

# 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)

US/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: [earthwatch.jp/getinvolved/condition/formdownload-i.html](http://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 personal funds 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.

# Archaeology of the Mongolian Steppe

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# General Information

<b>Project title</b>	Archaeology of the Mongolian Steppe		
<b>Earthwatch scientists</b>	<b>Richard P. Reading, Ph.D.</b> , Director of Conservation, Denver Zoological Foundation; Adjunct Professor, University of Denver <b>Joan S. Schneider, Ph.D.</b> , Associate State Archaeologist, Colorado Desert District, California State Parks. <b>Yadamaa Tzerendagva, Ph.D.</b> , Principal Archaeologist Mongolian Academy of Sciences Institute of Archaeology <b>Ganchimeg Wingard, Ph.D.</b> , Mongolia Program Director, Denver Zoological Foundation		
<b>Research site</b>	Ikh Nart Nature Reserve, Dornogobi Aimag, eastern Mongolia		
<b>Expedition length:</b>	14 days	<b>Minimum age of participation:</b>	18 years*
<b>Team size max:</b>	10 participants		
<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 in the UK:**

**+44 (0) 7900-895-752**

A duty officer is available 24 hours a day, seven days a week to assist you. If you reach voicemail, state that you have an emergency communication and leave a clear message with the name of the field program, your name, the location from which you are calling, and, if possible, a phone number where you can be reached. An Earthwatch staff person will respond to your call within one hour.

You may also call Earthwatch in the US:

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

After business hours, leave your message with our live answering service who will contact an Earthwatch staff person who will respond to your call.

**Medical and Security Assistance Helpline Numbers**  
**(For assistance while in the field)**

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

CEGA Emergency Medical & Travel Assistance:

**+44 (0) 20 3059 8770**

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

Henderson Risk Security Assistance and Advice:

**+44 (0) 20 3059 8772**

[axisenquiries@hendersonrisk.com](mailto:axisenquiries@hendersonrisk.com)



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", with a large, stylized flourish extending from the end of the name.

Ed Wilson  
President and CEO



Colorado Desert District  
200 Palm Canyon Drive  
Borrego Springs, CA 92004

Dear Archaeology Earthwatch Volunteers,

I am very pleased to welcome you to the third field season of our project at Ikh Nart Nature Reserve in Mongolia. Armed with my experiences from the 2010 and 2011 expeditions, I and my Mongolian colleague will pass on to each of you the extraordinary chance to be pioneers in the discovery, understanding, protection, and preservation of the cultural resources in the reserve. Earthwatch teams have been working with the natural resources within this extensive reserve for the past seven years, but no previous systematic study of the archaeology had been carried out. Although we achieved seeing and recording a small sample of what is out there on the Ikh Nart landscape in 2010, you will be part of a more systematic approach to sampling initiated during the 2011 field season and continuing on in 2012. Our work will be the basis upon which archaeological management and investigations will be planned. Your team will learn basic principles of archaeological survey and recording at the beginning of our adventure. We will learn how to recognize artifacts and cultural features, as well as a bit of archaeological terminology, both in English and Mongolian. There will be plenty of opportunity for discussions and questions. Most of our learning will be hands-on in the field. I find that dealing with an actual situation is the best way to teach—for different situations call for different approaches.

Most likely we will work in two teams for much of the time; we will rotate team members so everyone gets a chance to work with everyone else and play different roles. No doubt you will develop a special liking and skill for a specific part of the work, and may even become the team expert! Our team will also include one or more Mongolian archaeologists. We will have two vehicles at our disposal and will use them to get to different parts of the reserve; once there, we will be walking for several hours at a time. Depending on our location, we will either pack lunches to eat in the field or return to camp for lunch (most often the former).

As you see from the letterhead, I am associated with California State Parks in the Colorado Desert of the Southwestern US. I am now officially retired, but continue as a volunteer, and also teach through the Anza Borrego Foundation and Institute. I have worked in other deserts, such as the Mojave, Sonoran, Great Basin, and Negev. In my parks job, I trained volunteer archaeological field workers and archaeological site stewards. I have also taught archaeological field schools in Joshua Tree National Park and teach regular weekend classes through the University of California, Riverside Extension. My research interests are hunter-gatherer lifeways and early agricultural societies, but I have also worked on sites of pastoral nomads of the Bronze Age in the Negev. I am especially interested in the roles of women in prehistory as they are expressed in the archaeological record. My technical expertise is in stone quarries and investigations into the characteristics of different stones that made certain ones chosen for making tools for various tasks. As you may know, Anza-Borrego Desert State Park is a sister park to Ikh Nart; that is how I got involved in this Earthwatch project.

I look forward to meeting each of you in Mongolia. We will have an experience to remember as well as assisting the staff of Ikh Nart in understanding, protecting, and preserving the cultural heritage of the Mongolian people. Best regards,

Dr. Joan Schneider

# The Research

## Archaeology of the Mongolian Steppe

Within Ikh Nart Nature Reserve in eastern Mongolia are the remains of hundreds and thousands of years of human activities. By joining this expedition, you will be working with a bi-national team of Mongolian and US archaeologists to record these cultural resources. We need to know the kinds of archaeological sites, their locations, and their characteristics in order to develop a portion of the overall plan for management for Ikh Nart. It is not practical to look at every square mile of the reserve, so we have constructed a sample that should be a fairly accurate estimation of the whole. In 2010, we gained an understanding of the types of cultural resource sites; in 2011, we started to survey our sample (with exciting results), and in 2012, we will continue to survey within our statistical sample framework. As we did in 2011, we also will carry out test excavations at selected sites to determine the extent and contents of subsurface components.

Earthwatch participants will learn methods used by professional archaeologists and will assist researchers in locating, describing, recording, and mapping archaeological sites. We will use the information we gather to develop methods for sustaining the cultural resources of Ikh Nart.

The team will map locations of cultural resources using GPS (Global Positioning System) and GIS (Global Information System) technology. Each site will be recorded using archaeological site record forms developed specifically for Ikh Nart (modeled on forms and methods used in California state parks).

The team will assess sites for previous damage and will document needs for rehabilitation and/or continual monitoring/stewardship. These findings will form the basis for recommendations to develop a program to meet these needs.

Based on the project findings, archaeologists and Ikh Nart staff will develop an overall plan for a Cultural Resources Protection Program for Ikh Nart, to be incorporated into the overall management plan for the reserve. An important goal of the project is to work with Mongolian archaeological specialists so that the plans are both feasible and financially sustainable. The information gathered by the archaeology team will complement those data collected on the *Wildlife of the Mongolian Steppe* teams in order to provide more holistic recommendations for the management of the Ikh Nart Nature Reserve.

### **Physical Environment**

Ikh Nart was established in 1996 to protect approximately 66,600 hectares/163,170 acres of rocky outcrops in a region of northwestern Dornogobi Aimag (an aimag is like a province or state), known as Ikh Nartiin Chuluu. At about 1,200 meters/4,000 feet elevation, the region is a high upland covered by semi-arid steppe vegetation. Cold-water springs are found in several shallow valleys draining the reserve. The climate is strongly continental and arid, characterized by cold winters, dry, windy springs, and relatively wet, hot summers. Temperatures often vary dramatically, even within a single 24-hour period. Humidity is extremely low and little precipitation falls, mostly in the summer. The flora and fauna present in the research area is representative of the semi-arid regions of Central Asia, with a mix of desert and steppe species. Vegetation is sparse, with shrubs, scrub vegetation, and turf grasses dominating. Different plant communities can be found around oases and streams, on rocky outcrops, and in other areas. Large mammals in the region include argali, ibex, Mongolian and goitered gazelles, and wolves, several of which are locally or globally threatened. Common birds include cinereous vultures, saker falcons, steppe eagles, upland hawks, black kites, little owls, pied wheatears, white wagtails, horned larks, Guldenstadt's redstarts, red-billed choughs, and Daurian partridges.

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

Mongolia is a fascinating country and provides a great cultural experience to visitors. It remains largely undeveloped, with few paved roads, almost no fences, and most people outside of the cities still live a nomadic existence. The main mode of transportation outside of the capital is by horseback. People in the countryside still live in *gers* (traditional tents, also known as *yurts*) and wear traditional clothing. Most Mongolians are Khalkha Mongols who speak Khalkha Mongolian (or simply Mongolian). Few Mongolians speak English although the number of people learning the language grows each year. Mongolia is also one of the world's poorest nations, with average incomes at less than US\$2 per day, yet there is little evidence of abject poverty.

