



# WILDLIFE OF THE MONGOLIAN STEPPE



# PLANNING CHECKLIST

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### IMMEDIATELY

- Make sure you understand and agree to Earthwatch's **Terms and Conditions** and the **Participant Code of Conduct**.
- If you plan to purchase additional travel insurance, note that some policies require purchase at the time your expedition is booked.

### 6 MONTHS PRIOR TO EXPEDITION

- Log in at [earthwatch.org](https://earthwatch.org) to complete your participant forms.
- If traveling internationally, make sure your passport is current and, if necessary, obtain a visa for your destination country.
- Bring your level of fitness up to the standards required (see the Project Conditions section).

### 90 DAYS PRIOR TO EXPEDITION

- Pay any outstanding balance for your expedition.
- Book travel arrangements (see the Travel Planning section for details).
- Make sure you have all the necessary vaccinations for your project site.

### 60 DAYS PRIOR TO EXPEDITION

- Review the packing list to make sure you have all the clothing, personal supplies, and equipment needed.

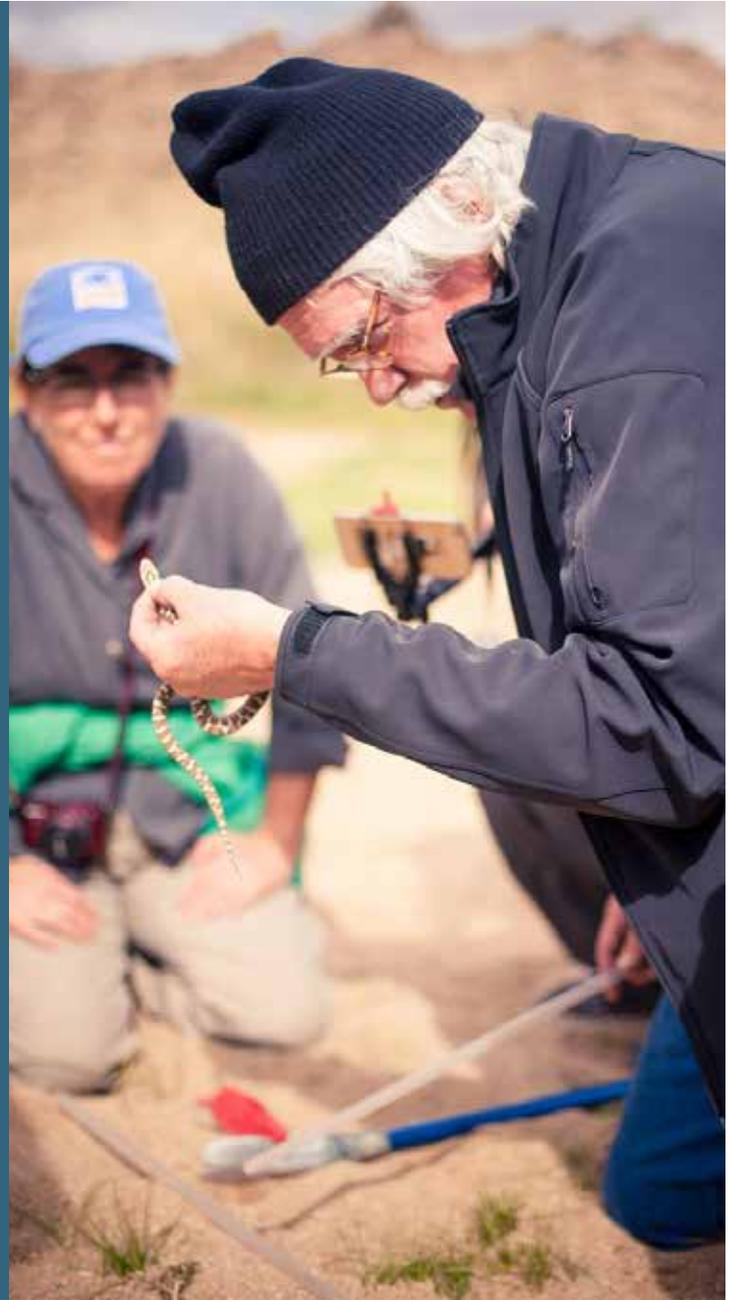
### 30 DAYS PRIOR TO EXPEDITION

- Leave the Earthwatch 24-hour helpline number with a parent, relative, or friend.
- Leave copies of your photo ID and flight reservation number with a parent, relative, or friend.

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

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# NOTE FROM THE PI

## DEAR EARTHWATCHER

Welcome to the *Wildlife of the Mongolian Steppe* expedition! On behalf of all of the project staff, I would like to thank you for choosing to help us and to welcome you to Mongolia—the “Land of Blue Skies.” We believe that you will enjoy your stay in Mongolia while assisting us with an important conservation project.

While in Mongolia, you will experience both city and country life. We hope you will take advantage of your couple of days in the capital, Ulaanbaatar, to experience some of the ancient, fascinating, and enjoyable culture that Mongolia has to offer. For the remainder of your two-week stay, you will be in the gorgeous Ikh Nart Nature Reserve, far from the nearest human settlement. On the journey to our study site, you will travel from the taiga-covered mountains of the north, through the forest steppe and true steppe, to the semi-desert steppe. This will allow you to enjoy Mongolia’s vast landscapes that remain largely free of fences and paved roads. At our research camp you will stay a traditional Mongolian tent, called a ger or yurt. At Ikh Nart you will enjoy bright blue skies (only rarely does it rain or snow) and spectacular sunsets, and you will see argali sheep, ibex, foxes, cinereous vultures, eagles, hawks, wheatears, and other Eurasian birds, toad-headed agama and racerunner lizards, and, if you are lucky, Mongolian or goitered gazelle, or even a gray wolf. In the midst of this natural beauty, you will help us with a wide variety of tasks that involve many of the area’s fascinating flora and fauna. We will train you to help us, and if you are ever uncomfortable performing a task, just let us know and we’ll find something more suitable. We will also ask you to assist with chores around camp, such as retrieving water, washing dishes, and helping us keep the equipment and living quarters clean.

