PROJECT OVERVIEW

Research Area

The Sharga Lake research area in Bulgan Province is located in an archaeologically rich river valley at approximately 1700 meters above sea level. Much of the landscape is covered by open grasslands, with forested areas generally occurring at higher elevations. The large majority of animals one encounters in the area are herded animals. Like much of Mongolia, the research area is characterized by low levels of humidity and a continental climate. The rainy season, which sometimes brings violent storms, begins around the middle of July, although abundant rains are also possible during the months of May and June. Daily temperature fluctuations can be very significant, ranging from as low as 30°F (−1°C) at night to over 90°F (32.2°C) during the day (Fig. 1).

By far the most significant subsistence system is nomadic pastoralism, characterized by the herding of various species of animals (mainly sheep, goats, cattle, and horses) and the regular migration of entire family units in search of new pastures or shelter for their animals. Families typically move between two and four times per year. The traditional lodging of the nomads is the 'ger' (more commonly known by foreigners as a 'yurt'), a circular structure that consists of a light frame of wooden slats covered by felt and canvas. Gers are typically found in groups of two to six, with the families in each ger linked to one another by kin and friendship ties. At the time of migration, a family's entire possessions are moved, with little left behind to indicate its earlier occupation of a particular locale. Because there is no private land ownership, families are free to relocate anywhere they wish as long as they maintain a certain distance from already established camps belonging to other families. The diet of nomads consists almost exclusively of milk and meat products obtained from their animals, although the past two decades has witnessed an increasing number of people complementing their diet with vegetables (when they are able to purchase them). Nomads in Mongolia eat large quantities of mutton, although other animals are sometimes eaten at certain times of the year. Other animal products that are consumed regularly include horse milk ('airag'), hard yogurt, and butter. Nomadic people in Mongolia are generally very hospitable and strangers are often invited into a family's ger to eat and drink the meat and dairy products obtained from its animals.

The research area is in many ways ideal for anthropological fieldwork. Mongolia is politically and ethnically stable and foreigners typically feel very safe traveling there. The months of May, June and July are generally sunny, the climate is dry and there exist none of the diseases or discomforts usually associated with tropical climates (e.g., malaria). The area's relative isolation has ensured the preservation not only of the stunning grassland setting but also of traditional customs. Participants on the project have many opportunities to meet local nomadic peoples and visit them in their gers.

