

SWAAG Abstracts *2011*



and Conference Program

Association of American Geographers
Southwest Division Annual Meeting
10-12 November, Austin, Texas

Edited by William E. Doolittle
Department of Geography and the Environment
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Acknowledgments

As is the case with every meeting of a learned society, a great deal of time is consumed and energy expended by a number of people. The 2011 meeting of the Southwest Division of the Association of American Geographers is no different. Thanks go to the following people for their help in making this meeting a success. Starting with people in the Department of Geography and the Environment, The University of Texas at Austin, Dee Dee Barton (the girl so nice, they named her twice) and Natalie Boudreau made sure that all funds were collected and disbursed properly. Anwar Sounny-Slitine set-up and handled with panache the electronic registration. Jon Gehrig, Pamela Sertzen, Katherine Lininger, and Kenneth Young organized papers and posters into a coherent program, and Matt LaFevor helped with a campus excursion. Troy Kimmel agreed to deliver the luncheon presentation.

Beyond the department, Shannon Bieberdorf assisted with venue and service negotiations. Destin Smith, from UT's College of Liberal Arts, made sure that all contracts were in order. Kara Reed of Rosemary's Catering ensured that all of our needs were met at UT's Etter-Harbin Alumni Center. Dennis Lancette guaranteed us excellent accommodations at the La Quinta Inn. Helmet Hartmann was a gracious host at Saengerrunde Halle, and Hayley Fassnidge arranged sumptuous cuisine from Scholz Garten.

Michael O. Hironymous arranged for a visit to Rare Books Room of the Nettie Lee Benson Latin American Collection of UT's libraries, where he discussed some of the major map holdings. Lynnette Maphies and Richard Oram arranged for our visit to the Harry Hunt Ransom Humanities Research Center, where Maria Lane spoke eloquently about some of the holdings in the Kraus Map Collection. Finally, Joshua Long provided *Keeping It Weird*, a guide to the fabulous city of Austin, Texas.

Program

*All sessions will be held in the Etter-Harbin Alumni Center
The University of Texas at Austin*

With the exception of organized special sessions and panel discussions, the final speaker in each session will serve as session or panel moderator and time keeper

Thursday, 10 November 2011

Noon to 5:00 pm

Katherine A. Jackson Room

Conference Check-In

1:20 to 3:00 pm

Arno Nowotny Room

- 1:20 pm** **Rudow, Joshua**, The University of Texas at Austin; “Uncharted Territory: Agricultural Adaptations to a Changing Environment in the Sierra Tarahumara.”
- 1:40 pm** **Gehrig, Jon**, The University of Texas at Austin; “Eating the (M)other: Western Quinoa Consumption and Neocolonialism in the Andes.”
- 2:00 pm** **Rizzo, Rosario**, The University of Texas at Austin; “Coping with Neoliberalism: The Case of Corn Farmers in the Totonacapan.”
- 2:20 pm** **Anderson, Kevin M.**, Austin Water–Center for Environmental Research; “The Forgotten Habitat: the Rediscovery of the Colorado River Bottomlands.”
- 2:40 pm** **Day, Frederick** and **Ashley Summers**, Texas State University-San Marcos; “Evaluating Recreational Activities: The Geo-demographics of Texas Coastal Fishermen.”

Benno C. Schmidt Room (Graduate Program Information Session)

1:20 pm **Professors/Graduate Advisors** from Geography Programs at:
The University of Texas at Austin
Texas State University-San Marcos
University of North Texas
Oklahoma State University
University of New Orleans

Ben G. Oneal Room

1:20 pm **Kleitches, Larry**, Texas State University-San Marcos; "Down in the Town: An Urban/Rural/Suburban Tripartite."

1:40 pm **Hagge, Patrick D.**, Penn State University; "Rural Land-Use and Economic Challenges of Urbanization in the Twentieth-Century Greater Mississippi Delta Region."

2:00 pm **Falola, Bisola**, The University of Texas at Austin; "The Public's Interest: Representation and Decision-Making in City Planning."

2:20 pm **Matthews, Olen Paul**, University of New Mexico; "Federal Power, the Commerce Clause, and Health Care Reform."

2:40 pm **Ostrander, Anthony**, and **Murray D. Rice**, University of North Texas; "Firm Change and Development: An Analysis of Walmart's Retail Expansion Strategies."

3:00 pm

Janie and Dolph Briscoe Rotunda

Campus Excursion: Walk to the Harry Hunt Ransom Center and discussion of ancient maps in the Kraus Map Collection with Maria Lane (UT PhD), University of New Mexico.

3:00 to 3:20 pm

Janie and Dolph Briscoe Rotunda

Coffee and Snack Break

3:20 to 5:00 pm

Arno Nowotny Room

- 3:20 pm** **Lambert, Dean P.**, San Antonio College, and Harary Security Consulting International; “An Analysis of Ambushes on Mexican Authorities and their Relation to the Ongoing Drug War.”
- 3:40 pm** **Islas, Marina**, The University of Texas at Austin; “Negotiating Change: Community Driven Development and Domestic Labor in Ciudad Sandino, Nicaragua.”
- 4:00 pm** **Lemon, Robert Douglas**, The University of Texas at Austin; “Identifying Place in Oakland, California: Using GIS to Synthesize Spatial Perceptions of Demographically Distinct Neighborhoods in Oakland, CA.”
- 4:20 pm** **Jones, Richard C.**, The University of Texas at San Antonio; “Migration and Development in Mexico’s Historic Migration Region: a Recursive Micro-Analysis.”
- 4:40 pm** **Irwin, Anthony**, Texas State University-San Marcos; “Characterizing Rapidly Growing Counties of the United States, 1990 – 2010.”

Benno C. Schmidt Room (Panel Discussion: Non-academic Careers)

- 3:20 pm** **Joy Adams** and **Mark Revell**, Association of American Geographers; “Beyond the Ivory Tower: Geography Careers in the Business, Government, and Nonprofit Sectors”
Sponsor: AAG’s Enhancing Departments and Graduate Education (EDGE) Project
Chair: Joy Adams, Association of American Geographers
Panelists:
Max Baber, U.S. Geospatial Intelligence Foundation
Joshua Gibson, Chesapeake Energy
Dmitry Messen, Houston-Galveston Area Council
Anthony Morales, Cubit Planning
Wayne Prosser, National Geospatial-Intelligence Agency
William Rowe, Louisiana State University
Todd Votteler, Guadalupe-Blanco River Authority
Kathy Weimer, Texas A&M University Libraries
Jeff Widener, The University of Oklahoma.

Ben G. Oneal Room

- 3:20 pm **Brannstrom, Christian**, Texas A&M University; “John Shary, Charles Pease, and Contested Irrigation Landscapes in Early-Twentieth-Century South Texas.”
- 3:40 pm **Adams, Paul C.**, The University of Texas at Austin; “Communication in Virtual Worlds.”
- 4:00 pm **McWatters, Mason**, The University of Texas at Austin; “Worlding an Ethics of Descriptive Outreach.”
- 4:20 pm **Lowell, Jonathan**, The University of Texas at Austin; “Text and Embodiment on the Road to Santiago.”
- 4:40 pm **de Oliver, Miguel**, University of Texas at San Antonio; “Postmodernity and The Return of ‘History’: Using Geography to Reinststate the Historical Metanarrative.”

5:00 pm to whenever

Cash bar on the patio at *Scholz Garten*, 1607 San Jacinto Blvd.

Dinner?

Try one of the restaurants on

“Billy’s List of Good and Unpretentious Austin Eateries”

For a list of late night funky places to hang out and have a good time,

see Joshua Long’s

“Keeping It Weird”

Friday, 11 November 2011

8:00 to 9:00 am

Janie and Dolph Briscoe Rotunda

Continental Breakfast

9:00 am

Janie and Dolph Briscoe Rotunda

Campus Excursion: Walk to the Nettie Lee Benson Latin American Collection with Matt LaFevor (PhD Candidate, UT), and discussion of ancient maps by Michael Hironymous.

9:00 to noon

Katherine A. Jackson Room

Conference Check-In

9:00 to 10:20 am

John A. Jackson Room (POSTERS 1)

Anaz, Necati, University of Oklahoma; "Geopolitics of film: *Valley of the Wolves-Palestine* and its Reception in Turkey."

Bogle, Brian P., University of Central Oklahoma; "The Economic Impact of Wind Farms in Oklahoma: A Case Study of Woodward."

Brule, C., and **C. Thomas**; University of North Texas; "Bike Commuting at the University of North Texas."

Christiansen, Thomas, The University of Texas at Austin; “Racial Covenants and their Role in Shaping the City of Austin”

Dohanich, Elizabeth, University of North Texas; “Patterns of Manufacturing in the PV Industry.”

Driver, Laura, and **David A. Parr**, Texas State University-San Marcos; “Where Would Batman Live in Austin, Texas? Using Creativity to Teach GIS in an Introductory Course.”

Hagelman, Ronald R., and **Greg Dannheim**, Texas State University-San Marcos; “Civilian Conservation Corps Parks in Texas: Seventy-Five Years of Use and Change.”

Hay, Jennifer, Louisiana State University; "Memories of the Civilian Conservation Corps within Louisiana State Parks;"

Milbauer, John A., Northeastern State University; “Oklahoma County Courthouse Monuments.”

Preston, Joyce N., and **Kristopher L. Burch**, Stephen F. Austin State University; “Using GIS/GPS to Reconstruct a Historic African-American Cemetery in East Texas.”

Rainey, Steven, McNeese State University, **Linda Langley**, McNeese State University and Coughatta Heritage Center, and **Jay Precht**, University of Pennsylvania; “Creating the Coughatta Migration History Map.”

Schwan, Gavin D., The University of Texas at Austin; "Geopolitical Map Projections and Political-Economic Intersections."

Thomas, C., and **C. Brule**; University of North Texas; “Bike Rack Occupancy at the University of North Texas.”

Turk, Yasmin, Texas State University-San Marcos; “Mapping Ethnic-Specific Programs for Survivors of Sexual and Domestic Violence.”

Arno Nowotny Room

9:00 am **Blue, Sarah A.**, Texas State University-San Marcos; “Inside Cuban Medical Internationalism: A View of Cuban Missions from the Island.”

9:20 am **Jones, Naya**, The University of Texas at Austin; “Reframing Local Knowledge: Afro-Mexican Medical Ethnobotany in Social Ecological Systems Perspective.”