We have a saying about Mongolia: “It’s not just a country; it’s an adventure!” We truly hope that your adventure will be enjoyable, educational, and productive. Let us know if there are ways we can improve your stay, your experience, and our project.

With best regards,

Ganchimeg Wingard, *Mongolia Program Director*, Denver Zoological Foundation





# THE RESEARCH

## WILDLIFE OF THE MONGOLIAN STEPPE



### THE STORY

Mongolia hosts a rich diversity of wildlife, especially compared with other Central Asian nations. Ikh Nart Nature Reserve, 66,600 hectares (257 square miles) of grassland and arid steppe habitats, provides a protected home for many of its species. But even within the bounds of the reserve, the animals of Ikh Nart face threats from poaching, illegal mining, and overgrazing—local soums (counties) manage protected areas for the Mongolian federal government, but lack the infrastructure and resources to provide really active stewardship.

One of the species that needs our protection is the endangered argali sheep, the largest mountain sheep in the world. Ikh Nart shelters one of the last populations of these sheep, which, research suggests, have declined primarily due to poaching and conflicts with domestic livestock production. We initially began researching in Ikh Nart to develop strategies to conserve this majestic beast, but as the project developed, we began to collect data on the other important species: the globally declining cinereous vulture, saker falcon, lesser kestrel, the Siberian ibex (wild goat), small carnivores, the Siberian marmot, and many small prey species including lizards, insects, small mammals such as gerbils, hamsters and plant species. The more we understand these species and how they interact with each other and their environment, the better we can develop plans to conserve them in the future.



## RESEARCH AIMS

Simply put, our research focuses on how different species use resources and influence each other in this unique desert environment. For example, we explore how argali and ibex coexist, and the impact of domestic sheep and goats on argali and ibex. We also research how goitered gazelle and domestic camel divide resources so that they can both thrive in the same area. We also examine nesting behavior, movement patterns, and diet of large birds of prey.

Already, the results of this work have helped improve the conservation of these species and the ecosystem on which they depend. We have successfully recommended conservation strategies to the Mongolian government, other biologists, and nongovernmental organizations working to conserve and recover species in Mongolia. We also work closely with local communities to increase their support for conservation, and to try to induce changes in livestock husbandry and wildlife use practices that will benefit the area's wildlife. Simply by having a research presence

in the park, we have cut down on poaching. So at the core, this project is about understanding coexistence, both among various related species in the wild, and between local communities, their livestock and the wildlife that they share the steppe with.



## HOW YOU WILL HELP

Because the research spans from gazelles to cinereous vultures to small mammals, you will have the opportunity to work with a variety of species. You may spend one day helping to capture ibex in 450 yard-long drive nets, and the next day surveying argali sheep. Few people get this opportunity, because many species remain shy and inhabit inaccessible areas. At Ikh Nart, however, wildlife is becoming increasingly habituated to human presence, especially to people on foot. Few people in the world have seen argali sheep up close, but at Ikh Nart, our team members often get within 100 meters of these endangered animals. Working with the project's large, friendly team of Mongolian experts and students permits you to develop strong relationships with staff members. Assisting students with English language support for their research projects.

Before you begin fieldwork, you'll receive training on project equipment use and research techniques. We'll stress the importance of remaining unseen by target animals during data collection. You'll also learn from presentations by local researchers in the evenings while in the field, and we'll guide you on local customs during visits to nomadic family.

Tasks that you may perform include the following:

- Identifying saker falcon and lesser kestrel nests and trapping saker falcons for banding Team 1.
- Collecting vegetation samples from the study site and estimating biomass in measured plots. Teams 1, 2, 3 and 4
- Assisting in capturing argali and ibex in "drive nets". Team 5.
- Monitoring cinereous vulture nests and taking measurements of nestlings. Team 1, 2 and 3
- Conducting line transect surveys for argali sheep. Teams 4 and 5.
- Trapping small mammals and assisting with camera traps. Teams 1,2,3 and 4.
- Entering data and sorting camera trap photos. Teams 1,2,3 and 4
- And if you'd like to, taking photographs to document these research tasks.
- Assisting local graduate students in preparing their presentations in English for their Master's programs.

# DAILY LIFE IN THE FIELD

## PLANS FOR YOUR TEAM



We are far from the big city, but you will have time at the beginning and end of the expedition to explore Ulaanbaatar. While at Ikh Nart, we will have a half day off for a Mongolian-style barbecue and recreation, which can include hiking, wildlife watching, visiting local families, and a disco at a Mongolian holiday camp within the reserve.

Some teams will be visited by the local women's craft collective, Ikh Nart Is Our Future. The collective provides income for local women through the production of felt and other Mongolian craft items, made almost exclusively from local materials. You will have the opportunity to purchase traditional handicrafts inspired by the beauty of the Ikh Nart Nature Reserve, with all proceeds directly benefiting the collective.



## DAILY ACTIVITIES

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

### TYPICAL DAILY SCHEDULE TEAMS 1,4 AND 5

6:00 a.m.	Some volunteers and staff rise and check small mammal and invertebrate traps
7:00 a.m.	Breakfast
8:30 a.m.	Collect gear, break into groups, and field work
1:00 p.m.	Break for lunch
4:00 p.m.	Presentations and data entry
7:00 p.m.	Dinner, recreational and rest time, etc.

### TEAMS 2 AND 3

5:30 a.m.	Volunteers and staff rise. NOTE: Potentially earlier wake up to avoid hot weather.
5:45 a.m.	Breakfast
6:30 a.m.	Collect gear, break into groups, and fieldwork
8:30 a.m.	Short break for a snack
11:30 a.m.	Break for lunch and afternoon nap during heat of day
1:00 p.m.	Break for lunch and afternoon nap during heat of day
3:30 p.m.	Start of afternoon fieldwork session
6:30 p.m.	Return from field, presentations and data entry
8:00 p.m.	Dinner, recreational and rest time, etc.

