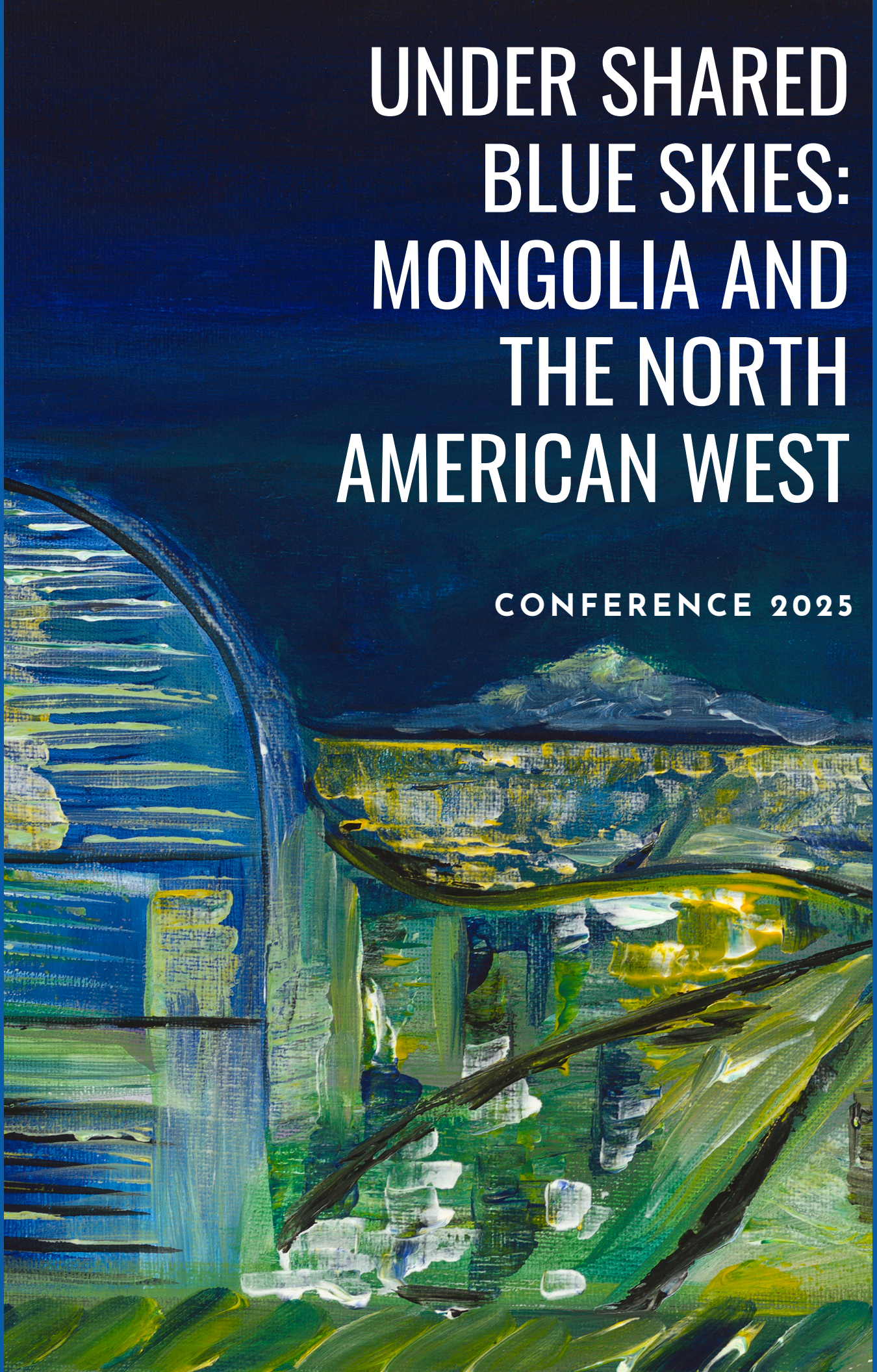
UNDER SHARED BLUE SKIES: MONGOLIA AND THE NORTH AMERICAN WEST

CONFERENCE 2025



DENVER, COLORADO

NOVEMBER 7, 8, AND 9 2025

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PROGRAM SUMMARY

Friday, November 7

4:00pm to 7:00pm – Reception for Invited Guests
Denver Botanic Gardens, York Street

Saturday, November 8

8am to 5:40pm – Interdisciplinary Presentations
Denver Water, 1600 W 12th Ave

Time	Room A	Room B
8:00 to 9:00am	Light Breakfast, poster and artwork set-up	N/A
9:00 to 9:20am	Welcome	N/A
9:20 to 10:10am	Session 1: Land, Culture, and Connections	N/A
10:20 to 11:10am	Session 2A: Traditional Practices and Migration	Session 2B: Science Education through Community and the Arts
11:10 to 11:30am	Break	Break
11:30am to 12:20pm	Session 3A: Expanding Educational Opportunities	Session 3B: Community, Culture, and Conservation
12:30 to 1:30pm	Lunch	
1:30 to 2:20pm	Session 4A: Language, Linguistics, and Literature	Session 4B: Changing Landscapes and Adapting Animals
2:20 to 2:30pm	Break	
2:30 to 3:30pm	Posters and Art	Posters and Art
3:30 to 4:20pm	Session 5A: "Waste" and Pollution	Session 5B: The Political Past and Present
4:30 to 5:20pm	Session 6A: Conservation and Collaboration	Session 6B: Landscapes, Lifeways, and Legacies
5:25 to 5:40pm	Closing Remarks	

Sunday, November 9

9am to 3:30pm – Colorado/Mongolia Connections
St. Cajetan's on Auraria Campus, 101 Lawrence Way

9:00 to 10:00am	Light breakfast and small art exhibit
10:00 to 10:20am	Welcome by the Honorary Consul of Mongolia
10:20 to 11:10am	Panel on Rangeland Management and Sustainability
11:20am to 12:10pm	Panel on Conservation
12:15 to 1:15pm	Lunch
1:20 to 2:10pm	Panel on Culture and Education
2:25 to 2:55pm	Music: Ajnai Ensemble
3:00 to 3:20pm	Undraa Agvaanluvsan, Member of Ikh Khural
3:20 to 3:30pm	Closing remarks

6:00pm to 8:00pm – The Mongolian Democratic Revolution Through the Photographer's Lens
2821 South Parker Road, Tower II Conference Room, Flatirons, Aurora

SATURDAY, NOVEMBER 8
Interdisciplinary Presentations

8:00 to 9:00am – Light Breakfast, poster and artwork set-up

9:00am to 9:20am – Welcome

9:20 to 10:20am – Session 1

Session 1: Land, Culture, and Connections
Moderator: Christy Carello

Title: Changing Identities of Mongolian Pastoralists and Colorado Ranchers: Implications for Rangeland Social-Ecological Systems
Presenter: Maria Fernandez-Gimenez (Colorado State University)

Title: Home on the Range: Horses, Cattle, and Connections Across the Great Plains and Mongolian Steppes
Presenters: William Taylor (University of Colorado), Tumurbaatar Tuvshinjargal (Mongolian Academy of Sciences), Jamsranjav Bayarsaikhan (Max Planck Institute for Geoanthropology, Mongolian Academy of Sciences)

Title: Sounding Connections to the Land in Mongolia and the American West
Presenter: Peter Marsh (California State East Bay)

Title: From Peking to Bellingham: Chasing a copy of Üliger-ün Dalai around the world
Presenter: Munkhchimeg Tserendorj (Western Washington University)

10:20 to 11:20am Sessions 2A and 2B

Session 2A: Traditional Practices and Migration
Moderator: Geet Govind Shukl

Title: Sustaining Mongolian Herders' Traditional Practices while Educating Visitors about Herder Lifestyles
Presenter: Karen Hollweg (Fulbright Alumni Association)

Title: A Qualitative Analysis of Travel Patterns in The Darkhad Depression
Presenters: Matthew Hovorka (Community Member), Julia Clark (NOMAD Science Mongolia)

Title: Summer in the taiga: How seasonal migration impacts cultural identity and health among the Dukha reindeer herders of Mongolia
Presenter: Jean Hatcherson (Corawill, Inc.)

Session 2B: Science Education through Community and the Arts
Moderator: Khursheed Ichhaporia

Title: Under Cretaceous Skies: Children, Nature, and Dinosaurs
Presenter: Elizabeth Gartley (Rutgers University)

Title: Teaching Environmental, Health, and Sustainability Issues in Mongolia at the Largest US Community College.

Presenter: Maria del Carmen Paniagua Quinones (Ivy Tech Community College)

Title: Connecting Inter-Institutional Higher Education Students to Local and Mongolian Environmental Issues Through Photovoice
Presenters: Nona Shipman (Metropolitan State University of Denver), Erin Seedorf (Metropolitan State University of Denver), Shamili Ajgaonkar (College of DuPage), Ryan Chaney (Kingsborough Community College)

Title: SCENIC Mongolia: Design, Development and Results of Environmental Engineering Summer Camps in Ulaanbaatar and Kharkhorin.
Presenters: Daniel Knight (University of Colorado), Evan Coffey (University of Colorado)

11:20 to 11:30am – Break

11:30am to 12:30pm – Sessions 3A and 3B

Session 3A: Expanding Educational Opportunities
Moderator: Derek Moscato

Title: Introducing Mongolian as an Optional Foreign Language Elective in Colorado High Schools
Presenter: Duren Walters (Mongolian School of Colorado)

Title: Digging Deeper: Fieldwork, Culture, and Community in the Nomad Science Archaeological Field School
Presenters: Asli Erem (NOMAD Science), Julia Clark (NOMAD Science)

Title: Broadening Horizons, Expanding Definitions: The Benefits and Challenges of Independent Field School Programs in Mongolia
Presenter: Maggie Lindrooth (American Center for Mongolian Studies)

Session 3B: Community, Culture, and Conservation
Moderator: Olaf Jensen

Title: Darhad Community-Led Conservation Database
Presenter: Badamgarav Dovchin (Round River Conservation Studies)

Title: Elevating Tsaatan voices: Sowing the seeds of Indigenous Evaluation in Mongolia
Presenters: Oyuntulkhuur Jukov (Mongolian Evaluation Association), Azjargal Amarsanaa, Itgemjit Gankhuyag, Gereltsetseg Adiya

Title: Gendered Barriers to Working in Conservation: A Comparative Case Study in South Korea and Mongolia
Presenter: Nari Lee (University of Montana and Zigudang Environmental Organization)

12:30 to 1:30pm – Lunch

1:30 to 2:20pm – Sessions 4A and 4B

Session 4A: Language, Linguistics, and Literature
Moderator: Hilary Schwandt

Title: Word-initial /b/ in Khalkha Mongolian: A case study of variation in naturally occurring speech
Presenter: Corrina Fuller (University of California, Los Angeles)

Title: Methodologies in Mongolian Linguistics: A Critical Review and Exploration
Presenter: Geet Govind shukl (National University of Mongolia)

Title: California-Based Collaborative Digitization and Localization Efforts For Mongolian Language Communities Around The World
Presenter: Marissa Smith (Stanford SILICON)

Title: Between Time and the Word: Translating G. Ayurzana's Poetic Modernism in Dialogue with Eliot and Borges
Presenter: Nan Zhang (University of Chicago)