9:40 am **Rowe, William**, Louisiana State University; “The Effects of Economic Chaos in Post-Soviet, Post-Conflict Tajikistan on Nutrition, Health, and Livelihoods.”

10:00 am **de Beurs, Kirsten**, The University of Oklahoma; and **Grigory Ioffe**, Radford University; "Agricultural Land Use Change in Russia."

Benno C. Schmidt Room

9:00 am **De Hon, René A.**, Texas State University-San Marcos; "Crater Morphologies in Monogenetic Volcanic Fields of Western New Mexico."

9:20 am **Hopf, Frank**, Texas A&M University; "Q-Method Analysis of the Governance Debate over the Levees of the Sacramento- San Joaquin Delta, California."

9:40 am **Latrubesse, E.**, and **Aquino S. Latrubese**, The University of Texas at Austin, and **M. Bayer**, Universidade Federal de Goiás, IESA-LABOGEF, Brazil; "Assessing the Hydrophysical Response to Deforestation of the Most Impacted River of Central Brazil: The Araguaia River."

10:00 am **Latrubesse, E.**, The University of Texas at Austin, **E. Cafaro** and **C. G. Ramonell**, Universidad Nacional del Litoral, FICH, Argentina; "New Conceptual Clues from the Largest Alluvial Megadepositional System on Earth: The Chaco Megafans."

Ben G. Oneal Room

9:00 am **Nagaoka, Lisa** and **Matthew Fry**, University of North Texas; "Undergraduate Choice of Majors: Why not Geography?"

9:20 am **Comer, Jonathan C.** and **Thomas A. Wikle**, Oklahoma State University; "'Friends' in Far Places: Global Patterns of Facebook Penetration."

9:40 am **Ley, Amelia**, Louisiana State University; and **Alyson Greiner**, Oklahoma State University; "Examining the Origins of Catholic Priests in Louisiana, 1850-1920: A Geographical Perspective."

10:00 am **Doughty, Robin**, The University of Texas at Austin; "The Albatross and Industrial Fishing: Conserving Seabirds and Fish on the High Seas."

10:20 to 10:40 am

Janie and Dolph Briscoe Rotunda

Coffee and Snack Break

10:40 to noon

John Jackson Room (POSTERS 2)

Beckage, Stephen, Hal Needham, and Barry Keim, Louisiana State University; "A Global Database of Historical Storm Surges."

Bonthius, Christine, The University of Texas at Austin; "Flooding Hazards in an Urban Watershed in Austin, Texas: An Analysis of Waller Creek."

Clause, Vincent A., The University of Texas at Austin; "The Effect of Urbanization on Stream Discharge in Houston, Texas."

Granberg, Tynan C., David M Cairns, and Charles W Lafon, Texas A&M University; **Jon Moen**, Umeå University; "Variation in Treeline Seedling Establishment in Response to Herbivore Density."

Hu, Lan, University of North Texas; "Material Cycling: Geographic Destination and Treatment Strategies of Pennsylvania's Industrial Wastes from 1992 to 2008."

Knox, Richard L., The University of Texas at Austin; "Initial Analysis of Natural and Anthropogenic Adjustments in the Lower Mississippi River."

LaFavor, Matthew, The University of Texas at Austin; "Mapping the Natural Resource Monopolies of New Spain."

Lininger, Katherine B., The University of Texas at Austin; "Gold Mining in the Madre de Dios Watershed in the Peruvian Amazon: Initial Analysis of Geomorphologic Change and the Applicability of a Social-Ecological Systems Framework."

McGregor, Kent M., University of North Texas; "Causes and Dynamics of Heat Wave and Drought during the Summer of 2011 in Texas and Oklahoma."

Parafina, Ben, and M. Anwar Sounny-Slitine, Southwestern University; "Rooftop Solar Potential of Southwestern University: LiDAR application to Solar Mapping."

Park, Edward, The University of Texas at Austin; "Estimating Land Cover Change using Image Pre-processing of Landsat images."

Porter, Jess C., and John A. Kirk, University of Arkansas at Little Rock; "A Divided City: Mechanisms of Segregation Before and After the Little Rock Central High Crisis."

Ruiz, Michelle, Texas A&M University; "How Will Climate Change Affect Florida's Future Hurricane Event Risk?"

Sheehan, Rebecca, and **Jacqueline M. Vadjunec**; University of Oklahoma; “We’re Called No Man’s Land for a Reason: The Political Ecology of Land Use, Drought, and Contested Frontiers in Oklahoma’s Cimarron County.”

Arno Nowotny Room

10:40 am **Zhan, F. Benjamin**, Texas State University-San Marcos; **Jean D. Brender**, Texas A&M University; and **Bin Zou**, Texas State University-San Marcos and Central South University Changsha; “GIS-Augmented Human-Environmental Science Research: Maternal Residential Proximity to Superfund Sites and Low Birth Rate in Offspring.”

11:00 am ***Moment of silence in remembrance of defenders and liberators.***

11:01 am **Brayfield, Brad**, University of Oklahoma Health Sciences Center; **Kirsten de Beurs**, University of Oklahoma; “Factors Influencing the Incidence of Tickborne Rickettsial Diseases in Oklahoma since 2000.”

11:20 am **Rodriguez, Jonathan**, University of North Texas; “Texas HIV Prevalence in the 25-49 Age Group.”

11:40 am **Huddleston, Jody S.**, University of North Texas; “Geography of HIV/AIDS Late Testers in Texas.”

Benno C. Schmidt Room (Special Session: Southwestern Resources)

10:40 am **Sobey, Allyssa**, University of North Texas; “Gas’roots Movements in North Texas: An Analysis of Gas Drilling Resistance.”

11:00 am ***Moment of silence in remembrance of defenders and liberators.***

11:07 am **Tiwari, Chetan**, and **Hannah Gautsche**, University of North Texas; “Relationship between Socio-economic Disparities and Clustering of Gas Wells around Public Schools in Denton County, Texas.”

11:34 am **Fry, Matthew**, University of North Texas; “Drought and Drilling Anxieties.”

Ben G. Oneal Room

10:40 am **Anderson, Jay**, University of Oklahoma; “A Geopolitical Rhetorical Critique of Croatia’s Defense Ministry Website.”

11:00 am *Moment of silence in remembrance of defenders and liberators.*

11:01 am **Brym, Michelle**, University of Central Oklahoma; “Integration and Separation at the Polish-Ukraine Border: Cross-Cultural Exchanges at the Eastern Frontier of the European Union.”

11:20 pm **Blackford, Mikeal J.**, Louisiana State University; “Morocco’s Phosphorus and Why We Care.”

11:40 am **Buenemann, Michaela** and **Kristen Hestir**; New Mexico State University; “Land Transitions in the Chihuahuan Desert: A Quarter-Century of Change.”

Noon to 1:20 pm

John and Nellie Connally Banquet Room

Buffet Sandwich Luncheon

Troy M. Kimmel, Jr.

KEYE-TV (CBS), KimCo Meteorological Services, and The University of Texas at Austin

“Taking Weather Predictions to a New Level: Working as Incident Meteorologist at the University of Texas”

1:20 to 3:00 pm

Arno Nowotny Room

1:20 pm **Cheetham, Louise**, Louisiana State University; “Natchez Trace: The Scenic Backbone of American Trade.”

1:40 pm **Morren, Sophia**, University of Oklahoma; “Beyond Bread and Circuses in Oklahoma City?”

2:00 pm **Miyakado, Haruna**, University of North Texas; “Relationships between Food Deserts and Areas of High Crime in Dallas, Texas.”

2:20 pm **Wolf, Garrett**, Louisiana State University; “A City and its River: The Urban Political Ecology of the Loop and Bridgeport in Chicago.”

2:40 pm **Martinez, Vanessa**, The University of Texas at Austin; “Place and Legality: A Gendered Analysis of Migrant Political Participation in Fremont, Nebraska.”

Benno C. Schmidt Room

1:20 pm **Holloway, P.**, The University of Texas at Austin; “Fire Ecology: The Forests of Texas.”

1:40 pm **Chi, Zhaohui**, Texas A&M University; “Surface Melt Mapping for Lambert Glacier Amery Ice Shelf System (LAS) from Satellite Data: 2008-2010.”

2:00 pm **Zhao, Panshu**, and **Andrew G. Klein**, Texas A&M University; “The Validations of Current MODIS Daily Snow Albedo Product and Relevant Spatial Analysis.”

2:20 pm **Ford, Trent**, Texas A&M University; **David Gay**, and **Christopher M.B. Lehmann**, University of Illinois at Urbana-Champaign; “Modeling the Atmospheric Movement of Asian Soybean Rust Spores in the Central United States.”

2:40 pm **Lyons, Donald**, University of North Texas; “Material Cycling and Industrial Waste: A Case Study of Non-Hazardous, Industrial Waste in Pennsylvania, 1992-2008.”

Ben G. Oneal Room

1:20 pm **Hurt, Douglas A.**, University of Central Oklahoma; **Ajax Delvecki**, **Adam Payne**, Oklahoma State University; and **Gary Gress**, University of Oklahoma; “Oklahoma Tourism along Route 66: Pioneers, Perseverance, Community, and Freedom.”

1:40 pm **Cox, Kasey**, URS, **D. McDonald**, **D. Kulhavy** and **I. Hung**, Stephen F. Austin State University; “Geospatial Analysis of Baseball Clustering in the Texas Rangers’ Ballpark in Arlington, Texas.”

2:00 pm **McEwen, John W.**, Louisiana State University; “Identifying the Gulf Coast-Mardi Gras Culture Region.”

2:20 pm **Romig, Kevin**, Texas State University-San Marcos; “Not Fade Away: Geographic Dimensions of Buddy Holly’s Meteoric Career.”

2:40 pm **Roth, Jeffery**, and **Darrel L. McDonald**, Stephen F. Austin State University; “Contested Cultural Landscape Artifacts: East Texas Cemeteries.”

3:00 to 3:20 pm

Janie and Dolph Briscoe Rotunda

Coffee and Snack Break

3:20 to 5:00 pm

Katherine A. Jackson Room (Film Showing and Discussion)

3:20 pm **Lemon, Robert Douglas**, The University of Texas at Austin; “¿Tacos or Tacos?”

Arno Nowotny Room

3:20 pm **Mendive, Juan S.**, University of Central Arkansas; “The Economic Geography of a Micropolitan City: A Case Study of Alice, Texas.”

3:40 pm **Powell, Lisa J.**, The University of Texas at Austin; “Coal Floats in a Corn Parade: Examining Performance and Representation of Farming and Mining Identities in a Kentucky Corn Festival.”