### ITINERARY: TEAM 1-4

Day 1	Rendezvous in Ulaanbaatar, settle in, optional cultural activities, group dinner.
Day 2	Drive from Ulaanbaatar to field site (approx. 5 hours), settle in and get acquainted with site.
Day 3	Half-day orientation and training. Second half of day spent on data collection (setting up trapping grids and raptor nest monitoring, etc.).
Days 4-6	Data collection (small mammal trapping, raptor nest identification and monitoring, vegetation sampling, etc.).
Day 7	Data collection in the morning, traditional Mongolian barbeque in the afternoon and evening, visit to a local disco in the evening (optional)
Days 8-11	Data collection.
Day 12	Pack in the morning, leave for Shivii-Gobi after lunch to catch overnight train to Ulaanbaatar.
Day 13	Arrive in Ulaanbaatar, settle into hotel, optional cultural activities, group dinner and goodbyes. Optional activities include a cultural show in the evening (at an extra cost of approximately 35,000 MNT).
Day 14	Breakfast and depart for airport to catch flight home.

### ITINERARY: TEAM 5

Days 1-3	Same as other teams.
Days 4-5	Drive-netting argali and ibex, and data collection (data recording, morphometric data collection, animal health monitoring, radio-collaring and ear-tagging, still and video photography).
Days 4-6	Data collection (radio-telemetry on foot or from fixed stations, small mammal trapping, raptor nest identification and monitoring, vegetation sampling, etc.).
Day 6	Drive-netting argali and ibex before noon; take down the nets; in the afternoon break down the camp and drive back to the research camp. Upon arrival set up the nets at drive net sites.
Day 7	Drive-netting argali and ibex before noon, in the afternoon traditional Mongolian barbeque.
Days 8-14	Same as other teams.

**PLEASE NOTE** that depending on what research activities you are involved with the above schedule is likely to shift to accommodate the work required, and to accommodate travel to the southern part of the reserve, if required.

# ACCOMMODATIONS AND FOOD

## ABOUT YOUR HOME IN THE FIELD

### SLEEPING

#### ULAANBAATAR

Zaya's Guesthouse in Ulaanbaatar is comfortable and clean. We usually try to accommodate two volunteers of the same gender in each room. We also can house couples together, when possible, with advance notice to Earthwatch. Some rooms have their own bathrooms, although some guests must share. The guesthouse is formed of a few large apartments with kitchens, living rooms, bathrooms, and bedrooms that we rent. The guesthouse offers breakfast and has free internet access on one computer. Zaya's sits in the heart of Ulaanbaatar, within easy walking distance of tourist sites, restaurants, banks, and shopping areas.

Zaya's Guesthouse offers transport to and from the airport for a reasonable fee, although this is not always possible, and can help arrange excursions at your own expense for before or after the Earthwatch expedition. They have a comprehensive list of equipment and camping gear that can be rented, and can send you a list of what's available, with costs, if you email them at [info@zayahostel.com](mailto:info@zayahostel.com). Zaya's is also available to book through TripAdvisor and Booking.com

Please specify that you are with Earthwatch if you decide to book additional nights at Zaya's before or after the expedition.

#### IKH NART

The research camp lies in the heart of the project's study area. At the camp, you'll stay in yurts or traditional Mongolian gers. There are currently ten gers at the research camp, 3-4 of which are for Earthwatcher lodging. One ger is the kitchen, one ger is the office and another serves as the dining hall and lounge area.

Each ger can house up to five people, but we usually limit them to four people each. We make every effort to house people of the same gender together, depending on team makeup. Gers are larger than standard tents (you can easily stand upright in them), they have storage space, water filters, and wash basins, and they tend to be warmer than tents at night. The research site has some standard tents for team use, but you may also bring your own if you like.

All team members will sleep on beds, but you should bring sleeping bags, as we have no linens. You'll get a sleeping pad (but we recommend bringing your own as well for added padding). It can get cold at night, so please bring a warm bag and layers of clothing. Also bring your own towels (camp towels work great and are available at most outdoor stores).

### BATHROOMS

There is one outhouse with two sit-down "eco-design" toilets. They are composted with dry manure and you will be instructed in their use on arrival. In the field, you'll follow the nomadic tradition of using the great outdoors when nature calls. Several "sun showers" (insulated bags that hold water warmed by sunlight) are available at camp, so you can wash regularly.

### ELECTRICITY

The research project gets electricity from solar panels. We use much of this energy to recharge project equipment, but there's usually enough power to recharge your electrical items (project equipment has priority). Gers have lights for reading, etc. We have outlets for American and European electronics. Outlets are 220 volts, 50 Hz two-prong Type C European-style plugs (American-style outlets are also available in camp).

### DISTANCE TO THE FIELD SITE

We use vehicles to access portions of the reserve and we often walk to our sites too.

**ADDITIONAL POLICIES:** For safety reasons, participants may not ride motorcycles, horses, or camels during Earthwatch expeditions. If you wish to ride horses or other animals during your visit to Mongolia, please do so before or after the expedition. While there may be an opportunity to observe traditional Mongolian wrestling, participants are not allowed to wrestle.



## FOOD AND WATER

A cook will prepare most meals. We'll generally eat breakfast and dinner together, and depending on the schedule you may pack your own lunch in the morning to take into the field. All Earthwatch participants and staff members will be expected to assist in cleaning up after meals.

The following are examples of foods you may find in the field. Variety depends on availability. We appreciate your flexibility.