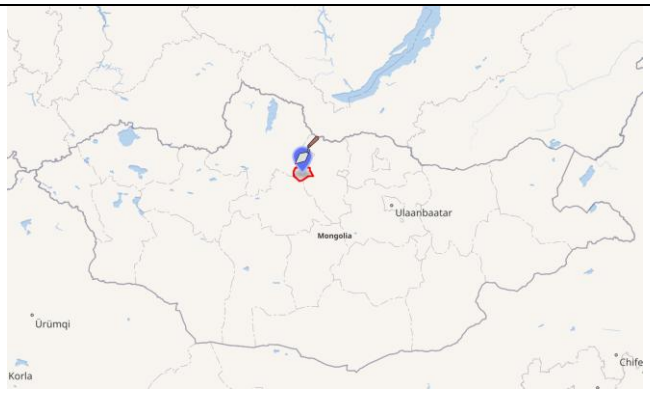


Fig.1 Sharga Lake Research Area, Bayan Agt, Bulgan Province

Research Objectives

Understanding the sociopolitical trajectory:
The presence of large burial and ritual monuments and the amount of labor needed to construct them point to the likely presence of some type of leadership associated with these sites. These sites bring to mind a number of important questions and issues that the project regards as highly interesting and relevant. For example, how can we best define the nature and expression of power at the time of the khirigsuurs? We know from the excavation of other large burial mounds in Mongolia that in some cases, few artifacts accompanied the deceased, reversing the usual association made between the scale of mortuary structures and the amount of prestige goods. Possibly, then, the power of leaders may have been expressed more simply through the impressive scale of his or her tomb and associated structures than by the grave goods displayed and buried at the time of the funeral. We may also be dealing with a system where differential (possibly even hierarchical) social relations were based on the control of nonmaterial resources (such as ritual-based polities) rather than hierarchical social relations based on economic variables. Although not entirely consistent, this is a pattern that is witnessed in other nomadic societies as well. Another possibility is that religious specialists were buried under the larger mounds and that the associated rituals were meant to confirm the efficacy of the religious system and position of the specialist rather than honor the achievements or status of a single individual. These monuments could also have been used by relatively egalitarian societies that engaged in seasonal group-oriented ceremonies in order to reaffirm social ties. Regardless, it is clear that communal rituals played an important role in local and supra-local integration. Accordingly, we also wonder about the circumstances that may have permitted or encouraged the development of their complex sociopolitical organization. Here again, a number of possible scenarios exist including one that sees a climatic amelioration leading to increased productivity. In such a scenario, khirigsuur monuments became centers of territories whose increasingly productive lands needed to be protected and in which leadership was dependent on the ability to manage the defense of the territory. Based on current data, it also seems possible that climate amelioration may have enabled the rapid spread of horse ritual over vast areas of Mongolia. The testing of these models remains an important objective of the project, although more data must be collected before answers to these and other related questions can be proposed.

Planned Activities:
The activities planned for the 2027 field season aim to collect data that can be used to address all of the above issues. One of the main goals will be to record and map archaeological sites in our research area. The point of this survey is to collect information about the location, distribution, and organization of ritual, burial, and habitation sites. This will provide us with important information about past human activities and territorial behavior in a regional context. We will also be excavating ritual structures and habitation sites.

Ritual structures:
Small stone mounds (aka 'horse head mounds') that contain the heads and extremities of horses surround Late Bronze Age Khirigsuur ritual/mortuary monuments. Are these communal ritual sites, and the complex social interactions they suggest, a lead-up to the formation of the Xiongnu polity? Is there evidence for ritual intensification through time? If so, does ritual intensification parallel community growth and supra-local integration? Datable material from the horse head mounds will help answer the temporal aspect of these questions. Undertaking strontium (Sr87/Sr86), oxygen ($\delta^{18}O$), and carbon ($\delta\ ^{13}C$) isotope analyses on the horses buried at the ritual sites will help inform us about the extent of regional interaction, i.e., if some of these horses were brought from areas farther afield or if they were all local. To do this, we will excavate horse head mounds to retrieve material for carbon-14 dating as well as mandibular molars from ritually deposited horses for isotopic analyses. Determining where horses from ritual contexts originated will help shed light on supra-local interaction.

Habitation sites:
Knowledge of habitation sites is also important for many reasons, including the determination of subsistence practices, population estimates, mobility patterns, and territorial behavior. Our preliminary work in the region has discovered a number of habitation sites. During the 2027 field season, we will excavate some of these, with the goal of further elucidating the relationships between these sites and the broader regional dynamics, such as trade networks, settlement hierarchies, and environmental adaptation strategies. These excavations will also provide insight into the cultural practices and daily lives of the people who inhabited the area, enriching our understanding of Mongolia's past.

Additional work: Archaeology, Sustainability, and Community Engagement
We will also continue our ethnographic and ethnoarchaeological research, as well as gather geoarchaeological proxy data for climate and environmental reconstructions. This ongoing research will allow us to build a more comprehensive understanding of how past communities interacted with their environment, adapted to climate fluctuations, and shaped their landscapes over time. By integrating ethnographic insights with archaeological data, we aim to create a more nuanced model of ancient human-animal-environment relationships, while the geoarchaeological data will help refine our understanding of regional environmental changes and their impacts on settlement patterns and subsistence strategies.

This project also builds on Mongolia's nomadic legacy to investigate how sustainable lifeways developed and may continue to offer viable responses to modern environmental challenges. To this end, we are developing a community-based archaeology program in collaboration with local stakeholders to co-develop a community engagement initiative tailored to the region. By integrating local voices and histories, traditional knowledge and skills, and archaeological research, we aim to foster pride in pastoralist heritage, support community-based advocacy, and strengthen interest in herding as part of a resilient future.