4:00 pm **Alexander, Jennifer L.**, The University of Texas at Austin; “What Happens When the Lines Change? Examining Public Health Impacts of Border and Scale Changes.”

4:20 pm **Sounny-Slitine, M. Anwar**, The University of Texas at Austin; “Where is the Southwest?: Neogeographic applications to Vernacular Geography.”

4:40 pm **McNair, Matthew R.**, University of Oklahoma; “Making a Name for Ourselves: Commemorative Toponymy in Little Rock’s Urban Geography.”

Benno C. Schmidt Room (Special Session: Geographical Ecology)

3:20 pm **Young, K. R.**, The University of Texas at Austin; “Biogeographical Processes and Coupled Natural-Human Systems: Examples from Utilized Tropical Landscapes in Botswana and Peru.”

3:40 pm **Ponette-González, Alexandra G.**, University of North Texas; and **Kenneth R. Young**, The University of Texas at Austin; “Seedling Regeneration above a Tropical Treeline in Northern Peru.”

- 4:00 pm** **Polk, Molly**, The University of Texas at Austin; “The Missing Link? Wetlands and Glacial Retreat in the High Andes of Peru.”
- 4:20 pm** **Wolverton, Steve**, and **James H. Kennedy**, University of North Texas; and **Charles R. Randklev**, Texas A & M University; “Applied Paleozoology, Biogeography, and Conservation Biology.”
- 4:40 pm** **Huston, Michael A.**, Texas State University–San Marcos; “The Geography of Injustice: Global Patterns of Poverty and Biodiversity.”

Ben G. Oneal Room

- 3:20 pm** **Evans, Bryant**, Houston Community College; “H2Oh! A Comparative Look at Water in Oman and Jordan.”
- 3:40 pm** **Su, Habin**, Texas A&M University-Kingsville; “Integration of Morphological and Biological Information Derived from Remote Sensing Images for Improved Benthic Habitats Mapping.”
- 4:00 pm** **Josephson, Sarah E.**, **Brannon Barr**, and **Steve Wolverton**, University of North Texas; “Annual Effects of Precipitation on White-Tailed Deer Fawn Body Size at Fort Hood Texas.”
- 4:20 pm** **Barr, Brannon**, University of North Texas; “Environmental Predictors of Spatial Variability in White-tailed Deer Body Size in Texas.”

5:00 to 6:00 pm

Benno C. Schmidt Room

Business Meeting

7:00 to 9:30 pm

Saengerrunde Halle, 1605 San Jacinto Blvd.

Barbeque Dinner and Awards Presentations (cash bar)

Individual Paper & Poster Abstracts

Adams, Paul C., The University of Texas at Austin; “Communication in Virtual Worlds.”

Virtual place metaphors have helped us to understand the new media of the 21st century. They are also the best tools we have to understand what was distinct and different about “old” media. The multiplication and intensification of virtual spaces by digital media simply continues a process that began in prehistory with the origins of speech and intensified with writing. New technologies simulate multi-sensory experience through vision and hearing, presenting the specter of virtualization and disembodied experience, but the word pioneered this phenomenon by translating sights, smells and tactile sensations into acoustical signs. Writing expanded the virtual world by stabilizing verbal representations and making them durable and portable. Rather than marking a radical break with the past, digital manifestations of virtuality extend a several thousand year trend in the virtualization of human-environment relations.

Alexander, Jennifer L., The University of Texas at Austin; “What Happens When the Lines Change? Examining Public Health Impacts of Border and Scale Changes.”

Public health systems serve populations; program successes are built on information. Thus, the quality of information—especially case and population numbers—is integral to successfully serving the health needs of populations. Additionally, planning depends on information accuracy. Geographers recognize both the strengths and the impacts of geographic information quality, and we understand the theoretical impacts of changes in both statistical and administrative boundaries. What, though, are the public health impacts that occur as we change the lines on maps? How do data change, and what then are the impacts when we re-divide spaces? How does our understanding of health problems change when we collect data at different scales? How do we avoid data duplication when borders cross each other or contain other borders? Informed by field research on HIV/AIDS in Botswana, this paper examines the impacts of geographical elasticity and flexibility. It explores the public health impacts of border, boundary, and scale changes. It examines these issues in Botswana, and in surrounding southern African countries. It will consider the modifiable areal unit problem, and will look at strengths and weaknesses of scale changes when examining health data. It also will examine the utility of combining physical geographical and health data.

Anderson, Jay, University of Oklahoma; “A Geopolitical Rhetorical Critique of Croatia’s Defense Ministry Website.”

This paper applies to Kenneth Burke’s Dramatic Pentad in narrative and rhetorical theory as related to geopolitics. Nation-states promote images of themselves to other regions of the world through telling stories. They display positive stories about their governments through presentations on each government ministry’s website. Kenneth Burke claimed that through rhetorical criticism the audience unravels the motives of actors by examining the real purpose behind their actions. The critique applies in discovering the true motives of a nation through the actions of the government ministries. Burke’s Dramatic Pentad applies to Croatia’s integration into the North Atlantic Treaty Organization (NATO) and the European Union (EU). Croatia promotes a new image of itself while integrating into NATO and the EU. Observers have to ask why a rhetorical critique, including the pentad, changes the way foreign citizens perceive the international image of Croatia through its

Ministry of Defense. Other questions have to be answered based on the Dramatic Pentad, including five types of questions consisting of act, scene, agent, agency, and purpose. Discourse analysis is used to examine texts and images on government websites.

Anaz, Necati, University of Oklahoma; "Geopolitics of film: *Valley of the Wolves-Palestine* and its Reception in Turkey."

Turkey's relationship with Israel has been in a critical phase since Turkish Prime Minister R. Tayyip Erdogan's scolding of Israel's President Shimon Peres at the World Economic Forum in Davos, Switzerland in 2009. This showdown negatively impacted relations between the two countries, and the tenor of diplomatic exchanges worsened afterward. They reached a nadir when in the wake of the 2010 flotilla effort to deliver materials to Palestinian Territories in violation of an Israeli blockade of the territories. The Netanyahu government refused to comply with the Turkish government's demand for an apology, compensations to families of the deceased and removal of the blockade following the attacks and killing nine Turkish activists sailing to breach the Gaza blockade. However, the ill-managed and mutual escalation of the crisis became more public and international when film makers took part in this crisis and ventured to become a virtual observer, interpreter, and driver of geopolitical events in the Middle East. *Valley of the Wolves-Palestine* –a Turkish film- is a prime example of this. Thus, this poster focuses exclusively on this political-action film to better understand how Turkish audiences engaged with a politically charged film to interpret Turkey's role in the Middle East and Israel-Palestine issues in particular.

Anderson, Kevin M., Austin Water–Center for Environmental Research; "The Forgotten Habitat: the Rediscovery of the Colorado River Bottomlands."

When exploring Central Texas, the Spanish called it "*El Monte Grande del Diablo*," and this bottomland "thicket of the Devil" along the Colorado River was passed through quickly and with foreboding. Later in Texas history, Stephen F. Austin used the bottomland forest of "rich timber - Pecan, Ash, Oak, Cedar" as a selling point for attracting Anglo settlers to Austin's Little Colony. However, by the early 1900s, the forest was lost to agriculture, and today it is a largely forgotten habitat of the Austin area. Yet the forest is returning along the Colorado River corridor downstream of Austin, and the biodiversity associated with this habitat is being rediscovered. This paper explores how maps and environmental perceptions have created problems for this rediscovery and for the ecological assessment and conservation of the Colorado River bottomland forest.

Barr, Brannon, University of North Texas; "Environmental Predictors of Spatial Variability in White-tailed Deer Body Size in Texas."

Body size is a component of fitness, life-history strategy, and population dynamics in ungulates because it affects an individual's probability of survival. Thus, a greater understanding of how environmental characteristics drive body size differentiation is of interest. White-tailed deer are suitable for this type of study because of their adaptive plasticity in body size and because harvest records are readily available. Deer sizes may respond to soil fertility, habitat type, and anthropogenic land use. Environmental variables that contribute to body size are parsed out using soil survey data and land cover data obtained from online sources, which eliminates the need for field sampling and

laboratory testing. Constrained ordination using size classes as the dependent variable and environmental variables as constraints reveals: 1. Anthropogenic land uses (commercial/industrial/transportation and cultivated crops) and barren land are the most important negative correlates to body size. 2. Mixed forest and woody wetland, both preferred habitats for deer, are the strongest positive correlates to body size. 3. Organic matter and cation exchange capacity are the strongest indicators of soil fertility. These variables are spatially structured similarly to deer body sizes, indicating that they are likely driving body size variation.

Beckage, Stephen, Hal Needham, and Barry Keim, Louisiana State University; “A Global Database of Historical Storm Surges.”

Historical storm surge data are currently lacking in the climatological community. Due to this absence, the Southern Climate Impacts Planning Program (SCIPP) at LSU created SURGEDAT, a database containing peak surge values on a global scale. Researchers used government documentation, newspaper archives, books, and other resources to compile a database containing peak surge values for tropical systems. Research began in the Gulf of Mexico, and the database has expanded to include more than 500 values from around the world. This poster presents the results of the project to this point, with heavy focus on the Gulf of Mexico, where research is nearing completion. Once completed, the database will contain peak surge values for every storm producing surge greater than 1 meter on a global scale. The project will benefit emergency management planners, stakeholders in various industries, and residents of coastal zones.

Blackford, Mikeal J., Louisiana State University; “Morocco’s Phosphorus and Why We Care.”

Morocco is a nation with a long history. While now its population is composed mainly of ethnic Berbers, it has a history of Jewish residents, French and Spanish colonists, and even of Roman farmers if you look far back enough. Phosphorous is an element required for human and plant life. Being a reactive element, it is not an element that can commonly be found by itself; rather it must be harvested as part of something else—like phosphorous bearing rock, or bird guano, or human urea. Morocco and Phosphorous may seem like an uninteresting or unlikely combination for a research topic. This paper will demonstrate why that is patently false. It will seek to explain the intertwining of the two topics: why they are important both separately, and together. The paper will look at the past, present, and future of the intertwined topics, with an analysis and comparison of some of the economics involved, and the impact of colonialism on the situation, with particular attention to the saga of Western Sahara. Morocco’s special cultural and geographical advantages and challenges, and how this ties into their Phosphorous, will also be highlighted.

Blue, Sarah A., Texas State University-San Marcos; “Inside Cuban Medical Internationalism: A View of Cuban Missions from the Island.”