Session 4B: Changing Landscapes and Adapting Animals
Moderator: Richard Reading

Title: Deciphering the causes and consequences of the formation of the Altai Mountains
Presenters: Jeremy Rugenstein (Colorado State University), Nora Vaughan (Lehigh University), Gaby Sanchez Ortiz (Colorado State University), Rory Bertoldo (Lehigh University), Jared Sexton (University of California, Irvine), Dervla Meegan Kumar (University of California, Irvine)

Title: Hooves on the Steppe: Equids of Mongolia
Presenter: Sergelenkhuu Jambal, Daniel Miller (Consultant/Independent Researcher)

Title: Potential Impacts of Mongolia's Egiin Gol Hydropower Plant on Fish and Fisheries
Presenters: Jensen, Olaf (University of Wisconsin, Madison), Ganzorig Batsaikhan (Taimen Conservation Fund), Zeb Hogan (University of Nevada), Sudeep Chandra (University of Nevada)

2:20 to 2:30pm – Break

2:30 to 3:30pm – Posters and Art Displays

Poster Presentations

Title: Gender Equality in Mongolian Higher Education
Author: Begz, Ankhbayar (Mitchell Foundation for Arts and Sciences)

Title: Mongolian Sustainable Rangeland Collaborative: Understanding the effects of changing grazing and nutrient availability patterns
Authors: Brown, Cynthia (Colorado State University), Khishigbayar Jamiyansharav (Colorado State University), Ariuntsetseg Lkhagva (National University of Mongolia), Tserendulam Tseren-Ochir (Hustai National Park)

Title: Cognitive and Social Development Through The Mongolian Traditional Knucklebone Game "To Be Hundredth
Authors: Chultem, Baigalmaa (Mongolian National University of Education), Batdelger Jamsrandorj (Mongolian National University of Education)

Title: Herder Observations and Instrument Measurements of Pasture and Hydro-climatic Decadal Variations in Mongolia

Authors: Fassnacht, Steven (Colorado State University), David Barnard (Colorado State University), Darya Lilie (Colorado State University), Niah Venable (Colorado State University), Maria Fernandez-Gimenez (Colorado State University), Arren Mendezona, Chantsaa Jamsranjav

Title: Social Religion in Central Asia & Medieval Fortresses
Author: Jimenez, Jasmine (Saint Louis University)

Title: Welcoming in a New Era of Health: The Past, Present, and Future of Public Health in Ulaanbaatar, Mongolia
Authors: Marley, Angelica (Metropolitan State University of Denver), Dr. Erin Seedorf (Metropolitan State University of Denver)

Title: North American cowboys and Mongolian nomads: Shared lifestyles and similar challenges
Author: Miller, Daniel (U.S. Agency for International Development (Retired)

Title: Age and sex-based differences in behavior, movement, and habitat use in the toad-headed agama (Phrynocephalus versicolor)
Authors: Pham, Alicia (Erell Institute), Kaera Utsumi (Erell Institute), Douglas Eifler (Erell Institute), Maria Eifler (Erell Institute)

Art Displays

Title: Documentary Photographs of the Mongolian Democratic Revolution 1989-1990
Artist: Tsatsralt, S. (Confederation of Mongolian Photographers)

Title: Photographs Telling the Story of Mongolia's Human Ecology
Artists: Forsgren, Todd (Rocky Mountain College), Dimitri Staszewski (freelance photographer)

Title: Vignettes from Mongolia – 2024: My Most Marvelous Mongolian Adventure
Artist: Ichhaporia, Khursheed (Oakton College)

Title: Revolution: Documentary Photographs and Posters from the Mongolian Democratic Revolution 1989-1990
Artists: Krusekopf, Charles (Royal Roads University), Irja Halasz (journalist, photographer)

Title: Searching for Grass and Water: Nomads of the Mongolian Steppe – A Photographic Exhibition
Artist: Miller, Daniel

3:30 to 4:30pm – Sessions 5A and 5B

Session 5A: "Waste" and Pollution
Moderator: Nona Shipman

Title: "Nothing Beats the Happiness of Collecting Dung in the Wild": Urban Migrant Women Retaining the Rural
Presenter: Sondra Cuban (Western Washington University)

Title: Hoggüj and hajagdalgüj: Competing Visions of Zero-Waste in Ulaanbaatar
Presenter: Anna Dupuy (Western Washington University / EHESS (Paris))

Title: Purple haze: Media coverage of air pollution in Mongolia and the United States

Presenters: Derek Moscato (Western Washington University), Ariunzaya Norovsuren (National University of Mongolia), Bayarmaa Boldbaatar (National University of Mongolia)

Title: Tin Cans to People: Shifting the Focus of Spatial Studies in Ethnoarchaeology
Presenter: Matthew O'Brien (Chico State University), Todd Surovell (University of Wyoming)

Session 5B: The Political Past and Present
Moderator: Marissa Smith

Title: The Female Mongol Princes—Rethinking Gender and Heroism in Wartime China (1937-1945)
Presenter: Yunna Jiangxue Han (Columbia University)

Title: Mongolia's Diplomacy and Development: Small Power Balancing in a Divided World
Presenter: Monica Weller (Johns Hopkins University)

Title: Postabortion Contraception in Mongolia
Presenters: Hilary Schwandt (Western Washington University), Batbaatar Monkhooroi, Burenjargal Tegshee, Oyuntsetseg Dugarsuren

4:30 to 5:30pm – Session 6

Session 6A: Conservation and Collaboration
Moderator: Christy Carello

Title: Advancing Fish and Freshwater Conservation in Mongolia
Presenters: Melaney Dunne (Wild Salmon Center), Saulyegul Avlyush (Wild Salmon Center), Matthew Sloat (Wild Salmon Center)

Title: Transcontinental Collaboration for the Conservation of Threatened Parnassius Butterflies in Mongolia
Presenters: Richard Reading (Butterfly Pavilion), Chuluunbaatar Gantigmaa (Mongolian Academy of Sciences), Duinkherjav Bayarmaa (Mongolian Academy of Sciences), Francisco Garcia Bulle Bueno (Butterfly Pavilion), Shiran Hershcovich (Butterfly Pavilion)

Title: 21st Century climate change impacts on steppe social-ecological systems across Mongolia
Presenters: Dennis Ojima (Colorado State University), Chuluun Togtohyn (National University of Mongolia)

Session 6B: Landscapes, Lifeways, and Legacies
Moderator: Lauren Hosek

Title: The Use of Exterior Camp Space among Dukha Reindeer Herders, Khövsgöl Aimag, Mongolia
Presenters: Todd Surovell (University of Wyoming), Matthew J. O'Brien (California State University, Chico)

Title: Archaeology (and Not Archaeology) on a Mission: Interdisciplinary Goal Oriented Field Work
Presenters: Julia Clark (Nomad Science Mongolia, Inc.), Bayarsaikhan Jamsranjav, Peter Hommel, Tuvshinjargal Tumurbaatar, Jennifer Farquhar

5:30 to 5:40 – Closing Remarks

SUNDAY, NOVEMBER 9

Mongolia/Colorado Connections

9:00am to 10:00am – Light Breakfast, poster and artwork set-up

10:00am to 10:20am – Welcome by Honorary Consul of Mongolia, Jim Wagenlander

10:20am to 11:10am – Panel on Rangeland Management and Sustainability

Panelists: Maria Fernandez-Gimenez (Colorado State University), Dennis Ojima (Colorado State University), Khishigbayar Jamiyansharav (Colorado State University), Cynthia Brown (Colorado State University)
Discussant: Emily Yeh (University of Colorado)

11:20am to 12:10pm – Panel on Conservation

Panelists: Michael Bone (Denver Botanic Gardens), Richard Reading (Butterfly Pavillion), John Azua (Denver Zoo)
Discussant: Catherine Kleier (Metropolitan State University of Denver)

12:15pm to 1:15pm – Lunch

1:20pm to 2:10pm – Panel on Culture and Education

Panelists: Duren Walters (Mongolian School of Colorado), Oyuntulkhuur Jukov (Ajnai Ensemble and Colorado Mongolian Community Association), Myrna Ann Adkins (Denver Sister Cities International), Shatrina White (Butterfly Pavillion), Oksanna Wildrick (Butterfly Pavillion),
Discussant: Erika Taylor (Denver Sister Cities International)

2:25pm to 2:55pm – Ajnai Morin Khuur Ensemble

3:00pm to 3:20pm – Undraa Agvaanluvsan, Member of Ikh Khural

3:20pm to 3:30pm – Closing Remarks

The Mongolian Democratic Revolution Through the Photographer's Lens

6:00pm to 8:00pm

2821 South Parker Road, Tower II Conference Room, Flatirons, Aurora

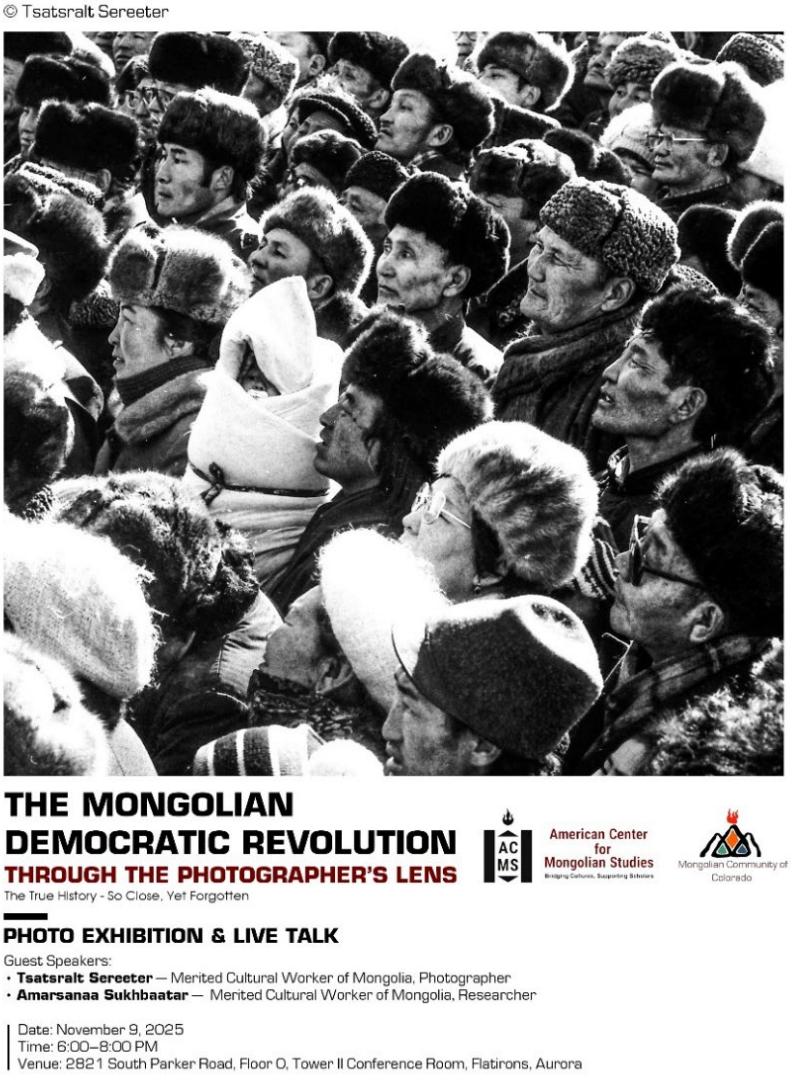
Photo Exhibition and Open Dialogue Featuring:

Tsatsralt Sereeter, Merited Cultural Worker of Mongolia, Photographer
Amarsanaa Sukhbaatar, Researcher and Participant of the Mongolian Democratic Revolution

The exhibition presents 24 historical photographs by Tsatsralt, capturing pivotal moments of Mongolia's 1989–1991 Democratic Revolution, including the largest peaceful demonstrations in the country's history and the leaders of the movement, and ordinary citizens from all generations who shaped a historic transformation. In addition, over 20 photographs celebrating the beauty of Mongolia's people, landscapes, and daily life will also be on display.