Mongolia was the world's second communist country, officially becoming a communist nation in 1924. Contrary to what many people believe, Mongolia has remained independent of both Russia and China since before that date. Mongolia was once the center of the world's largest empire ever (founded by Genghis Khan—known as “Chingis Khan” in Mongolia—and ruled by Kublai Khan at its height), and the Mongolians are a fiercely independent and proud people. Any presumption of inferiority due to their nation's monetary poverty or for any other reason is met with a strong negative reaction. Prior to becoming communist, Mongolia was an overwhelmingly Buddhist nation. A strong Buddhist tradition of love and respect for nature continues among most Mongolians today. Indeed, the Mongolian constitution guarantees every Mongolian the right to a healthy environment and the government adopted a formal goal of protecting 30% of its land base. Although many people remain atheists, since the end of communism in Mongolia, many people are rediscovering their Buddhist past. Buddhist traditions from the Yellow Sect (Tibetan Buddhism) predominate. Associated with this style of Buddhism and the animist traditions that pre-date it are a multitude of customs, taboos and what outsiders might see as superstitions. Most Mongolians do not get offended if these are accidentally violated, especially by foreigners, but volunteers should always remember to be respectful guests.

Today Mongolia is a parliamentary democracy (they have both a president and a prime minister). Freedom of speech allows people to speak freely and criticize openly. Still volunteers should be aware that most Mongolians are proud of their country and generally react poorly to excessive criticism of it. They usually frown on people taking photos of the poor, dirty conditions, pollution, etc. Criticisms of any kind are usually preceded by vast amounts of praise in Mongolia (e.g. “You are so wonderful, marvelous, and generous, but...”).

Mongolians are mostly shy and often will say little, especially when they are just getting to know someone. However, in general they are friendly and extremely hospitable—you can walk into any *ger* without knocking and the residents will serve you milk-tea and snacks, if not a complete meal. They also love to sing and will often break out in song, requesting their guests to sing for them as well. To make the most of your experience, volunteers are highly encouraged to get to know the Mongolian staff and students, and persuade them to practice their English skills. Do not hesitate to ask questions of your new Mongolian friends and colleagues.

Mongolians tend to be very generous and will often share gifts with visitors. Therefore, it is a good idea for volunteers to bring small gifts as well (something that represents them or where they are from is most appreciated—you can be creative). If you express too much praise for an item you see, it may result in it being presented as a gift (these can be costly items that are difficult for Mongolians to replace). Still, once a gift is offered, it usually should be accepted. This is also true of food and drink, although if you really do not want to eat or drink, a simple taste (or even pretending to taste) usually suffices.

Many rituals and taboos are associated with nomadic living in Mongolia, about which Mongolian hosts will strive to educate the volunteers. It is okay to make mistakes, and the Mongolians really appreciate visitors who attempt to learn and use their customs. Brief training and educational material will be provided to volunteers to assist with this process.

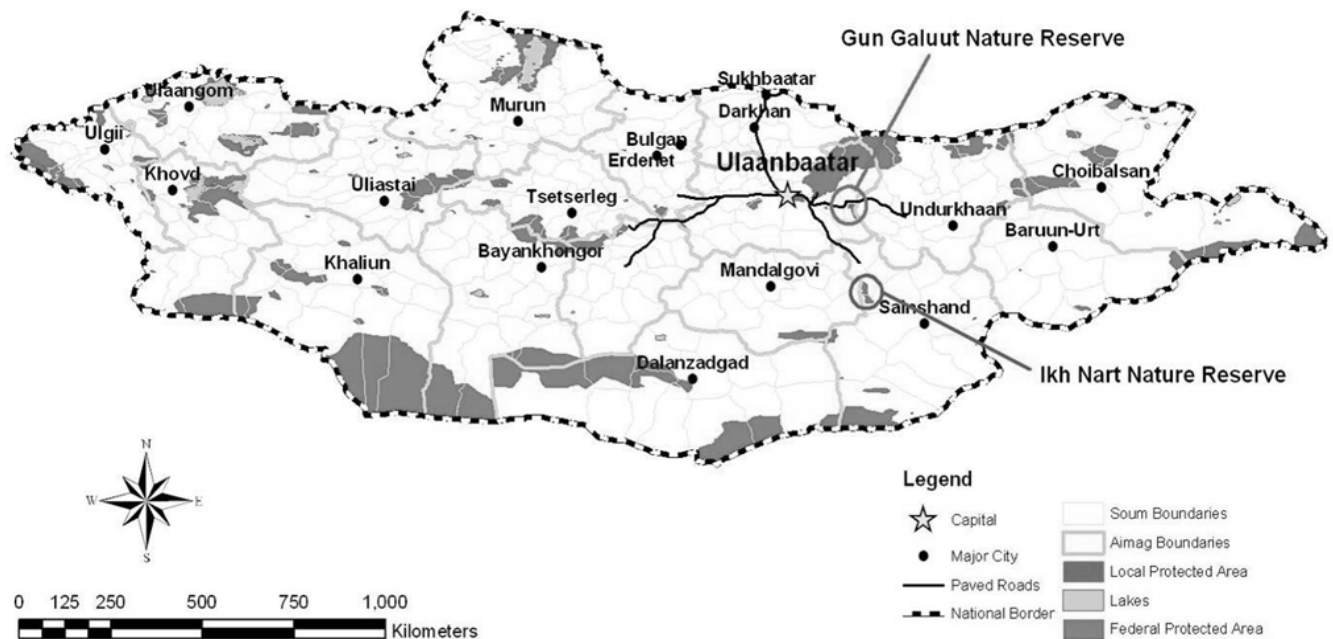
The project staff strives to maintain an alcohol-free research camp. Most Mongolian men like to drink but they are all genetically predisposed to alcoholism. Several rituals surround drinking traditional mildly alcoholic drinks in Mongolia. Volunteers will be briefed about these traditions should the need arise. Please do not bring any alcohol with you.

Overall, the atmosphere in Mongolia is quite relaxed; things are occasionally more relaxed than the research team would like. Delays are common (don't expect the train to be on time) and should be accepted with a Zen-like attitude. Most people will try to help someone in need of assistance, especially in the countryside, and will likely be curious (e.g. local people will surround you and actually press their noses to your windows to look into your vehicle). A simple smile and wave is usually met with a smile.

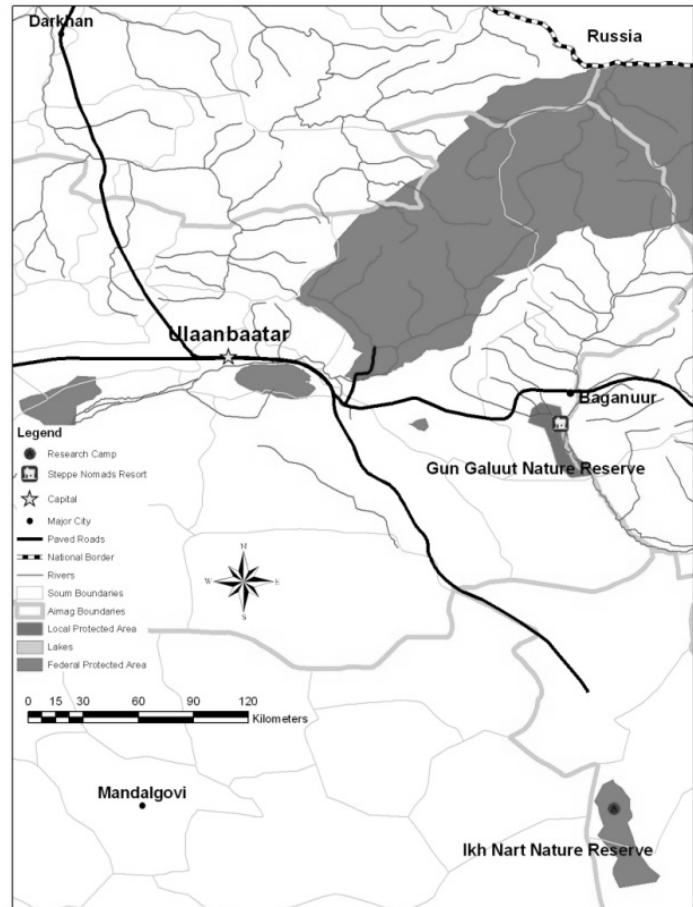
### Research Achievements

During the 2010 and 2011 archaeological field seasons in Ikh Nart, we gained some understanding of the types of archaeological sites that are present. We recorded 50 sites that will be registered at the Mongolian Institute of Archaeology in Ulaanbaatar. We found and know GPS locations on many more. So far, we have sites ranging from Neolithic times (domestication of herd animals) about 6,000 years ago, to sites of the Tibetan Buddhist period (13<sup>th</sup> century AD to 1937). In between we have Bronze Age, Iron Age, Turkic, and Mongolian Empire sites. We recorded burial features, structures, rock art, living sites, a stone tool quarry and workshop, and Buddhist monastery communities. Sites are both large and small, simple and complex, and may represent more than one time period. We recorded arrowheads of stone and metal, ceramic vessel fragments of all periods, metal containers, horse trappings, a variety of stone cutting, piercing and scraping tools, grinding implements, and metal tools and decorative items. Certain patterns were repeated over and over again.

