

**LONG TERM GRANT APPLICATION**  
**Cover Sheet**

**Amount Requested: \$3,000.00**

**Project Information**

**Chyanne Smith**

Student Participant (Last, First)

**Small Mammal Communities of the Darhad Valley, Mongolia**

Project Title (10 words or less)

**Mull, John**

**2505**

Faculty Mentor Name (last, first)

Mail Code

**College of Science**

**Zoology**

College (Weber State is the University, NOT college)

Department

This project \_\_ DOES/ **X** DOES NOT require review by the WSU Institutional Review Board for Human Subjects or the WSU Animal Care and Use Committee.

*Chyanne Smith*  
Student Signature

3/25/19  
Date

*John Mull*  
Project Mentor Signature

3/13/19  
Date Received by Mentor.  
Must be 10 business days  
before final deadline.

**2505**

**6173**

Campus Mail

Phone Ext.

*Tracy Covey*  
Undergraduate Research Committee Representative  
Rep.

3-25-19  
Date Received by URC

Must be 5 business days  
before final deadline.

*[Signature]*  
Faculty Mentor Department Chair

3-25-19  
Date

**Please check if attended Research Proposal Workshop:**



**DATE WORKSHOP ATTENDED 3/12/19**

## LONG TERM GRANT APPLICATION

### Small Mammal Communities of the Darhad Valley, Mongolia

#### Project Description

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In January 2019, I was accepted into the Round River Conservation Studies (RRCS) 2019 summer program to study abroad (Appendix A). Round River is an ecological research and education organization whose goal is the formulation and implementation of conservation strategies that conserve and restore wildness. Group field work is a standard in this program. However, since being accepted into this program, I have been working with my mentor and program directors to identify an independent research project. After explaining my past research experience and future goals, it was determined that I will assist with small mammal trapping in the Darhad Valley for my independent project.

The Darhad Valley in northern Mongolia is remote and relatively unexplored scientifically. The Siberian taiga meets the Central Asian steppe here, and it is surrounded by the Khoridol Saridag Mountains. This heterogeneous landscape fosters habitat for a range of species, large and small. Members of the Ulaan Taiga Protected Areas Administration (UTPAA) oversee this region's three protected areas: Ulaan Taiga Strictly Protected Area, Horidol Saridag Strictly Protected Area, and Tengis-Shishged National Park. The UTPAA has asked RRCS to conduct research in this area to better understand what small mammal species inhabit the valley. Many times, when research is conducted in this area, small mammals are overlooked for larger more charismatic animals. Currently, there is no baseline for the communities and densities of the small mammals present in the Darhad Valley.

Of all mammal species, approximately 90 percent, or 4,875 species, are small mammals (Reeder and Wilson, 2005), mammals weighing less than 5 kg (Merritt, 2010). Quantifying small mammal populations and densities is important to understanding ecosystem functions (Davidson et al., 2012), as well as zoonotic disease transfer and risks (Pulscher et al., 2018). Therefore, obtaining information on small mammal communities and densities in Darhad Valley is essential for a greater understanding of the ecosystem and protecting public health.

The goal of my research is to assist RRCS in creating and implementing a protocol for small mammal trapping. Currently, they do not have small mammal protocols, nor experience in this form of small mammal trapping. Data obtained for each trapped individual will include: species identity, location, sex, morphological measurements, tick presence, and a photographic image. Ultimately, this research will be delivered to UTPAA to provide a better understanding of the valley's biological diversity.

**My Role** – I will be consulting published literature and creating a protocol which can be followed by me and others in the field while trapping and collecting data. I will also be assisting in selecting study locations within the valley and setting up grids and live traps, as well as checking traps and collecting data. After data are obtained, I will be analyzing the data to quantify community composition and animal densities.

**Mentor's Role** – Dr. Mull will act as a liaison between Round River and myself to make sure everything is in place before leaving to Mongolia. He will also assist in reading over protocols, ensuring proper techniques, and assisting in finding literature as needed. He will also assist in final data analysis and act as an advisor for my thesis.