Following the exhibition, the guest speakers will share personal insights and untold stories behind the photographs, offering reflections on Mongolia's democratic transition and its ongoing significance. The session will include an open Q&A with the audience, providing a unique opportunity for dialogue and shared learning.

Select photographs from the exhibition will be available for purchase. Fifty percent of the proceeds will support the **"Digital Archive of the Mongolian Democratic Revolution"** — an ACMS initiative dedicated to documenting, preserving, and providing public access to the visual history of Mongolia's democratic movement (1989–1992) for education, research, and community engagement.



PRESENTATION ABSTRACTS

Oral Presentation Abstracts

Clark, Julia (Nomad Science Mongolia, Inc.), Dr. Julia Clark, Dr. Bayarsaikhan Jamsranjav, Dr. Peter Hommel, Tuvshinjargal Tumurbaatar, Dr. Jennifer Farquhar
Archaeology (and Not Archaeology) on a Mission: Interdisciplinary Goal Oriented Field Work

Nomad Science and our collaborators are committed to doing rigorous academic research employing traditional and cutting-edge methodologies to answer some of archaeology's toughest questions. In the course of implementing this work, our team took notice of many threats that were damaging the archaeological resources of the regions in which we worked – threats such as looting, climate change, development, erosion, and vandalism. Recognizing that these threats were causing irreversible harm, and fearful that we may be contributing indirectly to these harms, our team reflected on our priorities and has begun to move forward with a primary mission to counteract these threats. Our fieldwork is now focused on protecting and studying the most vulnerable or damaged sites and incorporates a wide range of tangential programs aimed at supporting system wide changes to protect archaeological resources in both the short and long term. These programs include cultural heritage education initiatives, salvage archaeological projects, collaborations with the National Park Service in the area, cooperation with law enforcement and the judiciary system, and policy advocacy. This approach necessitates interdisciplinary collaboration in the fields of education, biology, conservation, museum studies, law, governance and more. These side projects have required a significant investment in time and resources, but in return they have contributed significantly to our efforts to conduct quality research.
Keywords: Salvage archaeology, rescue archaeology, interdisciplinary, cultural heritage education

Cuban, Sondra (Western Washington University)
"Nothing Beats the Happiness of Collecting Dung in the Wild": Urban Migrant Women Retaining the Rural

"Nothing beats the happiness of going and collecting cow dung in the wild. It is freer and I was on my own. It is happiness. I don't know how to say it. It is how I was raised. I learnt to do it from an early age. Here, I don't know what to do, where to go."
A migrant participant in my study who lost 90% of her livestock in the dzud of 2010-2011 reminisces about her rural livelihood and what she enjoyed most (dung collecting). Her remembrances concentrate on gendered animal-human relationships within a natural landscape (Peemont, 2022; Spengler, 2019) free from industrial/urban time scales. Other participants in my study of 30 Mongolian migrant women similarly ruminated about a rural mobile space, with one burning dung incense regularly to remind her of her "roots." These women neither romanticized country life nor exoticized the dung as a pastoral symbol because they also remarked on the heavy workloads. Atwood (2004, pp. 14-15) likens dung to what North American pioneers called "buffalo chips," and early observations exist of Native American nations' using dung for ceremonial rites, fuel and heating, including from bison in the American West (Bao, 2020; Gur-Arieh & Madella, 2024). Mongolians give numerous names to dung including by animal type, purpose, and form. Dung used for fuel is multifunctional in Mongolia including baking/cooking and heating in addition to medical/health care, livestock protection, smoke purification, fertilizer, insulation, drying, and cleaning, and it is also symbolic (Gur-Arieh & Madella, 2024). This presentation focuses on the meaning and memories of gendered cultures of dung and the recall and transfer of the rural among urban migrant women.
Keywords: dung, Mongolia, gender, rural, women

Dovchin, Badamgarav (Round River Conservation Studies)
Darhad Community-Led Conservation Database

This project was started in 2006 as part of a graduate research project centered in Darhad Valley that will apply findings across the Valley, including the Ulaan Taiga Special Protected Area (UTSPA). By bridging Traditional Ecological Knowledge (TEK: land use stories, legends, songs, names of the places and sacred ceremonies and

harvesting calendars, etc.,) with Western Science Knowledge (SK), I aim to enhance conservation efforts through an interactive spatial database that consists of layers of diverse knowledge systems, the Darhad Community-led Conservation Database (DCCD). In 2015. 2019 and 2024, workshops identified that:

- The deep knowledge systems of the Darhad and Dukha people are on the verge of being lost with the elders
- Less inclusive conservation efforts from international conservation organizations and national government are overlooking the millennium-old TEKs and missing the opportunities to enhance the conservation efforts using both SK and TEK
- The local community people are feeling left out and not being able to participate in the conservation of their land

By expanding data collection, analysis, and inclusive stakeholder involvement, I have been facilitating the Darhad Valley communities to lead the conservation and management of their land using their respective knowledge enriched with scientific insights. Culminating in a framework that can be applied to other conservation concerns and specially protected areas of the world will help understand the system as a whole, resist climate change, and reverse biocultural erosions that strengthen the land and human communities.

Keywords: Copmmunity-Led Conservation, Traditional Ecological Knowledge (TEK), Place-Based Knowledge Conservation, Bio-cultural conservation

Dunne, Melaney (Wild Salmon Center), Dr. Saulyegul Avlyush (Wild Salmon Center), Dr. Matthew Sloat (Wild Salmon Center)

Advancing Fish and Freshwater Conservation in Mongolia

The Wild Salmon Center (WSC) is an international conservation organization dedicated to promoting the conservation and sustainable use of wild salmonid ecosystems. At the invitation of local partners, WSC is now active in Mongolia with the goal to protect Siberian taimen and their ecosystems. Taimen, the world's largest salmonids, are a culturally revered fish and a flagship species for freshwater conservation. However, despite their ecological, cultural, and economic importance, a limited number of Mongolian rivers have healthy populations. Facing threats from habitat degradation, climate change, and insufficient fisheries management, the program focuses on achieving outcomes to sustain wild fish populations, maintain resilient ecosystems and support human well-being. By focusing on the conservation needs of taimen, we can also protect the ecosystems that sustain freshwater biodiversity and support local communities across Mongolia. Five core strategies comprise the program's activities: conservation science research to address information gaps; protecting habitats; implementing sustainable fisheries management; building conservation partnerships & local capacity; and elevating the importance of taimen conservation on a global platform through WSC's International Taimen Initiative. WSC prioritizes and supports Mongolian-led conservation, collaborating on every project with government, civil society, local communities, and private sector partners. WSC is eager to foster deeper connections between Mongolia and the North American West, recognizing that we have significant opportunities for knowledge and cultural exchange that can promote the stewardship of these globally significant ecosystems and species for generations to come. The research will highlight active research and conservation projects.

Keywords: Environmental conservation, sustainability, nature, water

Dupuy, Anna (Western Washington University / EHESS (Paris))

Hoggüj and hajagdalgüj: Competing Visions of Zero-Waste in Ulaanbaatar

In Ulaanbaatar, contemporary urban policies promote the emergence of a hoggüj city — literally, a "waste-free" city. In parallel, activists involved in the zero-waste movement advocate for a hajagdalgüj lifestyle. These two terms — hog and hajagdal — reflect two distinct understandings of waste and two diverging approaches to addressing it.

By tracing the etymology of these words and their semantic shifts throughout the twentieth century, this presentation investigates their respective meanings, how they are mobilized in different political and discursive contexts, and the symbolic and practical implications they carry. While hog evokes dirtiness, disorder, and mixture — calling for containment and control without fundamentally questioning the existence of waste — hajagdal

refers to all residuals of production and consumption, which zero-waste activists frame as undesirable and to be eliminated in the name of environmental and resource protection.
Drawing on a cross-analysis of ethnographic interviews and communication materials produced by both municipal authorities and grassroots anti-waste collectives, this paper explores how these two conceptions of zero-waste shape divergent eco-citizenship norms in Mongolia. It highlights the tensions between competing ways of inhabiting, governing, and moralizing waste in urban space.
Keywords: Waste, Zero-Waste Activism, Eco-Citizenship, Semantics, Anthropology

Erem, Asli (NOMAD Science), Dr. Julia Clark (NOMAD Science)
Digging Deeper: Fieldwork, Culture, and Community in the Nomad Science Archaeological Field School

Nomad Science is a non-profit organization that conducts archaeology field projects in the Darkhad Depression of northern Mongolia. The program is multi faceted including education, research, conservation , advocacy, and a professional archaeological training field school. Students who participate within the field school are immersed in the nomadic and diverse culture of Mongolia (e.g. food, lifestyle and culture). At the same time, they are building a connection with the local community and working to study and protect the valuable history of the region. Interviews with fellow students, instructors, and local collaborators illustrate the importance of these experiences during their time at the field school. This presentation aims to use an anthropological lens to explore the motivations, highlights, and lessons of students and instructors throughout their archaeological field school. This will also include a discussion of what challenges instructors and students face, new skills acquired during the trip, and perspectives gained. The findings from the project overall highlight the importance of teamwork and collaboration for a greater purpose for NOMAD Science's initiative currently and in the future.
Keywords: archaeology, field school, Mongolia, community

Fernandez-Gimenez, Maria (Colorado State University)
Changing Identities of Mongolian Pastoralists and Colorado Ranchers: Implications for Rangeland Social-Ecological Systems

Identity denotes an individual's unique sense of self as well as collective belonging to various social and cultural groups. Pastoralist and rancher identities develop through intertwined relationships of herders with livestock, place, family and community, and occupation, and are continually reshaped through changing pastoral practices and identity performances. As such, pastoralist and rancher identities may influence how herders respond to the complex social and environmental changes facing rangeland social-ecological systems. Additionally, as herders alter their practices, they change what it means to be a pastoralist or rancher. In this presentation we draw on research from Mongolia and Colorado to explore the commonalities and differences in the changing identities and practices of Mongolian pastoralists and Colorado ranchers, how pastoralist/rancher identities may shape or be shaped by wider social and environmental changes, and the role of rancher and pastoralist identities in conflicts over natural resources and land use. We hold that rancher or pastoralist identity contributes to a sense of purpose and meaning related to herding work. Thus, pastoralist/ranchers may resist changes that threaten identities, especially if they believe the changes devalue pastoralist/rancher lifeways or occupations. At the same time, ranchers and pastoralists may alter herding/ranching practices and diversify income sources to other sectors, while retaining pastoralist/rancher identities.
Keywords: rangeland, identity, pastoralist, agency, adaptation

Fuller, Corrina (University of California, Los Angeles)
Word-initial /b/ in Khalkha Mongolian: A case study of variation in naturally occurring speech

