

THOUGHTS ON FIELDWORK IN MONGOLIA: THE GOBI

Obviously, the basic considerations inherent in participating in any archaeological field project are pertinent to Mongolia as well; thus the following recommendations are intended only as supplemental guidelines.

RECOMMENDED ESSENTIALS:

- *Layerable, primarily cotton, clothing*¹
- *Sturdy shoes* (lightweight hiking boots with ankle support are recommended; mountaineering boots are unnecessary)
- *Sunglasses* (dark glass lenses; pack a spare pair)
- *Hats* (one broad-brimmed with a chin-strap for sun, one knit cap for warmth)²
- *Camera* (35mm or digital), film/memory cards, spare batteries, dust-proof bag
- *Large folding knife* (MicroTech and Spyderco knives are particularly well-made)
- *Pocket Multi-Tool* (such tools are made by a variety of companies; see www.toolsforstagecraft.com/n309.htm)
- *Small, high intensity flashlight* (plus spare bulbs & batteries)³
- *Compass and Global Positioning System (GPS)*⁴
- *Field notebooks* (e.g., Keuffel & Esser's Cross Section Book, K&E #82 0056 or equivalent)
- *Pens* (permanent black ink) *and Pencils* (black HB lead & colored)
- *8-10X monocular or compact binoculars*
- *10X magnifying loupe*
- *Self-locking plastic freezer bags* (several sizes, including some large enough to seal cameras, laptop computers, etc. Sharpie-type permanent black pens to write on plastic bags)
- *Personal water bottle* (at least one liter; Platypus bags are very handy), *cup & eating utensils*
- *Water filter* (see pages 4-5)
- *Basic individual first-aid kit, including sterile disposable syringes and needles* (the Savvy Traveler from Adventure Medical Kits is a good choice)
- *Lip balm* (bring two)
- *Insect repellent* (100% DEET is recommended)
- *Sunscreen* (at least SPF 30; zinc oxide creme for those with particularly sun-sensitive skin)
- *Eye drops (sterile tears)*⁵
- *Gastro-intestinal medications* (e.g., Tagamet, Maalox, Imodium, prescription Lomotil, etc.)
- *Cold medications* (e.g. Sudafed, Tavist-D, Drixoral, etc.)⁶
- *Adequate supply of other personal medications, toiletries, a detergent concentrate* (e.g., Camp-Suds), *and clothes-pins*⁷

¹At least one sweater/windbreaker combination is suggested. Ideally, the windbreaker should be a ¾-length Gore-Tex parka with a hood and removable fleece liner. The Gobi, even at mid-summer, can be cold with dramatic day/night temperature

differentials. *Protection from the sun, wind, and sand are of paramount consideration.*

Since personal hygiene is a problem in the field due to limited water supplies (plan on having a bucket-bath only once a week), carrying sufficient changes of underclothing and socks is far more important than outerwear. "Moist towelettes" or baby wipes are handy for between-shower hygiene. Rudimentary laundry facilities will be available several times during the summer.

Occasional rain, some heavy, is expected. You need not bring specialized rain gear if your windbreaker is capable of shedding water, although a trekking umbrella is handy (Sea to Summit makes a particularly sturdy and compact model; see www.seatosummit.com.au/tumbrella.php?cat=access). Shower shoes (flip-flops or Teva-type sandals) and a swimsuit are useful for bathing in the field. Lightweight thermal underwear is recommended as a first clothing layer for the occasional cold day and for sleeping. (Remember: Ulaanbaatar and the Hanggai Plateau can be significantly cooler than the Gobi).

Women should pack a compression-type "sports" bra in anticipation of long jeep trips over rough roads.

²In addition to a broad-brimmed hat, a cotton scarf (e.g., an Arab *kaffiyeh* or *shemagh*, or a Berber-Tuareg *chèche*) that can be used in a variety of configurations for protection from the sun and wind is a good idea.

³Sure-Fire® lights are compact and powerful but LED lights, though not as bright, suffice for most needs and are vastly more efficient (remember that batteries are heavy!). Emissive Energy Corporation's Inova X⁵ LED Floodlight® and 24/7® multifunction headlamp (www.inovalight.com) and Arc Flashlight's Model LSH-P (www.arcflashlight.com) are state-of-the-art. See also www.theledlight.com and www.ccrane.com for additional background information.