Dependent \_\_\_\_\_X\_\_\_\_\_ Independent

**Previous Experience** – Since December of 2017, I have been working in both the Weber State animal facility and the field with Dr. Michelle Skopec on her research of woodrats (*Neotoma spp.*) caching behavior. During this research, I have been responsible for animal welfare, setting live traps, handling animals, and data collection. Additionally, I volunteered during the 2018 Bat Blitz with Utah DWR, which included handling of bats and data collection. During this time, I received a rabies vaccination, which is useful in the field. I also have experience writing technical and customer service protocols. This was a part of my job duties during my employment at Unisys Technical Services from 2011-2015, which I believe will benefit me while creating field protocols. I have also taken several classes at Weber which I feel will benefit me during this program (Appendix B).

**Product** – Protocols that can be reused by Round River in future studies, as well as data which can be disseminated to UTPAA members, to contribute to further understanding of the Darhad Valley Ecosystem. Additionally, I will present my findings at Weber State's 2020 Annual Symposium and write a thesis to fulfil Zoology Departmental Honors requirements. If accepted, I will also present my findings at the 2020 Annual Meeting of the American Society of Mammalogists in Boulder, CO.

#### **Project Methods & Timeline**

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Creation of field protocols has already begun (Appendix C) and will be completed by June of 2019. Data collection will take place during my time in Mongolia from June 18<sup>th</sup> to July 29<sup>th</sup>, 2019. Dissemination of preliminary species findings to UTPAA will take place at the end of July, 2019, as required by RRCS course practices. After returning to Utah, during the fall semester 2019, I will begin final data analysis and completion of my thesis by the spring of 2020 semester.

**Review by IUCAC**– This is not required, as it is out of the country. However, I am submitting my protocols for review to the committee, because of requirements for some publications. The protocols will be reviewed in April and I have already been in personal communication with Dr. Skopec, the head of this committee, regarding my project.

#### **Budget Explanation**

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The total RRCS program cost is \$9,600 and airfare to Mongolia costs \$2,382.43 (Appendix D). The funds I am requesting from OUR are to cover a portion of the program cost. The Zoology department has agreed to assist with \$500 of the cost. Therefore, I am requesting \$3,000, in order to meet the \$3,500 total OUR request. I will be paying the remaining program cost out of pocket (\$2,100) and with the aid of a scholarship from RRCS (\$4,000; Appendix E).

The materials and equipment for the trip are expensive. I have had to purchase many items needed for spending 6 weeks camping in the Mongolian wild: tent, backpack, rain gear, vaccinations, and more. I am estimating personal funds in the amount of \$2,825 for the program material and equipment. Additionally, Round River is purchasing many of the larger field supplies, such as the Sherman live traps, bait, and bags (\$2,162).

I understand this is a larger request, and any contribution from OUR would be useful. Therefore, if there is not room in the budget for the full request, I would be willing to accept less than the amount specified.

## References:

Davidson, A. D., Detling, J. K., & Brown, J. H. (2012). Ecological roles and conservation challenges of social, burrowing, herbivorous mammals in the world's grasslands. *Frontiers in Ecology and the Environment*, **10**(9), 477-486. doi:10.1890/110054

Merritt, J.F (2010) *The Biology of Small Mammals*. Baltimore, MD: The Johns Hopkins University Press.

Pulscher, L. A., Moore, T. C., Caddell, L., Sukhbaatar, L., von Fricken, M. E., Anderson, B. D., Battsetseg, G., & Gray, G. C. (2018). A cross-sectional study of small mammals for tick-borne pathogen infection in northern Mongolia. *Infection Ecology & Epidemiology*, **8**(1), 1450591-7. doi:10.1080/20008686.2018.1450591

Reeder, D. M., & Wilson, D. E. (1992). *Mammal species of the world: A taxonomic and geographic reference (2nd ed.)*. Washington, D.C: Smithsonian Institution Press.