This paper explores the variable pronunciation (here, called "realization") of word-initial phoneme /b/ in Khalkha Mongolian through the lens of naturalistic, connected speech. While phoneme /b/ can be variably realized word-internally (yaw-Bal "if (it) goes" vs. ir-Wel "if (it) comes"), word-initial /b/ does not alternate in careful speech; it is always realized as [b]. In connected speech, however, not only is word-initial /b/ variably realized as [b] or [w], it is at times deleted altogether, yielding a "zero" realization. Thus, words beginning with /b/ like baisan "was" are pronounced as [b]aisan, [w]aisan, or even [ ]aisan in naturally occurring speech. In this

study, I offer a characterization of the nature of the variable realization of word-initial /b/ through careful investigation of a small corpus of naturalistic speech (four Mongolian-language TEDx Talks). The corpus data show a strong preference for the [b] realization, followed by a slight preference for the zero realization, with the [w] realization being the least preferred variant of word-initial /b/. All four speakers follow this trend, demonstrating that the observed variation is patterned and generalizes beyond the idiosyncrasies of any individual speaker. The results also reveal a massive split in the realization of /b/ between content and function words, with the [w] and zero realizations of /b/ occurring almost exclusively in function words. I argue that the variation in the realization of word-initial /b/ is not random but patterned, and that processes related to ease of articulation in connected speech, as well as processes particular to certain grammatical configurations, are at work in defining the distribution of pronunciations of word-initial /b/.
Keywords: Khalkha Mongolian language, linguistics, phonology, variation, corpus linguistics

Gartley, Elizabeth (Rutgers University)
Under Cretaceous Skies: Children, Nature, and Dinosaurs

Mongolia and the American West have provided some of the past century's most iconic paleontological discoveries. The first Tyrannosaurus rex specimens were discovered in Wyoming and Montana at the beginning of the 20th century. Roughly two decades later, Velociraptor was discovered in Ömnögovi. The first dinosaur eggs were found in Mongolia, and Diplodocus carnegii was unearthed in the American West. All these remarkable specimens were packaged and shipped to institutions in the eastern United States. Drawing from science studies, posthumanism, and childhood studies, this paper seeks to examine the ways in which nature, childhood, and dinosaurs have been co-constructed and the opportunities that may arise for decolonizing knowledge production and learning. Building on the work of childhood studies scholars such as Alan Prout and Affrica Taylor, this paper examines how childhood and dinosaurs are both products of material and representational processes or hybrids of culture and nature. Through examining the power hierarchies that mark the interwoven and transnational flows of paleontological artefacts, knowledge construction, and science education, the project aims to examine how the paleontological discoveries made in Mongolia remain obscured and underexplored in how the dinosaur figure dominantly shapes US children's construction of nature. The paper employs a rhizoanalysis that involves an intertextual examination of museum exhibits, science education, historical writings, and various cultural, literary, and scientific artifacts. This methodological approach aims to detail connections and generate new questions regarding the association between the American West and Mongolia, with a particular emphasis on US childhoods, nature, and dinosaurs.
Keywords: childhood studies, dinosaurs, nature, rhizoanalysis

Han, Yunna Jiangxue (Columbia University)
The Female Mongol Princes—Rethinking Gender and Heroism in Wartime China (1937-1945)

This presentation explores how gender was narrated during the Second Sino-Japanese War (1937–1945) through the cases of Ba Yunying (巴雲英) and Qi Junfeng (奇俊峰), two Mongol generals whose military success challenged conventional gender roles. Unlike many wartime women who were framed as martyrs, comfort women, or logistical supporters, Ba and Qi were celebrated as military leaders—yet historical narratives also emphasized their roles as wives and mothers, raising critical questions about gender, ethnicity, and political legitimacy. Did their Mongolian heritage—rooted in a tradition of warrior women—make their leadership more acceptable? Why were they referred to as "Female Prince" rather than "Female General" or "Princess"? These titles signal a shift from Mongol aristocracy to modern democracy while also revealing the complex ways Mongols were positioned within Chinese nationalism. Engaging with Chinese biographies, wartime media, and Pan Yihong's recent work Not Just a Man's War (2024), this study challenges dominant gendered war narratives by examining how Mongol women navigated military power, political recognition, and ethnic identity. Ultimately, it raises a provocative question: Were Ba and Qi seen as "women" at all, or did their leadership place them outside traditional gender frameworks? By reconsidering their status within the social-political landscape of wartime China, this presentation offers new insights into how gender, ethnicity, and power intersected on the battlefield and beyond.
Keywords: Gender, Mongol Ethnicity, Military leadership, Wartime, narrative

Hatcherson, Jean (Corawill, Inc.)

Summer in the taiga: how seasonal migration impacts cultural identity and health among the Dukha reindeer herders of Mongolia

The semi-nomadic Dukha of northern Mongolian represent the world's most southerly located Indigenous reindeer herders. While meat and reindeer milk products are staples of the Dukha diet, when seasonally migrating they also gather plants used as food and medicine. Recent studies suggest that traditional knowledge of the landscape, vegetation, and pasture of Indigenous peoples like the Dukha, and the transfer of this knowledge to their children, is critical to their attempts to adapt to the effects of climate change, contributing to the physical and socio-emotional health of the community. During summer migration from June to the end of July, most Dukha families move from the government center, Tsagaannuur, to the high elevation spring and summer camps. Living in urts (teepees) amidst the reindeer, adults renew bonds with nature and each other. Through enculturation, children acquire traditional knowledge, cultural values, and socio-religious beliefs relating to their animals and the environment. This exploratory study examines the role of spring and summer migration on the physical and social health of the Dukha and the transfer of Indigenous traditional knowledge to Dukha youth. Field research utilized participant observation and open-ended interviews conducted at multiple spring and summer camps over four extended visits between 2016 and 2023. Results highlight rituals and everyday behaviors that serve to reconnect the Dukha with their reindeer, the spirits of the landscape, and each other, while providing dietary, physical, and socio-religious opportunities to strengthen cultural identity and improve overall health.
Keywords: migration, reindeer herders, Indigenous health, cultural identity

Hollweg, Karen (Fulbright Alumni Association)

Sustaining Mongolian Herders' Traditional Practices while Educating Visitors about Herder Lifestyles

A small Mongolian NGO (Nomadic Nature Conservation), a Colorado Fulbright Specialist (Karen Hollweg), and Mongolian herder communities in 2016-17 collaborated to craft a program that provides supplemental income for herders, respects the integrity of their environment and traditional lifestyle, and engages and educates visitors regarding culturally-rooted practices of herder communities. This presentation describes the thinking that led to the initiation of this program, the way it was designed and tested, and shows the kinds of opportunities that participating visitors experience. We have found that this program enables people living in or visiting Mongolia to spend a day experiencing the daily life of authentic traditional herders who graze livestock and live on the land. Participants have opportunities to visit a herder's residence (ger); help women boil cow's milk and use it to make yogurt, dried cheese, wet cheese, sweet cream, & aruul; walk into the forest's edge to see how milk is "refrigerated" in the creek; and engage in conversations with herder(s) to learn about their way of life and the challenges of sustaining that lifestyle in the face of increasingly severe droughts, extreme weather (dzud), and encroaching urban development. Among those who have highly recommended these visits to friends and colleagues are: families stationed at the Embassies in Ulaanbaatar and graduate students from the University of Pennsylvania's Lauder Institute of Management & International Studies. Their comments included: "an exceptionally authentic 'countryside' activity" and "a huge success."
Keywords: countryside experiences, visiting herders, traditional lifestyles

Hovorka, Matthew (Community Member), Julia Clark (NOMAD Science Mongolia)

A Qualitative Analysis of Travel Patterns in The Darkhad Depression

Mobility is one of the key outward factors through which peoples' relationship with their environment can be observed. By examining extant roads, paths, and trails around several recently discovered archaeological sites we aim to uncover insights into both contemporary and historical travel behaviors in a relatively remote part of the Mongolian taiga. Through ethnographic fieldwork and cartographic studies, we will explore how these travel routes reflect the socio-economic activities, cultural exchanges, and environmental adaptations of the communities inhabiting this area. By building an understanding of these patterns, we aim to contribute to a deeper comprehension of the interplay between mobility and the cultural landscape of the Darkhad depression.
Keywords: Travel, Mobility, Roads, Archaeology

Jambal, Sergelenkhuu, Daniel Miller (Consultant/Independent Researcher)

Hooves on the Steppe: Equids of Mongolia

There are three equids in Mongolia: the domestic Mongolian horse (Equus caballus) and two wild equines, Mongolian wild ass (Equus heimonus) and Przewalski's horse (Equus przewalski). This presentation discusses: 1) the history and importance of the Mongolian horse; 2) the status of the Mongolian wild ass and threats to its survival; and 3) the successful reintroduction of the Przewalski's horse and the challenges it faces. Mongolia has four million horses (Mongolian: aduu or mori). Horses from different regions have different characteristics. Desert horses have larger feet than average. Mountain horses are short and strong. Horses from the East are the fastest. Horses are valued for their milk, meat, and hair. Horses are used for herding livestock. Horse racing is one of the three manly sports. A popular saying is: "A Mongol without a horse is like a bird without wings." The Mongolian wild ass, or khulan, is found in the Gobi Desert. It is protected, but poaching and loss of habitat have reduced its numbers. Today, there are an estimated 40,000 khulan. Their movements are nomadic, traveling enormous distances searching for forage and water. Their annual range can encompass 70,000 km2. Przewalski's horse, or takhi, is the only wild horse in the world. The species is named after Nikolai Przhevalsky, who made numerous explorations in Mongolia and Tibet and obtained the skull and hide of a takhi in 1878. Takhi went extinct in the wild in the 1960s; it was reintroduced to Mongolia in 1992. There are now 900 takhi in three different locations.

Keywords: Mongolia, equids, horse, wild ass, Przewalski's horse

Jensen, Olaf (University of Wisconsin, Madison), Ganzorig Batsaikhan (Taimen Conservation Fund), Zeb Hogan (University of Nevada), Sudeep Chandra (University of Nevada)

Potential Impacts of Mongolia's Egiin Gol Hydropower Plant on Fish and Fisheries

The Egiin Gol Hydropower Plant is a proposed hydropower dam on the Eg River near its confluence with the Selenge River in Bulgan aimag in north-central Mongolia. The Eg River contains some of the best remaining habitat in Mongolia for taimen (Hucho taimen), an endangered salmonid fish species, and other native fishes. Taimen support a valuable recreational fishery throughout the Eg River with foreign clients typically spending $5-7 thousand USD per person per week to catch and release this rare fish. Concerns about the impact of the hydropower dam on the taimen population and fishery motivated field studies on taimen and other species from 2014-2015. Here, we report on movements of radio tagged fish with reference to the proposed dam site. Multiple tagged taimen exhibited movements of > 200 km, passing frequently through the proposed dam site and reservoir. These movement patterns demonstrate that taimen caught in recreational fisheries in the upper Eg are part of the same population that uses the lower Eg and Selenge River. Taimen are a riverine species and unlikely to use the reservoir habitat. However, northern pike (Esox lucius) – a predator of juvenile salmonids like taimen – are likely to expand their populations from the limited side channel habitat they currently occupy into the reservoir. The combination of isolation, habitat loss, and potential increased predation by pike are likely to result in the extirpation of taimen from the Eg River above the dam and the loss of the taimen fishery.

