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GPHY 500.01: Geography Graduate Colloquium

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GPHY 500 - GEOGRAPHY COLLOQUIUM
Department of Geography
University of Montana
Fall 2016

Meets:

Tuesdays 3:40-5:30, Stone Hall 217

Instructor/Coordinator:

Dave Shively

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Email: david.shively@umontana.edu

Phone: 406-243-6478

Course Description:

The Geography Colloquium is a speaker series and forum for sharing research and practice pertaining to issues with geographic dimensions. Graduate students in residence and undergraduate seniors are required to attend. It brings together faculty, graduate students, undergraduate seniors, and other interested parties. The speaker series sets out to span the broad range of topics in geography or with connections to geography. Speakers are scholars from within the department, from other UM departments, from other institutions, and practitioners from the public and private sector. It is also a forum for sharing information of importance to graduate students and undergraduate seniors (e.g., Geography Club activities, research opportunities, course scheduling, etc.). Early sessions also serve to orient incoming students to the program, to other students and faculty, and to provide guidance on professional development.

Learning Goals and Outcomes:

1. Incoming graduate students will be welcomed, introduced to continuing students, to faculty, and oriented to the graduate programs in Geography.
2. Students will receive guidance toward professional development, including Curriculum Vitae and Resume preparation.
3. Undergraduate seniors will receive guidance on completing GPHY 400 – Geography Senior Capstone.
4. Participants will gain an appreciation of the broad range of topics with geographic dimensions, from the sciences and social sciences to the arts, from theoretical to methodological to professional practice.
5. The audience will benefit from exposure to academics and practitioners in Geography, GIS, Planning, and allied fields.

Required Textbooks:

- There are no required textbooks.
- Readings may be assigned.
- Geography Graduate Student Handbook Draft (sent by e-mail).
- For Curriculum Vitae versus Resumes, please consult the UNC Writing Center's guidelines at: <http://writingcenter.unc.edu/handouts/curricula-vitae-cvs-versus-resumes/>

Course Guidelines and Policies:

Assignments/Expectations

- Students and faculty take turns in providing refreshments to be shared before and/or after the guest presentations. A signup-sheet will be circulated.
- Early in the semester, students will receive a draft copy of our Graduate Student Handbook. They are expected to provide feedback.
- A Curriculum Vitae (CV) and Resume are due by Tuesday, November 24, the class period before the Thanksgiving Holiday.

Attendance

- Regular attendance is expected. Active participation in the discussion, typically at the end of a talk, will enhance the experience for speaker and audience.

Grading Policy

Grading mode is C (CR Credit; NCR No Credit.)

Student Conduct Code

All students at the University of Montana must practice academic honesty at all times. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the *Student Conduct Code*. The Code is available for review online at http://www.umt.edu/vpsa/policies/student_conduct.php

Course Withdrawal

The 15th Day of Classes. Sept 21, 2015, last Day To: Register for classes, add classes with override slip/electronic override, change credits in variable credit courses or drop classes with a refund on CyberBear or with an override slip/electronic override.

For additional relevant dates, please see

<http://www.umt.edu/registrar/PDF/201570ImportantDatesDeadlines.pdf>

Disability Modifications

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and *Disability Services for Students*

(<https://www.umt.edu/dss/default.php>). If you think you may have a disability that might adversely affect your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406.243.2243. Your instructor will work with you and Disability Services to provide an appropriate modification.

Course Schedule:

| Date | Topic | Presenter |
|-------------|---|---------------------------------|
| 8/30 | Introduction to Colloquium and Participants; continue Orientation to Geography Programs (Graduate, UG Capstone), university resources, professional organizations, etc. | Geography Faculty |
| 9/6 | CVs, Resumes, Portfolios, etc. | Geography Faculty |
| 9/13 | Flood Risk Management In The United States: Implications Of National Flood Insurance Program Changes For Social Justice | David Shively |
| 9/20 | The Political Ecology of Cordyceps in the Garhwal, Indian Himalaya | Laura Caplins |
| 9/27 | Saving Tigers - One Map at a Time! | Kevin McManigal |
| 10/4 | <i>Haggerty</i> : Local Costs & Benefits Of Energy Booms: Findings From Comparative Research In Wyoming, Montana And Pennsylvania. <i>McEvoy</i> : Defending Dissensus: Participatory Governance and the Politics of Water Measurement in Montana's Yellowstone River Basin. | Julia Haggerty, Jamie McEvoy |
| 10/11 | Deglaciation, Debris Flows, and Doing Geography: Reflections on Fieldwork in Slovenia | Sarah Halvorson |
| 10/18 | Migration Dynamics in Rural America | Christiane von Reichert |
| 10/25 | | Eric Rowell |
| 11/1 | Predicting Sense Of Community in a Gentrifying Historic Latino/Latina Neighborhood | Laurie Walker |
| 11/8 | Election Day – UM Classes Canceled | |
| 11/15 | Bakken Blind Fields: The Cultural Eddies of Accidents and Fractured Government in Oil and Gas Development | Susan Gilbertz |
| 11/22 | | Natalie Dawson |
| 11/29 | Using Boolean algebra, information theory and soft computing for the exploration of geospatial trends in fuzzy descriptions of place | Fernando Sánchez-Trigueros |
| 12/6 | Lake fluctuations since the Last Glacial Maximum in the Altai Mountains of Mongolia | Caleb Pan |
| 12/13 | Finals Week – Meeting TBD | |

Presentation Abstracts

(Alphabetical Order)

Laura Caplins, Department of Society and Conservation, College of Forestry & Conservation, UM: *The Political Ecology of Cordyceps in the Garhwal, Indian Himalaya*.

In the Garhwal of northern India, the Bhotiya (an ethnically and culturally distinct tribal group) were historically engaged in seasonal migration (i.e. transhumance) to take advantage of scarce mountain resources and trade relations with Tibet. This livelihood practice has all but disappeared due to the 1962 closure of the Indo-Tibetan border and other nation-state policies, thereby drastically altering the way of life of the Bhotiya (Negi 2007). One way the Bhotiya are adapting to these changing circumstances is by engaging in the collection and sale of a valuable alpine medicinal fungus locally known as kirajury, and commonly called the caterpillar fungus or cordyceps (*Ophiocordyceps sinensis*). Though the Bhotiyas' livelihoods have been drastically altered, their historic relationship with alpine meadows where cordyceps are found, uniquely positions them to access "the world's most expensive biological resource" (Shrestha and Bawa 2013:514). Some rural households in the Himalaya earn as much as two-thirds of their household income via the collection of cordyceps. This research addresses how people navigate the socio-spatial dimensions associated with accessing cordyceps meadows, how people access and capitalize on local and distant cordyceps markets, and the ways in which categories of social difference and location shape access.

Natalie Dawson, Wilderness Institute, UM:

Susan Gilbertz, Department of Social Sciences and Cultural Studies, MSU Billings: *Bakken Blind Fields: The Cultural Eddies of Accidents and Fractured Government in Oil and Gas Development*.

Eastern Montana is knitted into the urban industrial fabric of the 21st Century as an important hinterland for oil and gas industries. Not surprisingly, the region suffers environmental degradation and numerous social and economic disruptions caused by a boom and bust economy. In recently gathered cultural data, locals express ambivalence about the Bakken Boom, yet generally they regard the overall benefits as more important than the hardships. Many of them excuse environmental accidents, and they assume "government" will step in when needed to protect against or to correct environmental harm. However, careful analysis of heartrending environmental mishaps and grievances illuminate two cultural eddies in which the narratives of accidents and the limitations of fractured governmental oversight seemingly conspire to compound injury. These cultural eddies help blind locals from their exploitation, but when the blinds fail the impacted individuals also suffer betrayal and alienation.

Julia Haggerty, Department of Earth Sciences, Montana State University: *Local Costs & Benefits of Energy Booms: Findings from Comparative Research in Wyoming, Montana and Pennsylvania*.

Julia Haggerty will share results from a USDA-funded research collaboration among MSU, Pennsylvania State, Cornell and Univ. of Wyoming. The project aims (1) to evaluate how rural communities and local stakeholders in agriculture assess the costs and benefits of shale and coal-bed gas development and (2) innovate and share innovative approaches to planning for and mitigating impacts to rural communities. Haggerty's talk will focus on preliminary findings from

a multi-state survey of business owners and agricultural land owners and case studies of local responses to development impacts.