### TYPICAL MEALS

<b>BREAKFAST</b>	Fresh bread, oatmeal, cold cereal (usually muesli), yogurt, hot rice or wheat porridge, rolls and jam, eggs and Mongolian sausage.
<b>LUNCH AND DINNER</b>	Mixed vegetable and meat stew, pasta, soup, salad, traditional Mongolian meals with emphasis on meat.
<b>SNACKS</b>	Chocolate, cookies, peanuts, 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, and some soda
<b>WATER</b>	At the research camp, we get drinking water from a small spring nearby. Gers have passive water filters. Please keep passive filters full and they provide more than enough water for the team.
<b>ALCOHOL</b>	On this project, we try to maintain a dry camp. Please do not bring any alcohol with you.
<b>BARBEQUE</b>	Additionally, project staff will endeavor to hold one ceremonial Mongolian barbeque for each team. This entails the ceremonial killing of a goat (sometimes a sheep) and heating up 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. You are not required to watch or participate in the ceremonial barbeque.

## SPECIAL DIETARY REQUIREMENTS

Please alert Earthwatch to any special dietary requirements (e.g., diabetes, lactose intolerance, nut or other food allergies, vegetarian or vegan diets) as soon as possible, and note them in the space provided on your volunteer forms.

Accommodating special diets is not guaranteed and can be very difficult due to availability of food, location of field sites, and other local conditions. **SPECIAL NOTE:** It is extremely hard to accommodate gluten-free and vegan diets on this expedition. Volunteers are strongly encouraged to carry supplemental food and snacks of their choice especially if they have dietary restrictions.

# PROJECT CONDITIONS

## THE FIELD ENVIRONMENT

The information that follows is as accurate as possible, but please keep in mind that conditions may change. 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 dry and hot. It can get rather cold in May and September, especially at night. Alternatively, 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 or early July.

### GENERAL CONDITIONS

The following are averages. Please check weather resources for your team dates for more accurate weather predictions. Projects have experienced unseasonable weather at all times of year.

#### MAY AND SEPTEMBER

**HUMIDITY:** 35% to 61%

**TEMPERATURE RANGE:** 10°F/-12°C to 90°F/32°C

**ALTITUDE:** 3,780 ft/1150 m to 4,100 ft/1250 m

**RAINFALL:** 0.4 in/1 cm per month

#### JUNE THROUGH AUGUST

**HUMIDITY:** 40% to 66%

**TEMPERATURE RANGE:** 25°F/-4°C to 100°F/38°C

**RAINFALL:** 1.5 in/3.8 cm per month

### ESSENTIAL ELIGIBILITY REQUIREMENTS:

All participants must be able to:

- Follow verbal and/or visual instructions independently or with the assistance of a companion.
- Enjoy being outdoors all day in all types of weather (see above), in the potential presence of wild animals and insects.
- Tolerate largely varying temperatures as low as -12°C(10°F) at night and over 38°C(100°F) during the day.
- Tolerate long periods of time spent working in direct sunlight with little to no shade available (4–6 hours per day)
- Traverse distances of 4–6 miles (6–10 km) for some research activities on some days. 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 days of hiking and driving. No volunteers will be asked to exert themselves more than they are comfortable. Once out of camp there is restricted means of communication so ensuring that you are well hydrated and working within your fitness and comfort levels is important as help will take time if required.
- Get low enough to the ground in order to set and check small mammal traps for up to two hours on all project days.
- Climb rock outcrops using non-technical climbing if participating in vulture and kestrel work (may opt out).
- **TEAM 5 ONLY:** You will not be directly handling wildlife, but you can assist with data recording and photo documentation, but all will be involved in the capture nets building process.
- Look through binoculars or spotting scopes for periods of 3–4 hours to spot and identify animals.
- Carry a light daypack while out in the field (under 4.5 kg/10lb) with personal daily supplies such as lunch, water, and some basic field gear (binoculars, possibly radios, GPS units and rangefinders, etc.).





# POTENTIAL HAZARDS

## WILDLIFE OF THE MONGOLIAN STEPPE

HAZARD TYPE	ASSOCIATED RISKS AND PRECAUTIONS
Transportation	There are few paved roads outside of Ulaanbaatar. Urban and rural roads are often poorly maintained and can be very bumpy, sandy, or rocky. We may also encounter fast drivers, poor lighting, pedestrian traffic, and lack of safety standards and traffic controls; however, the project drivers have experience driving in Mongolia. You must wear a seatbelt in project vehicles. You may not drive vehicles or drive or ride on motorbikes. In Ulaanbaatar, vehicular and pedestrian traffic can be very heavy; take caution when crossing streets on foot.
Hiking	Terrain is often uneven, and you'll often hike over loose gravel, rocks, steep slopes, or in loose sand. The area has several high rocky outcrops, which are often covered with loose debris; take care to avoid injury while climbing on rocks. Wear sturdy, broken-in footwear with ankle support and watch your steps carefully. Use a walking stick and knee braces if needed. Do not overexert yourself and inform a staff member immediately if you feel tired or ill.
Terrain	The rocky outcrops create a maze-like terrain, which can cause confusion. Risks include becoming lost, disoriented, and/or dehydrated. Carry sufficient water and extra batteries for your GPS units, and work with a knowledgeable staff member until you are familiar with the area. Never wander off alone. Your team member will always carry and know how to use a GPS unit; project staff will also instruct you on how to use this essential equipment if you are unfamiliar with it.
Animals/Plants	<p>You may assist with drive-netting argali, ibex, and goitered gazelles. Anyone could be harmed by a netted animal, although that has not happened before. We will also capture vultures and small mammals, which could bite or scratch. You must let experienced staff members restrain animals prior to assisting, and follow staff instructions carefully and quickly to minimize the possibility of harm. Always wear gloves if handling small mammals and wash or sanitize your hands after fieldwork and before eating.</p> <p>One venomous snake, the Central Asian viper, inhabits Ikh Nart. This snake is very rarely lethal, unless the person has an allergy or other compromising condition. Avoid picking up, touching, or approaching snakes and inform a staff member if one is spotted. Project staff will instruct volunteers to avoid all snakes on the project.</p> <p>Avoid domestic dogs whenever possible, as rabies is present in Mongolia. You can scare most dogs away by picking up a rock (you don't usually have to throw it). Volunteers may wish to discuss rabies vaccination with their physicians (see the safety section). Ticks in the area may transmit tick fever (similar to Lyme disease). They are more prevalent during wet season (July–September), and they are relatively large and easy to spot. Wear appropriate footwear (hiking boots that cover the ankle) and check for ticks daily.</p>
Plants	Several plants are thorny or prickly. Wear foot protection at all times and don't handle plants without looking carefully for thorns, prickles, or nettles.
Allergies	You will be working in grassland areas with potentially high pollen counts (especially in spring) and dust. Also, felts are used for warmth in gers. Volunteers with allergies should bring appropriate medication (antihistamines, at least two EpiPens, etc.) and inform project staff as well as Earthwatch of your condition and the location of your medication.
Climate/ Weather	<p>In this arid environment, you must always carry sufficient water in the field and drink frequently. You will also spend most of the day working in direct sun. Even on cool days, use and re-apply high-SPF sunscreen and high-SPF lip balm and wear protective clothing (long sleeves, broad-brimmed hats and sunglasses).</p> <p>Severe thunderstorms can occur any time, but are rare in late summer and 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. Bring clothing that can be layered and a bandana or scarf for protection from windborne dust and sand, and carry waterproof clothing.</p>