Keywords: hydropower, aquatic conservation, green energy, endangered fish, fisheries

Jukov, Oyuntulkhuur (Mongolian Evaluation Association), Azjargal Amarsanaa, Itgemjit Gankhuyag, Gereltsetseg Adiya

Elevating Tsaatan voices: Sowing the seeds of Indigenous Evaluation in Mongolia

The Tsaatan, an Indigenous reindeer-herders in Mongolia, has increasingly struggled due to government land conservation policies. Approximately 97% of Tsagaannuur soum has been designated as a protected area, severely restricting their traditional practices, including hunting and seasonal migrations disrupting their food security, cultural traditions, and overall well-being. Despite the significant impact of these policies have on their lives, the Tsaatan community has had little to no involvement in the development or evaluation of these policies. This research aims to address this gap by integrating Indigenous evaluation approaches, utilizing the 'Toolkit on Indigenous Evaluations for the Asia-Pacific Region' to offer the Tsaatan community a basic, participatory evaluation framework. Although local authorities acknowledge the challenges the community faces, their traditional knowledge has not been systematically incorporated into conservation efforts. Community members

are deeply concerned about the loss of traditional knowledge, economic instability, and restrictions on mobility—issues that have only worsened since the implementation of the Special Protected Area law in 2011.
Keywords: Indigenous evaluation; community engagement

Knight, Daniel (University of Colorado), Evan Coffey (University of Colorado)
SCENIC Mongolia: Design, Development and Results of Environmental Engineering Summer Camps in Ulaanbaatar and Kharkhorin

In the spring of 2020, CU Boulder developed a chapter of an environmental engineering and science outreach program in partnership with the National University of Mongolia (NUM) and NGO Public Lab Mongolia (PLM) focused on mentoring youth through air and soil quality research projects in Mongolian high schools. After four years of remote activities, an in-person team from CU Boulder travelled to Mongolia to host environmental engineering and science air and soil quality summer camps at NUM in partnership with NUM students and PLM. Fifteen students participated in a weeklong camp in the capital city, Ulaanbaatar (UB), and twelve college students participated in a half day camp at the NUM field research site in Kharkhorin. Students in the weeklong camp formed teams and co-developed air and soil quality projects, collected data around UB and then analyzed and presented scientific posters to a general audience while students at the field research site in Kharkhorin conducted air and soil quality experiments and analyzed results in one day. The CU team also participated in cultural activities surrounding the Naadam Festival. The presentation will provide additional detail on the summer camps along with feedback received from student participants.
Keywords: Summer Camp, Engineering Education, International, Environmental Monitoring, Project Based Learning

Lee, Nari (University of Montana and Zigudang Environmental Organization)
Gendered Barriers to Working in Conservation: A Comparative Case Study in South Korea and Mongolia

This research explores the impact of gender inequity on conservation efforts, particularly how patriarchal structures and gender norms create systemic barriers within the conservation field, and seeks to develop more inclusive practices for people who work in conservation organizations. Mongolia and South Korea face diverse conservation challenges today. Mongolia has the lowest population density of any sovereign nation globally and heavily relies on its herding culture. Mongolia is experiencing extreme climate change, with temperatures rising twice as fast as the global average. In contrast, South Korea is one of the most densely populated countries globally. South Korea is known for its rapid economic development, but that development has significant environmental costs. In both countries, conservation leadership is predominantly male, and research on gender inequality is limited. In Mongolia, women comprise only 15% of high-level management positions in the workplace, and in Korea, only 8%. Gender equity is crucial to conservation, as studies indicate that gender diversity in conservation leads to more effective outcomes. However, women are often sidelined from conservation leadership roles and face salary inequality, presumptions of incompetence, and sexual harassment. This research uses mixed ethnographic methods, including semi-structured interviews and photovoice, to explore gender inequality in conservation at the micro level of personal experience and the macro level of systemic barriers to better understand women's experiences. The findings from this research will be used to create practical recommendations for policymakers and conservation organizations to support women in leadership roles and improve inclusive organizational culture and policies.
Keywords: Gender inequity, conservation leadership, patriarchal barriers, gender norms, inclusive conservation practices

Lindrooth, Maggie (American Center for Mongolian Studies)
Broadening Horizons, Expanding Definitions: The Benefits and Challenges of Independent Field School Programs in Mongolia

This paper will explore the role of Overseas Research Centers (ORCs) like the American Center for Mongolian Studies (ACMS) in developing and facilitating transdisciplinary and cross-cultural international experiences for students, faculty, staff, researchers, and lifelong learners. Every summer, ACMS runs several Mongolia Field Schools, which push beyond the typical tourist experience in Mongolia to focus on specific topics such as climate

change, public health, the history of horse culture, or rangeland management—fostering transdisciplinary and cross-institutional, cross-cultural connections that facilitate greater understanding of Inner Asia and the challenges and opportunities this region faces in the twenty-first century. These programs welcome anyone over the age of 18 with a desire to learn, regardless of their knowledge of Mongolia, prior experience with the course material, or citizenship. Participants and instructors alike come from Mongolian, U.S., and global institutions and this past summer, we welcomed a substantial cohort of American high school teachers as well as faculty from community colleges and Minority Serving Institutions (MSIs), who broadened their own, and subsequently their students', understanding of this critical region. This paper will highlight the important role such open, short-term programs abroad play in the international education landscape, particularly in Mongolia—an understudied country where there are no long-term, formal study abroad opportunities available for American students, faculty, or staff. Importantly, since ACMS is an independent institution, Field Schools provide a more open level of access that is not tied to a specific school, student population, citizenship status, or education level—subsequently presenting a lower cost barrier than similar credit-bearing programs at universities or "adventure tours" from tourist companies. This is a critical aspect of the ACMS Field Schools that sets them apart, further redefining what it means to "study abroad" and who this experience is for.
Keywords: short-term study abroad, experiential learning, field school, education abroad, short course

Marsh, Peter (California State East Bay)
Sounding Connections to the Land in Mongolia and the American West

In 2004, I had the opportunity to accompany a delegation of Mongolian musicians and herders to the 20th Annual Cowboy Poetry Gathering in Elko, Nevada. This cross-cultural encounter revealed a striking parallel: both the American West and the Mongolian steppe foster rich oral traditions that express profound connections to their respective environments. While the longevity of the Elko gathering attests to the enduring significance of cowboy poetry (the 40th anniversary was held this year), a similar richness of cultural expression exists among Mongolian herders, a significant portion of whom (approximately 40%) maintain centuries-old nomadic traditions despite increasing urbanization. This paper will analyze three audio examples from the Mongolian context to illuminate how sonic and linguistic elements articulate and reinforce the herders' intimate relationship with the natural world. By comparing these examples with the core themes of "cowboy" songs and poetry, this paper aims to highlight not only similarities between the traditions of these two distant communities but also fascinating distinctions rooted in different worldviews and cultural outlooks.
Keywords: oral traditions, American West, Mongolian steppe, identity, sense of place

Moscato, Derek (Western Washington University), Ariunzaya Norovsuren (National University of Mongolia), Bayarmaa Boldbaatar (National University of Mongolia)
Purple haze: Media coverage of air pollution in Mongolia and the United States

This study is focused on environmental news coverage in two national jurisdictions: Mongolia and the United States. In Mongolia, it looks to coverage in two major newspapers, Unuudur (Today) and Udriin Sonin (Daily News). In the United States, it examines coverage from a major newspaper in the West, the Seattle Times, and a national newspaper in the New York Times. A content analysis is provided to assess coverage in these two distinct places. Air pollution remains a pressing human health issue globally. The impacts of localized air pollution and excessive, airborne particulate matter presents short-term impacts for individuals and communities, including conditions such as asthma and other respiratory conditions. Yet it also presents longer-term concerns as well. In some parts of Asia, rapid industrialization over the past half-century has led to deteriorating air quality in some urban areas. Resources-rich nations such as the United States and Russia continue to deal with pollution arising from refineries in the petroleum industry and beehive burners in the forestry sector. And fast-growing global cities such as Ulaanbaatar, Mongolia rank among the World Health Organization's list of most-polluted cities as a result of emissions from industrial sources but also automobile traffic. Finally, natural events such as wildfires and sandstorms contribute to especially hazardous air conditions. The news media play an important role in both documenting the hazards of this problem in cities and regions around the world, but also in terms of advocating for, or amplifying, the public health messaging from government agencies and NGOs.
Keywords: environmental, urban, smog, pollution, ozone

O'Brien, Matthew (Chico State University), Todd Surovell (University of Wyoming)
Tin Cans to People: Shifting the Focus of Spatial Studies in Ethnoarchaeology

Beginning in the 1970's, ethnoarchaeology undertook intensive studies of foraging populations to understand the behavioral implications of artifact spatial patterns. The primary method was to use modern debris as an analog to the cultural materials found in the past. The results of these studies revealed broad patterns only discernable at the scale of campsites, which struggled to resonate with archaeologists who operate at far smaller scales. We highlight the concern over mapping refuse to identify behavior through mapping efforts conducted among several Dukha reindeer herder camps in 2016 and 2017 as part of the Dukha Ethnoarchaeology Project. We argue that discard patterns today do not match the intensity of discard patterns observed in the past. Instead, we advocate for shifting focus toward mapping people over objects in ethnographic contexts. In mapping individuals and their activities, we provide a greater density of spatially and activity-specific data that is more commensurate with what we find in the archaeological record, which furthers the initial goal proposed decades ago.
Keywords: Archaeology, Ethnoarchaeology, Dukha, Pastoralism, Spatial Analysis

Ojima, Dennis (Colorado State University), Chuluun Togtohyn (National University of Mongolia)
21st Century climate change impacts on steppe social-ecological systems across Mongolia

During the past several decades, changes in climate variability, ecosystem dynamics and socio-economic factors are interacting in novel ways to undermine the resilience of pastoral communities of Mongolia. Traditional pastoral social ecological systems are faced with degraded steppe systems, reduced water availability, and market conditions that undermine their livelihoods. Mongolia has undergone notable climate change impacts over the past century with over 2oC increase from the early 20th century, and projections indicate continued warming across the country. This regional warming is combined with increased variability in precipitation and has led to various extreme weather events, such as two consecutive years with dzud events; large steppe fires occurring this year aided by dry spring weather and high winds conditions) conditions threatening the pastoral livelihoods of the steppe systems across Mongolia. These climate changes have a tremendous impact on the pastoral system in Mongolia (e.g., loss of livestock, loss of forage, exacerbating human health through dust, smoke, and drought conditions) and is has potential to erode the resilience of pastoral social-ecological systems by undermining social networks, intergenerational knowledge, and reducing financial resources to overcome extreme events. The vulnerability of the rangelands to climate change derived weather extremes associated with droughts, dzuds, and fires in combination with increased grazing pressure have led to land degradation across Mongolian steppe regions. The loss of land productivity is part of the challenge for pastoral communities to sustain livelihoods and social-ecological systems that would support a resilient steppe ecosystem.
Keywords: climate change, pastoral livelihood, extreme weather events

Paniagua Quinones, Maria del Carmen (Ivy Tech Community College)
Teaching Environmental, Health, and Sustainability Issues in Mongolia at the Largest US Community College.