The traditional pastoral life ways of the Mongolian people of the past can be observed in today's herdsman and their families. Pastoral nomadism has a very long history in this region, and ways of coping with the harsh environment have endured over the ages.



**Maps that locate Ikh Nart Nature Reserve in Mongolia.**  
 (Note: Gun Galuut, which is also shown, is a locally designated nature reserve (designated by the soum, or county), while Ikh Nart is federally designated.)



## PROJECT STAFF

### Earthwatch scientists

**Richard P. Reading (Rich), Ph.D.**, is the director of conservation biology at the Denver Zoological Foundation (DZF) and adjunct professor at the University of Denver. He holds a Ph.D. in wildlife ecology and three master's degrees from Yale University, as well as a B.S. from Trinity College (Hartford), and performed additional study at the Duke University Marine Laboratory. He has worked in Mongolia since 1994 on a variety of conservation projects, and is an avid birder. Rich will not be present on this team but works closely with Joan pre-fielding to ensure everything runs smoothly.

**Joan S. Schneider, Ph.D.**, received her M.S. and Ph.D. degrees in anthropology from the University of California, Riverside. At present, she is associate state archaeologist based in the Colorado Desert District (Borrego Springs) of California State Parks. Her archaeological research focuses on the reasons why prehistoric people (particularly women) chose certain stones for tools and vessels, and how the stone chosen relates to the tasks performed or uses of the artifacts. She has contributed professional articles to regional, national, and international publications. Schneider has worked for over 20 years in the deserts of the world, including the Colorado, Mojave, Sonoran, and Negev. She has conducted field projects in Joshua Tree and Death Valley

National Parks in the US, and in northern Israel, as well being an archaeological field school director for the University of Nevada, Las Vegas.

**Yadamaa Tzerendagva (Tsedo), Ph.D.**, is a principal archaeologist at the Mongolian Academy of Sciences, Institute of Archaeology. He is particularly interested in lithic technology and rock art, but studies all phases of his country's past. He has published in English, Mongolian, and Russian. Most of his research has taken place in the Altai (northern) region of Mongolia, and this is his first project in the southeastern portion of the country. In fact, he says that almost no archaeological research has taken place in the region of Ikh Nart. His expertise and guidance in both the field and laboratory makes this a truly international project with liberal interchange of information.

**Ms. Ganchimeg Wingard (Gana)** is the Mongolia program director with DZF. She holds two master's degrees, one from Prague University in environmental science, and the most recent (2005) in wildlife ecology from the University of Montana, where she studied argali and domestic livestock feeding relationships at Ikh Nart. A Mongolian national, Gana is a resident of Denver, Colorado and speaks fluent English. She has experience leading eco-tours in Mongolia. She will not be present for all of this team, but will work with Joan to ensure everything runs smoothly, and may join the pre- and post-team dinners.

### Earthwatch field staff

**Roger L. Riolo (research staff and field team leader)**, is a master interpreter and trained volunteer archaeologist. He is currently a volunteer archaeologist and member of the Colorado Desert Archaeology Society, and conducts interpreter training for a variety of college-level institutions and government agencies. Roger is a retired airline pilot and, for many years, has worked with archaeologists in Oregon and California. He is a third-year participant in this project.

**Charles ("Chuck") Bennett (research staff and field team leader)** is president of the Anza Borrego Foundation as well as a long-time trained volunteer archaeologist in Anza-Borrego Desert State Park. He also is an active member of the Colorado Desert Archaeology Society, a retired aerospace engineer, and an expert carpenter and woodworker. He is a two-year participant in this project.

**Ms. Tu. Selenge** is the executive director of the Mongolian Conservation Cooperation, which manages Earthwatch's work in Mongolia. She has been working with this project for four years, as executive director for the last year or so. She speaks German, Russian, Mongolian, and English.

**Mr. Sukhiin Amgalanbaatar (Amgaa)** is a research biologist with the Mongolian Academy of Sciences, president of the Argali Wildlife Research Center, and a research associate with the DZF. He has been studying the status and ecology of argali since the late 1980s, and is currently working on his Ph.D. at the Mongolian National University. Recognized as the leading ecologist on mountain ungulates in Mongolia, Amgaa is the project's field manager. He speaks proficient, though not fluent, English.

**Mongolian students:** Mongolian undergraduate or graduate students will assist in the field on some teams. Most graduate students speak at least some English, and some are quite proficient. One student will be present on this team.

### Staffing Schedule (Subject to Change)

<b>Staff Member Present</b>	<b>Team 4</b>
Richard P. Reading	
Joan S. Schneider	<b>x</b>
Yadamaa Tzerendagva	<b>x</b>
Ganchimeg Wingard	
Roger L. Riolo	<b>x</b>
Charles Bennett	<b>x</b>
Tu. Selenge	<b>x</b>
Sukhiin Amgalanbaatar	
Mongolian student	<b>x</b>

# Daily Life in the Field

## VOLUNTEER TRAINING AND ASSIGNMENTS

### Training

Upon arrival at camp, volunteers will receive an introduction to archaeology (what it is and what it is not), a list of common archaeological terms and their meanings (both in English and Mongolian), and an orientation to archaeological field survey methods. This information will be provided by both lecture and visual presentation. We will review the general approach to our fieldwork and its goals, as well as all the data-collecting forms that will be used during the expedition.

The first field days will start with practicing recording and survey methods in the field. Learning will be hands-on after this, depending on what archaeological features are encountered during survey. Identification of archaeological features and artifacts will be primary; then, we will progress to recording methods, with the Earthwatch scientists and/or field team leader demonstrating different approaches to gathering data in the field.

We expect to divide the volunteers into two survey teams after the introductory work, each led by one or more of the Earthwatch scientists or the field team leader. Team members will rotate so that each volunteer will have a chance to work with all other volunteers and each Earthwatch scientist.

Teams will conduct field surveys in two sessions per day; we will carry our lunches or, if feasible, return to camp for lunch. Evening sessions will consist of discussion of the day's work and findings, entering data into digital databases, and general discussion.

There will be opportunities to learn how to transfer the data we gather in the field to site registration forms so that the sites can be added to the central database for the county at the Institute of Archaeology; this includes learning how to create to-scale maps of sites and features. Map creation, labeling photographs, and creating digital files will take place in the research *ger* during the evening hours (if you are interested in learning these skills).

The Earthwatch scientists will give the team a more detailed onsite project briefing upon arrival.

### Assignments

We plan to conduct fieldwork in two sessions per day: one in the morning and one in the afternoon. We plan to either eat in the field or return to camp for lunch and a rest period. We will walk 1-2 mi/1.5-3 km during each session, but may walk up to 3.7 mi/6 km per day. The distance we walk each day will depend on how many archaeological sites/artifacts are encountered in our survey because we will record the archaeology as we go; more archaeology means more recording and less walking. We will likely carry out test excavations at selected sites. Excavation skills include highly controlled digging with small and large tools, detailed note-taking, drawing, and keeping other records. These skills will be taught in the field as required.