Isolation/ Communications	Some volunteers might find the isolation uncomfortable. We will probably have limited communication with the outside world. A satellite telephone will be turned on from 7:30 a.m.–8:30 a.m. (Mongolian time) every day to receive emergency calls. We can call internationally from the satellite phone in case of an emergency.
Personal Security	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. Try to never walk around alone, especially after dark. Avoid wearing expensive jewelry and displaying money or cameras, and leave any unnecessary valuables at home.
Distance from Medical Care	On this project we will be up to six hours (320 km/200 mi) away from the hospital in Ulaanbaatar, and 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, which may be possible only in daylight. Obtain necessary routine medical and dental care prior to traveling and keep a copy of your personal health records and prescriptions with you. 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 you feel at all unwell. The nearest clinic is in Shivee-Gobi, 1.5 hours or 60 km/37 mi away. If you have a chronic condition, which could require immediate medical care (heart conditions, kidney problems, severe asthma, etc.), or if you are pregnant, seriously discuss your participation in this expedition with your physician.
Water	Tap water in Mongolia is not safe to drink. Only drink water provided by the project. Or bottled water when in Ulaanbaatar.
Accommodations	There is a risk of fire within the camp. You will be instructed in what to do should this occur. All gers have very low doorways and wooden frames. Please ensure that you duck whenever entering and exiting them.
Unexploded Ordinances	In some areas of Mongolia there are historic military remnants, including mortars and rounds. While it is rare that you will encounter these ordinances, project staff will brief you on what to expect in the field. Please be aware of your surroundings and keep an eye on where you step. If military remnants are found, please notify project staff team immediately.



# HEALTH & SAFETY

## WILDLIFE OF THE MONGOLIAN STEPPE



### EMERGENCIES IN THE FIELD

On this project we will be up to six hours (320 km/200 mi) away from the hospital in Ulaanbaatar, and 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, which may be possible only in daylight.

#### PHYSICIAN, NURSE, OR EMT ON STAFF:

Project staff members are not medical professionals.

**STAFF CERTIFIED IN SAFETY TRAINING:** Ganchimeg Wingard, Erica Garrouette, Mary Jo Willis, Jen Hausmann, and John Azua are certified in CPR and basic first aid. Ganchimeg Wingard and Erica Garrouette are also certified in Wilderness First Responder.

For emergency assistance in the field, please contact Earthwatch's 24-hour emergency hotline number on the last page of this briefing. Earthwatch is available to assist you 24 hours a day, 7 days a week; someone is always on call to respond to messages that come into our live answering service.

### IMMUNIZATIONS & TRAVEL VACCINATIONS

Please be sure your routine immunizations are up-to-date (for example: diphtheria, pertussis, tetanus, polio, measles, mumps, rubella and varicella) and you have the appropriate vaccinations for your travel destination. Medical decisions are the responsibility of each volunteer and his or her doctor, and the following are recommendations only. Visit [cdc.gov](http://cdc.gov) or [who.int](http://who.int) for guidance on immunizations.

If traveling from countries or region where yellow fever is endemic, you must have a certificate of vaccination.



# TRAVEL TIPS

## SUGGESTIONS FOR THE ROAD

### YOUR DESTINATION

**LANGUAGE:** Mongolian. The project will be conducted in English.

**TIME ZONE:** GMT +8. **NOTE:** Mongolia does not observe Daylight Savings Time.

**CULTURAL CONSIDERATIONS:** Mongolians love to give and receive gifts, and you may wish to bring some small items to give: calendars, pins or buttons, small flashlights, inexpensive pocket knives or tools, small puzzles, playing cards, tea, batteries, your own handmade crafts or trinkets, clothing (including used clothing if it is clean and in very good shape), water bottles, pens and notebooks—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 or Leatherman, or your handheld GPS unit with the project, those gifts are greatly appreciated. Earthwatch does not expect volunteers to give any gifts, and any such gestures are entirely voluntary on your part.

**TIPPING:** Mongolians generally do not tip, however, if you appreciate the service at the research camp, please feel free to tip the staff.

**ADDITIONAL INFORMATION:** The following are prohibited for export from Mongolia: any publications, records, films, or drawings critical of Mongolia; paleontological and archaeological findings without special permission; collections of plants and their seeds; birds and wild or domestic animals; wool, raw skins, hides, and furs; and artifacts without permission from the appropriate authorities. A receipt from a souvenir shop does not mean you have export permission.