The Cuban government in recent years has promoted a new opportunity for professional workers to earn hard currency through temporary work abroad. International non-tourism services--most of which is medical services--are now earning more hard currency for the Cuban economy than is tourism. This research examines how these international exchanges and the remittances from short-term contract migration influence Cuban society. The rapidly growing scholarship on Cuban international medical missions has emphasized the associated macro-scale political and economic

gains of Cuban internationalism. This research focuses the domestic impact of international missions, an essential part of a full understanding of the impact of international missions in contemporary Cuba. In addition to the economic impact, there is also a striking societal effect that accompanies the return of tens of thousands of Cubans who have experienced life and work in foreign countries around the world. Drawing on fieldwork from June 2010, this article uses interviews with *internationalistas* who have returned to Cuba, Cuban officials working with the *internationalistas*, and *internationalista* families to assess the domestic impact of Cuba's international missions.

Bogle, Brian P., University of Central Oklahoma; "The Economic Impact of Wind Farms in Oklahoma: A Case Study of Woodward."

Since 2003, wind energy farms located near Woodward, Oklahoma have experienced a consistent growth starting at sixty-four turbines producing 102 megawatts to 178 turbines producing 255 megawatts. This development is part of a multi-phased project that is projected to produce a total of 350 megawatts. The focus of this research project will be on the economic impact of wind energy farms on Woodward, Oklahoma with the goal of providing this information to citizens of communities that may consider similar projects. This study also will assess and relate how development of wind energy has directly affected this particular city's school district, tax base, and members of the community that have found employment in the industry. Field work will be a crucial component of the research. Conducting interviews with members of the community, officials in the local government, school board members, and employees in the industry will be the main priority. Visiting the area is necessary to access tax records stored in the local courthouse, as well as to obtain a sense of how people perceive the positives and negatives of the wind energy industry.

Bonthius, Christine, The University of Texas at Austin; "Flooding Hazards in an Urban Watershed in Austin, Texas: An Analysis of Waller Creek."

Flooding hazards constitute an environmental reality in central Texas urban oases. A historical analysis indicates that the city of Austin has suffered major floods due to its unique geographical position in "Flash Flood Alley" and frequent, intense storms. Floods in Austin reflect the urban environment that surrounds the city's watersheds, namely Waller Creek. Bordered, for the majority, by impervious surfaces, Waller Creek and its hydrologic regime provide an opportunity to investigate the interaction between the urban environment and flooding events.

Brannstrom, Christian, Texas A&M University; "John Shary, Charles Pease, and Contested Irrigation Landscapes in Early-Twentieth-Century South Texas."

The late nineteenth and early twentieth-century boom in irrigated agriculture inspired new organizations and institutions to regulate hybrid hydrological cycles that engineers and farmers created across the arid and semi-arid world. These systems were contested, debated, and contingent, rather than inevitable. In this paper I describe and analyze competing irrigation systems for the Lower Rio Grande Valley of Texas (hereafter "Valley") between the late 1910s to the early 1930s, when the Valley became a nationally prominent source for fruit and vegetables based on an irrigation complex that transformed a semi-arid shrubland. I focus on two prominent individuals, John Shary and Charles Pease, who represented diametrically opposed views on irrigation systems. Shary's vision for irrigation, the norm in the Valley, was that irrigation water was a means to sell more

land, but that farmers should pay both for water delivered to their canals and for the right to obtain water. Pease's promotion of a federal gravity irrigation project, which was never constructed, was based on a critique of the Valley's fundamental contradiction: land entrepreneurs are incapable of pursuing profit and making decisions about irrigation and flood control in the best interests of farmers.

Brayfield, Brad, University of Oklahoma Health Sciences Center; **Kirsten de Beurs**, University of Oklahoma; "Factors Influencing the Incidence of Tickborne Rickettsial Diseases in Oklahoma since 2000."

Tickborne Rickettsial Disease (TBRD) incidence has steadily but dramatically increased in Oklahoma in the last 10 years, more so than most other reportable disease in Oklahoma during this same period. TBRD comprise at least five rickettsial diseases, including Rocky Mountain Spotted Fever (RMSF) and both monocytic and granulocytic Ehrlichiosis. Since 2000, Oklahoma has ranked in the top 5 and top 3 states in the nation in the number of cases of RMSF and Ehrlichiosis, respectively. In fact, these five states have accounted for 60% of all RMSF cases since 2000. Most cases in Oklahoma occur in the Eastern and Southeastern region of the state where higher forest and tick populations occur. While reported cases tend to follow the tick vector population distribution, reasons for the increase in the last decade have not been determined. We hypothesize that weather as well as increased human activity in tick infested areas play a strong role in the noted increased incidence. We analyzed the changes in temperature and precipitation since 2000 in relation with tickborne disease changes. In addition, we use satellite data and models to better understand the land use changes that have occurred in southeastern Oklahoma over the past ten years.

Brule, C., and C. Thomas; University of North Texas; "Bike Commuting at the University of North Texas."

In 2008, the University of North Texas (UNT) signed the American College and University President's Climate Commitment (ACUPCC) to reduce greenhouse gas emissions. Commuting by car is one of the largest contributors to GHG emissions for UNT, so the university has made a concerted effort to support alternative commute modes such as mass transit and carpooling. Cycling, in particular, has seen a rise in popularity with the increase in gas prices and in the number of students residing within the City of Denton. However, bike commuting remains a small proportion of the commute mode. To understand the barriers to increasing bike ridership, this study examines motivators for and deterrents against cycling, and how these varied across demographic variables, as well as commute distance and preferred commute mode. Bike commuting declined dramatically over commute distances greater than 1.5 miles. Non-cyclists were deterred by distance and safety, but could be motivated to cycle to improve their health. By understanding cyclist and non-cyclist perceptions about bike commuting, the research can be used in outreach and marketing campaigns that could be aimed at emphasizing the health benefits of cycling and changing perceptions about commute distances.

Brym, Michelle, University of Central Oklahoma; “Integration and Separation at the Polish-Ukraine Border: Cross-Cultural Exchanges at the Eastern Frontier of the European Union.”

The Schengen Accord has refigured the role of European Union (EU) interior borders from barriers that monitor the mobility of people and goods to easily crossed symbolic borderlines. Exterior borders meanwhile have become notable filters that screen what enters the EU. This paper explores the effect of demarcation at the exterior EU eastern border on cross-border networks between the Polish province of Subcarpathian and the Ukrainian province of Lviv. EU influences, felt through the Carpathian Euro-Region and the EU Neighborhood Program, are intended to minimize the divisive role of the borderline. The development of heritage tourism in the region has increased through the remembrance of the cities shared past as part of Galicia in the Austrian-Hungarian Empire and the Polish Kresy, part of the Polish-Lithuanian Empire and the Second Polish Republic. Cross-border networks and the hope of EU membership for Ukraine have the potential to minimize the divisive features of the EU borderline that unchecked could develop into a long-term split between EU terrain, and non-EU space.

Buenemann, Michaela and **Kristen Hestir**; New Mexico State University; “Land Transitions in the Chihuahuan Desert: A Quarter-Century of Change.”

Las Cruces, New Mexico, is one of the fastest-growing cities in the U.S. Southwest, rapidly transforming farmlands in the Rio Grande floodplain and rangelands in the Chihuahuan Desert rangelands. It is unclear, however, which parts of the landscape are at the greatest risk of being transformed by the city’ development or what effects urbanization will have on ecosystem services and human well-being. As a first step toward addressing these issues, we produced multi-temporal (1985, 1990, 1995, 2001, 2005, and 2009) land cover maps for a 2,400 km² area in and around Las Cruces. We then quantified rates of land change in absolute (square kilometers), relative (percent of landscape), and intensity (time, category, and transition levels) terms. We assessed patterns of land change with respect to ten commonly used landscape metrics (number of patches, mean patch size, patch density, edge density, landscape shape index, contagion, interspersion juxtaposition index, landscape division index, Simpson’s diversity index, Simpson’s evenness index). Our findings show that the city has almost doubled in size. Growth occurred mostly along major transportation corridors and in the piedmont zone of the Organ Mountains and resulted in the increasing loss and fragmentation of croplands and rangelands.

Cheetham, Louise, Louisiana State University; “Natchez Trace: The Scenic Backbone of American Trade.”

The designation of certain routes as “parkways” or organized trails has economic impacts on the communities that surround them. Rivers, trails and highways that have been named such “parkways” are intended to function as popular tourist routes as travelers move from point to point. This paper will discuss how and why such parkways come into being and look at ways in which the designated byway works as a pull factor to draw people toward an area or, more specifically, a chosen route. Through a case study of the Natchez Trace Parkway, I will explore how the route came into being, the original purpose of the proposed route and finally, the economic, cultural and social impacts that the route has had on the roadside communities that exist along it’s length and the

region and/or country at large. In conclusion I shall evaluate the parkway in terms of its economic impact and socio-cultural repercussions.

Chi, Zhaohui, Texas A&M University; “Surface Melt Mapping for Lambert Glacier-Amery Ice Shelf System (LAS) from Satellite Data: 2008-2010.”

Surface melt mapping of the Lambert Glacier-Amery Ice Shelf System (LAS) from 2008 to 2010 has been developed using MODIS (Moderate-Resolution Imaging Spectroradiometer) land-surface temperature and ice-surface temperature products. The surface temperature images are at 1km resolution and collected on a daily basis. A MODIS "melt" state is identified and recorded in days at individual pixel level when the surface temperature value is at or above 273.15° Kelvin. This dataset provides a useful comparison to compare the surface melt measured from lower resolution passive microwave sensors and a moderate resolution active optical sensor. A comparison between the MODIS melt and SSM/I derived melt is undertaken starting in July 2008 to June 2009. Melt anomalies were observed from the passive microwave surface melting map in the interior region of the LAS. This study offers a congruency validation between these two surface melting maps. MODIS-based surface melt observations suggest a longer melt duration in 2009 than the passive microwave record. Large surface melt areas were observed near the LAS terminus as opposed to its interior; and some unevenly distributed small patches of surface melt were observed in details using MODIS products. Excluding the anomalies, the surface melt distribution patterns of these two remote sensing time series agree with each other. From MODIS the melt season duration of the LAS in the year 2009 is 22 days longer than 2008. Simply taking the average by dividing the sum of surface temperature with the number of melt days, it was found that the annual mean of surface temperature in the year 2009 is higher 1.21° Kelvin than 2008. The surface melt states of LAS derived from both MODIS and SSM/I derived surface melt will be updated through 2011.