As part of the archaeological research team, Earthwatch participants will:

- Learn archaeological survey methods;

- Describe, draw to scale, photograph and map (using GPS technology) archaeological sites ranging from burial cairns and stele-like features to structural remains to campsites and rock art;
- Compile collected information on descriptive site forms and databases;
- Contribute ideas toward the development of an interpretive materials;
- Help conduct educational sessions with Ikh Nart research staff, camp staff, and visitors focusing on preserving the cultural resources within the reserve, as well as improve an existing informational pamphlet in Mongolian and English about the “dos” and “don’ts” of visiting cultural sites in the reserve
- Learn the rudiments of archaeological excavation.

You may learn to do simple data entry, draw to scale site maps, features and artifacts. You may be asked to fill out and organize archaeological site record forms, identify and label digital photographs taken during the day, and record GPS/GIS information on site locations. We will use an organized method of keeping the records so that they can be used by Ikh Nart staff and future Earthwatch teams.

*Volunteers with additional skills:*

There will be a need to measure distances accurately with various measuring devices. Those volunteers with drawing abilities will be asked to draw archaeological features or artifacts; those with good spatial skills might be asked to create field maps. Those with good writing skills will be asked to create text descriptions of conditions at sites. Every volunteer will maintain his/her own field notebook (to be provided). These will be collected at the end of the project and become part of the permanent record at Ikh Nart.

# 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.

## Overview

Day	Activity
Day 1	Rendezvous; optional cultural activities; group dinner
Day 2	Train ride from Ulaanbaatar to Shivee-Gobi (approximately 7.5 hours) and drive (approximately 1 hour) to field site, settle in; get acquainted with site
Day 3	Half-day orientation and training; second half of day spent on data collection
Day 4 – 6	Survey and data collection
Day 7	Data collection in the morning; visiting local families; traditional Mongolian barbeque in the afternoon/evening
Day 8 – 11	Survey and data collection; test excavations
Day 12	Survey and data collection; test excavations; pack in the evening, then leave for Shivee-Gobi to catch overnight train to Ulaanbaatar
Day 13	Arrive in Ulaanbaatar, settle into hotel; optional cultural activities; group dinner
Day 14	Breakfast and depart for airport to catch flight home

## Typical Daily Schedule

Time	Activity
6:00 a.m.	Rise and wash
6:30 a.m.	Breakfast, lunch preparation and clean up
7:00 a.m.	Collect gear, break into groups, receive a quick briefing on the day's tasks, and leave for field location
7:30 a.m.	Fieldwork
9:30 a.m.	Short break for a snack
11:30 a.m.	Break for lunch and siesta during the heat of the day
3:00 p.m.	Start of afternoon fieldwork session
4:30 p.m.	Snack
7:00 p.m.	Return from field and wash up
7:30 p.m.	Dinner
8:30 – 9:30 p.m.	Recreational time/showers/mapping/appropriate presentations/discussions

**Recreational Time:** We would like to plan a trip to the Soum Museum during the expedition. This will entail one-half day; the exact day will be determined during the team. There may be an opportunity to visit the southern Airag Soum Center. We plan to visit local families on Day 7.

## **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.

# ACCOMMODATIONS

## Sleeping

**Ulaanbaatar:** Zaya's Hostel in Ulaanbaatar is very comfortable, clean, and safe. We usually try to accommodate two volunteers of the same sex in each room, although we will also house couples together, when possible, with advance notice to Earthwatch.

**Ikh Nart:** The research camp lies in the heart of the project's study area. Although we sometimes use vehicles to access portions of the reserve, we often walk while conducting our work. Accommodations consist primarily of camping in tents or traditional Mongolian *gers* (yurts). There are currently eight *gers* at the research camp: one for the camp manager, one for the camp assistant and his family, one for the kitchen, one for the office and lodging, one for student lodging, two for volunteer lodging, and one as the dining hall and recreation area. Each *ger* can accommodate up to eight people, but we usually limit occupancy to four to five volunteers per *ger*. We strive to house men and women volunteers separately; this is usually possible. The advantages of the *ger* compared to a standard camping tent are that the *gers* are much larger (you can easily stand upright in them); they have storage space, water filters, and wash basins; and they tend to be warmer at night. However, more privacy is available through the use of camp tents, which sleep up to three people comfortably. There are approximately three tents available at the research site for volunteer use, but you may wish to bring your own. For more privacy, couples can move further from the main camp area with a tent.

Volunteers will sleep on cots, but should bring sleeping bags (we have no linens), and sleeping pads for more comfort. It can get cold at night, so please try to bring a warm bag and layers of clothing. Volunteers should also bring their own towels. Camp towels work great and are available at most outdoor stores. Good to bring some wood clothespins or clips for hanging things from *ger* interior; a small bag of laundry soap for personal wash.

## Bathrooms

**Ulaanbaatar:** Some rooms have their own bathrooms; however, most guests must share bathrooms.

**Ikh Nart:** Simple sun showers (an insulated bag holding water warmed by sunlight (or on stoves on the rare occasions when it is too cold or overcast), with a tube and nozzle attached) are available and should enable volunteers to shower every day or at least every other day, weather permitting (it is usually sunny, but can be cool at times). Volunteers may wish (and are encouraged) to bring additional sun showers, which they can purchase from camping or outdoor gear providers prior to the expedition. There is a freshwater spring near camp for drinking and to use for shower water, but it is not large enough for bathing. Please filter the water with the provided passive filters—no need to pump!—before drinking. There are two outhouses with sit-down pit toilets (composted with soil and ash). In the field, volunteers will be following the traditional nomadic custom of using the Great Outdoors when nature calls.

## Electricity

**Ulaanbaatar:** Hostel has electricity

**Ikh Nart:** Electricity is provided by solar panels and wind mills. Although much of this energy is required to recharge project equipment, there is usually enough power to recharge volunteers' electrical items (project equipment has priority), and there will be lights in the *gers* for reading, etc. We have outlets for American- and European-style plugs only.

## Internet and Communications

**Ulaanbaatar:** The hostel has free Internet access on one computer, as well as wireless access in Building #2.

**Ikh Nart:** None

## Facilities and Amenities

**Ulaanbaatar:** The hostel also rents some apartments with kitchens, living rooms, bathrooms, and bedrooms. The hostel offers breakfast and offers transport to and from the airport for a reasonable fee; they can help arrange excursions or tourist activities at your own expense for before or after the Earthwatch expedition as well.

**Ikh Nart:** There is no refrigeration but a root cellar is available to keep food cool.

## Distance to Field Site

**Ulaanbaatar:** You will want to do a good bit of walking to see the sights and museums in the capital city.

**Ikh Nart:** Most of the time, field vehicles will take us to the vicinity of our survey areas. Most walking will take place while surveying. Several sites where test excavations might take place are less than ½ mi from camp and walking to and from the site(s) is encouraged.

## Services and Restaurants in Walking Distance

**Ulaanbaatar:** Zaya's sits in the heart of Ulaanbaatar, within easy walking distance of tourist sites, restaurants, banks, shopping, etc.

**Ikh Nart:** No outside services are available at the field site.



Gers

# FOOD

The project hires a cook to prepare most meals. Breakfast and dinner are generally prepared and eaten by the team together. Volunteers are expected to prepare their own lunches from the food that the cook sets out each morning, which they will usually eat in the field. Volunteers will not assist with food shopping or cooking; however, all volunteers and staff members will be expected to assist in serving and cleaning up after meals.

Additionally, project staff will endeavor to hold a Mongolian barbeque for the team. This entails the ceremonial killing of a goat (sometimes a sheep) and heating up of hot rocks. The rocks and meat are placed in a kind of pressure cooker. The meat is consumed off the bone and the rocks are passed around; supposedly they are great for your health and should be handled while still hot. **Volunteers are not required to watch or participate in the ceremonial barbeque.**

**Note:** This project maintains a dry camp (no alcohol), as Mongolians are highly susceptible to alcoholism. However, volunteers occasionally have the opportunity to drink airag, which is only mildly alcoholic (less alcohol content by volume than beer) and is often used ceremonially. Please note, however, that it can often cause diarrhea, especially in first time consumers.