⁴The Brunton Pocket Transit (waterproof International Model or Geo Transit), Suunto KB-14 or MC-1D, or Silva Ranger (Model 15) are especially recommended, although Silva compasses (and the Suunto MC-1D), being plastic, are less durable and attract dust due to static electricity. Small Silva compasses (e.g., Models 26 & 27) are excellent back-up compasses. Although compasses graduated in *quadrants* are more familiar to many American field workers, those with *azimuth* graduations are more commonly used outside the US. The Expedition relies mostly on Global Positioning Systems for orienteering and in-field cartography. The Garmin eTrex Summit™ is an efficient unit combining a GPS, flux-gate compass, and barometric altimeter. The AltiTech multifunction instrument, distributed by HighGear (www.highgearusa.com) is a compact altimeter, barometer, digital compass, watch, and chronograph that is a useful supplement to a traditional GPS.

⁵Contact lenses should be avoided due to the risk of developing corneal ulcers while wearing contact lenses in remote places. Eyeglass wearers should carry a spare pair.

⁶Respiratory and eye maladies are a special problem in Central Asia and are compounded by dust in arid regions and excavations in caves. Those with allergies to dust should carry disposable filter-masks. *See Page 12 for recommended prescription medications. See also www.travmed.com.*

⁷Remedies for minor gastrointestinal upsets are recommended. Women, especially, should carry a prescription-strength sulfa drug (e.g., Sulfamethoxazole/Trimethoprim 800/160 mg tablets) to treat possible urinary tract infections. It is recommended that women take a sugar-free cranberry juice concentrate daily, such as AIM's Cranberry® caplets (www.theaimcompanies.com) to help avoid UTIs. Women should also carry one 150mg tablet of Fluconazole (e.g., Diflucan®) in the event of a *Candida* ("yeast") infection. *See Page 12 for recommended prescription medications.*

INDIVIDUAL LUGGAGE LIMITATIONS:

- One carry-on bag (preferably an internal frame back-pack)
- One personal check-through bag (duffel-bag or other soft luggage *only*; a PVC "white-water" duffel-bag, sealed against water, is recommended)
- One check-through container (a hard-sided suitcase will suffice); unlocked for airport inspection (each person will be expected to transport a portion of the Expedition's rations and field equipment).

SOURCES OF FIELD EQUIPMENT:

In Tucson:

Miller's Surplus (406 N. 6th Avenue, 622-4777; good values, great selection)
Popular Outdoor Outfitters (several locations; good values, best prices in town on GPSs)
The Sports Authority (several locations; see sporting goods and snow sports sections)
Summit Hut (5045 E. Speedway, 325-1554 & 605 E. Wetmore, 888-1000; knowledgeable and well-stocked but over-priced)
Tucson Blueprint (537 N. 6th Avenue, 624-8881; Brunton Compasses, K&E Field Notebooks)

Mail order and on-line catalogues:

Triple Aught Design Gear, Inc. (95 Linden Street, Suite 8, Oakland, California 94607, 510/465-5110; www.tadgear.com)
Forestry Suppliers, Inc. (205 W. Rankin St., P.O. Box 8397, Jackson, Mississippi 39284-8397, 601/354-3565; www.forestry-suppliers.com)
Miners, Inc. (PO Box 1301, Riggins, Idaho 83549-1301, 800/824-7452)
Carolina Biological Supply Co. (2700 York Road, Burlington, North Carolina 27215, 919/584-0381)
Brigade Quartermasters (1025 Cobb International Boulevard, Kennesaw, Georgia

30144-4300, 404/428-1234; www.actiongear.com)
U.S. Cavalry (2855 Centennial Avenue, Radcliff, Kentucky 40160-9000, 502/351-1164;
www.uscav.com)
Cheaper Than Dirt! (2536 NE Loop 820, Fort Worth, Texas 76106-1809, 888/625-2506;
www.cheaperthandirt.com; excellent prices on all outdoor equipment)
The LED Light (3668 Silverado Drive, Carson City, Nevada 89705, 775/267-3170;
www.theledlight.com)
The Brunton Company (620 East Monroe, Riverton, Wyoming; compasses & binoculars)
Travel Medicine (369 Pleasant Street, Northampton, Massachusetts 01060; 800/872-
8633; www.travmed.com; first aid kits and supplies)