Christiansen, Thomas, The University of Texas at Austin; “Racial Covenants and their Role in Shaping the City of Austin”

This poster explores the significance of private racial covenants in the creation, development and persistence of racial residential segregation in Austin. Building on recent scholarship on racially restrictive covenant and the racialization of urban space, this poster explores their use in the early portion of the 20th century up until they were made non-enforceable by a United States Supreme Court decision in 1948. Much of the literature on private forms of racial discrimination has only focused on the time after 1917, when they began to proliferate because the Supreme Court ruled public forms of racial zoning were illegal. The poster makes three specific contributions: (1) patterns of private discrimination were firmly in place in Austin prior to 1917; (2) private forces, not just the local governmental, had a significant role in shaping Austin's racial patterns; (3) racial consciousness in Austin was not just a matter of black and white as many deeds limited accesses to Hispanics, who were legally considered white. Through archival work, 120 neighborhoods were sampled throughout Austin to determine the spatial pattern of these racial covenants. The verbiage of the racial covenant and date were recorded, which were then used to created several maps showing their spatial distribution and significance.

Clause, Vincent A., The University of Texas at Austin; “The Effect of Urbanization on Stream Discharge in Houston, Texas”

Houston is a city that has seen tremendous growth over the past century with profitable enterprises. This has created a booming economy that has promoted the urbanization and suburbanization of Houston. Rapid growth that produces an immensely large city comes with many unintended environmental consequences, which is why Houston has some of the worst problems with urban flooding in the country. The magnitude of the city, rapid urbanization, and the frequent re-occurrence of flooding makes Houston a perfect fit for an urban flood based study on the relationship between development and urban flooding. The correlation between impervious surfaces and flooding is studied through the use of Landsat imagery, hydrological records, and stream gauge records.

Comer, Jonathan C. and Thomas A. Wikle, Oklahoma State University; “Friends’ in Far Places: Global Patterns of Facebook Penetration.”

Social networking sites (SNSs) are responsible for about 10% of the time people spend using the Internet, ranking second only behind search engines. While numerous “indigenous” SNSs have been developed around the world and continue to be popular, some local SNSs are losing market share to “mega” SNSs (MSNSs) such Facebook, MySpace, and Orkut. Facebook, the largest SNS in the world, had over 700 million worldwide users as of June 2011 according to www.internetworldstats.com. Therefore an examination of Facebook subscriptions by country offers a venue for exploring the growth of MSNSs within the larger, worldwide culture of telecommunications that continues to be dominated by the Internet and mobile phone technology. While a global analysis reveals strong correlations amongst penetration rates of these technologies and with GDP per person, strong regional differences persist in the adoption of one or more of these technologies. Cultural differences (such as privacy concerns), governmental policies (such as censorship of certain websites), and technological limitations (such as limited broadband internet service) combine to create uneven levels of Facebook penetration. The results of this study reveal how cultural norms have influenced the rate of expansion of “new” interactive and horizontal communication technologies.

Cox, Kasey, URS, D. McDonald, D. Kulhavy and I. Hung, Stephen F. Austin State University; “Geospatial Analysis of Baseball Clustering in the Texas Rangers’ Ballpark in Arlington, Texas.”

The study applied Geographic Information System (GIS) techniques to the sport of baseball by providing a spatial analysis of the baseballs hit into the seating area at the Texas Rangers’ Ballpark in Arlington (The Ballpark). The study covered one year of data. Only baseballs hit out of the playing field were analyzed in this study to avoid making predictions about any specific players or teams. Study results relied on spatial analysis methods to inform fans attending baseball games at The Ballpark where they should sit to have the greatest chance bringing home a game ball. The results showed that there were specific sections in which a fan can sit in order to increase their probability of gaining possession of a baseball hit at The Ballpark. In particular, there was clustering among foul balls hit into the seating area, but there is no significant clustering among fair balls hit into the seating area at The Ballpark. The use of GIS can increase a fan’s probability of gaining possession of a baseball at The Ballpark. The methods used in this study could be applied to baseballs hit in any playing field and could return analysis results specific to teams or batters that could provide insight to

coaches, players, and fans. However, since ballparks can differ greatly from each other, the results of this study only apply to the Texas Rangers' Ballpark in Arlington.

Day, Frederick and **Ashley Summers**, Texas State University-San Marcos; "Evaluating Recreational Activities: The Geo-demographics of Texas Coastal Fishermen."

Fishing is not only America's most popular sport, but also one of its more economically significant. The Texas coast, likewise, benefits from being a favored fishing destination. With this in mind, this study analyzes the spatial demographics of Texas coastal fishermen in the lower, middle and upper Gulf of Mexico coast. Texas coastal fishermen, true to stereotype, are typically older, white, and more affluent, and often drive extended distances to their destinations. "Business Analyst", an ESRI geo-marketing tool, compared their characteristics to the general Texas population. Salt-water anglers were more frequently found to be "Exurbanites", the "Rooted Rural" and the "Midland Crowd" in Texas. The "Milk and Cookies", "Southwestern Families, and "Up and Coming Families" groups were far below the Texas average. Given Texas anglers' age and comparative wealth, this research probes the viability of replacement populations, in particular, women, minorities and family groups. The promotional implications for Texas Parks and Wildlife, the state agency most responsible for maintaining facilities for this group, are clear.

de Beurs, Kirsten, The University of Oklahoma; and **Grigory Ioffe**, Radford University; "Agricultural Land Use Change in Russia."

Agricultural reform has been one of the most important anthropogenic change processes in European Russia that has been unfolding since the collapse of the Soviet Union at the end of 1991. Besides the ongoing land abandonment as a result of agricultural reform and rural depopulation, Russia's grain belt is predicted to experience significant climate change. In this paper, we describe the ongoing demographic changes and projected regional climate changes based on downscaled climate models for a region in the middle of the Russian grain belt. We visited this region in the summer of 2010 and engaged the local population, including district administrators, farm managers and local residents in extensive interviews. Based on these interviews, satellite data and downscaled climate data we describe the agricultural development over the past ten years and explain which climate adaptations we have found that are currently ongoing.

De Hon, René A., Texas State University-San Marcos; "Crater Morphologies in Monogenetic Volcanic Fields of Western New Mexico."

The combined Red Hill, Bandera, and Mt. Taylor-Mesa Chivato volcanic fields of western New Mexico occur along the northeast-trending Jemez Lineament. The fields contain as many as 300 vents including maare, tuff rings, cinder cones, fissure vents, and a possible explosive caldera (Mt. Taylor). Maare and tuff rings make up one-third of the cratered structures. Crater rim crest diameters range from 250 to 2200 m; rim heights range from inconsequential to greater than 30 m; and interior depths range from a few meters to as much as 50 m. Cinder cone heights range from 25 to 210 m, and basal diameters are 320 to 3600 m. The abundance of maare and tuff rings provides a unique opportunity for comparative studies of crater morphometry and tuff ring composition. The morphometry of 54 crater structures exhibits a continuous gradation from maare, tuff rings, and cratered cinder cones. Vent-opening ejecta provide samples of strata from beneath the craters.

de Oliver, Miguel, University of Texas at San Antonio; “Postmodernity and The Return of ‘History’: Using Geography to Reinstate the Historical Metanarrative.”

A large body of scholarship has asserted that the fragmentation of aesthetics in the postmodern era has precluded the operation of metanarratives that are fundamental to the qualification of ‘progress’ over time. In so doing, linear ‘history’ has been rendered ineffectual as a general reference of ‘progress’. This paper asserts that this period of intense fragmentation of aesthetics is largely a transformative stage and can no longer signify ‘the end of history’. Sufficient time has passed since the full emergence of postmodern society for a new metanarrative to take form around the social function of the marketplace – a new metanarrative that is not negated by the frenetic eclecticism of postmodernity and its annihilation of linear time but rather a metanarrative that integrates these heretofore problematic features into a humanitarian conception of ‘progress’. Linear ‘history’ is being reconstituted within an intelligible metanarrative of humanitarian ‘progress’.

Dohanich, Elizabeth, University of North Texas; “Patterns of Manufacturing in the PV Industry.”

This poster illustrates the geographic patterns of manufacturers of solar photovoltaics (PV). PV technology converts solar energy into electricity and is utilized on the small scale of individual households and businesses. PV manufacturers and their facilities encompass an obvious geography operating in both domestic and foreign locations, but in addition, contain patterns based on installation location by favoring specific geographic destinations. As manufacturers continuously expand or consolidate their productions through time, their geographies shift. Maps and graphs created from U.S. state level PV data illustrate such patterns and their changes over time.

Doughty, Robin, The University of Texas at Austin; “The Albatross and Industrial Fishing: Conserving Seabirds and Fish on the High Seas.”

Albatrosses are among the most seriously endangered birds on the planet. Exploitation for meat and sport resulted in declines of several albatross species during the 1800s. Protection of nest islands assisted in the bringing back populations in the mid 1900s. However, over the last 50 years, scientists among several nations have documented steep declines. They have confirmed that industrial long-line fisheries drown and maim foraging birds. Seabird experts, national governments, marine and fisheries organizations, international NGOs, and other interested parties are coordinating efforts on several levels to reduce and eventually eliminate the accidental destruction of albatrosses. This paper discusses how various stakeholders are collaborating to conserve birds. It assesses national plans, regional treaties, codes of conduct drawn up for fishers, and a new an international environmental regime directed toward the protection and management of these seabirds.

Driver, Laura, and David A. Parr, Texas State University-San Marcos; “Where Would Batman Live in Austin, Texas? Using Creativity to Teach GIS in an Introductory Course.”

Geographic Information Science (GIScience) is often celebrated for its ability to solve 'real world' problems. Students in introductory GIScience classes often find the application of GIS difficult even when they have mastered the theory and practice of the material. The gap between knowledge and implementation is overwhelming. Our solution to reaching new GIScientists is to remove the 'real world' and stress the creative aspects of GIS. Since Austin, Texas, is known for the largest urban bat colony in the United States, our poster answered the question 'Where would Batman chose to live in

Austin, Texas' under the conditions of having his Bat Cave near the highest crime areas of the city. The results should show the creative aspects of GIScience problem solving in a 'near world' scenario.

Evans, Bryant, Houston Community College; "H2Oh! A Comparative Look at Water in Oman and Jordan."