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>	Oatmeal, cold cereal (usually Muesli and Cornflakes), yogurt, hot rice or wheat porridge, rolls and jam, eggs and Mongolian sausage (both of these are rare), leftover dinner (a typical Mongolian breakfast)
<b>Lunch:</b>	Sandwiches with various fillings (peanut butter and jelly, tuna fish, cheese, tomato, salami), apples, cucumbers, cookies, crackers and Mongolian baked goods
<b>Dinner:</b>	Mixed vegetable and meat stew, pasta dishes, soup, salad, traditional Mongolian meals with emphasis on meat and fat – no vegetables (vegetarian and vegan options are generally possible with sufficient advance notice to Earthwatch)
<b>Snacks/Other:</b>	Chocolate, cookies, peanuts, traditional Mongolian baked goods (you may want to bring protein bars or some other favorite snack to eat while in the field.)
<b>Beverages:</b>	Juice, tea, instant coffee, spring water (see below), limited soda, <i>airag</i> (fermented mare's milk)
<b>Water:</b>	Drinking water is obtained from a small spring near camp and volunteers are requested to assist in collecting water. <i>Gers</i> have both passive and active water filters. The filters (especially the passive ones) clog frequently when used heavily and therefore need to be cleaned regularly (once every other day). Volunteers are asked to do this for filters they use. If the passive filters are kept full, they provide more than enough water for the use of volunteers. We usually also have a very limited supply of bottled water.

## 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. Vegetarian and vegan options are generally possible with sufficient advance notice to Earthwatch. Accommodating special diets is not guaranteed and can be very difficult due to availability of food, location of field sites, and other local conditions.

# Travel Planning

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

At the time of printing, citizens of the United States do NOT need a visa for Mongolia if they stay for less than 90 days. Citizens of most other countries, including the UK and Australia, require tourist visas and should check with the nearest Mongolian embassy or consulate, their travel agent, or a visa agency for specific visa and entry requirements.

**You will also need a visa if you fly through Russia and may need one for China (if it involves an overnight stay), so you are encouraged to fly through Korea instead.** If traveling through China or Russia, you may need a visa for each time you pass through that country—for both inbound and outbound travel.

All visitors wishing to stay in Mongolia longer than 30 days should be aware that additional requirements may apply, whether or not a visa was or was not initially required. Visitors of more than 30 days must register with the Naturalization and Foreign Citizens Agency in Ulaanbaatar within the first seven days of arrival.

Travelers are advised to check visa regulations well in advance of traveling.

### Passport Information

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

## For Volunteers Requiring Visas ONLY: Essential Information

**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 “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.

<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>Mongolian 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, 2-4 passport-size photos, and payment</b> to the embassy or visa agency (if applicable). Please be sure that your passport is valid for at least six months beyond your stay.
<b>Contact Information</b>	You may be required to list the following contact information on your Visa Application and Immigration Form:  This information is available in the print version of the briefing only.
<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.

## Visa Agencies

<b>In the United States</b>	<b>In Europe</b>	<b>In Australia</b>
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://trivisa.com">trivisa.com</a> (*See the website for additional offices)	CIBT, Inc.-UK 25 Wilton Road Lower Ground Floor Victoria SW1V 1LW Tel: 0844-736-0211 Fax: +44 (0) 207-828-5411 Calling from Europe outside UK: +44 (0) 207-802-1000 Email: <a href="mailto:info@uk.cibt.com">info@uk.cibt.com</a> Web: <a href="http://uk.cibt.com">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: [rainbowt.jp/travel/visa\\_top.html](http://rainbowt.jp/travel/visa_top.html)
- For Australian citizens: [passports.gov.au](http://passports.gov.au) and [dfat.gov.au/visas/index.html](http://dfat.gov.au/visas/index.html)
- For US citizens: [passportvisasexpress.com](http://passportvisasexpress.com)
- Travel Document Systems: [traveldocs.com/index.htm](http://traveldocs.com/index.htm)

# INSURANCE

MedEvac assistance, advice, and insurance are included in the contribution you pay to Earthwatch. This covers trip cancellation, and your travel medical risks, including medical expenses and emergency medical evacuation, while you are traveling. This coverage is valid in the country of your Earthwatch expedition (**Note:** For US volunteers, as long as the expedition is over 100 miles from your place of residence) and during travel to and from your expedition. Please see the Earthwatch website for more information on insurance provision.

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 the insurance provider.

**This insurance policy is secondary to your existing health insurance policy (e.g., the National Health Service in the UK).**

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

Details of the included insurance policy can be found at [earthwatch.org/europe/insuranceinfo](http://earthwatch.org/europe/insuranceinfo).

Please refer any queries regarding this policy to Earthwatch's Operations Department at +1 978 450 1232 or [insurance@earthwatch.org](mailto:insurance@earthwatch.org).

You can find information about additional insurance available to UK residents for coverage before or after your Earthwatch project at [earthwatch.org/europe/insuranceinfo](http://earthwatch.org/europe/insuranceinfo). Should you have any questions about whether you require coverage for your travel plans, please review the policy summary and the FAQs at the website above.

## **If you signed up through Earthwatch US:**

Details of the US insurance policy can be found at [earthwatch.org/insurance](http://earthwatch.org/insurance).

Please refer any queries regarding this policy to Earthwatch's Operations Department at +1 978 450 1232 or [insurance@earthwatch.org](mailto:insurance@earthwatch.org).

You can find information about additional insurance available for coverage before or after your Earthwatch project at [earthwatch.org/insurance](http://earthwatch.org/insurance). Should you have any questions about whether you require coverage for your travel plans, please review the policy summary and the FAQs at the website above.

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

Emergency medical and evacuation assistance is available for all Earthwatch participants from CEGA Medical, a 24-hour international emergency medical and evacuation service. Please see the contact information on the *General Information* page.

For nonemergency information from CEGA, such as advice on visa and vaccine requirements, you may call the CEGA Non-Emergency Medical & Travel Advice helpline at **+44 (0) 20 3059 8770**.

## 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:* Tugrug (MNT). See [xe.com/ucc](http://xe.com/ucc) for currency information and exchange rates.
- *Personal funds:* It is recommended that you bring about US\$200-500 or equivalent, depending on whether or not you intend to buy gifts, souvenirs, cashmere, etc. **Cash in the newest possible US\$100 bills is best**, as these usually bring the highest exchange rate. Bills in poor condition may not be accepted. Cash machines/ATMs are located only in Ulaanbaatar and do not always function; many banks and the State Department Store (on Peace Avenue, two blocks from Zaya's, 5th floor) have ATMs. **There is an ATM at the Chinggis Khaan- Ulaanbaatar airport.** Visa and MasterCard credit cards are increasingly being accepted in restaurants and shops in Ulaanbaatar, but the majority of establishments still do not accept either. Traveler's checks are very difficult to spend in Mongolia and you will be charged a fee to use them (in addition to the fee you pay to acquire them). If you bring traveler's checks, you will have to change them in a bank in Ulaanbaatar as there is no way to cash a traveler's check, or use foreign currency, outside of Ulaanbaatar. The best place to change money is in a money exchange shop in Ulaanbaatar, as they have the best rates. There are several in the city, including some just around the corner from the hotel to which volunteers can be directed upon arrival. **Once in the field, there is neither access to banks nor cash machines, and only cash in the local currency will be accepted** (often only small bills are accepted).
- *Tipping:* Mongolians generally do not tip. If service is good, you might want to leave 1,000-3,000 tugrugs, but generally no more.

### Your Destination

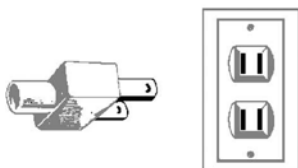
- *Language:* Mongolian. The project will be conducted in English.
- *Cultural considerations:* Mongolians love to give and receive gifts, so you may wish to bring small, inexpensive gifts. Some suggestions for gifts include: postcards of your hometown, calendars, pins/buttons, small flashlights, inexpensive pocket knives/tools, small puzzles, playing cards, tea, batteries, your own handmade crafts/trinkets, clothing (including used if it is clean and in very good shape), water bottles, pens and paper—be creative, but keep luggage restrictions in mind. Of course, if you want to give more expensive items, such as leaving your pair of binoculars, your Swiss Army knife/Leatherman tool, or your handheld GPS unit with a student, those gifts are greatly appreciated, too. No volunteers are expected by Earthwatch to give any gifts and any such gestures are entirely voluntary on your part.
- *Taxis:* In Ulaanbaatar, any car will serve as a taxi, but be careful, as theft is increasing. To be safe, only official or "tourist" taxis are recommended. Do not get in a taxi that already has people other than the driver in it, and

avoid private cars with several young men in them. You can call a taxi to pick you up or have your hotel/hostel call one for you.