### MONEY MATTERS

**LOCAL CURRENCY:** Mongolian tugrug (MNT).

**PERSONAL FUNDS:** We recommend that you bring the equivalent of about US\$200, depending on whether or not you intend to buy gifts and souvenirs, etc. Cash in the form of the newest possible US\$100 bills will usually bring the highest exchange rate. Bills in poor condition may not be accepted. You'll only find ATMs in Ulaanbaatar; many banks and the State Department Store (on Peace Avenue, two blocks from Zaya's) have ATMs. The Chinggis Khaan- Ulaanbaatar airport also has an ATM. Restaurants and shops in Ulaanbaatar increasingly accept Visa and MasterCard credit cards, but most establishments still do not accept either. We recommend changing any money at the State Department Store in Ulaanbaatar (at first floor).

Once in Ikh Nart Nature Reserve, we won't have access to banks nor cash machines, and locals (disco, women's coop) will only accept cash in the local currency.

### COUNTRY AND PROJECT ENTRY REQUIREMENTS

Entry visa requirements differ by country of origin, layover, and destination, and do change unexpectedly. For this reason, please confirm your visa requirements at the time of booking and, again, 90 days prior to travel. Please apply early for your visa (we recommend starting six months prior to the start of your expedition). Refunds will not be made for volunteers cancelling due to not obtaining their visa in time to meet the team at the rendezvous. You can find up to date visa requirements via the following site:

[www.travisa.com](http://www.travisa.com)

If a visa is required, participants should apply for a TOURIST visa. Please note that obtaining a visa can take weeks or even months. We strongly recommend using a visa agency, which can both expedite and simplify the process.

Generally, passports must be valid for at least six months from the date of entry and a return ticket is required.

### CONTACT INFORMATION

You may be required to list the following contact information on your visa application and immigration form, or if your luggage does not make it to baggage claim at your destination:

**Ms. Selenge Tuvdendorj**

Mongolian Conservation Coalition

Ulaanbaatar, Mongolia

+976 9927-1239 or +976 11326-051

[stuvdendorj@yahoo.com](mailto:stuvdendorj@yahoo.com)



# EXPEDITION PACKING LIST

## WHAT TO BRING

### EXPEDITION PACKING CHECKLIST

#### GENERAL

- This expedition briefing
- Your travel plans, rendezvous details, and Earthwatch's emergency contact information
- 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)

#### CLOTHING/FOOTWEAR FOR FIELDWORK

- Clothes should not be brightly colored or white; tan and dull colors are best
- Lightweight, quick-drying, long-sleeved shirts and pants/trousers
- Heavy, warm long pants/trousers (May, June, and September)
- 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 jacket—it rains in the summer months from June to August
- Windbreaker
- Fleece/jumper/sweater
- Warm (down or insulated) jacket/gloves/hat
- Work gloves
- Long underwear (May, June, and September)
- Women—Strongly recommend bringing supportive sports bra as off-road travel can be very bumpy

#### CLOTHING/FOOTWEAR FOR LEISURE

- At least one set of clothing to keep clean for end of expedition
- Comfortable footwear for camp

#### FIELD SUPPLIES

- Small daypack to keep your personal items together and dry
- Drybag or plastic sealable bags (good for protecting equipment like cameras from dust, humidity, and water)
- Plastic sealable bags or plastic box lunches
- Insect repellent spray
- Two one-liter water bottles
- Pens, pencils, and pocket-sized notepad

**ESSENTIAL:** Flashlight or headlamp (preferred) with extra batteries and extra bulb (although the GERS—traditional Mongolian tents—have lights, the power is not 100% reliable, so it is useful to bring a smaller lantern-style flashlight as well)

#### BEDDING AND BATHING

- Sleeping bag (comfortable to about -7°C/20°F)
- Sleeping pads (while pads are provided, having your own will make sleeping more comfortable.)
- Towel
- Mesh shopping bag useful for carrying things to the showers but not essential

#### PERSONAL SUPPLIES

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



## EXPEDITION PACKING CHECKLIST

### OPTIONAL ITEMS

- Travel guidebook (The Bradt Travel Guide to Mongolia is recommended, see Recommended Reading for details)
- Small gifts for Mongolian locals (postcards, calendars featuring your home town, etc.)
- Pillow (a pillowcase and rolled-up sweater/jumper may suffice and saves on space)
- Walking poles for hiking
- Goggles and or bandanas for dust storms
- Good-quality hiker's compass, such as Silva or Brunton, with mirror top (recommended: very useful. We will give a compass-reading lesson)
- Spare batteries
- Snack food
- Insulated cup

- Camera, film or memory card(s), extra camera battery
- Hardware for sharing digital photographs at the end of the expedition
- Dry bag or plastic sealable bags (e.g. Ziploc) to protect equipment like cameras from dust, humidity, and water
- Books, games, art supplies, etc. for free time
- Earplugs for light sleepers

**NOTE:** Do not bring more luggage than you can carry and handle on your own. If traveling by air and checking your luggage, we advise you to pack an extra set of field clothing and personal essentials in your carry-on bag in case your luggage is lost or delayed.