## LONG TERM GRANT APPLICATION

### Additional Questions

1. What funding have you received from OUR in the past? Where has your previous project been disseminated? **I have not received previous funding from OUR.**
  
2. Is this project part of a required course? If so, please indicate the support (monetary and in-kind) provided for this project by the academic department. **This is not part of a required course.**
  
3. What additional sources of funding have been solicited? Is your department willing/able to fund any equipment they will be retaining? **I have pulled from personal savings, and received a scholarship at Round River. Additionally, Round River is providing some field equipment to use. The Zoology department is also assisting with \$500 toward my OUR funds total.**
  
4. Where do you plan to disseminate the results of this project? **I will first disseminate preliminary findings to the Ulaan Taiga Protected Areas Administration in Mongolia. After further research and data manipulation, I plan to attend the Symposium at Weber State University in 2020. Additionally, I will use this research to complete and present an honors thesis. Also, if accepted, I would like to attend the 2020 Annual Meeting of the American Society of Mammalogists, which will take place June 5-9 in Boulder, CO (<https://www.mammalsociety.org/meetings>).**
  
5. If you are requesting a Research Scholarship, please list all significant time commitments (5+ hours per week) that you expect to maintain over the duration of your project including, for example, class and work schedules. **N/A**

**LONG TERM GRANT APPLICATION**  
Faculty Recommendation Form

Student Name (last, first): Smith, Chyanne

Project Title: Small Mammal Communities of the Darhad Valley, Mongolia.

**Mentor Directions:** After carefully reviewing the proposal and assessing both the viability of this project and the qualifications of the student requesting funding, answer the questions found below. Please expand the sections as necessary (**do not attach separate letter**). If the project involves the use of human subjects or protected animals, be sure the student secures IRB or ACUC approval. If the project receives funding, it is your responsibility to work closely with the student, monitor the ongoing progress of the project and budget, and evaluate the project's results. Failure to do so will jeopardize funding for this project and any future projects.

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1. How long and in what capacity have you known this student?

I have known Chyanne for about a year and in the capacity of her being a student in two of my courses, Zoology 4350, Animal Behavior, and Zoology 4900, Topics in Zoology, which included an extended field trip.

2. Briefly describe the proposed project. Is this part of a larger research project? Is this part of a course? If so, how is the project apart from the nature and scope of activities normally taken for the course (Please attach a copy of your course syllabus)?

Her proposed project would survey small mammals (mainly rodents) in a government protected area in a remote region of Mongolia, where Chyanne would be a student in an extended, summer field course offered by Round River Conservation Studies (RRCS). Students in these RRCS courses typically participate in field research. The organization conducts basic monitoring-type research with their in-country partners to better inform land use and management for the local population in the region where they are working. So, her project is part of a larger project, as well as part of a course. Chyanne's project differs from normal course activities in that she is developing the protocol to be used and would lead this research effort, rather than being one of several students who collect data as part of a project established in advance by course instructors.

3. Give an assessment of the project's significance to the student's discipline and of the project's educational and/or professional benefit to the student.

The project that Chyanne would conduct is highly significant to the disciplines of mammalogy and conservation biology, because no systematic assessment of small mammal populations has been done in this region. The government has requested of RRCS and their local partners that they conduct a survey of small mammals in the Horidol Saridag Strictly Protected Area in the Darhad Valley. This project is of high potential value for the baseline data it will provide, as there is no information available on this region's small mammal fauna. Likewise, the project is of high professional benefit to Chyanne, who is interested in pursuing a graduate degree in biology with an organismal focus.



4. Comment on the qualifications of the student to successfully complete this project, both in terms of the project's scope and its time frame.

Chyanne has already invested significant time in devising a protocol for this research and is currently soliciting feedback on it from the staff of RRCS. Based on what I know of her work ethic and motivation to complete this project, I am confident she will invest more time preparing for it between now and when she departs in early summer. The project is of a reasonable scope and will be supported by RRCS equipment, staff, and other course participants, who will contribute to data collection. I am also confident that she will follow through with the analysis and presentation/write-up of this work, given her already strong track record in this regard. Chyanne has already presented the results of two different research projects at regional meetings.

5. Comment on the justification and appropriateness of the project budget, including the necessity of a Research Scholarship (if requesting one).

Chyanne is not requesting a research scholarship. Her sole budget request is for support related to the cost of the RRCS program she will be attending. Her total expenses to participate in this program exceed \$11,000, so her request of \$3,000 seems reasonable in this context.