Sarah Halvorson, Department of Geography, UM: *Deglaciation, Debris Flows, and Doing Geography: Reflections on Fieldwork in Slovenia*

In the Slovenian Alps people are deeply connected to mountains as a source of cultural identity, sustenance, and economic development. However, changing climate conditions including the retreat of mountain glaciers, shifts in precipitation regimes, and extreme natural hazard events are reworking mountain-society relations in profound and unexpected ways. The latest scientific research indicates a range of climate change risks to agricultural productivity, hydrologic systems, human health, and well-being in the country. How Slovenian mountain communities articulate climate processes, meaningful adaptations, and supportive policies is insufficiently understood. Analyzing local observations, potential adaptive strategies, perceived risks, and related features was a major motivation for examining the case of Slovenia and undertaking six months of fieldwork in that country. This presentation will highlight observations and preliminary findings from the research. It will also delve into several unique and unexpected outreach and professional service opportunities that greatly enhanced and expanded scientific knowledge and exchange.

Jamie McEvoy, Department of Earth Sciences, Montana State University: *Defending Dissensus: Participatory Governance and the Politics of Water Measurement in Montana's Yellowstone River Basin*

The role of a particular aspect of collaboration, dissensus, in stimulating critical reconsideration of 'prior appropriation', a historically hegemonic condition related to water rights in the western United States, is examined via a collaborative planning effort in Montana. Consensual support for a water-use measuring proposal was undermined by strong libertarian resistance to governmental regulation, and an unwavering embrace of the status quo. However, based on insights from scholars engaged in the 'post-political' dimensions of contemporary forms of rule – dissensus – understood as the manifestation of consensus-forestalling disagreement articulated between oppositional voices – is revealed as a condition to be actively nurtured, rather than purged. This case reveals how dissensus can open discursive spaces for hegemony disrupting modes of inquiry, alternative perspectives, and innovative possibilities, even among sanctioned participant voices operating within otherwise established, depoliticized governing arenas. The study thus deepens our understanding of the complex political dynamics of participatory water planning.

Kevin McManigal, Department of Geography, UM: *Saving Tigers - One Map at a Time!*

A unique partnership between the University of Montana Department of Geography and the Panthera large cat conservation organization has been producing high resolution topographic maps of the Parsa Wildlife Reserve in Nepal and the Manas National Park in India. Twelve student cartographers have worked for the last 2 years to create over 24 topographic maps that cover both parks. They are being utilized in the field by anti-poaching patrols as part of the Tigers Forever program. The maps have the potential to literally change the family trees of the park's tigers. This presentation will delve into the entire workflow from data creation and digitizing in GIS, to styling of the maps in Illustrator, and training the park rangers in the jungle

with the finished maps. The talk will conclude with a discussion of the challenges and successes while mentoring aspiring cartography students through a project of this scope and size.

Caleb Pan, Systems Ecology, UM: *Lake Fluctuations since the Last Glacial Maximum in the Altai Mountains of Mongolia.*

With: Michael Walther³, Ulrich Kamp¹, and Avirmed Dashtsetseg³

¹ Department of Geography, University of Montana, Missoula, MT, USA

² Systems Ecology, University of Montana, Missoula, MT, USA

³ Institute of Geography and Geoecology, Mongolian Academy of Sciences, Ulaanbaatar, Mongolia

Throughout time, lakes in western Mongolia have exhibited extreme fluctuations in lake extent. These fluctuations include increases of lake extent as high as 258 m higher than present, conversely some lakes have disappeared entirely. However, since the time of these extreme fluctuations, Mongolia has developed an economic dependence on industries that are fiercely attached to water including; agriculture, mining and livestock, making it critical to monitor lake extent fluctuations. This paper examines modern lake extent fluctuations using Google Earth Engine to generate a 20-year time-series of change in the glacially-fed lakes in the Upper Khovd River basin of western Mongolia. To determine the causes in these changes in lake extents, we performed multiple linear regression analysis between annual lake extent and climatic variables including precipitation, temperature, aridity, and evapotranspiration.