OVERVIEW OF LIVING AND WORKING CONDITIONS:

All participants should be in good physical condition and be able to adapt to basic living conditions. We stay in a camp with small shared wooden cabins, use camp toilets and showers, and filter and carry our own water. Survey work requires participants to walk up to 10 miles per day, sometimes in moderately difficult terrain such as hill slopes and rocky terrain. Excavation work at the sites involves carrying equipment to and from the vehicles, working on one's hands and knees, and moving stones and soil in and out of excavation trenches using hands, trowels, and shovels. Travel in the vehicles is usually bumpy and uncomfortable (but fun!), and the Mongolian concept of personal space is not as generous as in the West. In Mongolia, transportation is, for the most part, just that—transportation. Having said the above, we also emphasize that none of the tasks expected of the participants are particularly strenuous or demand more than limited physical strength.

Mongolia's dry northern climate provides definite advantages in that there are none of the many infectious diseases (such as malaria) that plague tropical countries. In fact, Mongolia is a generally healthy place to travel in. Aside from the usual set of vaccinations recommended for travelers (e.g., tetanus, hepatitis, diphtheria, etc.), we encourage participants to be vaccinated for Covid-19. Participants may also wish to be inoculated against rabies. In the unlikely event that someone is bitten or licked by a rabid animal, there is plenty of time to obtain medical care and eliminate the risk of contracting the disease. Wearing hiking boots and long pants helps protect against scratches and other injuries. The most important things that participants must guard against are heat stroke, sunburn, and dehydration. Protecting oneself from the sun in a treeless environment can be hard and dehydration/heat stroke is a real concern. This is why participants must drink water regularly (at least one gallon per day), wear sunscreen and appropriate clothes, including a hat. Participants are also encouraged to take breaks whenever they feel it is necessary. Anyone with a phobia to animals or open spaces is of course discouraged to join the project. Sanitary conditions in the *gers* (traditional Mongolian dwellings made of wood and felt, also known as yurts) are often basic and may not meet modern hygiene standards, and those who are averse to sharing drinking cups and eating with their hands (all encountered when socializing with the nomads) should also reconsider their participation. Finally, participants need to understand that cultural norms and privacy are somewhat compromised on a trip like this.

Mongolia is often called *The Land of the Blue Sky*, and in the region where we are working, summers are generally pleasant and dry. However, the weather can change quickly, especially when the wind shifts from the north. Summer nights are frequently cold, with temperatures occasionally dipping below freezing. One moment you might be comfortable in a T-shirt and shorts, and the next you are reaching for a warm sweater, windbreaker, and wool cap, before returning to lighter clothing again. The wind can be strong at times, and while violent storms do occur, rainfall is usually light and short-lived.

Humidity	56%	To	66%
Temperature Range:	30°F/-1°C at night	To	over 68°F/20°C during the day
Altitude	1700 m	To	2,000 m

FIELD ACCOMODATIONS:
Participants need to be aware that there are few modern amenities available in the remote region where the research is being conducted. The camp consists of small wooden cabins, a kitchen/mess hall, as well as shared camp toilets and showers. All participants sleep in small, shared cabins with beds and are asked to bring their own sleeping bag, taking into consideration the likelihood of occasional strong winds and rain and the fact that temperatures may (and almost certainly will) drop into the low 30°s (-1°C) at night. **Do not underestimate this!** Although locals drink the river water unfiltered, we ask all project participants to filter their water using their personal filter (see below). With all this said, it should also be added that participants typically do not find the living conditions particularly taxing and soon come to appreciate the dry climate, the safe working environment, and the friendly relations they develop with the group and the local inhabitants. Those who are used to camping and hiking for extended periods of time are even likely to find their stay an easy and relaxing one.