- *Additional information:* The following are prohibited to export from Mongolia: any publications, records, films, and drawings critical of Mongolia; paleontological and archaeological findings, without special permission; collections of various plants and their seeds; birds and wild or domestic *animals*; *wool, raw skins, hides, and furs, without permission from the appropriate authorities.*
- *Electricity:* 220 volts, 50 Hz two-prong *Type C* European-style plugs (American-style outlets are also available in camp). For additional information, see [kropla.com/electric2.htm](http://kropla.com/electric2.htm).



Type C (European)



Type A (American)



Type B (American)

- *Time zone:* GMT +8, Mongolia does not observe Daylight Savings Time. For time worldwide with GMT/UTC, see [worldtimeserver.com](http://worldtimeserver.com).
- *Telephone Dialing codes:* When calling Mongolia from *another* country, dial the country's international dialing code, followed by (976) and the number. When calling within Mongolia, omit the (976). When calling another country from Mongolia, dial (00), followed by the other country's country code and the number. **PLEASE NOTE:** you should check with your cell phone provider to obtain any carrier-specific dialing codes you may need; many providers have dialing procedures that may differ in whole or in part from these directions. For additional information [see kropla.com/dialcode.htm](http://kropla.com/dialcode.htm).

## Country Information

- UK 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. See the *Helpful Resources* section for suggested vendor websites.

### Scientific media

#### Books

- Chambers, J. *The Devil's Horsemen: the Mongol Invasion of Europe*. New York: Antheneum, 1985.
- Finch, C. (ed). *Mongolia's Wild Heritage: Biological Diversity, Protected Areas, and Conservation in the Land of Chingis Khan*. Boulder, CO: Avery Press, 1999.
- Gallenkamp, C. *Dragon Hunter: Roy Chapman Andrews and the Central Asiatic Expeditions*. New York:

Viking Press, 2001.

- Goldstein, M.C. and C.M. Beall. *The Changing World of Mongolia's Nomads*. Berkeley: University of California Press, 1994.
- Man, J. *Gobi: Tracking the Desert*. New Haven: Yale University Press, 1997.
- Morgan, D. *The Mongols*. Cambridge, MA: Blackwell Publishers, 1986.
- Ratchnevsky, P. *Genghis Kahn: His Life and Legacy*. Cambridge, MA: Blackwell Publishers, 1991.
- Schaller, G.B. *Wildlife of the Tibetan Plateau*. Chicago: University of Chicago Press, 1998. **Note:** includes some information about Mongolia as well.

## Popular media

### Books

- Williams, M. (ed). "Mongolia: Biodiversity at a Crossroads." In *Biodiversity Briefings from Northern Eurasia*, Volume 2, Issue 1. The Center for Russian Nature Conservation, 2003. **Available at:** [russianconservation.org/BiodivBrief-Mongolia.pdf](http://russianconservation.org/BiodivBrief-Mongolia.pdf).
- Weatherford, Jack. *Genghis Khan and the Making of the Modern World*. New York: Broadway Publishers, 2004. **Note:** Although the title is somewhat misleading, this is a very readable and enjoyable account of the contributions that the Mongolian people and their ways of life have made to the world. Written by a anthropology professor for popular audiences.

### Field guides

- Reading, R.P., D. Kenny, G. Wingard, B. Mandakh, and B. Steinhauer-Burkart. *Ikh Nart Nature Reserve: Argali Stronghold*. Nature-Guide No. 4, Mongolia. ECO Nature Edition. Oberaula, Germany: Steinhauer-Burkart OHG, 2006. **Note:** This guidebook on the wildlife of Ikh Nart is recommended and available for purchase from Rich Reading at [rreading@denverzoo.org](mailto:rreading@denverzoo.org) for US\$10 plus shipping.

### Films

- Davaa B. and L. Falorni. *The Story of the Weeping Camel*. New Line Home Cinema, 2003. **Note:** nominated for an Academy Award.

## Project-related websites

- Ikh Nart Nature Reserve: [ikhkart.com](http://ikhkart.com)
- Argali Project: [waza.org/en/site/conservation/waza-conservation-projects/argali-research-and-conservation](http://waza.org/en/site/conservation/waza-conservation-projects/argali-research-and-conservation)
- Cinereous Vulture Project: [waza.org/en/site/conservation/waza-conservation-projects/cinereous-vulture-research](http://waza.org/en/site/conservation/waza-conservation-projects/cinereous-vulture-research)
- Hedgehog Project: [waza.org/en/site/conservation/waza-conservation-projects/mongolian-hedgehog-research](http://waza.org/en/site/conservation/waza-conservation-projects/mongolian-hedgehog-research)
- Denver Zoo: [denverzoo.org](http://denverzoo.org)

## 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 US office, visit: [earthwatch.org/volunteerresources](http://earthwatch.org/volunteerresources)

Volunteers who sign up through our UK office, 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 terrain in Ikh Nart is sparsely covered by semi-arid steppe vegetation with several large rocky outcrops. The altitude is approximately 1,250 meters/4,100 feet. Permanent cold-water springs are present in some of the shallow valleys draining the reserve.

Temperatures range considerably from day to day, and even within a single day; during the Earthwatch expeditions, the weather is likely to be relatively wet and hot. From May through September, the temperature can range from -12°C/10°F to over 38°C/100°F. It can get rather cold in May and September, especially at night, while July, August, and increasingly June can be hot.

Precipitation is generally low, though most falls in the summer and there can be severe thunderstorms, and even flash floods (these are more likely to occur in late June/early July).

Conditions during June through August			
Relative Humidity	40 %	to	66 %
Temperature range	25°F/-4°C	to	100°F/38°C
Altitude	3,780 ft/1150 m	to	4,100 ft/1250 m
Rainfall	1.5 in/3.8 cm	per	month

## Essential Eligibility Criteria

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

- Follow verbal and/or visual instructions.
- Enjoy being outdoors all day in all types of weather (see above), in the potential presence of wild animals and insects.
- Tolerate widely varying temperatures as low as 10°F/-12°C at night and over 100°F/38°C.
- Tolerate long periods of time spent working in direct sunlight with little to no shade available (4-6 hrs per day)
- Traverse distances of 3-4 miles/5-8 kms per day on 7 days; some days (minimum 2-3) of 6+ miles/10+ kms may be required. The terrain in Ikh Nart can be uneven, with shallow and occasionally steep drainages and

valleys, making hiking fairly strenuous. Volunteers can expect some of the hiking to be over steep rocky outcrops (often with loose rock debris) or through soft sand. Distance varies greatly with activity, so volunteers can expect some lighter days and other more strenuous days of hiking. No volunteers will be asked to exert themselves more than they are comfortable with, and all teams will have radios in case a volunteer becomes tired and needs a ride back to camp.

- Get low enough to the ground in order to dig, and record archaeological features for up to 6hrs on 8 days.
- Shake and sift excavated material through shifting screens and carry buckets of dirt during the excavation periods.
- Climb rock outcrops using non-technical climbing to reach archaeological features (may be opted out of).
- Carry a light day pack while out in the field (under 4.5 kg/10 pounds) with personal daily supplies such as lunch, water, and some basic field gear (binoculars, writing and recording materials, flagging, camera, GPS, measuring tapes, etc.).
- Get oneself up into and down out of a vehicle and ride, seated with seatbelt fastened (when available), for about 2-6 hours a day over bumpy roads and terrain, depending on that day's activity. This would be for 8 days of the expedition.
- Live comfortably without a constant and reliable source of electricity.