Connecting mathematical definitions, properties, and rules with diverse perspectives on global issues, trends, and systems can assist students in making inferences on different aspects of the world. Some important aspects of classroom assessment are through projects. A math project was created to discuss environmental, health, and sustainability issues in rural Mongolia. Indiana has a substantial amount of land classified as rural, with 93% of its land area being rural and a significant portion of the population lives in rural areas. Therefore, this project gives the opportunity to shed light on creative aspects of math--like describing and comparing patterns--as well as allowing students to collect data, organize, structure, and present their ideas, which helps with memory retention. Malcom Knowles suggests that adult learners are more aware of self-directed learning who are motivated to apply new learning immediately. By creating a learning climate based on the students' experiences and interests, educators can improve their learning because adults are problem-solvers and learn faster when the subject is of immediate use or of a way to observe or experiment.
Keywords: Environmental, Health, and Sustainability Issues

Reading, Richard (Butterfly Pavilion), Chuluunbaatar Gantigmaa(Mongolian Academy of Sciences), Duinkherjav Bayarmaa (Mongolian Academy of Sciences), Francisco Garcia Bulle Bueno (Butterfly Pavilion), Shiran Hershcovich (Butterfly Pavilion)
Transcontinental Collaboration for the Conservation of Threatened Parnassius Butterflies in Mongolia

Butterfly Pavilion started working with Mongolian butterflies in 2017. Since then, field sessions have been carried out in most years. This year, we are continuing our collaborative research by returning to Mongolia and hosting our Mongolian colleagues in Denver to advance conservation efforts for threatened butterfly species. Our fieldwork has identified critical conservation needs for several Parnassius butterflies, including Apollo (P. apollo), Eversmann's (P. eversmanni), and Stubbendorf's (P. stubbendorfi), while also gathering data on the non-threatened Nomion's (P. nomion). Our research has involved population monitoring, DNA sample collection, and habitat assessments, particularly focusing on host plant identification (Chuluunbaatar et al. 2019, 2020; Chuluunbaatar & Reading 2023, In Press). During 2024 fieldwork, Delgerkhaan Mountain recorded the largest Apollo Butterfly population so far (n=506), showing a significant increase from 2022. At Hovsgol, Stubbendorf's Apollo populations rebounded significantly after years of decline, and the rare Eversmann's Apollo was sighted for the first time in years. Extensive habitat assessments across three study sites identified 73 plant species integral to butterfly survival, emphasizing the importance of rocky terrains for supporting larval host plants. Given that these species inhabit isolated and fragmented landscapes across Mongolia, understanding their genetic diversity and ecological requirements is essential for their conservation. Additionally, genetic analyses are being conducted on the butterflies listed above, plus the Small Apollo (P. phoebus) and Tenedius Apollo (P. tenedius) to assess their population structure and inform management strategies. This international partnership fosters scientific exchange and conservation action, strengthening efforts to protect Mongolia's imperiled butterfly species.
Keywords: Butterfly, Conservation, Parnassius

Rugenstein, Jeremy (Colorado State University), Jeremy Rugenstein (Colorado State University), Nora Vaughan (Lehigh University), Gaby Sanchez Ortiz (Colorado State University), Rory Bertoldo Lehigh Universityt), Jared Sexton (University of California, Irvine), Dervla Meegan Kumar (University of Califo
Deciphering the causes and consequences of the formation of the Altai Mountains

The Altai Mountains of western Mongolia rise more than 4000 meters and are associated with continental-scale faults that have produced some of the largest intracontinental earthquakes on record. However, this range lies thousands of kilometers from a plate boundary, challenging our notions of mountain-building, which more readily predicts mountains at plate boundaries. We present new data collected from sediments shed off the Altai mountains, including new data on both the age of these sediments as well as new paleo-environmental data. These data suggest that, while Altai uplift has been ongoing for the last 25 million years, the Altai has only recently been uplifted to its present height in the last 5-10 million years. This timing implicates the continued collision of the Indian plate with the Eurasian continent as the tectonic driver of mountain building in western Mongolia. In turn, this uplift has substantially decreased precipitation in western Mongolia and modified climate across Asia, expanding the Gobi Desert to the west and creating increasingly dusty conditions across the northern hemisphere. This climatic response to uplift created the modern-day desert-steppe ecosystem that today characterizes much of Mongolia. This mechanism of mountain-building and subsequent environmental change differs from the tectonic mechanisms that produced the North American Cordillera and the climatic response to mountain building that produced the diverse array of ecosystems across the western US. Mongolia and western North America thus represent two unparalleled regions to study how mountain ranges are constructed and how climate and ecosystems respond to the effects of tectonism.
Keywords: Altai Mountains, Climate, Tectonics, Earthquakes, Intracontinental Mountains

Schwandt, Hilary (Western Washington University), Batbaatar Monkhooroi, Burenjargal Tegshee, Oyuntsetseg Dugarsuren
Postabortion Contraception in Mongolia

Of all unintended pregnancies in Mongolia, 66% result in abortion. In one study, 30% of women reported a history of abortion. In one facility, 62% of those aborting had more than one abortion, while 25% had two or more abortions. This suggests women use abortion as a method of family planning. In addition, providers are financially incentivized to provide abortions as they are compensated for them as they are not coved by the health insurance scheme. There are often no contraceptives available in the post abortion care facilities, only counseling. Those who have had an abortion are less likely to have used contraception, specifically less likely to have used IUD and injectables and more likely to have used abstinence for pregnancy prevention. The goal of this proposed research project is to better understand the abortion and post abortion experience for abortion service providers as well as clients, with a particular focus on post abortion contraception counseling, provision, and uptake. This qualitative study will include a series of in-depth interviews of abortion care providers as well as clients in June/July 2025. There will be 2 IDIs with abortion providers, 2 IDIs with post abortion clients, and 2 IDIs with male partners each in a private clinic and a public clinic in Ulaanbaatar as well as in one rural area – for a total of 24 IDIs. The literature review revealed knowledge about the reproductive health landscape in Mongolia, but gaps in that knowledge remain, particularly around post abortion care, which begs to be more intimately examined and studied, which this study will do.
Keywords: Mongolia, abortion, contraception, post abortion care, family planning

Shipman, Nona (MSU Denver), Erin Seedorf (MSU Denver), Shamili Ajgaonkar (College of DuPage), Ryan Chaney (Kingsborough Community College)

Connecting Inter-Institutional Higher Education Students to Local and Mongolian Environmental Issues Through Photovoice

Water is our most precious environmental resource and connects all of us with one another. Environmental resources such as water were central to the ACMS Faculty Fellows program in Mongolia Summer 2025: Public Health & the Environment. This presentation will highlight experiences of 4 faculty participants, and present the development and results of an inter-institutional project. A deeper understanding of our water resources can not only influence our place-based environmental connection and decision making but also create channels of new perspective, understanding, and consideration for places further away. Throughout the 2024-2025 academic year, students from the College of DuPage, Kingsborough Community College, and Metropolitan State University of Denver participated in a collective Photovoice project focused on raising awareness of water issues local to each institution and the connection to environmental issues globally, and more specifically in Mongolia. Photovoice is a process by which people can identify, represent, and enhance their community through a specific photographic technique. For this project, Photovoice allowed participants to call attention to a water issue that they felt was important and related to the prompts and lessons provided. At the Under the Shared Blue Skies conference, we intend to discuss how this group from three institutions connected over Mongolian environmental issues, the development of the collective Photovoice project, and showcase the photographic results from each institution.
Keywords: Photovoice, Water, Public Health, Students, Mongolia

Shukl, Geet Govind (National University of Mongolia)

Methodologies in Mongolian Linguistics: A Critical Review and Exploration

This paper presents a critical review and exploration of the methodologies employed in Mongolian linguistics, focusing on the evolution, theoretical frameworks, and practical applications in the field. The study examines key approaches to the analysis of Mongolian language, including structuralist, generative, functional, and sociolinguistic methods, while also considering more recent trends in corpus linguistics and computational approaches. Through a comprehensive analysis, the paper identifies the strengths and limitations of each methodology, exploring how they have contributed to our understanding of Mongolian phonology, syntax, morphology, semantics, and pragmatics. Additionally, the paper highlights the challenges faced by linguists working with Mongolian, such as issues of language variation, dialectology, and the influence of historical and sociopolitical factors on language use. By synthesizing existing research and suggesting avenues for future exploration, this review aims to provide a framework for advancing Mongolian linguistic studies and improving interdisciplinary collaborations in the field.
Keywords: Mongolian linguistic

Smith, Marissa (Stanford SILICON)

California-Based Collaborative Digitization and Localization Efforts For Mongolian Language Communities Around The World

In this presentation, I will describe work underway with Mongolian undergraduates and graduate students studying in the United States to improve computing tools for Mongolian, Buryat, Classical Mongolian, and other related languages. Currently, these efforts are based around improving keyboard design and locale data, but looking ahead we also expect to be contributing to font design, text completion, optical character recognition, and AI/ML applications. Our broader organization, SILICON (the Stanford Initiative on Language Inclusion and Conservation in Old and New Media, and the Unicode Consortium) works to "collaborate intimately with relevant user community representatives to produce tangible progress." We are also working with the Unicode Consortium, "a non-profit corporation devoted to developing, maintaining, and promoting software internationalization standards and data, particularly the Unicode Standard, which specifies the representation of text in all modern software products and standards."
Keywords: industry, academia, student projects, language, computer science

Surovell, Todd (University of Wyoming), Matthew J. O'Brien (California State University, Chico)

The Use of Exterior Camp Space among Dukha Reindeer Herders, Khövsgöl Aimag, Mongolia

The Dukha Ethnoarchaeological Project (DEP), conducted in Khövsgöl Aimag, Mongolia, from 2012 to 2017 over six field seasons encompassing winter, spring, summer, and fall, investigates the spatial organization of human behavior in Dukha reindeer herding camps to develop frameworks for interpreting archaeological spatial patterns. Inspired by the 12,800-year-old Barger Gulch Folsom campsite in Grand County, Colorado, this research explores the link between behavior and spatial patterning in a mobile pastoralist context. Two research questions governed this research project: 1) How do people decide where to do what they do? 2) How are those spatial decisions manifested archaeologically? In this presentation, we examine the proportion of used and unused exterior space within Dukha camps and the major factors structuring the spatial distribution of human behavior across all seasons. Using time-lapse photography and photogrammetry, we mapped activities across camp exteriors. We relate the distribution of human behavior to both natural and cultural features, like houses, cache platforms, and wood piles. We conclude that archaeologically significant behaviors are clustered within approximately 25% or less of camp area and that the majority of camp space sees little use. Furthermore, the most important factors structuring how people use campsite spaces are the positioning of houses, woodpiles, and livestock management areas. These findings have important implications for understanding spatial patterning in the archaeological record.
Keywords: Ethnoarchaeology, Dukha, mobile pastoralism, spatial analysis, photogrammetry

Taylor, William (University of Colorado), Tumurbaatar Tuvshinjargal (Mongolian Academy of Sciences), Jamsranjav Bayarsaikhan (Max Planck Institute for Geoanthropology, Mongolian Academy of Sciences)

Home on the range: horses, cattle, and connections across the Great Plains and Mongolian Steppes