FOOD:
Hired cooks will be responsible for buying and preparing all of the food consumed. The remoteness of the research area, combined with the limitations imposed by the climate, place significant restrictions on the food available locally. A sheep is purchased from the local nomads every few days, with mutton representing a very substantial part of the project participants' diet. The range of dishes available to participants is relatively limited, with meals consisting of varied combinations of boiled (often fatty) mutton, vegetables (potatoes, onions, beets, and carrots), rice and fried bread. The meals vary little from one another and many of the non-Mongolian participants consider Mongolian food to be monotonous. For this reason, non-Mongolians often choose to season their dishes. Although the project will purchase some spices and condiments (e.g., chili, tomato sauce), participants may also want to bring their own supply of favorite seasonings, which they can add directly to their meal (e.g., curry powder). You are also advised to bring along a selection of lightweight and nutritious foods that you enjoy. These might include, for example, dried fruits or granola bars. Nutella (a chocolate/hazelnut spread) and peanut butter, both of which can be purchased in Ulaanbaatar, are particularly popular among some participants. There is little fiber content in the diet. Hot water and tea/milk tea are available at all meals. Because tea is almost always salted, some participants may wish to bring their own tea bags. If you can't live without it, please bring your own supply of instant coffee. Participants will also have opportunities to consume local beverages and foods in nearby gers. It is also advisable for participants to bring daily multi-vitamins.

It is important to point out that special diets cannot be accommodated. All meals are cooked in the same containers and, although vegetarians (of which there have been a few over the past 20+ years) are able to leave out the meat when they eat, it is not possible to avoid ingesting meat fat or vegetables that will have some mutton taste. The number of cooking utensils/equipment is limited, and participants will have few, if any, opportunities to cook their own meals (although you may wish to bring the army type ready made meals that only need to be boiled). The project also cannot accommodate low fat or low sodium diets.

MEDICAL INFORMATION AND ADVICE:

The following medical conditions (or limitations) would make participation difficult or uncomfortable for participants. Also listed are health hazards that may be encountered in the research area.

- Problems with back, legs, knees, or ankles. There is a lot of walking, bending, kneeling, crouching, and sitting on the ground.
- Severe arthritis, cardiac problems, or high blood pressure.
- Sensitivity to direct sunlight.
- Diabetics should carefully consider their individual medical needs when deciding whether to participate in this project. The project does not have the capacity to carry or store insulin.
- Restricted diet: low sodium, low fat, strict vegetarians, vegans.

When ill, the potentially serious loss of fluids resulting from vomiting or diarrhea can be alleviated by suppositories, which the participants should consider bringing. Aside from personal medications and other basic supplies (antibacterial wipes/lotion, anti-diarrhea pills, antibiotics, antiseptic, itch-relief, pain reliever, bandages, foot powder), participants should not forget to bring sunscreen lotion (SPF 30 or higher) and any needed medication if prone to allergies (the project does not carry epinephrine).

Medical care is generally poor in Mongolia and the camp is located far from any decent medical facilities. The project will have a first aid kit. Minor problems will be handled at camp. Anyone suffering from a major medical condition that is not life threatening will be made as stable as possible and then accompanied by an appropriate person to a medical facility in UB (about 10 hours away by vehicle).

The following are recommendations only: tetanus, typhoid, and hepatitis A. A rabies inoculation is optional. Malaria is not present at the research site. Health conditions around the world are constantly changing, so keep informed and consult your local travel health clinic or the Center for Disease Control website. Medical decisions are the responsibility of each participant.

COMMUNICATIONS WHILE IN THE FIELD:

There are no public phones in the local town. However, things are changing quickly in Mongolia and there is increasing cellphone reception with a Mongolian SIM card. That being said, this is NOT something you should count on as the service may not always work.

WHAT TO BRING:

Do not bring more luggage than you can carry and handle on your own. There is a maximum of two pieces of luggage per person. These would ideally include one backpack and one small daypack that is both soft and sturdy, since the bags will be stuffed into restricted spaces in the vehicle along with other luggage and equipment. Luggage may (no, WILL) become dirty. A number of you will be asked to pack some project equipment (i.e., bags, labels, etc.). When flying, we recommend that you pack a carry-on bag with an extra set of field clothing and personal essentials in the event that your luggage is lost and/or takes several days to catch up with you.