INDIVIDUAL EXCAVATION & OTHER FIELD EQUIPMENT:

Major excavation equipment will be provided however each Expedition member will be expected to provide his/her own small dig kit including, but not limited to, a trowel, dental picks, paintbrushes, compass, line-level, and a 5-meter tape.

You should bring your own sleeping bag (for the Gobi, a mummy bag rated to 0° F, with a silk or fleece liner is best; for cautionary information regarding sleeping bag temperature ratings, see www.backpackinglight.com/index/article.asp?did=92). A Therm-a-Rest™ type self-inflating pad, although expensive, is comfortable, provides superior insulation from the ground, and is relatively easy to pack (especially the ¾-length backpacker models).

If you have a lightweight, low profile tent capable of shedding wind, bring it along. The Expedition has several tents in addition to the rather less efficient military tents supplied by the Russians, but extra housing will be welcome!

THE BOTTOM LINE:

Prepare for a wide range of diurnal temperatures, from hot (relatively few days) to downright cold (quite often). Nights will be cool to cold without exception. Our worst enemies are the sun, wind, and dust. It is best to equip yourself with layerable clothing that you can adapt to changing conditions, even over the course of a single day.

You will need one set of respectable clothes for the inevitable banquets and official meetings that will take place in Ulaanbaatar and provincial towns.

The general tendency is to take far more clothing than is actually necessary. A good rule of thumb is to lay out all the clothing you *think* you'll need on the floor and cut that amount *by half* before actually packing!

WATER AND FOOD:

Fortunately, the pervasiveness of tea drinking in Mongolia means that adequate supplies of boiled water are generally available. On the other hand, fieldwork

conducted in areas where local supplies of water are scarce, heavily laced with minerals (like Tsagaan Agui), or rendered unpotable due to the proximity of settled populations and their livestock, requires special considerations. By far, the best means of rendering all but the most chemically polluted water potable (although not necessarily palatable!) is by passing the raw water through a porous (<0.4 micron) ceramic and/or activated charcoal filter. Since 1995, expedition members have successfully employed microfiltration systems manufactured by the Pūr, MSR, Sweetwater, British Berkefeld/Doulton, and Katadyn corporations. Remember: no simple filtration system, including those referred to above, can render salty or heavily mineralized water potable. Treatment of water with iodine, chlorine, or other chemicals is not recommended due to health hazards associated with their prolonged use.

Most well- and spring-water in the Gobi is microbiologically clean but often contains a large mineral fraction, thus minor stomach upsets and transient diarrhea are inevitable. Powdered drink mixes (e.g., Gatorade, Tang, instant iced tea, etc.) can be used to improve the water's taste. The water at most localities in southern Mongolia is of variable, but often good, quality (i.e., "sweet").

The quality and quantity of locally available foodstuffs varies in Mongolia. In general, it is impossible to acquire fresh bread, fruits, vegetables, and eggs outside Ulaanbaatar and provincial capitals, rarely visited by the Expedition. The traditional Mongolian diet consists solely of meat supplemented with dairy products and, to a much lesser extent, various grains, especially barley and buckwheat. Although the Expedition brings large supplies of vegetables and bread from Siberia each year, *if you are vegetarian, you will have to compromise that principle in order to conduct fieldwork in Mongolia.* The local meat – mostly mutton – is fatty and tough and prepared without spices, generally only by boiling, since the scarcity of wood in the Gobi usually precludes grilling meat over an open fire. (Cooking in rural Mongolia is generally done over an *argul* fire; "argul" being the dried dung of camels, yaks, and other domestic stock that produces acrid smoke with an unpleasant aftertaste. The Expedition cooks with modified gasoline-fueled blowtorches).