Water scarcity is a topic that geographers and many others take a keen interest in given the fact that water is a vital and life-sustaining element. Only 2.5% of the world's total water supply is fresh water, so proportionally, there is a very small amount of fresh water to begin with. Currently, around one-third of the world's population lives in water-stressed regions where scarcity is a very real issue. As the population of the world continues to grow, it is anticipated that the strain on the Earth's limited fresh water supply will grow correspondingly. Another geographic complexity tied to fresh water is the fact that over 260 of the world's river basin watersheds are shared by at least two countries. This has created a political dimension to water, sometimes referred to as "hydropolitics", and fresh water has been the source of both tension and cooperation between countries over the course of time. Two countries where water scarcity is a modern reality are Jordan and Oman. Situated in Southwest Asia, Jordan and Oman are rich in many ways, but in terms of fresh water, the two have been historically impoverished. This paper explores Jordan and Oman in more detail, focusing upon their respective water-based similarities and distinctions.

Falola, Bisola, The University of Texas at Austin; "The Public's Interest: Representation and Decision-Making in City Planning."

Democratizing local governance by providing opportunities for public input and influence has become a required element of city planning initiatives. While participatory planning is praised for its democratic ideals, it is also critiqued for its failure to involve the public in transparent and meaningful decision-making. In this paper, I use ethnographic data gathered during a comprehensive planning process in Austin, Texas and discourse analysis to show that participants are often taught to believe citizens must attain expertise and credibility in order to effectively plan on their own behalf. This learned belief sanctions the idea that "experts" should lead the process, planning for citizens rather than with them.

Ford, Trent, Texas A&M University; **David Gay**, and **Christopher M.B. Lehmann**, University of Illinois at Urbana-Champaign; "Modeling the Atmospheric Movement of Asian Soybean Rust Spores in the Central United States."

Since 2005, weekly precipitation samples at selected National Atmospheric Deposition Program/National Trends Network (NADP/NTN) sites in the eastern and central United States have been screened for *Phakopsorapachyrhizii* spores, Asian Soybean Rust (ASR). The fungal spore is able to disperse aerially from infected plants and deposit through wet and dry deposition to areas of great distance from the source. To locate the geographic origin of ASR spores, back air trajectories for 2007 through 2009 were calculated from the largest ASR-positive precipitation events. The calculations, completed by Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) model, were compiled in an ArcGIS database for spatial distribution analysis. The results suggest specific atmospheric transport pathways of uridinospores from Northeast Mexico and the Southern United States into the Midwest and Great Plains regions. Forward HYSPLIT air trajectories from

USDA inspected, ASR-positive counties in the Southern US were also calculated and demonstrate similar transport pathways and deposition areas. The results exhibit a coherence of identifiable *P. pachyrhizi* source areas of concern for soy bean growing regions.

Fry, Matthew, University of North Texas; “Drought and Drilling Anxieties.”

Every five years, the Texas Water Development Board (TWDB) releases a state water plan for how to meet water needs during times of drought. The timing of the 2012 draft plan, during a major drought event, offers an opportunity to assess how public concerns about current water supplies compare to TWDB proposals to deal with future water shortages. A topic of growing concern in North Texas is the large amount of water used to extract natural gas from the Barnett Shale gas play. For example, in a phone survey conducted in February 2011 in the region, 1000 participants reported that the greatest hazards to their water supply were drought (34.8%) and gas drilling (27.7%). Findings from the survey also show that residents’ have a limited understanding of the water cycle, water supply, and water issues in general. Currently, public knowledge about gas drilling and its potential impacts are also limited, partially due to the lack of empirical, peer reviewed studies. This presentation examines the current state of water supplies in North Texas and analyzes public perceptions/misperceptions of water issues and the use of water by gas drillers.

Gehrig, Jon, The University of Texas at Austin; “Eating the (M)other: Western Quinoa Consumption and Neocolonialism in the Andes.”

Inca Power Fuel, Soul Food of the Andes, The Mother Grain, Andean Dream, Ancient Harvest, Fair Trade, Organic, Supergrain, Objective Carbon Zero. These are just a few of the labels found on packages of quinoa products on shelves of a local grocery store. For some, looking at the labels perhaps makes them part of a larger world with a deeper history, conjuring images of Incan Warriors, shamans or snowcapped peaks. Still others might see the environmental justice, social equity or nutritional factors that these labels portray. While the packaging may tell one story, another narrative exists. Drawing from two months field research in the Bolivian Altiplano, this paper attempts to understand the alternate narratives of quinoa consumption and illustrates how these stories contradict the images that alternative food movements try to portray. The following has three purposes: it will trace this seemingly innocent food from the supermarket shelf to its origins in the Andes; secondly, it will problematize our consumption of this food, and reveal how our actions as consumers have fetishized quinoa and furthered the marginalization of those who produce it; finally, it will analyze how the trade of quinoa has recreated the colonial domination and dependence of the south by the north, ultimately jeopardizing food security in the long term.

Granberg, Tynan C., David M Cairns, and Charles W Lafon, Texas A&M University; **Jon Moen**, Umeå University; “Variation in Treeline Seedling Establishment in Response to Herbivore Density.”

The positions of arctic and alpine treeline have an impact on numerous landscape scale ecological processes, from wind patterns and snow distribution, to nutrient cycling and accumulation of litter. These ecotones may also serve as sensitive points of reference for measuring vegetative responses to global climate change. However, climate is not the only factor influencing treeline locations and treeline responses to changes in climate are spatially and temporally heterogeneous—herbivory is one potentially significant variable. In northern Sweden, and Fennoscandia in general,

reindeer herding has been an economically and culturally significant practice for the indigenous Sami for centuries. Grazing by their animals at the transition between forest and tundra may influence the relative stability of the ecotone by shifting competitive balances, altering soil temperatures, and other potential mechanisms. My study investigates the interacting effects of abiotic factors (aspect and topography), field layer vegetation, and reindeer herbivory on the establishment of new birch trees above the existing treeline in northern Sweden. Specifically, my hypothesis is that establishment varies across the treeline zone and that this variation is related to the presence of large reindeer herds. My study makes extensive use of dendrochronological techniques to determine periods of establishment, which are then checked for correlation with historical reindeer stocking levels and local pellet counts.

Hagge, Patrick D., Penn State University; “Rural Land-Use and Economic Challenges of Urbanization in the Twentieth-Century Greater Mississippi Delta Region.”

The historical plantation-and-sharecropping system of cotton farming that existed throughout large swaths of the American South left those regions with severely stunted urban hierarchies. Several plantation legacies contributed to this long-term ruralism: transportation infrastructure designed for cotton export, not internal commerce; an agrarian labor force distributed across rural lands; and major commercial market functions such as cotton ginning scattered at multiple sites in any given county, oversaturating the potential for local urban clustering. As a result, much urbanization in the Trans-Mississippi River South centered on a variety of smaller micropolitan-focused growth attempts, rather than existing metropolitan-focused growth efforts common to the American North. Several attempts at micropolitan growth in the rural Mississippi Delta states throughout the twentieth century will be examined, including the morphology, economy, demographics, labor, and outcomes of agribusiness towns, non-cotton agribusiness towns, extractive resource towns, resort towns, defense industry towns, and county seats. Documents (U.S. census records, Sanborn Insurance maps, agricultural statistics, railroad maps) are used to compile a statistical narrative of micropolitan urbanization in the rural Delta South. This study will link different historical micropolitan landscapes with specific contemporary problems of infrastructure, commerce, and population shifts that directly resulted from these uneven urbanization attempts of the previous century.

Hagelman, Ronald R., and **Greg Dannheim**, Texas State University-San Marcos; “Civilian Conservation Corps Parks in Texas: Seventy-Five Years of Use and Change.”

This poster presents the results of landscape assessments from a sample of state parks constructed during the Civilian Conservation Corps (CCC) program in Texas (1933-1942). CCC-period park architecture is unique due to the influences of architectural designs derived from U.S. National Parks of the time, the availability of skilled construction labor during the Great Depression, and a lack of public funds for *ex situ* building materials. The purpose of this research is to assess the degree to which CCC-period state parks in Texas have retained their original architecture/landscape characteristics over 75 years of park management, regional development, and changing expectations of park-goers. Data were collected using field photography and park documents for 12 CCC-period parks in central Texas. Results indicate that although many CCC-period features endure in Texas state parks, most in this sample have undergone substantial repurposing associated with

development and increased park use. With current budget reductions for Texas Parks and Wildlife and the continued development of regional infrastructure, we conclude that Texas' ability to retain the unique architectural integrity of these historical structures is dubious.

Hay, Jennifer, Louisiana State University; "Memories of the Civilian Conservation Corps within Louisiana State Parks;"

In the 1930s and early 1940s, the Civilian Conservation Corps (CCC) in the state of Louisiana employed young men as labor for forestry projects and infrastructure improvements such as road and levee building. CCC camps anchor the shared origin story of numerous state park systems across the country that serve as regional and local historical markers of human-environment interaction. This research provides insight to the significant contribution that the CCC made to the Louisiana State Park system. Specifically, it asks how these public properties remember the labor that marked their advent. I rely on a number of archival sources as well as tangible experiences such as hiking and camping that enable contemporary park visitors to explore the visible and hidden influences of the CCC camps on these spaces. The inescapable processes of hazards, decay, and Louisiana politics continue to affect the functionality and upkeep of these spaces and threaten to shroud these historic landscapes in disrepair and neglect. Today, stories from park staff and a few documents archived in the park centers share the memory of the CCC labor while historic structures including roads and cabins form the only other tangible memorial to the industrious efforts of the CCC camps.

Holloway, P., The University of Texas at Austin; "Fire Ecology: The Forests of Texas."

This paper takes the highly topical Bastrop County fires as a point of reference, and raises a number of topics regarding fire history and ecology within the forests of Texas. Current research indicates that fire ecology within Texas appears to have been understudied, especially in relation to other regions in the USA. The apparent increase in fire frequency and fire extent within Texas presents a need to understand fire ecology of the region in greater detail. The concept of forest regeneration is discussed in terms of temporal scale, and a variety of long-term and short-term approaches aimed at investigating this are discussed. The tools used to study fire ecology, and their appropriateness for practical applications in Texas is debated. This discussion leads to a number of potential research directions with which to study fire ecology in Texas.

Hopf, Frank, Texas A&M University; "Q-Method Analysis of the Governance Debate over the Levees of the Sacramento- San Joaquin Delta, California."

