasionally, vouchers can be purchased on Robben Island.

There is an Internet café at the waterfront in Cape Town that you can use before and after the expedition and during the recreational day(s). You may also send and receive short emails on the island either through Mario Leshoro or in the evenings at the field research house. This email address is provided in the printed version of this expedition briefing given to volunteers. Please contact your Earthwatch office. However, please note that

Internet access is not always available on the island, connections can be intermittent, bandwidth is limited and priority will be given to research-based Internet use. Therefore, volunteers should not rely on using their own email addresses. Emails sent to Mario should have the volunteer name in the subject line and they must not have attachments, as bandwidth is limited. Please keep email communications to a minimum.

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

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

## **Contact Information**

This information is provided in the printed version of this expedition briefing given to volunteers. Full details, including places and times, are available from Earthwatch upon request prior to registration for an expedition. Please use the "Contact Us" button on the top right-hand corner of the website to get in touch with an Earthwatch representative, who will be very happy to help you.

# Appendix

Barham P.J., Crawford R.J.M., Underhill L.G., Wolfaardt A.C., Barham B.J., Dyer B.M., Leshoro T.M., Meÿer M.A., Navarro R.A., Oschadleus D., Upfold L., Whittington P.A., William A.J.. "Return to Robben Island of African Penguins that were rehabilitated, relocated or reared in captivity following the *Treasure* oil spill of 2000." *Ostrich* 77 (2006): 202-209.

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Ellis S., Woehler E.J., Skewgar E., Boersma P.D. 2007. "Penguin Conservation Assessment: summary document." IUCN/SSC Conservation Breeding Specialist Group, Apple Valley, USA, 2007.

Lubbe A. "A condition index for African Penguin *Spheniscus demersus* chicks." B.Sc. (Hons.) thesis, University of Cape Town, 2008.

# 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 liability release section of the Earthwatch Participation Form to indicate that you understand and accept the risks inherent to your expedition and the policies, rights, and responsibilities enumerated in this document. Participants will not be permitted to partake in an expedition until Earthwatch has received the signed 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 section of the Earthwatch Participation Form, participants are indicating that they have read and understand the policies in this document. Removal of a participant from a team is at the discretion of the Earthwatch scientist or field team leader and Earthwatch staff. In addition, Earthwatch will support the right of the scientist to send participants away from a project once in the field should their behavior compromise the safety, research objectives or general performance of the team, or if the participant has violated a stated policy. In the event that a minor is dismissed from a project, Earthwatch will contact the participant's parents or legal guardian prior to their dismissal. Should a participant be removed from a team, he/she is responsible for any or all costs associated with departure from the team and will receive no refund of the share of costs of the expedition nor any expenses incurred in participation on the expedition.

# Expedition Packing Checklist

## Required Items

- This Expedition Briefing**
- Photocopies of your passport, flight itinerary and credit cards in case the originals are lost or stolen; the copies should be packed separately from the original documents**
- Passport and/or visa (if necessary)**
- Certification of vaccination (if necessary)**
- Documentation for travel by minors (if necessary)** (see *Volunteers Under 18 Years of Age* in the *Travel Planning* section)

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

- Be sure to bring your Earthwatch T-shirt and remember to wear it, as appropriate, throughout your expedition
- Lightweight, quick-drying, long-sleeved shirts and pants/trousers
- T-shirts and shorts for warm days
- Warm clothes that can be layered (wool or polypropylene are recommended—not cotton), especially for teams working April-August
- Rain gear (poncho or jacket and trousers are strongly recommended, especially for winter teams)
- Well worn-in and comfortable walking shoes and/or hiking boots
- Hat with wide brim to protect your head and neck from sun

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

- One set of clothing to keep clean for end of expedition and/or recreational day(s) in Cape Town
- Comfortable clothes for relaxing at the research house
- Sandals or flip-flops to wear in the house

## ***Field Supplies***

- GOOD binoculars are essential**—7x35 or 8x40, field and vacuum sealed (larger models, such as 10 x, are difficult for beginners but would work for experienced birders)
- Pair of glasses (either your own prescription glasses, or sunglasses) to be worn when handling the penguins as a guard against any risk of the birds pecking at eyes; there are also safety goggles available on site.
- Small daypack/rucksack
- Water bottle(s) able to hold at least 2 liters (two 1 liter bottles are often better than one large one)
- Notebook and pen/pencils, preferably small enough to fit in your pocket

## ***Bedding and Bathing***

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

- Towel(s) (there are some towels onsite left by previous volunteers and you are welcome to use these to save yourself the luggage space)

### **Personal Supplies**

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

### **Miscellaneous**

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

### **Optional Items**

- Drybag or plastic sealable bags (good for protecting equipment such as camera from dust, humidity, and water)
- Insect repellent
- Flashlight or headlamp with extra batteries and extra bulb
- Earplugs
- Blank CD or DVD for sharing digital photographs at the end of the expedition
- Travel guide
- Books, games, journal, art supplies, etc. for recreational/rest time and travel
- Field guide for South African Western Cape area
- Favorite snack foods
- Transformer and/or adaptor for electronics and electrical equipment (see *Additional Travel Information* in the *Travel Planning* section for details)

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