Each Expedition member will be responsible for transporting provisions from the US purchased by the Expedition that will be shared in common with the entire party. Such provisions include, but will not be limited to, a range of "instant" foods (oatmeal, ramen noodles, etc.), various dried foodstuffs (trail mix, fruits, sun-dried tomatoes, beef jerky, etc.), and peanut butter.

HEALTH RELATED ISSUES (see also Page 12 for recommended immunizations):

- It is important to include the following sterile supplies in all individual first aid kits due to concern about the availability and sterility of such items in lesser developed countries, including Mongolia:

5.0 nylon suture with needle
syringe, 1 cc

syringe, 3 cc
needle, 25 gauge X 5/8"
needle, 18 gauge X 1 1/2"
needle, 21 gauge X 1 1/2"
intravenous catheter, 18 gauge
nitrile (not latex) barrier gloves
antiviral/antibacterial towelettes

- Useful travel-related medical supplies, including sterile needles, syringes, and suture kits, can be purchased at: www.travmed.com (800-872-8633).
- Consult the University of Washington Medical Center, Travel Medicine Service home page for complete information on suggested immunizations and health precautions for Mongolia. The UWMC Travel Medicine Service URL is: weber.u.washington.edu/~travmed/index.html.
- The Centers for Disease Control also provide useful health information for travelers at: www.cdc.gov/travel/index.htm.
- International travel insurance (highly recommended) is available from the International Medical Group, Inc. See insurancetogo.com or www.globalmedicalinsurance.com.
- The Equipped to Survive web page (www.equipped.org/home.htm) contains a wealth of information helpful in making appropriate selections of field gear.

MONGOLIA RELATED WEB SITES (see also attached sheets):

JMRAAE Expedition Web Page
www.ic.arizona.edu/~mongolia/

Weather forecast for Ulaanbaatar
cnn.com/WEATHER/html/UlaanBaatarMongolia.html

CIA Factbook for Mongolia
www.cia.gov/cia/publications/factbook/geos/mg.html

SELECTED READING LIST (ENGLISH):

Academy of Sciences, Mongolian People's Republic (1990). *Information Mongolia*. Oxford and New York: Pergamon Press.

Akiner, Shiren, editor (1991). *Mongolia Today*. London: Kegan Paul International and Central Asia Research Forum. **An excellent companion to Moses and Halkovic 1985.**

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Christian, David (1999). *A History of Russia, Central Asia, and Mongolia, Volume 1*. Oxford, England: Blackwells.

Curtin, Jeremiah (1996). *The Mongols: A History*. Conshohocken, PA: Combined Books. Reprint of the 1908 edition by Little, Brown, and Company, Boston.

Derev'anko, A. P., editor and compiler (1998). *The Paleolithic of Siberia, New Discoveries and Interpretations*. Novosibirsk: Institute of Archaeology and Ethnography, Siberian Branch, Russian Academy of Sciences and Urbana, IL: University of Illinois Press. "Derev'anko" is an alternative spelling of "Derevianko".

Fairservis, Walter A. (1993). *The Archaeology of the Southern Gobi of Mongolia*.

Durham, NC: Carolina Academic Press. Discusses materials collected by the Andrews Expeditions.

Gabori, Mikloš (1964). New data on Paleolithic finds in Mongolia. *Asian Perspectives* 7: 105-112. A report of the Hungarian prehistoric expedition in Mongolia.

Gallencamp, Charles (2001). *Dragon Hunter: Roy Chapman Andrews and the Central Asiatic Expeditions*. New York: Viking. An up-to-date biography of Andrews.

Getchell, Annie and Dave Getchell, Jr. (2000) *The Essential Outdoor Gear Manual*. Second Edition. Camden, ME: Ragged Mountain Press. A good resource guide for novice fieldworkers.

Golden, Peter B. (1992). An Introduction to the History of the Turkic Peoples. *Turcologica*. Band 9. Weisbaden: Otto Harrassowitz. Very thorough and comprehensive.

Goldstein, Melvyn G. and Cynthia Beall (1994). *The Changing World of Mongolia's Nomads*. Berkeley: University of California Press. Excellent discussion of modern rural Mongolia.