Eric Rowell,

Fernando Sánchez-Trigueros, Department of Geography, UM: *Using Boolean algebra, information theory and soft computing for the exploration of geospatial trends in fuzzy descriptions of place.*

This lecture describes a raster approach to the representation and modeling of places that have been vaguely defined in geographical space. The model assumes that places may not have crisp boundaries but can be approximated as areas fuzzily defined by a "multipoint" arrangement (in the parlance of ISO/IEC and the Open Geospatial Consortium), echoing Evans and Waters (2007) and Huck et al. (2014). A sequence of techniques based on Boolean arithmetics, relative entropy and machine learning supported by evolutionary computing are shown in exploring locational similarities in sets of multipoint representations, with the ultimate goal to model prototypes of fuzzily-defined phenomena. The toolkit was originally developed for the treatment of fuzzy descriptions of place in collaborative, community-based studies led by the US Forest Service and Tribes in the West CONUS, and examples derive from multistakeholder partnerships for the assessment of fuels management strategies in historical territories of the Colville Confederated Tribes, WA, and to identify public perceptions of environmental change on the Flathead Indian Reservation, MT.

Dave Shively, Department of Geography, UM: *Flood Risk Management in the United States: Implications of National Flood Insurance Program Changes for Social Justice.*

The National Flood Insurance Program (NFIP), an essential element of US flood management, has been modified by recent legislation to make it financially solvent. Primarily affecting policy types that have long been subsidized, the reconfigured program will result in these being converted to risk-based policies and this has produced concerns over policy affordability,

especially for moderate to lower-income households. The Homeowners Flood Insurance Affordability Act of 2014 does require the program's administrator, the Federal Emergency Management Agency, to develop an affordability framework and program to present to the US Congress for enactment. The social justice implications of the recent legislation and potential affordability approaches are considered through a synoptic review of literature from diverse fields. Lacking in this literature is attention to the implications of climate change on the reconfigured NFIP and its rate structures. More attention needs to be paid by policy makers to the need for community participation in the NFIP's Community Rating System. The No Adverse Impacts approach to flood zone management can help to enhance this as well as serve as a bridge to smart growth community planning that protects and enhances social justice.

Christiane von Reichert, Department of Geography, UM: *Migration Dynamics in Rural America*.

Migration is a major force in re-distributing the population within the United States. Migration not only changes the population size of regions and places, but also the composition of the population, which is especially well known for age. This presentation focuses on two aspects of (internal, not international) migration affecting rural America.

1) Many rural communities experienced long-term population loss through outmigration of rural youth. Findings of a qualitative study shed light on rural return migration -- by people who left their hometowns after high school graduation but later moved back: Why did they move back, and how does their return impact their rural home towns?

2) Disability rates are higher in rural than urban America, even after taking the higher concentration of elderly in rural places into account. To what extent does selective migration up or down the urban hierarchy by persons with or without disability contribute to higher rural and lower urban disability rates? A quantitative approach drawing on a rich set of public micro data is used to seek an answer to this question.

Laurie Walker, School of Social Work, UM: *Predicting Sense of Community in a Gentrifying Historic Latino/Latina Neighborhood*.

Neighborhoods with generational Mexican American populations may have strong Social Cohesion within blocks and a strong neighborhood Sense of Community. Gentrification in the context of streetcar-focused redevelopment has the potential to have an impact on neighborhood dynamics. This study focuses on: (a) what factors predict neighborhood Sense of Community; (b) determines differences in Social Cohesion, Sense of Community, Involvement in Neighborhood and Voluntary Associations between Latino/Latina households and those with children present and other study participants; and (c) provides a description of generational and new resident experiences with block Social Cohesion and neighborhood Sense of Community. The study highlights the Latino/Latina residents' strong maintenance of a strong ethnic identity; generational neighborhood based social ties; and ongoing involvement in neighborhood schools and religious traditions that contribute to a strong neighborhood Sense of Community. Newer residents report being drawn to and supporting the maintenance of the neighborhood Sense of Community.