GENERAL CONSIDERATIONS/OVERVIEW

When deciding what to bring on this 'expedition', please remember that you will not have the opportunity to buy supplies once you are in the field (except perhaps for basic things like soap and snacks in the local village). Something else to remember is that the weather is unpredictable (powerful winds and storms sometimes race through the valley), the midday sun is very strong, and temperature fluctuations on any single day are significant (from the low 30°s F/-1°C to over 68°F/20°C). **DO NOT UNDERESTIMATE THIS!** For these reasons, we ask that you bring a hat and sunscreen for the daytime, warm clothes for the evening and nighttime, and that you carefully select and purchase your own sleeping bag. The project will supply toilet paper (but bring a roll or two of the softer kind), cutlery (utensils and dishes, cups, etc.), and most excavation materials to be used in the field (shovels, screens, GPS units, etc.).

<u>You are required to bring the following</u>: an archaeology pointing trowel, a metric tape measure (at least 5m long), a small notebook, and pens/pencils (More about that below).

It is important to note that electricity may not always be available. <u>Please make sure that you have enough batteries</u> to run the electronic equipment you bring.

You cannot buy Togrog (the Mongolian currency) outside Mongolia. Bring US dollars or Euros (the bills should be unmarked and as recent as possible. Mongolians often reject or give a lower exchange rate for old bills!). ATM cards and credit cards (for some reason MasterCard doesn't always work, but VISA works fine) can also be used in many places in Ulaanbaatar, including banks to obtain cash advances (don't only count on this for money as they might not always work). In almost every place outside Ulaanbaatar you must use Togrog, though there is an ATM in the nearby village and some shops accept cards (but do not count on this). It is suggested that you bring with you US$150-200 in Togrog when you leave Ulaanbaatar for the field. This should be more than sufficient to cover the costs of any extra supplies or treats that you might wish to purchase while in the field, as well as food and treats when traveling to and from the research area. At the local 'stores', it's usually possible to buy candy/chocolate, biscuits, and a few other things, although the stores sometimes run out of these completely.

- Ideas of small gifts to local people include things such as pins, candies, photos, and crayons for kids.

What to Bring

Required

Bedding

- Sleeping Bag (You should consider a sleeping bag rated to at least 20°F/-7°C). Do not underestimate this. Some nights can (no, WILL) be pretty chilly!

Clothing/Footwear

- Light weight, quick drying, long-sleeved shirts, and pants/trousers (although cotton is warm and comfortable, some of you may wish to bring nylon or nylon blend clothing since it is durable and dries faster than cotton).
- Sweater
- Windbreaker (preferably with a fleece liner and a hood) that also acts as raingear (heavy raingear is not necessary)
- Thermal underwear (long johns are a good idea for those cold mornings/nights!)
- Woolen gloves (and/or cut off [short finger] gloves for chilly working days)
- Comfortable hiking boots with good ankle support (lightweight boots are sufficient for the type of walking you will be doing). Make sure to break them in before fieldwork!
- Bathing suit (and optionally bath slippers or sandals for bathing)
- Cap or broad-brimmed hat for protection against the sun
- Knitted (e.g., woolen) hat for protection against the cold

Field Supplies

- Small daypack/rucksack
- Drybag or plastic sealable baggies (good for protecting equipment such as camera or other belongings from dust, humidity, and water)
- Insect repellant
- Water Containers: You should drink at least one gallon (128 ounces) of water per day. We suggest you bring a few Nalgene water bottles, which you can fill directly (after filtering of course) from the water in the large plastic containers the project will supply. Some participants may wish to bring and carry with them a 'camelback' or 'fannypack' water container.
- Personal water filtration system. Although there are different brands out there, the *Katadyn Hiker Pro* is a good one that some of us have used in the past. We suggest you bring a replacement filter, since they do clog up after some time. You may wish to buy and share your filter with someone else on the project as these are not cheap – but ESSENTIAL! No need for filters that filter down to virus size.