Hildinger, Erik (1997). *Warriors of the Steppe: A Military History of Central Asia, 500 BC to 1700 AD* New York: Sarpedon.

Jacobson, Esther and James E. Meacham (1998). When Stones Speak: Mapping and Mongolian Surface Archaeology. *Geo Info Systems* 8(2): 15-22.

Kielan-Jaworowska, Zofia (1969). *Hunting for Dinosaurs*. York, PA: The Maple Press. A report of the Polish-Mongolian dinosaur expeditions. Interesting for local color...

Kwanten, Luc (1979). *Imperial Nomads: A History of Central Asia, 500-1500*. Philadelphia: University of Pennsylvania Press.

Lattimore, Owen (1940). Inner Asian Frontiers of China. *American Geographical Society Research Series No. 21*. New York: American Geographical Society.

Lattimore, Owen (1941). *Mongol Journeys*. London: Jonathan Cape. Essential reading.

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Man, John (1999). *Gobi: Tracking the Desert*. New Haven: Yale University Press. A well written, popular traveler's account that includes areas surveyed by JMRAAE.

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- Mayhew, Bradley (2001). *Mongolia*. Third edition. Hawthorn, Australia: Lonely Planet Publications. This is the best practical guide to read and take to Mongolia. See also Sanders and Bat-Ireedui 1995.
- Morgan, David (1986). *The Mongols*. Oxford, UK and Cambridge, MA: Harvard University Press.
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Vishnyatsky, Leonid B. (1999). The Paleolithic of Central Asia. *Journal of World Prehistory* 13(1): 69-122. Includes an excellent bibliography.

Waley, Arthur, translator (1963). *The Secret History of the Mongols, and Other Pieces*. London: George Allen & Unwin. A good translation of the most important historical text in the Mongolian corpus.



The logo of the Joint Mongolian-Russian-American Archaeological Expedition (*Mongolian*: Монгол-Орос-Америкийн Археологийн Хамтарсан Экспедици¹; *Russian*: Российско-Монгольско-Американская Совместная Археологическая Экспедиция²) is based on the official seal of Bayan Lig *suum* (district) in Bayan Hongor *aimag* (province) where the Expedition's base camp was located from 1995-2000. JMRAAE's logo depicts two Bactrian camels with the region's most prominent topographic feature, a volcanic plug called Khatan Suudal (the Queen's Saddle), in the background with Jupiter ascendant.

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¹ *Pronounced:* Mongol-Oros-Amerikiin Arkheologiin Xamtarsan Ekspeditsii.

² *Pronounced:* Rossisko-Mongol'sko-Amerikanskaya Sovmestnaya Arkheologicheskaya Ekspeditsiya.

RECOMMENDED IMMUNIZATIONS FOR MONGOLIA

- *Measles, Mumps, & Rubella*
- *Diphtheria, Tetanus, & Pertussis*
- *Hepatitis-A*, two 1cc injections, Havrix or equivalent
- *Hepatitis-B*, three 1cc injections, Engerix or equivalent
- *Typhoid Vaccine*, Live Oral, e.g., 4 capsules Vivotif Berna or equivalent inoculation
- *Cholera*, at your discretion. Outbreaks do occur every summer in Mongolia.

NOTE: Malaria prophylaxis is considered unnecessary in Mongolia.

RECOMMENDED PRESCRIPTION MEDICATIONS

- *Ery-tab* (Erythromycin delayed-release tablets, 333mg tablets). 42 tablets.
- *Amoxicillin* (500mg capsules). 42 capsules.
- *SMZ/TMP* (Sulfamethoxazole & Trimethoprim, 800/160mg double-strength tablets). 28 tablets.
- *Floxin* (Ofloxacin, 400mg tablets). 28 tablets.
- *Tylenol #3* (Acetaminophen & Codeine Phosphate, 300/30mg tablets). 15 tablets.
- *Lomotil* (Diphenoxylate/Atropine, 2.5/.025mg tablets). 40 tablets.
- *Diflucan* (Fluconazole, 150mg tablet). 1 tablet. (For *Candida* infections in women).
- *Polytrim* (Trimethoprim Sulfate & Polymyxin B Sulfate). 10ml dropper bottle.