Between 1850 and 1922, agriculturalists built 1,700 kilometers of levees, converting 250,000 hectares of tidal marsh to farmland in San Joaquin - Sacramento (the Delta) of California. The organic soils behind the levees subsided to elevations as low as 8 meters below S.L., converting the "levees" into "dams." The federal and state governments built large irrigation projects in the mid-20th century, drawing water from the Delta, converting the levee-dams into water supply channels. This worked until 1972 when a levee failed causing contamination and interruption of water deliveries. This triggered debate over the need for a Peripheral Canal to avoid relying on the levees. The debate continues unresolved, and revitalized by the 2005 Katrina-related levee failures. This paper describes research that employed Q-Method to study the current discourses over the governance of the Delta held among experts and key actors involved. Q-method identified four social perspectives: Delta

Sustainers, Abandon the Levees, Levee Pragmatists, and the Multi-Purpose Levee Advocates. This presentation highlights major differences and agreements among social perspectives and provides insight into the political discussions over the Peripheral Canal. It also looks at the interaction of the social perspectives and the creation of science for application by policy makers.

Hu, Lan, University of North Texas; “Material Cycling: Geographic Destination and Treatment Strategies of Pennsylvania’s Industrial Wastes from 1992 to 2008.”

This poster studies material cycling based on the Pennsylvania dataset which includes the industrial wastes generated in Pennsylvania from 1992 to 2008. Material cycling is an industrial strategy of industrial ecology, which aims to promote a sharing of material, energy and water resources among firms, reduce our reliance on raw materials, and decrease negative environmental impacts. My primary objective in this research is to find out whether there is an expanding network which means whether more and more firms involve in material cycling over time through an analysis of the geographic destination of Pennsylvania’s waste from 1992 to 2008, as well as the treatment strategies of those wastes, which can help me to study whether there is an increasing amount of wastes being recycled rather than disposed.

Huddleston, Jody S., University of North Texas; “Geography of HIV/AIDS Late Testers in Texas.”

This paper looks at HIV/AIDS late testers, individuals that develop AIDS within one year of testing positive for HIV. In Texas about 4,600 Texans are diagnosed with HIV every year with 1 out of 3 already having AIDS. Understanding the characteristics of HIV/AIDS late testers in Texas is a necessary step in planning an effective strategy to combat this issue. In this study the Texas rate of late testers was found to have a positive correlation with median family income and living in an urban area. There were higher late tester rates found in areas with higher percentages of black residents. The geographic distribution of the survival time after AIDS diagnosis is also examined.

Hurt, Douglas A., University of Central Oklahoma; **Ajax Delvecki, Adam Payne**, Oklahoma State University; and **Gary Gress**, University of Oklahoma; “Oklahoma Tourism along Route 66: Pioneers, Perseverance, Community, and Freedom.”

A 2007 Zogby International Survey found that nearly one-third of Americans surveyed did not know enough about Oklahoma to form positive or negative opinions of the state. In order to explore what cultural heritage images of Oklahoma tourist sites convey to visitors, we assessed the information presented to tourists at museums and historic sites in the state astride Route 66. Four themes dominate interpretation at Route 66 historic sites. These locations suggest to tourists that the cultural heritage of Oklahoma is deeply rooted in its pioneer past, is based upon perseverance during regularly occurring trying times, is underlain by a passion for community cooperation, and is based upon the idea of mobility as a key to individual freedom. We conclude by reflecting on the ideas of Schöllmann et al. about the construction of heritage tourism sites and their application to Route 66.

Huston, Michael A., Texas State University–San Marcos; “The Geography of Injustice: Global Patterns of Poverty and Biodiversity.”

Many social and economic problems are attributed to political corruption or economic mismanagement, suggesting that most injustice results from human actions. However, there is a global pattern of injustice imposed by environmental conditions that is rarely discussed. Poverty and many other social, economic, and environmental problems are severe within the tropics, and improve with distance away from the tropics. The problem with “tropical paradise” is that deficient soil nutrients in areas with abundant rainfall, or deficient rainfall in areas with higher nutrients, severely limit agricultural productivity. Low agricultural productivity is the root cause of much of the poverty, and related problems of malnutrition, disease and environmental injustice that are concentrated within the Earth’s tropical belt. Efforts to reduce environmental and social injustice and achieve a healthy and sustainable future for humanity will continue to fail until we recognize and address this natural global inequality in the food resources for all life on Earth.

Irwin, Anthony, Texas State University-San Marcos; “Characterizing Rapidly Growing Counties of the United States, 1990 – 2010.”

Recent economic growth and in-migration have led to an interesting patchwork of rapidly growing counties in the United States. This research identifies 344 U.S. counties that grew by at least 51% from 1990 to 2010, a rate greater than one standard deviation above the mean of all U.S. counties. Using a K-Means cluster algorithm, eight distinct types of rapidly growing counties, with meaningful spatial patterns, were found. Four of these clusters were primarily urban: smaller fast-growing cities in the South and West, large Sunbelt cities, as well as both professional and working-class suburban counties ringing many of the more dynamic metropolitan centers of the country. Also, there were three predominately rural clusters: retirement counties, agricultural centers and several counties mainly in the Intermontane West characterized by environmental and recreational amenities. Lastly, we observed a distinct cluster of several Hispanic counties in the Southwest predominantly along the U.S.-Mexico border. We believe these eight clusters present a remarkably clear portrait of the significant forces underlying the current rapid growth of counties in the United States.

Islas, Marina, The University of Texas at Austin; “Negotiating Change: Community-Driven Development and Domestic Labor in Ciudad Sandino, Nicaragua.”

As gender mainstreaming has become pervasive in development projects over the years the recent trend of community-driven development initiatives has followed suit and endeavored to include women. It is understood that individuals participate in development initiatives in different ways, some becoming more involved than others, and this participation can serve to reinforce or challenge existing community hierarchies. Similarly, it is implicit that as women are included in projects and as their roles within the community change, gender roles and relationships also change. This research explores the ways in which women have participated in traditionally masculine labor vis-à-vis community-driven development, and how their involvement has necessitated that they renegotiate domestic labor responsibilities. This paper is based on a case study of Cooperativa Hilandería Génesis, an organic cotton spinning cooperative that is part of a larger non-governmental organization, the Jubilee House Community in Ciudad Sandino, Nicaragua. I conducted this research based on participant observation and semi-structured interviews with women while volunteering for

Jubilee House Community. Findings indicated that although the women working for Cooperativa Hilandería Génesis were not receiving pay for their labor, they were still able to renegotiate domestic labor with their spouses and family members, based on the hope of one day being able to provide a better life for their family. I argue that due to the contextual nature of community-driven development projects, researchers should consider the implications that participation has on the future of gender relations and roles.

Jones, Naya, The University of Texas at Austin; “Reframing Local Knowledge: Afro-Mexican Medical Ethnobotany in Social Ecological Systems Perspective.”

The social ecological systems (SES) framework positions local knowledge as essential for both social and ecological resilience. By drawing on local knowledge, scholars assert communities can better devise innovative solutions to the complex social and environmental problems of the 21st century. This assertion takes hold amid documented ethnobotanical knowledge loss among rural and indigenous populations worldwide. Given its focus on uncertainty and change, the SES framework invites a re-reading of local knowledge “loss” from a perspective of negotiation, adaptation, and transformation. To begin, this paper reviews conceptualizations of local knowledge in SES literature. I then introduce a case study of Afro-Mexican medicinal plant knowledge in Central Veracruz. In addition to empirical data, I discuss factors which increasingly interact with local healing plant knowledge and practice, including access to medical care, outmigration to the United States, and gendered demographic shifts. Building on the SES framework, I consider how these factors bolster or challenge ethnobotanical knowledge and, in turn, foster or hinder social-ecological resilience. In conclusion, I propose future trajectories for research on local knowledge in the context of rapid local and global change.

Jones, Richard C., The University of Texas at San Antonio; “Migration and Development in Mexico’s Historic Migration Region: a Recursive Micro-Analysis.”

Anthony Giddens’ argument for considering the recursive roles of agency and structure makes special sense in the study of migration-development interactions where questions of scale and lagged relationships are paramount. This study investigates relationships between economic and social structure, migration, and subsequent structure and income for 432 *municipios* in the historic migration region of Mexico over the period 1990-2000. The results point to a modest negative relationship between active migration (the proportion of households with a member currently working in the US) and subsequent socio-economic structure and income. Further analysis, however, uncovers positive developmental impacts of remittances, return migration, and circular migration that dampen the negative impacts of active migration on the employment profiles and the educational and age structures of emigrant *municipios*.

Josephson, Sarah E., Brannon Barr, and Steve Wolverton, University of North Texas; “Annual Effects of Precipitation on White-Tailed Deer Fawn Body Size at Fort Hood Texas.”

Body size in white-tailed deer (*Odocoileus Virginianus*) is largely driven by food availability, which is a function of plant productivity and population density within an observed habitat. In some areas, total plant productivity is directly related to the amount of precipitation added to the system. When precipitation levels are reduced to drought classifications plant productivity approaches its

minimum. How a juvenile white-tailed deer develops in its first six months of its life will determine its maximum adult body weight. This research aims to understand the relationship between habitat productivity and deer body size by analyzing the response of fawn weights to the Palmer Drought Severity Index (PDSI) over a thirty-five year historical record. A more detailed understanding of the correlation between juvenile body size and the PDSI will allow wildlife managers to frame an exceedingly comprehensive management system.

Kleitches, Larry, Texas State University-San Marcos; "Down in the Town: An Urban/Rural/Suburban Tripartite."

Happy days are not here again for a cluster of five actual (but unnamed) municipal governments in the United States. Once prosperous from thriving industrial interests, these communities have experienced persistent population losses and declining revenue streams. In the face of this persistent regression and fiscal hardship, the municipalities explored the legal remedy of consolidation to provide the vision of a fresh beginning. The following case study looked at these municipalities and found several factors weighing against the prospect of consolidation. Long-standing rancor between the municipalities and post-consolidation distribution of services were merely the beginning. Hard times facing these communities also served to further extenuate the artificial distinctions between the three of the five municipalities located "up in the hills" and the two former industrial hubs of the region "down in the town". The two hubs consistently viewed themselves as urban even though the size and makeup of their populations bore many similarities to those "in the hills".

Knox, Richard L., The University of Texas at Austin; "Initial Analysis of Natural and Anthropogenic Adjustments in the Lower Mississippi River."