- Pocket knife or other pocket multi-tool (such as a Leatherman). Important: Place this kind of tool/equipment in your checked luggage, not your carry-on (otherwise, it will be confiscated).
- An archaeological pointing trowel (the Marshalltown brand or equivalent is required – we highly suggest the 45-5 model; other brands break too easily). In the USA, you can easily purchase your trowel at: www.marshalltown.com (under 'Products'/'Archaeology Tools').
- Metric Tape Measure. Measuring tape must be metric (in meters) and should be no shorter than 5 meters. These can be difficult to find in local hardware stores in the US but can be purchased on Amazon.com.
- Work gloves. You will be moving stones and dirt, so gloves will help prevent blisters.
- A small personal notebook and pens/pencils.

Personal Supplies

- Personal toiletries (please bring biodegradable soaps that can be used for both washing clothes and oneself)
- Antibacterial wipes or lotion (good for "washing" while in the field). 'Baby wipes' have proven useful.
- Personal first aid kit (anti-diarrhea pills, broad-spectrum antibiotics, antiseptic, itch-relief, pain reliever, bandages, moleskin, suppositories, foot powder, etc.)
- Sunscreen lotion with SPF 30 or higher (it is essential that you protect yourself against the harsh sun during the day)
- Personal flashlight/torch
- Batteries
- Duct tape (always handy!)

Recommended but not essential

- Sleeping mat (the bed mattresses are very rigid and offer little to no cushioning)
- Higher quality toilet paper (than what the project will supply)
- Drinking cup (although I can't promise it won't end up in the shuffle and be used by others)
- Knee pads (for excavation)
- Face mask/bandana that covers the mouth (to protect against the sometimes abundant dust carried by the wind or associated with the process of excavation)
- Mongolian phrase book
- Hat with chin tie (to keep the hat from blowing away in the wind)
- Thin super absorbent 'chamois type' towel that dries quickly

- Sunglasses
- Lip balm
- Camera, Camcorder, film, Memory cards
- iPod, MP3 player
- Binoculars
- Spices, snack food, multivitamins

IMPORTANT INFORMATION

Passports:

If you do not have a passport, begin applying immediately – it can be a lengthy process. If you have a passport, make sure it is valid for at least six months beyond the end date of the program; if it is not, you should begin the renewal process immediately. US citizens do not need a Visa for visiting Mongolia for less than 90 days, but you do need to register with the local "*Office of Immigration, Naturalization and Foreign Citizens*" if you stay over 30 days. For other nationalities, please visit the following website (some other countries need not have a visa for stays under 30 or 90 days) – https://en.consul.mn/visa/c/83. However, if you are traveling through another country before entering Mongolia (e.g., China), then you will need a visa from that country (unless you are just transiting through there). Make sure you allow enough time for visa processing. We can provide information regarding these procedures (Information regarding Passport and Visa preparation for Americans can be found at the following address: http://www.passportvisasexpress.com). We can also provide some information and help for non-US participants.

Conditions

I have read the Project Overview and have read all and/or agree to read all other materials sent to and received by me about the program for which I am applying, and feel informed.

As a team member (hereafter Participant) of the Western Mongolia Archaeology Project, I will adhere to the regulations and maintain a standard of good conduct. The director of the expedition (hereafter Director) reserves the right to require a Participant to withdraw at any time if conduct or behavior jeopardizes the welfare of any participant or the fulfillment of the objectives of the project. Additional travel costs due to early dismissal will be the entire responsibility of the Participant. It is understood that the Participant will assume all responsibilities, financially or otherwise, for any illness or injury which might occur during the expedition. Emergency transport, medical or hospitalization costs resulting from illness or accident during the expedition are the responsibility of the Participant receiving such care. In cases where the Director, in consultation with the Participant and local medical authorities, considers it necessary, a Participant will be sent home or hospitalized. The Director will make every effort to ensure that an ill or injured volunteer receives proper medical attention. The Participant is aware that while taking part in this project, certain exposure to risks may occur. Exposure may include but not be limited to: accident and/or sickness without readily available medical facilities, the forces of nature, travel on the ground and in the air, and others. In consideration of the right for the Participant to engage in this project, he or she assumes all of the risks involved and agrees to indemnify and hold the Director of the project and his Associations harmless for any and all liability that may arise in connection with travel to and from the archeological site, to any of the excursions, and while engaged in any archaeological or other activities.