The Great Plains of North America and the Steppes of the high Mongolian plateau are home to two of the world's largest grassland environments and some of the world's greatest horse cultures. From the last Ice Age, the human ecology of these high prairies has been deeply intertwined with large animals - but the introduction of domestic horses fundamentally altered lifeways in both regions, elevating the open grasslands to the role of cultural, economic, and ecological centers like never before. In both Mongolia and the Plains, horses shifted relationships with bovids, including cattle and yak in Mongolia and the American bison in the Plains. As both regions navigate a changing future, understanding the impacts of these ancient human-animal relationships is a necessary foundation for developing sustainable futures in a rapidly changing cultural and natural landscape.
Keywords: horse domestication, archaeology, bison, cattle

Tserendorj, Munkhchimeg (Western Washington University)

From Peking to Bellingham: Chasing a copy of Üliger-ün Dalai around the world

A unique xylograph of Üliger-ün Dalai is housed in the Special Collections in Western Libraries, Western Washington University. This block-print book, one of only a handful of copies known to exist, is a marvelous collection of short stories that have been spread widely among Mongol nomads for centuries. As part of the type of Buddhist literature known as Jataka, these parables are believed to have been narrated by the Buddha in response to inquiries by his close disciples, imparting moral lessons and wisdom about the human condition. For centuries, Üliger-ün Dalai has been used as an educational tool among Mongol nomads, teaching children the core values of human life. The text has been translated into Mongolian from Tibetan numerous times over the centuries, with block prints made under the Qing Dynasty—first under the Kangxi Emperor in 1714, and later under the Yongzheng Emperor in 1728. This article investigates the remarkable history of the xylograph copy held at the Western Libraries, and attempts to answer questions of provenance. The article also attempts to paint an underlying narrative delving into the origin of this item as a sample from the set of hundreds of other cultural artifacts gathered during the Second Danish Expedition to Central Asia, ranging from jewelries to shaman caftans, and from rare books to wrestling jackets. Through textual and linguistic analysis, the article further seeks to understand the content and vocabulary features of the book as a literary monument representing a unique moment in the long-standing tradition of transmitting Buddhist canons into Mongolian.
Keywords: Guush Tsorj, Uliger-un Dalai, Jataka

Walters, Duren (Mongolian School of Colorado)

Introducing Mongolian as an Optional Foreign Language Elective in Colorado High Schools

The goal of this initiative is to help teachers at the Mongolian School of Colorado (MSoC) obtain teaching licensure through the Colorado Department of Education (CDE), enabling them to formally teach Mongolian as a second language. MSoC operates every Saturday from September through May and provides instruction in Mongolian language and culture. We aim to collaborate with CDE to create a pathway for selected MSoC teachers to become licensed to teach Mongolian as an optional foreign language. Once approved, this could allow students in Denver Public Schools—and potentially other districts—to count hours of Mongolian language instruction at MSoC toward their high school foreign language credit requirements. If successful, this program would establish Mongolian as a recognized second language option in Colorado schools. It would offer students a unique language opportunity while helping them meet graduation requirements. Importantly, this model represents a low-risk, low-cost opportunity for CDE. Aside from expenses related to teacher licensure, program oversight, and ensuring standards and compliance, there would be no significant financial investment required from the state. Tuition would be paid directly by students or their families, making the program self-sustaining from a taxpayer perspective.

The key challenges will be:

1. Developing verifiable academic standards for Mongolian language instruction.
2. Gaining support within CDE to allocate time and resources toward piloting this program.

Weller, Monica (Johns Hopkins University)

Mongolia's Diplomacy and Development: Small Power Balancing in a Divided World

Does Mongolia have a stable and functioning democracy? While there is no one clear path to "true democracy", and Mongolia still has substantial problems to resolve in order to better support its people and ensure democracy in the long-run, I think it can be stated that Mongolia has many key elements of a democratic state. This can be seen in peaceful transfers of power since the 1990s, the democratic structures of power and multiparty system framework, and a flourishing civil society made up of community organizations and advocacy groups. Mongolia's status as a democracy is also a strategic foreign policy position. By differentiating itself from its authoritarian neighbors China and Russia as a democracy, Mongolia is able to pitch itself as a bastion of democracy to its "third neighbors" – democratic countries such as the U.S., the EU, Japan, and South Korea. Thus, functioning as a democracy allows Mongolia to have greater leverage as a small country, balancing against its neighbors to retain its autonomy while still working within a functional regional framework. In this presentation, I utilize a series of case studies and interviews with practitioners and academics in the field of Mongolia studies, diplomacy, and

international development to develop a strategic case for why Mongolia first became a democracy, how sustainable its democratic model of governance is, and how development and investment into the country are shaping Mongolia's future as the sole democracy of North Asia.
Keywords: Democracy, Governance, Development, Diplomacy, Geopolitics

Zhang, Nan (University of Chicago)
Between Time and the Word: Translating G. Ayurzana's Poetic Modernism in Dialogue with Eliot and Borges

This presentation explores the poetry of G. Ayurzana—one of Mongolia's most influential contemporary writers—through the lens of translation and transnational modernism. Drawing from my ongoing English translation of The Seven Endless Strings of the Worded Harp, I examine how Ayurzana's work enters into a subtle yet profound dialogue with the global modernist tradition, particularly the writings of T. S. Eliot and Jorge Luis Borges. Ayurzana's poetry is shaped by Mongolia's post-socialist condition, infused with Buddhist cosmology, shamanic temporality, and metaphysical longing. His verses collapse linear time into cyclical rhythms, where ancestral memory and poetic vision entangle. In this way, his work parallels Eliot's Four Quartets in its meditation on time and decay, and Borges' philosophical inquiries into selfhood, history, and infinity. Yet Ayurzana's voice remains distinct: it speaks from a literary tradition that is often overlooked in dominant narratives of world literature. This presentation also reflects on the politics and poetics of translating Ayurzana's text from Mongolian into English. Translation becomes not only an act of linguistic mediation but also a form of cultural preservation and interpretation—bringing Mongolian modernism into conversation with the broader concerns of global literary studies. By highlighting Ayurzana's place in this constellation, I seek to contribute to a more expansive understanding of modernism beyond its Euro-American centers.
Keywords: Mongolian poetry, global modernism, poetic translation

Poster Presentation Abstracts

Ankhbayar Begz (Mitchell Foundation for Arts and Sciences)
Gender Equality in Mongolian Higher Education

Dr. Ankhbayar (Paul) Begz is Coordinator of the Gender Equality Research Program, Mitchell Foundation for Arts and Sciences. He was a visiting scholar at the Fisher Family Fellow of Center for Democracy and Rule of Law at Stanford University the Shorenstein Asia-Pacific Research Center, where he researched democracy, women's political participation, higher education, and gender equality issues in Mongolia and Asia. Dr. Begz currently serves as researcher at Mongolian University of Science and Technology's Open Education Center and as Parliamentary Assistant to Undraa Agvaanluvsa in the Mongolian State Great Hural. He will present findings from an evaluation study of gender equality practices at two major universities in Mongolia, examining the gender equality policies, labor practices, and resolutions of sexual harassment issues among students and faculty, using the multi-parameter index method. The findings are compared with the results from institutions in the US, Japan, and South Korea.
Keywords: Gender, Women's Political Participation, Higher Education, Democracy, Contemporary Mongolia

Brown, Cynthia (Colorado State University), Khishigbayar Jamiyansharav (Colorado State University), Ariuntsetseg Lkhagva (National University of Mongolia), Tserendulam Tseren-Ochir (Hustai National Park)
Mongolian Sustainable Rangeland Collaborative: Understanding the effects of changing grazing and nutrient availability patterns

Two of the most pervasive human impacts on ecosystems are alteration of global nutrient budgets and changes in the abundance and identity of herbivores. The Mongolian Sustainable Rangeland Collaborative (MSRC) was established to address this issue using multidisciplinary approaches, one of which is to study the effects of altered nutrient availability and herbivory on plant communities and ecosystem processes. To do this, MSRC joined the Nutrient Network: A Global Research Cooperative (NutNet). NutNet applies a standard experiment of nutrient addition and herbivore exclosure treatments in sites around the world and collects data in a consistent manner to

allow direct comparisons of environment-productivity-diversity relationships among systems (https://nutnet.org/home). To contribute to this global study and compare the North American shortgrass steppe to Mongolian rangelands in steppe and mountain steppe regions, the MSRC established two study sites in Mongolia and collecting vegetation and soil data. Our goal is to answer the following research questions: (1) How do grasslands with similar climates and history of grazing, but different current grazing patterns respond to warming and eutrophication and their interaction? (2) Do these grasslands respond differently to different nutrients? And (3) do these grasslands respond differently to herbivore exclosure and eutrophication? We are sharing our data with NutNet, collaborating on a supplemental research study, and publishing papers on the study's results. This research is the springboard for additional work addressing our questions about the role of altered nutrient availability and herbivory on important grassland systems in Mongolia and North America.
Keywords: eutrophication, pastoralism, grazing, nutrients, soil

Chultem, Baigalmaa (Mongolian National University of Education), Batdelger Jamsrandorj (Mongolian National University of Education)
Cognitive and Social Development Through The Mongolian Traditional Knucklebone Game "To Be Hundredth"

This paper investigates the potential of the traditional Mongolian knucklebone game "To Be Hundredth" as an educational tool for enhancing the cognitive and social abilities of primary school-aged children, particularly memory, mental calculation, self-regulation, and collaboration. Traditional Mongolian games, which fully reflect the nomadic lifestyle, have historically served as both recreational practices and instruments of child education and development. In contemporary society, however, the increasing prevalence of electronic games has contributed to a decline in the transmission and practice of traditional games. Among the rich repertoire of national games, the knucklebone game—crafted from livestock bones—has occupied a central role. It is inexpensive, durable, hygienic, and culturally significant. Historical sources report up to 200 variations, while oral traditions identify approximately 60 enduring forms (Ts. Uderpil, 1978). The "To Be Hundredth" game, widely played among children, exemplifies the educational value of this heritage. Gameplay begins when each participant selects four knucklebones, with the eldest casting them clockwise. Scoring is based on specific combinations of animal sides, ranging from 2 points (e.g., two sheep and two horses) to 100 points (four horses). A player who first reaches 100 becomes the winner; however, exceeding 100 leads to disqualification, 81 resets the score to zero, and 99 places the player in a "hole," from which they may only exit under specific conditions. By requiring children to remember, calculate, and monitor both their own and others' scores, the game strengthens cognitive skills while simultaneously fostering fairness, cooperation, and cultural continuity.
Keywords: traditional games, knucklebone, cognitive development, memory, collaboration, Mongolia

Fassnacht, Steven (Colorado State University), David Barnard (Colorado State University), Darya Lilie (Colorado State University), Niah Venable (Colorado State University), Maria Fernandez-Gimenez (Colorado State University), Arren Mendezona, Chantsaa Jamsranjav
Herder Observations and Instrument Measurements of Pasture and Hydro-climatic Decadal Variations in Mongolia

We used herder observations of changes in temperature, precipitation, and pasture condition for three pairs of soums in central Mongolia, covering the forest steppe, steppe, and desert steppe. For each pair, there was one soum that used community based rangeland management (CBRM) and an adjacent soum that did not (non-CBRM). These observations where in the form of closed-ended questions that we used to determine the agreement among herders with the potential for conflict index. We also obtain herders' input on the causes, implications, and adaptations of these changes. We also used station and remote-sensing based data to assessment change. Comparisons were made across all soums, across ecozones, and between CBRM and non-CBRM soums. Datasets were integrated using a Machine Learning approach.
Keywords: change, variability, climate, rangeland condition