# PROJECT STAFF

## YOUR RESOURCES IN THE FIELD

**NOTE:** The specific staff scheduled to run your team is subject to change.



**MS. GANCHIMEG WINGARD (GANA), EARTHWATCH SCIENTIST**, is the Mongolia program director at the Denver Zoological Foundation (DZF). She holds two master's degrees, one from Charles University in Prague in environmental science and her second 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 ecotours in Mongolia. **Schedule: Teams 2 and 5.**



**DR. JEN HAUSMANN** is one of the veterinarians at the Denver Zoo. She has been helping with the Denver Zoo's Mongolia Conservation Project for two years and received her doctorate in veterinary medicine from the University of California, Davis. She interned at VCA Emergency Animal Hospital and Referral Center in San Diego, CA and then spent a year at the Maryland Zoo in Baltimore for a zoo medicine internship. Jennifer then completed a three year residency program in zoological medicine at the University of Wisconsin, Madison. Jennifer loves Denver and the opportunity to assist in the health monitoring of the Ikh Nart nature reserve. **Team 1.**



**MS. ERICA GARROUTTE** is the Mongolia community engagement manager at the Denver Zoological Foundation (DZF). She received a master's degree in Landscape Ecology from Montana State University, where her research was focused on understanding grassland dynamics. Erica works with the Mongolian team to engage community members and students involved in the conservation of wildlife at Ikh Nart. Erica has worked on conservation projects in Kenya, Tanzania, Montana, New Mexico, and Colorado. **Team 4**



**MR. JOHN AZUA** is the Curator of birds at the Denver Zoo and has extensive experience with a wide variety of bird species. He has worked on conservation projects in Mexico, the US, and Mongolia since 2007. **Schedule: Team 1.**



**MS. SELENGE TUVDENDORJ** is the executive director of the Mongolian Conservation Cooperative and has experience working on a wide variety of conservation initiatives. She speaks fluent German and English. Selenge will facilitate all aspects of all expeditions. **Schedule: All Teams.**



# RECOMMENDED READING

## YOUR RESOURCES AT HOME

### RESOURCES

#### ARTICLES

- Reading, R. P., G. Wingard, T. Selenge, and S. Amgalanbaatar. 2015. The crucial importance of protected areas to conserving Mongolia's natural heritage. Pp. 257-265, in: *Protecting the wild: Parks and wilderness, the foundation for conservation*, Wuerthner, G., E. Crist, and T. Butler (eds.). Island Press, Washington, D.C.
- Zapletal, M., Batdorj S., J. Atwood, J. D. Murdoch, and R. P. Reading. 2015. Fine-scale habitat use by Daurian hedgehogs in the Gobi-steppe of Mongolia. *Journal of Arid Environments* 114:100-103.
- Kenny, D., Y. J. Kim, H. Lee, and R. P. Reading. 2015. Blood lead levels for Eurasian Black Vultures (*Aegypius monachus*) migrating between Mongolia and the Republic of Korea. *Journal of Asian-Pacific Biodiversity* 8(3): 199-202.
- Kenny, D., R. P. Reading, and H. Lee. 2015. Blood-gas analysis from free-ranging Eurasian Black Vultures (*Aegypius monachus*) in Mongolia and the Republic of Korea. *Research & Reviews: Journal of Veterinary Sciences* 1(1): 1-9.
- Murdoch, J. D., H. S. Davie, M. Galbadrakh, and R. P. Reading. In press. Factors influencing red fox occupancy probability in central Mongolia. *Mammalian Biology*.

#### BOOKS

- Reading, R.P., D. Kenny, and B. Steinhauer-Burkart. (2011). *Ikh Nart Nature Reserve: Argali Stronghold*. 2nd ed. Nature-Guide No. 4, Mongolia.
- Blunden, J. (2008). *Mongolia*. 2nd ed. Bradt Travel Guides.

#### FIELD GUIDES

**NOTE:** The following guides have different advantages and disadvantages, although if you were only going to purchase one book, we'd recommend Brazil (2009). *Birds of East Asia: China, Taiwan, Korea, Japan, and Russia*

- Batsaikhan, N., R. Samiya, S. Shar, and S. R. B. King. 2010. *A Field Guide to the Mammals of Mongolia*. Zoological Society of London, UK.
- Brazil, M. 2009. *Birds of East Asia: China, Taiwan, Korea, Japan, and Russia*. Princeton University Press, Princeton, NJ (best overall guide, but missing some species, especially in western Mongolia).

#### FILMS

- Bodrov, S. (director). 2007. *Mongol* (based on the early life of Genghis Khan)
- Davaa, B. and L. Falorni. (directors). 2003. *The Story of the Weeping Camel* (nominated for an Academy Award).

#### PROJECT-RELATED WEBSITE

- **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)

#### PROJECT FIELD REPORT

Each Earthwatch-supported project submits a report on past research and results.

- The most recent field report for this project is available online at: <http://earthwatch.org/FieldReports/earthwatch-field-report-wildlife-mongolian-steppe-2015.pdf>. **NOTE** that reports are not available for all projects

#### EARTHWATCH SOCIAL MEDIA

- **FACEBOOK:** [facebook.com/Earthwatch](https://www.facebook.com/Earthwatch)
- **TWITTER:** [twitter.com/earthwatch\\_org](https://twitter.com/earthwatch_org)
- **INSTAGRAM:** [instagram.com/earthwatch](https://www.instagram.com/earthwatch)
- **BLOG:** [blog.earthwatch.org](http://blog.earthwatch.org)
- **YOUTUBE:** [youtube.com/earthwatchinstitute](https://www.youtube.com/earthwatchinstitute)