## POTENTIAL HAZARDS

Hazard Type	Associated Risks and Precautions
Transportation	There are few paved roads outside of Ulaanbaatar, and urban and rural roads are not usually maintained well. Unpaved roads can be very bumpy, sandy, or rocky. Fast driving, poor lighting, pedestrian traffic and lack of safety standards and traffic controls are not uncommon; however, the project drivers are experienced in driving in Mongolia. Seatbelts must be worn whenever available; note that some project vehicles may not have seatbelts available on all seats. Volunteers are not permitted to drive vehicles and are not permitted to drive or ride on motorbikes. In Ulaanbaatar, vehicular and pedestrian traffic can be severe; be very cautious when crossing streets or intersections on foot.
Walking/Hiking/ Climbing	Terrain in the field is often uneven, and team members will be hiking often over loose gravel, rocks, relatively steep slopes, or in loose sand. The area contains several high rocky outcrops, often with loose debris, and care should be taken while climbing on rocks to avoid injury. Volunteers should wear sturdy, broken-in footwear with ankle support and watch their steps carefully. Use a walking stick if needed. Do not over-exert yourself and please inform a staff member immediately if feeling tired or ill.
Terrain	The rocky outcrops at the field site can cause confusion due to the maze-like terrain. There is risk of becoming lost, disoriented and/or dehydrated. These risks can be avoided by carrying sufficient water, extra batteries for your radios and GPS units, and working with a knowledgeable staff member until familiar with the area. Participants should <i>never</i> wander off alone. Team members <i>must</i> carry, and know how to use, a VHF radio and GPS unit with them; project staff will provide instruction for any unfamiliar in the use of this essential equipment.
Climate / Weather	The project takes place in an arid environment, so dehydration is an issue that must be addressed continuously. All volunteers are required to carry sufficient water in the field and must be sure to drink frequently. Volunteers will also spend most of the day working in direct sun. Even on cool days, high-SPF sunscreen and high-SPF lip balm

	<p>should be used and reapplied frequently, and protective clothing, (long sleeves, broad-brimmed hats and sunglasses) are essential.</p> <p>Severe thunderstorms can come at any time, but are rare in late summer/autumn. Strong winds are also possible and can create dust storms. The temperature can vary greatly from day to night and from day to day. It is necessary to bring appropriate clothing, particularly that which can be layered, and a bandana or scarf to protect yourself from dust or sand carried by the wind.</p>
Distance to Quality Medical Care	<p>Note that this project takes place several hours (up to 6 hours) from the hospital in Ulaanbaatar, and that medical care in Mongolia is not generally up to Western standards. Serious medical cases would require international evacuation, most likely to Hong Kong, Seoul or Beijing, and may be possible only in daylight hours. Participants should obtain necessary routine medical/dental care prior to traveling and keep a copy of their personal health records and prescriptions with them. Participants must be sure to disclose any medical conditions to Earthwatch and the project staff, and inform project staff of the location of any important medications. Inform a staff member immediately if feeling at all unwell. The nearest hospital is 320 km/200 miles away from the project site, and it may take up to 6 hours to arrange transport and reach the hospital. The nearest clinic is in Shivee-Gobi, 1.5 hours or 60 km/37 miles away. If you have a chronic condition which could require immediate medical care (e.g. heart conditions, kidney problems, severe asthma, etc.), or if you are pregnant, please seriously discuss your participation on this expedition with your physician.</p>
Plants	<p>Several plants in Ikh Nart are thorny or prickly. Volunteers should wear foot protection at all times and not handle plants without looking carefully for thorns, prickles, or nettles.</p> <p>You will be working in grassland areas with potentially high pollen count and dust. Felts are used for warmth in the <i>gers</i>. Volunteers with allergies should bring medication as appropriate (antihistamines, at least two EpiPens, etc.) and inform the project staff as well as Earthwatch of your condition and the location of your medication.</p>
Wildlife	<p>One poisonous snake, the Central Asian viper, inhabits Ikh Nart and could potentially strike a volunteer or researcher (note, however, that this has never happened to an Earthwatch team member). This snake is very rarely lethal, unless the person has an allergy or other compromising condition. Volunteers with allergies should bring medication as appropriate (antihistamines, at least two Epi-Kits, etc.) Volunteers should avoid picking up, touching, or approaching snakes and inform a staff member if one is spotted. In addition, there are ticks in the research area which may transmit tick fever disease, similar to Lyme disease. They are more prevalent during wet season (July-September), and they are relatively large and easy to spot. Participants should wear appropriate footwear (hiking boots that cover the ankle) and check themselves for ticks daily.</p>
Domestic Animals	<p>Volunteers should also be wary of all domestic dogs, although most will be scared away if you simply pick up a rock, not actually having to throw it. Rabies is present in Mongolia and dogs should be avoided whenever possible. Volunteers may wish to discuss rabies vaccination with their physicians (see <i>Health Information</i> below).</p>
Project equipment / tasks	<p>Volunteers may be undertaking excavation activity. You will be given a full briefing on safe use of tools and training in the work required. Volunteers must take care when bending and kneeling especially those with back and knee problems. The excavation areas must be clearly marked and everyone must take care when walking around the area to avoid falling into holes which could cause sprains and strains.</p>
Personal Security	<p>As in many large cities, crime, especially theft, is on the rise in Ulaanbaatar, so guard against pickpockets and people who might cut your bags to get at items inside. Volunteers are encouraged not to walk around alone, especially after dark. Volunteers should avoid wearing expensive jewelry and displaying money or cameras, and leave any unnecessary valuables at home.</p>

	Mongolia has seen some protests against privatization policies and government corruption in recent years. Further protests are possible, but the likelihood that they will turn violent is low. The risk of terrorism is minimal, but volunteers should avoid public demonstrations, large crowds, and political rallies.
Traveler's diarrhea	Tap water in Mongolia is <i>not</i> safe to drink. 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 and avoid ice. You should also carry an over-the-counter anti-diarrheal medication and rehydration salts in your personal first aid kit. Ensure all food is well cooked before consumption and do not eat fruit or vegetables unless they have been peeled or cooked. Speak to your doctor about other options for treating traveler's diarrhea and see the CDC website for advice on avoiding this condition.

## HEALTH INFORMATION

### 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 US Center for Disease Control ([cdc.gov](http://cdc.gov)) and the World Health Organization ([who.int](http://who.int)). Please consult a physician for guidance on vaccinations if you intend to travel to other parts of the country.

	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
Rabies		X

### Advice Regarding Diseases

Diseases occurring in Mongolia may include rabies, tuberculosis, typhoid fever, HIV/AIDS and hepatitis, foot and mouth disease, meningitis, anthrax, cholera and isolated cases of bubonic plague associated with marmots. There may also be a risk of avian influenza. See *Health Information* for vaccination recommendations. Please see the CDC ([cdc.gov](http://cdc.gov)) or WHO ([who.int](http://who.int)) websites for more information.

- **Rabies:** Volunteers should consider rabies vaccinations since the teams will be working with small mammals in an extremely remote area. However, volunteers are not required to handle the animals, and the risk of rabies transmission is low (there is probably greater risk of rabies from dogs in the capital of Ulaanbaatar than through the fieldwork). The pre-exposure rabies vaccination consists of three doses over a 28-day period. Please be sure to consult your physician or travel health clinic well in advance to ensure you have time for the full vaccination series. If you have previously been vaccinated, you must have a medical professional check your antibody levels; a booster shot may be required. Rabies is a fatal disease. Treatment after rabies

exposure requires immediate care (within 24 hours), and this type of rapid response is not likely to be available to volunteers on this project due to the remote location. Pre-exposure vaccination does not eliminate the need for post-exposure medical attention and treatment, but it does provide additional protection in event of a delay in treatment. In addition, any bites or scratches should be immediately and thoroughly washed with soap and clean water and a topical povidone-iodine solution or ethanol should be applied. Domestic dogs should be avoided whenever possible.

- *Avian influenza*: There were a few cases of avian influenza (also known as “bird flu”) in poultry reported in Mongolia in 2004 and 2005; there have been no human cases reported to date. Avian influenza is a widespread infectious disease, previously found in birds and pigs. It is spread to humans via direct contact with bird fecal matter. It is safe to eat fully cooked chicken and eggs. Travelers are cautioned to avoid poultry farms, contact with animal fecal matter, and animals at live food markets and to only consume foods that have been fully cooked.
- *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*: 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.
- *Typhoid fever*: Typhoid fever is a serious infection caused by a type of salmonella bacteria spread by contaminated food or water. Choosing safe food and water will greatly reduce the risk of developing the disease. Symptoms usually begin one to three weeks after exposure. Although typhoid fever is often called a diarrheal disease, some patients do not have diarrhea. Persistent, high fever is typical. Other early symptoms are flu-like: body aches and pains, weakness, loss of appetite and a continuous dull headache. A rash with pink spots may appear on the chest and abdomen of some patients. In severe cases, perforation of the bowel can cause severe bleeding or infection in the abdomen, which can be fatal. Typhoid is cured with antibiotic treatment. Preventive vaccinations are available. Typhoid is more common in Mongolia during the summer months.
- *Plague*: Plague is found in many areas of the world. Caused by the bacterium *Y. Pestis*, plague mainly affects rodents but is occasionally transmitted to humans by fleabites. There are three main forms of plague in humans: bubonic, septicemic, and pneumonic. Bubonic plague is the most common form and occurs as the result of a fleabite. The plague bacillus travels through the lymphatic system to the nearest lymph node. The lymph node becomes enlarged and inflamed—a “bubo”. The septicemic form of plague occurs when infection spreads directly through the bloodstream. Without antibiotic treatment, this form of plague is usually fatal. Pneumonic plague occurs when *Y. Pestis* infects the lungs. The first signs of illness in pneumonic plague are fever, headache, weakness and cough that produces bloody or watery sputum. The pneumonia progresses over two to four days and may cause septic shock and, without early treatment, death. The plague vaccine is no longer commercially available. Plague often occurs in rural areas of Mongolia between July to September, most often in the western regions. Infections have occurred in those who have had close contact with marmots, including farmers and hunters.