6. Describe your role in the project.

My primary role to date has been to help Chyanne to identify a research project, finalize the details of that project with the RRCS staff, and prepare for executing the research before she departs for Mongolia. When she returns, I will serve as her mentor during the process of analyzing, writing up, and presenting her results.

7. Include anything else that you think will be helpful to the committee in evaluating this application.

To get to this point in her proposal has required considerable initiative and self-motivation on her part. She began by exploring a project on Mongolian pika species, and while considering that she communicated by email and by phone with pika experts at different universities. When a pika-related project didn't pan out, she quickly changed her focus to developing the small mammal sampling project that forms the basis of this proposal.

This project \_\_\_\_ DOES \_\_\_\_x\_\_\_\_ DOES NOT require review by the WSU Institutional Review Board for Human Subjects or the WSU Animal Care and Use Committee.

  
\_\_\_\_\_  
Project Mentor Signature

4/1/19  
\_\_\_\_\_  
Date

2505  
\_\_\_\_\_  
Campus Mail Code

x 6173  
\_\_\_\_\_  
Phone Extension

## **Appendix A**



## ROUND RIVER

Conservation Studies

Chyanne Smith  
1002 W 2450 N  
Layton, UT 84041

January 18, 2019

### BOARD OF TRUSTEES

Trent Alvey  
Utah

Rick Bass  
Montana

Peter Gerity, PhD  
New Mexico

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Douglas Peacock  
Montana

Gerald Scoville  
Washington

Michael Soulé, PhD  
Colorado

Randall Tolpinrud  
Utah

Pic Walker  
California

John Ward  
British Columbia

Dear Chyanne,

Thank you for your interest in Round River Conservation Studies and our conservation projects. **After reviewing your application, we are pleased to offer you a position on our Summer 2019 Mongolia program.** Congratulations!

We request that after you have indicated to Round River your intentions of accepting our offer that you pay a \$1,000 non-refundable deposit within two weeks to secure your position on the program. Please mail a check to our main office at the address below, or to find out about our online and electronic payment options, contact Kathleen Wilson at [Kathleen@roundriver.org](mailto:Kathleen@roundriver.org) or (801) 359-4250. The remaining balance of your tuition will be due two months prior to the program start date. If you are planning to apply for our Edward Abbey Scholarship, please do so within two months of paying your deposit. This application can be found on our website.

Project information, which includes an equipment list, required forms, and travel information, will be emailed to you once we have received your deposit. If you have any questions or concerns, please do not hesitate to contact me.

### EXECUTIVE DIRECTOR

Dennis Sizemore  
Utah

Congratulations, and we look forward to having you on our program! Again, thank you for your interest in helping with our conservation efforts.

Sincerely,

Doug Milek  
Programs Director  
Round River Conservation Studies  
(406) 529-8175  
[dougmilek@roundriver.org](mailto:dougmilek@roundriver.org)

## **Appendix B**

**Related Coursework:**

Subject	Course #	Title	Grade	Credit Hours
ZOOL	1030	LS The Nature of Sex	A-	3
ZOOL	1110	LS Principles of Zoology I	A	4
ZOOL	1120	Principles of Zoology II	A	4
ZOOL	3720	Evolution	A	3
ZOOL	4800	Problems in Zoology	A	3
ZOOL	4900	Topic Zool:Ecol of Disturbance	A	4
ZOOL	3600	Comparative Physiology	A	4
ZOOL	4350	Animal Behavior	A	4
ZOOL	3450	Ecology	A	4
ZOOL	4680	Mammalogy	In progress (currently at 99.98%)	4
ZOOL	4990	Seminar: Hoarding in Animals	In progress (currently at 96.53%)	1
BTNY	1203	LS Plant Biology	A	3
MATH	1040	QL Introduction To Statistics	A	3

## **Appendix C**

# Small Mammal Survey Protocol - **DRAFT**

By: Chyanne Smith

## Introduction

Of all mammal species, approximately 90 percent, or 4,875 species, are considered to be small mammals (Wilson and Reeder, 2005). Small mammals are defined as mammals weighing less than 5 kg at maturity (Merritt, 2010). Quantifying small mammal populations and densities is important to understanding ecosystem functions (Davidson et al., 2012), as well as zoonotic disease transfer and risks (Pulscher et al., 2018). The Ulaan Taiga Protected Area Administration (UTPAA), in Mongolia, has asked Round River Conservation Studies to conduct research in this area to better understand what small mammal species inhabit the valley. Many times, when research is conducted in this area, small mammals are overlooked for larger more charismatic animals. Currently, there is no baseline for the communities and densities of the small mammals present in the Darhad Valley.