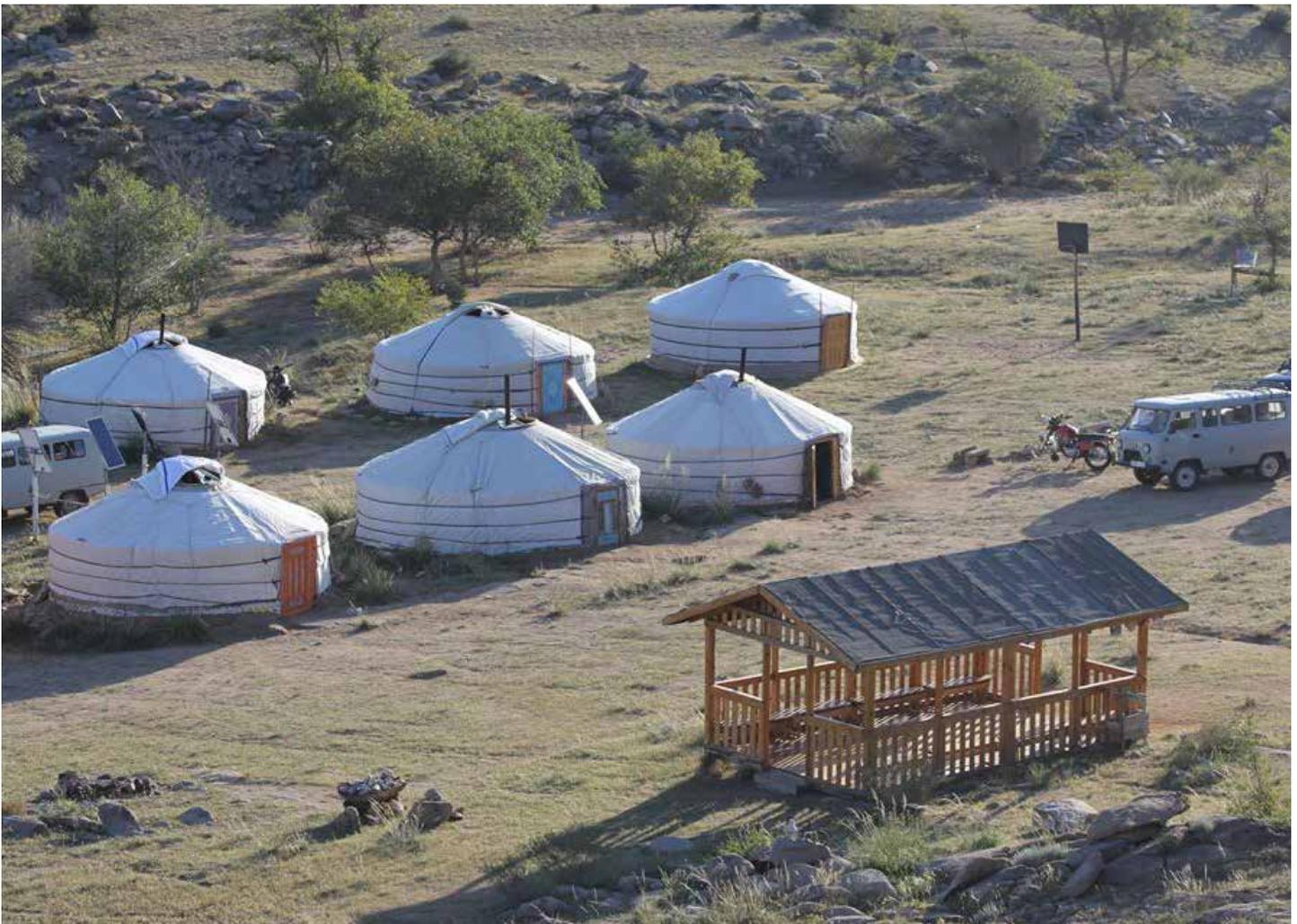


# LITERATURE CITED

## YOUR RESOURCES AT HOME

### LITERATURE CITED

- Bruun, O. and O. Odgaard (eds.). 1996. Mongolia in transition: Old patterns, new challenges. Nordic Institute of Asian Studies, Curzon Press Ltd, Surrey Great Britain.
- Reading, R. P., S. Amgalanbaatar, and H. Mix. 1998a. Recent Conservation Activities for Argali (*Ovis ammon*) in Mongolia - Part 1. *Caprinae August*: 1-3.
- Shiirevdamba, Ts., O. Shagdarsuren, G. Erdenjav, Ts. Amgalan, and Ts. Tsetsegma. (eds.). 1997. *Mongolian Red Book. Ministry for Nature and the Environment of Mongolia: Ulaanbaatar, Mongolia.* (In Mongolian, with English summaries)
- Wingard, J. R. and P. Odgerel. 2001. *Compendium of Environmental Law and Practice in Mongolia.* GTZ Commercial and Civil Law Reform Project and GTZ Nature and Conservation and Buffer Zone Development Project, 409 pp., Ulaanbaatar, Mongolia.



# EMERGENCY NUMBERS

## AROUND-THE-CLOCK SUPPORT



### EARTHWATCH'S 24-HOUR EMERGENCY HOTLINE

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Call Earthwatch's 24-hour on-call duty officer in the U.S.:

+1 (978) 461.0081

+1 (800) 776.0188 (toll-free for calls placed from within the U.S.)

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

### TRAVEL ASSISTANCE PROVIDER: ON CALL INTERNATIONAL

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TEL: +1 603-952-2680 (collect calls/reverse charges accepted)

TOLL FREE FROM U.S. & CANADA: 1-833-819-2939

TEXT ONLY: +1-603-945-0103

EMAIL: [mail@oncallinternational.com](mailto:mail@oncallinternational.com)

You may contact On Call International at any time. They can assist in the event of a medical or evacuation emergency or for routine medical and travel advice, such as advice on visas and vaccine requirements.

### FOR VOLUNTEERS BOOKED THROUGH THE EARTHWATCH AUSTRALIA OFFICE:

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### Earthwatch Australia 24-Hour Emergency Helpline

+61.0.3.8508.5537





# MESSAGE FROM EARTHWATCH

DEAR EARTHWATCHER,

Thank you for joining this expedition! We greatly appreciate your decision to contribute to hands-on environmental science and conservation. It is volunteers like you who fuel our mission and inspire our work.

While at Earthwatch, I've had the opportunity to field on a few expeditions, most recently in Kenya with one of my daughters. Each expedition has touched me deeply, and made me proud to be able to roll up my sleeves alongside my fellow volunteers and contribute to such meaningful work.

As an Earthwatch volunteer, you have the opportunity to create positive change. And while you're out in the field working toward that change, we are committed to caring for your safety. Although risk is an inherent part of the environments in which we work, we've been providing volunteer field experiences with careful risk management and diligent planning for nearly 45 years. You're in good hands.

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

Sincerely,



Scott Kania  
President and CEO, Earthwatch





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