## 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)
- Traveller's Healthline Advisory Service Tel: (020) 7950-7799
- MASTA Travelers' Healthline (UK) Tel: (0906) 8-224100 (within the UK)

## EMERGENCIES IN THE FIELD

### Proximity to Medical Care

There has yet to be a medical emergency during any of the *Wildlife of the Mongolian Steppe* expeditions. However, if a life threatening emergency did occur, project staff would use the satellite phone to call Central Mongolian Airlines and contract a helicopter to retrieve the sick or injured person and transport them to Ulaanbaatar. CEGA Medical would be used to evacuate such a person to the nearest and best hospital outside of Mongolia (likely Seoul, Beijing, Tokyo, or Hong Kong, depending on the nature of the illness/injury). In the case of a less threatening emergency, the individual could be flown, driven in one of the project vehicles (there will always be one and usually two vehicles available), or put on a train with one of the Earthwatch scientists to Ulaanbaatar to be treated at the appropriate hospital. For a minor emergency the person would be treated in camp or at the health clinic in Shivee-Gobi (about one hour away by car). In all cases, project staff trained in first aid will treat the person to the extent possible in the field.

If you need to leave the expedition early for a personal emergency, you will need to take the train to Ulaanbaatar on your own and at your own expense.

Proximity to Medical Care	
Physician, nurse or EMT on staff	Project staff are not medical professionals
Staff certified in safety training	CPR (Cardiopulmonary Resuscitation): Roger Riolo First Aid: Roger Riolo
Nearest hospital	SOS Medica Mongolia UB International Clinic 4a Building, Big Ring Road 15th Micro District 7th Khoroo, Bayanzurkh District Ulaanbaatar, Mongolia Tel: +976 (11) 464325 / 26 / 27 Fax: +976 (11) 454537
Nearest clinic	There is a clinic approximately one hour away in Shivee-Gobi. The Shivee-Gobi Health Center is staffed by a trained nurse, but has no telephone.

# COMMUNICATIONS

## Emergency Communications in the Field

In the case of an emergency, team members can use the satellite phone or drive a couple of kilometers from camp for reception to email and make telephone calls. A satellite phone will be turned on from 7:30 a.m. to 8:30 a.m. (Mongolian time) each day to receive incoming emergency calls, and project staff will check email every day. We will provide the satellite phone number to Earthwatch, so if volunteers require an emergency incoming call, that call should go to Earthwatch first (see number and calling instructions below). Volunteers can have emergency emails sent to [argali\\_mon@yahoo.com](mailto:argali_mon@yahoo.com), as we will check that address daily. Volunteers may NOT receive non-emergency calls on the satellite phone. People can also make contact via collaborators in the Mongolian Academy of Sciences in Ulaanbaatar. All groups working in the field will have radios in case a volunteer becomes tired and needs a ride to camp.

**The emergency contact number at Earthwatch headquarters in the UK is +44 (0) 7900-895-752 (see *Emergency Contacts* for calling instructions). You may also call Earthwatch in the US at +1 (978) 461-0081.**

## Personal Communications

Communication is very difficult at the research site. We can now make calls and receive emails by driving a few kilometers from camp, but as this is difficult, such use should be constrained to urgent calls and emails only. The satellite phone (see above) is for **emergency use only**. Volunteers should be able to communicate with family and friends from Ulaanbaatar at the beginning and end of the expedition, but may not be able to do so while in the field. Check with your mobile phone provider to determine the availability and cost of service in Ulaanbaatar.

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 available in the print version of the briefing only.

# Earthwatch Institute Policies & Participant Rights and Responsibilities

This document 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 your Earthwatch Participation Form to indicate that you understand and accept the risks inherent to your expedition and the policies, rights, and responsibilities enumerated in this document. Participants will not be permitted to partake in an expedition until Earthwatch has received the signed release form.

## **Intellectual Property Rights**

It is permissible to share photos, videos, and stories of your expedition with family, friends, local media, and in a public forum. Sharing your new perspectives and experiences is welcomed and encouraged.

However, please recognize that all information, data, and images shared or gathered in the course of your expedition's field work become the intellectual property of the Earthwatch scientist (ES). Co-opting or plagiarism of data, images or information gathered during an expedition for use in a scientific thesis, masters or PhD work, or for profit or for 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 possibilities exist that local residents may not have an awareness of best practice 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 or possession of alcohol or smoking is not permitted on any Earthwatch Teen Team, regardless of local law.

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

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

### **Minors**

Earthwatch considers participants 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). However, participants may be denied in the interest of team compatibility. 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 for health reasons, Earthwatch will refund in full any deposit or payment made toward the expedition.

Earthwatch scientists have the right to refuse special requests, such as 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 document ("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 your 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
- Short-sleeved shirts
- Shorts (June, July, and August)
- Hat (broad brim is best to protect your head, neck, and face from sun, wind, and dust)
- Sturdy hiking boots
- Rain gear
- Windbreaker
- Fleece/jumper/sweater
- Warm jacket
- Gloves
- Warm hat
- Work gloves

## Clothing/Footwear for Leisure

- One set of clothing to keep clean for end of expedition
- Comfortable footwear for camp

## Field Supplies

- Small daypack/rucksack
- Dry bag or plastic sealable bags (good for protecting equipment such as camera from dust, humidity, and water)
- Two 1-liter water bottles
- Pens, pencils, and small (pocket) notepad
- Good quality hiker's compass, such as Silva or Brunton, with mirror top (not required, but very useful; we will give compass-reading lesson)
- Small straight edge or ruler (pocket-sized)
- Clipboard
- Pocket tape measure, 5 m (with centimeter scale as well as inch scale)

### **Bedding and Bathing**

- Sleeping bag (comfortable to about -7°C/20°F)
- Sleeping pad
- Towel

### **Personal Supplies**

- Personal toiletries (biodegradable soaps and shampoos are encouraged)
- Small roll of toilet paper/handy pack of tissues (it is provided at the field site, but often not in public restrooms)
- Antibacterial wipes or lotion (good for cleaning hands while in the field)
- Personal first aid kit (e.g. anti-diarrhea pills, rehydration salts, antibiotics, antiseptic, itch-relief, pain reliever, bandages, moleskin/blister covers, etc.) and personal medications—there will be first aid kits on site, but only limited supplies
- Sunscreen lotion and lip balm with SPF 30 or higher
- Sunglasses (these are essential—you may wish to bring a spare pair)

### **Miscellaneous**

- Spending money
- Camera, film/memory card(s), extra camera battery
- Binoculars
- Flashlight or headlamp (preferred) with extra batteries and extra bulb (although the *gers* have lights, the power is not 100% reliable, so it is useful to bring a small lantern-style flashlight as well)
- Reading material

### **Optional Items**

- Hardware for sharing digital photographs at the end of the expedition
- Travel guide
- Books, games, journal, art supplies, etc. for recreational/rest time and travel
- Small gifts for Mongolians (postcards, calendars featuring your hometown, etc.)
- Insect repellent spray
- Pillow (a pillow case and rolled-up sweater/jumper may suffice and saves on space)
- Earplugs (very useful if you are a light sleeper)
- Camp chair
- Playing cards
- Insulated cup
- Spotting scope
- Daily journal
- Sun shower
- Global Positioning System (GPS)
- Snack food
- Spare batteries
- Goggles and/or bandannas for dust storms

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