## Safety

Both the Hantavirus and plague are associated with small mammal populations around the world, including Asia. Therefore, care should be taken in the field while handling animals and equipment that comes into contact with them.

### *Hantavirus*

Read the updated guidelines for protection of mammalogists and wildlife researchers from Hantavirus pulmonary syndrome (HPS) published by the American Society of Mammologists (Kelt et al., 2010).

### *Plague*

The plague is caused by the bacterium *Yersinia pestis*. A study in Mongolia found that most plague cultures are from ectoparasites of mammals, mainly fleas. Additionally, a majority of the fleas carrying the plague were marmot fleas (Galdan et al., 2010).

### *Recommended gear*

Researchers shall wear long sleeve shirts and pants in the field. Additionally, animals will only be handled by gloved individuals. A minimum of a latex glove will be worn, however, leather gloves may be worn for extra protection. For additional safety, protective eyewear can be worn.

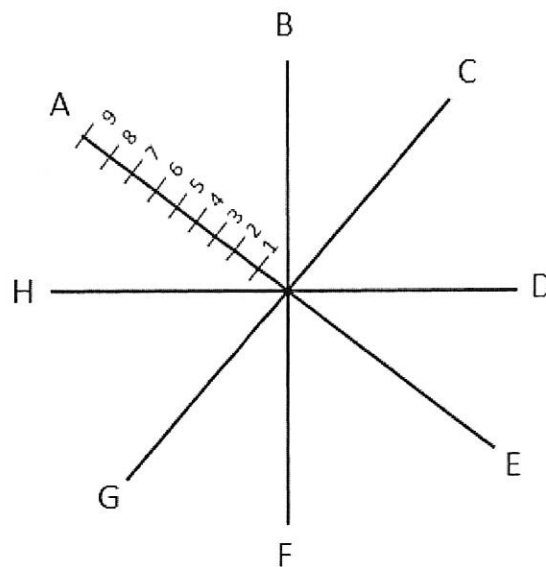
### *Bites/Scratches*

If researchers are bitten or scratched, affected areas will be washed thoroughly with soap and water and then disinfected with an alcohol-based sanitizer.



## Trapping Grid

1. Locate a central grid location, mark with a pin flag.
2. Use a measuring tape to create a 90 m long grid, with the center pin flag as the center point (each side from the center should be 45 m).
3. Every 5 m place a pin flag on the grid, starting at the center and working outward on each line. Each spoke from the center should have 9 flags.
4. Repeat the steps above, with a new line which will cross the center and the other line, making a t shape.
5. Repeat again two more times making an x over the t. Attempt to keep the grids as evenly spaced as possible.
6. Label each pin flag with the line name and location number (EX: A1 for line A and location 1). The center flag will serve as number 0 for all lines, so any trap in the center will be line name and location 0 (EX: A0).



## Setting Traps

1. Inside of each trap, include a handful of bait (seeds) and insulation (cotton batting or dry grass clippings). *Optional: If extreme weather, place a wax cardboard container (milk carton or juice box) around the trap for insulation.*
2. Set the trap by pressing down the door until it latches, only one side of the trap latches.
3. Place one trap at each pin flag location, starting from the center of each line. There will be 10 traps per line. Take care that the trap does not trigger shut as you place it. Traps can be placed away from the pin flag if there appears to be good habitat, however, all traps should be within 1 m of their pin flag.