Jimenez, Jasmine (Saint Louis University)
Social Religion in Central Asia & Medieval Fortresses

At this past summer's archeological expedition, we excavated the ruins of the Tsagaan Sumiĭn Balgas, which has been attributed to the Uyghurs of the 8th century (Bremann). We had also viewed the Qara Balgasun (Ordo Baliq, or "the Royal City"), where Bögu Qaghan had converted to Manichaeism in the 8th century. We also viewed, Karakorum, where Chinggis Khan's successors established the capital of the grand Mongol Empire in the 13th century. These three sites represent how the Pre-Chinggisid Turkic tribes (Golden) would have established permanent enclosures around their semi-nomadic society. In my thesis, I will connect the development of social enclosures as linked to the influence of the Iranian Sogdian peoples on the Uighurs. While scholars linked the Uighurs and the Sogdian religion, both, architecturally (Arden-Wong), and linguistically (Desmond Durkin-Meisterernst, Barbati, Hunter, etc.), I propose an approach to determine its influence by way of the social structure of their monasteries. I will argue that the influence of the Manichean religion had informed the rules by which the Uighurs managed their resources for sociological purposes. In my Thesis, I will compare the Canons of Maruta (Vööbus) to a contract or decree found at a central Asian site like Mount Mugh, Turfan, or Dunhuang, where Manichaeans and Christians are known to have settled. I will identify specifically how wealth and stability were centered in monastic or prayer communities. These arguments likewise reflect current scholarship concerning the history of east Syriac monastic societies as well as, other cenobitic models of communities in the Church of the East.
Keywords: Asceticism, monasteries, Uighur, city-towns, sociology

Marley, Angelica (Metropolitan State University of Denver), Dr. Erin Seedorf (Metropolitan State University of Denver)

Welcoming in a New Era of Health: The Past, Present, and Future of Public Health in Ulaanbaatar, Mongolia

Ulaanbaatar, Mongolia is home to 2.8 million people. Until 2024, the country of Mongolia did not have an official Public Health law. Mongolia adopted its first public health law on April 1st, 2024, this is the Law on Public Health Care and Services. The future of health and well-being for the people and land of Mongolia needs to be framed within the context of its recent past. This poster presentation is an analysis of the historical framework of public health in Ulaanbaatar, Mongolia. This framework will pull from public health's interdisciplinary approach to health; including socioeconomics, environment, accessibility, disease prevention and health disparities.
Keywords: Public Health, History, Health Disparities, Health Policy, Global Implications

Miller, Daniel (U.S. Agency for International Development (Retired)

North American cowboys and Mongolian nomads: Shared lifestyles and similar challenges

Mongolian nomads have been raising livestock for millennia. As such, there is a wealth of traditional ecological knowledge and experience with livestock. In the last seventy years, nomadic pastoral systems in Mongolia have undergone profound transformations due to political, socio-economic, and ecological factors. Livestock numbers have increased almost three-fold in the last thirty years, with overgrazing a serious issue and the sustainability of current livestock production practices being questioned. Livestock production in the Northern Great Plains is less than 160 years old. The heyday of cattle on the open range was in the 1880s. Overstocking of the range led to widespread degradation. Drought and severe winters led to changes in livestock raising and the birth of range science. In the last 50 years, significant developments have been made in livestock and grazing management that improved the rangelands and increased livestock productivity. Yet, ranchers in North America continue to face challenges with drought, winter storms, and low prices, just like Mongolian nomads. Despite the differences in their respective production systems, the vast distance between the ranges they ride across, and the different cultures, Mongolian nomads and Northern Great Plains cowboys speak the same basic language. They share an interest in wide-open spaces, productive grasslands, healthy livestock, good horses, and a strong sense of community. They also face many of the same challenges. This presentation will illustrate - with paired photographs – shared characteristics of North American cowboys and Mongolian nomads and discuss ways for these livestock-raising people to learn from each other.
Keywords: Nomads, Cowboys, livestock, pastoralism, ranching

Pham, Alicia (Erell Institute), Kaera Utsumi (Erell Institute), Douglas Eifler (Erell Institute), Maria Eifler (Erell Institute)

Age and sex-based differences in behavior, movement, and habitat use in the toad-headed agama (Phrynocephalus versicolor)

Within a species, adults and juveniles differ in body size and energetic needs based on their stage of development and reproduction, which can lead to variation in their behavior and habitat use. The differing energetic needs of juveniles can result in variation in how and when they use the habitat compared to adults. Although the juvenile stage has the highest mortality rate and represents a critical period for conservation, they are the least studied demographic group for most species. We tested the hypothesis that juvenile toad-headed agamas, Phrynocephalus versicolor, would differ from adult males and females in their movement patterns, foraging behavior, signaling, and habitat use in the Gobi Desert of Mongolia, predicting that juveniles, with their higher energetic needs, would move more and forage more than adults. We measured the movement path of individuals for 15-min, recording their spatial location, habitat, and behavior every 30 s. Our analysis included a measure of the entropy (i.e., randomness) of movement for demographic groups. Adult males differed from adult females and juveniles in their step length and turn angle distributions. In addition, juveniles moved longer distances than adult females. Juveniles moved most often, had the highest entropy, as well as the most foraging and signaling behavior (i.e., eating, digging, and tail waving). Both adults and juveniles spent the most time in open habitat each group differed in the plants they made use of the most.
Keywords: ecology, movement, behavior, reptiles, conservation

Art Display Abstracts

Forsgren, Todd (Rocky Mountain College), Dimitri Staszewski (freelance photographer)

Photographs Telling the Story of Mongolia's Human Ecology

This poster and/or presentation considers two documentary photography projects that create visual narratives about the relationship between Mongolian people and the landscape. Dimitri Staszewski's The World at Night: Spirituality and Wolf Hunting in Western Mongolia is the first documentation of nomadic Kazakh herders' nuanced spiritual relationship with wild wolves in western Mongolia. This work combines photography, text, and ethnographic recordings of folk songs to showcase the web of traditions that are a part of that complex and changing relationship as economic forces and climate change shift Kazakh herders' attitudes and lifestyles. Todd R. Forsgren's Post-industrial Edens document the gardening…A combination of harsh climate, tradition, and government restrictions prevented most Mongolians from gardening until their peaceful revolution of the mid-90s. Imported produce is scarce in remote Mongolia. Exceptionally severe winters, known as dzuds, have resulted in extensive loss of livestock, the traditional agricultural mainstay. In response, small-scale horticultural projects have been encouraged to provide a more adequate and balanced diet. This careful and intensive management of small plots maximizes the use of Mongolia's limited arable land (less than 1% of the country's total area) and depict a mixture of cultural ideas about gardening adapted to the Mongolian tastes and climate. Both these wildlife management and gardening practices can offer lessons to the American West, which faces similar ecological issues.
Keywords: Human Ecology, Photojournalism, Documentary Photography, Wolves, Gardens

Ichhaporia, Khursheed (Oakton College)

Vignettes from Mongolia – 2024: My Most Marvelous Mongolian Adventure

Diplomacy through educational trips present a wonderful way to exchange ideas, learn about a culture through immersive experiences. The trips equip faculty with tools to develop classroom and community projects that help develop collaboration, communication skills, and prepare students for global engagement. This display showcases one faculty member's journey from a community college in Illinois to Mongolia. All from ONE amazing trip! The objective is to tap creativity, generate emotional and cognitive awareness, and invite the viewer to extract deeper meaning from the black and white monochrome images.
Keywords: Monochrome, Black and white images, Ger, Ovoo, Airag, Deel

Krusekopf, Charles (Royal Roads University), Irja Halasz (journalist, photographer)

Revolution: Documentary Photographs and Posters from the Mongolian Democratic Revolution 1989-1990

This display includes highlights of docmentary photographs that Finnish Journalist Irja Halasz took during the 1989-1990 Democratic Revolution in Mongolia. At that time Irja was studying Mongolian at the National Univesity of Mongolia, and she was swept up into the democratic movement through one of her professors, S. Zorig, who became a leader of the Democratic movement. Irja captured the drama that unfolded day by day from the protests that started in late-1989 and grew into a national movement that led to the resignation of the Communist government and first democratic elections in 1990. Irja has remained in Mongolia to the present time, and served for many years as a journalist representing Reuters, Associated Press, Al Jezeera and other publications. Her collection includes her own photographs and remembrances of the events and people, including Zorig and other democratic leaders, and a unique collection of revolutionary posters that were created by a daring underground movement that was working to support the protests and calls for freedom and democracy. The materials have been published in two books, Revolution, spnsored by the Mongolian Democratic Union, and Posters of Mongolia in Transition, published by Internom Press. An exhibit of more than 150 of Irja's photos and posters was recently held in Helsinki, Finland at the Sofia Cultural Center, and the full collection is now in North America and available for display by interested institutions. Charles Krusekopf ckrusekopf@mongoliacenter.org will be at the conference to discuss the collection and selected items will be on display.
Keywords: Democracy, Photojournalism, Documentary Photography, Political Posters

Miller, Daniel

Searching for Grass and Water: Nomads of the Mongolian Steppe – A Photographic Exhibition

Mongolia's vast rangelands have supported nomadic pastoralists for thousands of years. Since the Early Bronze Age, approximately 4,000 years ago, nomads have raised livestock on Mongolia's steppe. Various empires emerged from these nomadic societies, including the largest land empire ever known, unified by Chinggis Khan in the 13th century. Among the five species of animals raised by Mongolians—camels, horses, cattle/yaks, sheep, and goats—horses hold the greatest cultural significance. This is clearly illustrated during various festivals featuring horse races. A popular Mongolian proverb states, "A Mongol without a horse is like a bird without wings." Horses are ridden, used for herding, and provide meat. Mares are also milked, producing large quantities of fermented mare's milk that is consumed. Camels, once far more numerous than they are today, are still used by some nomads to transport supplies between seasonal pastures. Cattle and yaks provide milk and meat. Sheep supply meat and wool for making felt, while goats produce valuable cashmere, a major source of income for many nomads. Today, nearly one-third of Mongolia's population depends on livestock raising for their livelihoods, making livestock production a crucial part of the country's economy. Although globalization, economic development, and climate change present challenges for Mongolia's nomads, the nation's nomadic heritage remains vital to its vibrant culture. This exhibition of black-and-white photographs celebrates Mongolia's nomads and the legacy they continue to uphold.
Keywords: Mongolia, nomads, steppe, photographs

Tsatsralt, S. (Confederation of Mongolian Photographers)

Documentary Photographs of the Mongolian Democratic Revolution 1989-1990

Sereeter Tsatsralt is a renowned Mongolian photographer, known for his pioneering work in the field of documentary photography, spanning more than four decades of modern Mongolia. His vast private collection includes images of his works shot during the Democratic Revolution in 1990s. At the conference he will display a collection of his photographs that he took during the Mongolian Democratic Revolution of 1989-1990 and the early period of democracy through the first elections in 1990 and 1992. His work has been highlighted in exhibitions in Mongolia and abroad, and he has contributed to numerous books and cultural exhibits and events on contemporary Mongolia.
Keywords: Democracy, Photojournalism, Documentary Photography, Contemporary Mongolia

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