## Checking Traps and Removing Mammals

1. Go to each trap location individually.
2. Check to see if the trap door has been triggered shut.
3. If the door has not been triggered shut, shut the door and mark it on your sheet as empty.
4. If the door is triggered shut, hold the trap away from your face and cautiously open the door with a gloved hand until you can see if a small mammal has been trapped. Take care not to open the door too wide, so the mammal does not escape.
5. If there is a mammal, take an empty plastic bag (3 L) and weigh it (g) marking the weight on your data sheet. Next, place the bag around the outside of the trap with the door still closed.
6. Use your hand to open the door, through the bag, and give the trap a firm shake to shake the mammal into the bag. **Take care to hold the door open the entire time you are shaking the trap, otherwise the door can shut and cause injury to the mammal. Also, make sure there is no gap between the bag and the trap.**

## Data Collection

1. Once the mammal is in the clear plastic bag, quickly record the following information:
  - Species information
  - Weight with the bag (g), using a spring scale (subtract the weight of the bag to get the mammals weight)
  - Photos (optional, can take after scruffing)
  - If this is a recapture or a first time captured individual
2. While the mammal is still in the plastic bag, place the mammal on a flat surface, and use your thumb and forefingers to grab the skin behind the neck and scruff the mammal. If done correctly, the mammal will have restricted head movement. Do not grab/hold the animal by its tail at any point, as it can cause damage to the vertebrae.
3. Once the mammal is secured, peel back the bag to reveal the ventral side of the mammal and record the following information:
  - Sex - If ambiguous, sex can be determined by distance from anus to vaginal opening or penis, males have a greater distance.
  - Reproductive status - can be determined by seminal plugs, distended abdomens, and milk in nipples or halos around nipples.

- Right hind foot measurement (mm) - heel of foot to the longest digit, including claw.
  - Right ear measurement (mm) - notch at base of ear cavity to tip of pinna, excluding hair.
  - Tail length (mm) - base of tail to last tail vertebrae, can gently bend the tail to find the base.
  - Total length (mm) - last tail vertebrae to tip of nose. This may be difficult to measure while the animal is living.
  - Any additional comments regarding the mammal - Presence of ticks, fleas, injuries, etc.
4. Once the data collection is complete, mark the mammal on the ventral side with a blue or purple sharpie. If you would like to identify individuals, you may wish to number them, otherwise, just place a large visible dot.

## **Animal Injury/Euthanasia**

If animals are severely injured during trapping activities, they will be euthanized by anesthetic overdose using the following method:

1. Place the animal in a sealed plastic bag
2. Soak a cotton ball in 2mls of isoflurane
3. Place the cotton ball in the sealed bag
4. Continue isoflurane exposure until one minute after breathing stops
5. Dispose of body in accordance with UTPAA guidelines

## **Release and Clean Up**

1. Once data collection is complete, place the mammal back in the bag, set on the ground with the bag open and wait for the mammal to exit.
2. Discard insulation and excess bait.
3. Clean the trap and plastic bags with a 1:10 bleach and water mix.

Hantavirus is inactivated by direct sunlight and a 10% bleach solution. Therefore, all equipment that comes in contact with rodents will be disinfected, by spraying with a 10% bleach solution and/or exposing to direct sunlight (Kelt et al., 2010).

## References

- Davidson, A. D., Detling, J. K., & Brown, J. H. (2012). Ecological roles and conservation challenges of social, burrowing, herbivorous mammals in the world's grasslands. *Frontiers in Ecology and the Environment*, **10**(9), 477-486. doi:10.1890/110054
- Galdan, B., Baatar, U., Molotov, B., & Dashdavaa, O. (2010). Plague in mongolia. *Vector Borne and Zoonotic Diseases* (Larchmont, N.Y.), **10**(1), 69-75. doi:10.1089/vbz.2009.0047
- Kelt, D. A., Hafner, M. S., & the American Society of Mammalogists' ad hoc Committee for Guidelines on Handling Rodents in the Field 1. (2010). Updated guidelines for protection of mammalogists and wildlife researchers from Hantavirus pulmonary syndrome (HPS). *Journal of Mammalogy*, **91**(6), 1524-1527. doi:10.1644/10-MAMM-A-306.1
- Merritt, J.F (2010) *The Biology of Small Mammals*. Baltimore, MD: The Johns Hopkins University Press.
- Pulscher, L. A., Moore, T. C., Caddell, L., Sukhbaatar, L., von Fricken, M. E., Anderson, B. D., Battsetseg, G., & Gray, G. C. (2018). A cross-sectional study of small mammals for tick-borne pathogen infection in northern Mongolia. *Infection Ecology & Epidemiology*, **8**(1), 1450591-7. doi:10.1080/20008686.2018.1450591
- Reeder, D. M., & Wilson, D. E. (1992). *Mammal species of the world: A taxonomic and geographic reference (2nd ed.)*. Washington, D.C: Smithsonian Institution Press.

## Appendix D



Chyanne Smith &lt;chyannesmith@mail.weber.edu&gt;

## itinerary SALT LAKE CITY - SEATTLE - SEOUL - ULAN BATOR - SEOUL - SEATTLE - SALT LAKE CITY

vickie@lockwood.net &lt;vickie@lockwood.net&gt;

Fri, Mar 22, 2019 at 6:54 PM

To: chyannesmith@mail.weber.edu, alexandra@roundriver.org, kathleen@roundriver.org

Please review itinerary carefully. Changes without  
penalty can only be done within 24 hours (Sat 23 Mar)

Record Locator with Delta Airlines: **G2P9I4**  
Electronic Ticket Issued: 006 7293 737 126  
Record Locator with Korean Airlines: **OELV7F**  
Electronic Ticket Issued: 180 7293 737 127

TRAVEL SOCIETY LLC  
650 S. CHERRY STREET DENVER CO 80246  
303 321-0900 FAX 303 321-0025

SMITH / CHYANNE MCKENZIE

MS. CHYANNE SMITH  
1002 W 2450 NORTH  
LAYTON UT 84041

DATE OF ISSUE: MAR 22 2019 INVOICE NUMBER: ITIN NG8Z00 781

## 19 JUN 19 - WEDNESDAY

DELTA 1433 ECONOMY CLASS EQUIP-739  
DEPART TERMINAL- UNIT 2  
LV: SALT LAKE CITY 855A NONSTOP MILES- 689  
CONFIRMED  
AR: SEATTLE 1006A ELAPSED TIME- 2:11  
NO MEAL SVC SEAT-26D  
FREQ FLYER-DL 9415211110

DELTA 199 ECONOMY CLASS EQUIP-76W  
LV: SEATTLE 1138A NONSTOP MILES- 5196  
CONFIRMED  
AR: INCHEON/SEOUL 315P ELAPSED TIME-11:37  
ARRIVAL DATE-20 JUN SEAT-31F  
ARRIVAL TERMINAL-2  
DINNER  
FREQ FLYER-DL 9415211110

## 20 JUN 19 - THURSDAY

KOREAN AIR 867 PREMIUM ECON EQUIP-333  
DEPART TERMINAL- 2  
LV: INCHEON/SEOUL 705P NONSTOP MILES- 1226  
CONFIRMED  
AR: ULAN BATOR 945P ELAPSED TIME- 3:40  
MEAL SEAT-38G

## 31 JUL 19 - WEDNESDAY

KOREAN AIR 868 ECONOMY CLASS EQUIP-333

LV: ULAN BATOR 1115P NONSTOP MILES- 1226  
CONFIRMED  
AR: INCHEON/SEOUL 325A ELAPSED TIME- 3:10  
ARRIVAL DATE-01 AUG SEAT-33B  
ARRIVAL TERMINAL-2  
MEAL

## 06 AUG 19 - TUESDAY

DELTA 198 ECONOMY CLASS EQUIP-339  
DEPART TERMINAL- 2  
LV: INCHEON/SEOUL 720P NONSTOP MILES- 5196  
CONFIRMED  
AR: SEATTLE 154P ELAPSED TIME-10:34  
DINNER SEAT-44B  
FREQ FLYER-DL 9415211110

## 06 AUG 19 - TUESDAY

DELTA 1845 ECONOMY CLASS EQUIP-738  
LV: SEATTLE 430P NONSTOP MILES- 689  
CONFIRMED  
AR: SALT LAKE CITY 725P ELAPSED TIME- 1:55  
ARRIVAL TERMINAL-UNIT 2 SEAT-22C  
NO MEAL SVC  
FREQ FLYER-DL 9415211110

BAGGAGE CHARGES AND RESTRICTIONS MAY APPLY  
FOR DELTA - TWO FREE CHECKED BAGS. EACH BAG CAN  
BE UP TO 50LBS AND 62 LINEAR INCHES  
FOR KOREAN AIR - FIRST CHECKED BAG IS FREE.  
SECOND BAG APPROX US \$70 EACH DIRECTION  
RATE MAY VARY WITH CURRENCY FLUCTUATION

\*\*\*\*\*

FEDERAL LAW FORBIDS THE CARRIAGE ON CERTAIN  
HAZARDOUS MATERIALS SUCH AS AEROSOLS FIREWORKS  
AND FLAMMABLE LIQUIDS ABOARD THE AIRCRAFT  
IF YOU DO NOT UNDERSTAND THESE RESTRICTIONS  
CONTACT YOUR AIRLINE OR GO TO FAA.GOV/ABOUT  
/INITIATIVES/HAZMAT SAFETY

\*\*\*\*\*

THANKS FOR CALLING - VICKIE AT TRAVEL SOCIETY  
FOR ROUND RIVER. DIRECT PHONE 720 215.0822  
YOUR DELTA MILEAGE NUMBER IS IN THE RECORD  
IF YOU HAVE A TSA OR GLOAL ENTRY SECURITY  
NUMBER LET ME KNOW

\*\*\*\*\*

FARE IS NON REFUNDABLE. IF THE TRIP DOES NOT  
OCCUR - IT HAS TO BE CANCELLED PRIOR TO THE  
START OF THE TRIP OR THE VALUE OF THE TICKET  
IS FORFEITED. THE VALUE -- PLUS THE EXCHANGE  
FEE CAN THEN BE USED FOR UP TO ONE YEAR FROM  
THE ORIGINAL DATE OF ISSUE  
FOR DELTA - CHANGE IS US \$380 PLUS ANY  
DIFFERENCE BETWEEN THE FARE PAID AND THE  
FARE AVAILABLE ON THE NEW DATE OF TRAVEL  
FOR KOREAN - APPROX US \$74 - DEPENDS ON  
CURRENCY EXCHANGE - AGAIN PLUS ANY DIFFERENCE  
IN AIRFARE

\*\*\*\*\*

NO MEAL SERVICE FROM SALT LAKE TO SEATTLE.  
DINNER FROM SEATTLE TO SEOUL. MEAL FROM SEOUL  
TO ULAN BATOR TO SEOUL. DINNER FROM SEOUL TO  
SEATTLE - NO MEAL SERVICE TO SALT LAKE.

OVO-LACTARIAN VEGETARIAN ORDERED FROM SEATTLE  
TO SEOUL TO SEATTLE

\*\*\*\*\*

aisle seat assignments as far forward as  
available with your mileage status

\*\*\*\*\*

valid passport required for travel

\*\*\*\*\*

record locator - G 2 P 9 I 4 - DELTA AIRLINES  
record locator - O E L V 7 F - KOREAN AIR

TOTAL ROUNDTRIP AIRFARE: \$ 1793.43

DELTA AIRLINES

TOTAL ROUNDTRIP AIRFARE: \$ 589.00

KOREAN AIR

AMEX ENDING IN

....2000 USED FOR TICKETS

AGENT NUMBER: 781      ACCOUNT NUMBER: 781003



## **Appendix E**



## ROUND RIVER

Conservation Studies

Chyanne Smith  
1002 W 2450 N  
Layton, UT 84041

March 18, 2019

### BOARD OF TRUSTEES

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### EXECUTIVE DIRECTOR

Dennis Sizemore  
Utah

Dear Chyanne,

Thank you for your application to our Edward Abbey Scholarship for assistance on the Summer 2019 Mongolia Conservation Program.

We are happy to inform you that you have been awarded **\$4000** for this program. This amount will be deducted from your total tuition, and will be indicated on your invoice, which will be sent to you soon. This scholarship must be utilized for tuition costs, and cannot be utilized for the deposit or other costs such as airfare or personal equipment. Please let me know if you have any questions or concerns.

Congratulations, and thanks again for your interest in helping with our conservation efforts in Mongolia.

Sincerely,

Doug Milek  
Student Programs Director  
Round River Conservation Studies  
(406) 529-8175  
dougmilek@roundriver.org