The author conducted initial analysis of natural and anthropogenic changes on a section of the Lower Mississippi River since 1880. The main goal of this poster is to capture the key channel adjustments and engineering interventions and make initial observations on their relationships. A secondary goal is to spatially organize all related research pertinent to this topic. This study made use of a number of hydrographic surveys conducted by the US Army Corps of Engineers and the Mississippi River Commission as well as the extensive body of literature on the subject. The author's conclusions will be used as the starting point for his thesis research.

LaFavor, Matthew, The University of Texas at Austin; "Mapping the Natural Resource Monopolies of New Spain."

This poster illustrates spatio-temporal aspects of the extraction, processing, and redistribution of natural resources in New Spain (Colonial Mexico). The discovery, extraction, and monopolistic control of key natural resources was a priority of the Spanish Crown. Yet managing New Spain's natural resources often proved difficult. Human and environmental challenges interrupted supply and distribution lines, while the strict monopoly control of resources often met resistance. Beneath each map is a short narrative that further illustrates individual and common themes related to New Spain's resource monopolies and their geographic distributions. These maps incorporate data from existing historical and geographic studies, as well as the author's own research of colonial documents from Mexico's *Archivo General de la Nación*.

Lambert, Dean P., San Antonio College, and Harary Security Consulting International; “An Analysis of Ambushes on Mexican Authorities and their Relation to the Ongoing Drug War.”

Mexico is currently experiencing the greatest threat to public safety since its revolution. The ongoing “drug war” has taken more than 45,000 lives, and with thousands of troops patrolling streets and daily gun battles, parts of Mexico could be considered war zones. Indeed, by some measures, Mexico is deadlier than Iraq or Afghanistan. One of the figures commonly used to measure insecurity in Mexico is the number of drug-related homicides. Preliminary numbers for 2011 display a marginal decline in such deaths when compared to 2010; indicating for some experts the progress of Mexican authorities to stem the influence of organized crime. However, this measure is not an accurate indicator of progress. Indeed, the number of people killed is mostly a function of inter-cartel rivalries, rather than a direct response to the overall effectiveness of law enforcement. Instead, the frequency and character of armed attacks directed against authorities provides valuable insight about the ability of Mexican authorities to combat organized crime. Data from 2010 and 2011 reveals a dramatic surge in ambushes; reflecting an overall decline in public safety when compared to early 2010. Furthermore, the rising number of firefights in urban areas and a notable increase in attacks on ostensibly civilian targets display a troubling escalation of violence. Indeed, it is clear that organized criminal groups will continue to diversify their revenue streams and will do whatever necessary to guarantee this income. What is less clear is what will happen with regard to the current wave of violence, and the outcome may depend in part on the 2012 presidential election.

Latrubesse, E., and **Aquino S. Latrubese**, The University of Texas at Austin, and **M. Bayer**, Universidade Federal de Goiás, IESA-LABOGEF, Brazil; “Assessing the Hydrophysical Response to Deforestation of the Most Impacted River of Central Brazil: The Araguaia River.”

With a mean annual discharge of 6500 m³/s and a drainage area of ~380,000 km², the Araguaia River is the main system draining the Cerrado biome of Central Brazil and part of the Amazon. The Cerrado is the second largest biome of South America after the Amazon and undergoes extreme land use changes and ~65% of the total area was lost by deforestation since the 1970s. Our analysis demonstrated that since the 70s the alluvial plain is undergoing active sedimentation and 233 Mt of sediments were stored by channel activity in a reach 570 km long of the middle Araguaia. The bed load transport has increased 31% from 6.6 Mt in the sixties to 8.8 Mt in the 1990s and the channel pattern has been metamorphosed to some extent. New estimations of wash load transport indicate that the Araguaia can carries up to ~57% of the total sediment load as sandy load and that wash load just represents near 43 to 49% of the total sediment load, which indicate that previous works overestimated the total wash load transport. Because of the scarce availability of wash load, proposed human interventions such as dams can be extremely harmful for the fluvial system and its ecosystems. The Araguaia River has been considered the most extreme case of geomorphic response of a large alluvial river without direct interventions in the channel to catastrophic deforestation in the whole human history.

Latrubesse, E., The University of Texas at Austin, **E. Cafaro** and **C. G. Ramonell**, Universidad Nacional del Litoral, FICH, Argentina; “New Conceptual Clues from the Largest Alluvial Megadepositional System on Earth: The Chaco Megafans.”

Publications on megafans increased significantly recently and opened debates on the global distribution and the importance of megafans across disciplines. With a few exceptions, however, small is known yet on the South American megafans evolution and on their present day morphodynamics. The Chaco plain, spreading on 840,000 sq km to the east of the Andes mountain range along 1200 Km from N to S, is the main area in the planet containing megafans. The main rivers debouche from the Andes on the Chaco plain, which act as a sort of complex trap in a foreland-platform sedimentary basin. The Andean-Chaco rivers show, as a common geomorphological feature, alluvial fans ranging from typical piedmont alluvial fans to giant fluvial fans. The largest Chaco fans are generated by five major rivers (from north to south): Grande, Parapetí, Pilcomayo, Bermejo and Juramento rivers. We concentrated our analysis on an area of approximately 400,000 km², 570 long (from 21°S to 27°S) and, 700 km wide from west to east, between the Subandean Ranges and the Paraguay and Paraná rivers where the Pilcomayo, Bermejo, Juramento, Itiyuro and del Valle megafans developed. The largest megafan is the Pilcomayo fan that stretches over an area of 220,000 km², having a 610 km radius and a fan-front of 720 Km. We estimated the sediment load produced by the Chaco rivers and the trapping efficiency of the Chaco plain as a sedimentary basin. Our results indicate that the Andes provides approximately 352 MT year⁻¹ of sediments to the Chaco plain and that the production of sediments in the Andean zone is in the order of 1,699 T km⁻² year⁻¹. These results open a new horizon on the knowledge of the largest alluvial megadepositional system in Earth.

Lemon, Robert Douglas, The University of Texas at Austin; “Identifying Place in Oakland, California: Using GIS to Synthesize Spatial Perceptions of Demographically Distinct Neighborhoods in Oakland, CA.”

This paper investigates how individuals and groups characterize and synthesize space. The research employed a stratified random survey of more than 30 people in each of four demographically distinct neighborhoods in the City of Oakland, California. The survey asked individuals to define the landscape features that make up their neighborhood boundaries. The survey also posed questions about the perceptions and use of outdoor spaces—parks, plazas, sidewalks, streets, etc.—as well as asking participants to rank certain physical characteristics of their neighborhood. Using Geographic Information Systems (GIS) the work employs a multivariate model and analysis to better map the factors and relationships that impact people and their perceptions of space. The work tests hypotheses and measures patterns that reveal the importance of cultural landscapes, urban typologies and other demographics in the perceptions of space.

Lemon, Robert Douglas, The University of Texas at Austin; “¿Tacos or Tacos?”

Austin has witnessed the growth of two different types of food trucks over the last few years; taco trucks that serve immigrants, and trendier food trucks that create new hybrid cuisines. “¿Tacos or Tacos?” is a short documentary about the emergence of new food cultures of Austin and how they are shaping community identity in the city. Moreover, it is about how food trucks transform the urban environment to create a place and space where particular customs are practiced and continued.

Through juxtaposing immigrant taco trucks on the East side of Austin to the new trendier food trucks in the eclectic and eccentric neighborhood of South Austin, the film elucidates that taco trucks are more than just a place to eat for Mexican immigrants.

Ley, Amelia, Louisiana State University; and **Alyson Greiner**, Oklahoma State University; “Examining the Origins of Catholic Priests in Louisiana, 1850-1920: A Geographical Perspective.”

What countries and regions have historically sent Catholic priests to the United States? We can answer this question in broad terms pointing, for example, to the Catholic countries of Western Europe, but we know much less about how the origins of priests varied among different U.S. states. Greiner’s (2010) study raised these and other questions, but focused solely on the origins of priests in Oklahoma. This project aims to expand the study to Louisiana and has two main purposes. The first is to determine how to gather the data necessary to identify the places that have historically supplied Louisiana with Catholic priests, and the second is to identify those origins.

Lininger, Katherine B., The University of Texas at Austin; “Gold Mining in the Madre de Dios Watershed in the Peruvian Amazon: Initial Analysis of Geomorphologic Change and the Applicability of a Social-Ecological Systems Framework.”

Since the 1980s, alluvial gold mining in the upper watershed of the Madre de Dios River has impacted a large area of tropical rainforest in southeastern Peru. In recent years, mining activities have increased along with high global prices for gold. This poster will discuss the development and history of gold mining in the Madre de Dios region and present an initial analysis describing changes to river geomorphology. The poster will also discuss how a social-ecological systems framework is useful when analyzing a system in which mining is a driver of change. The social-ecological systems framework can help a researcher determine the linkages between both biophysical and social processes, providing insight into testable hypotheses.

Lowell, Jonathan, The University of Texas at Austin; “Text and Embodiment on the Road to Santiago.”

The *Camino de Santiago* pilgrimage has seen a resurgence over the last forty years as both a tourist site and a site of spiritual and ontological searching among mostly Western European, middle-class pilgrims who eschew modern transportation and attempt to arrive at the shrine in Compostela by foot, bicycle or horse. Starting from the coordinates of person, place, text and movement delineated by pilgrimage researchers Eade and Sallnow, this paper explores how pilgrims construct and interpret their embodiment of the Camino’s landscape. The paper seeks to draw out the tensions between the embodied experiences the pilgrimage offers and the structural frameworks provided by the body of previously produced texts (guidebooks, memoirs, websites and tourism literature) surrounding the pilgrimage.

Lyons, Donald, University of North Texas; “Material Cycling and Industrial Waste: A Case Study of Non-Hazardous, Industrial Waste in Pennsylvania, 1992-2008.”

While there is mounting case study evidence of successful industrial ecology (IE) practices via industrial symbiosis and material cycling from across the world, it is still difficult to gauge the impact of these practices on industry in general. In large part, this is due to the lack of available data. For

example, while municipal solid and hazardous industrial waste are relatively well documented and understood in the United States, there are no federal and few state requirements for firms to report details on the billions of tons of nonhazardous industrial waste (NHIW) generated each year. An exception is the Commonwealth of Pennsylvania which began requiring all firms generating NHIW waste to report both the quantity and type of waste generated and how and where the waste was managed since 1992. As such, this dataset provides a unique insight into the structure and geography of non-hazardous industrial wastes in a major industrial state. The purpose of this paper is to present some preliminary results from this dataset to determine if industrial production in Pennsylvania has become more ecologically benign over the last 20 years. The results are significant because at the core of IE is the relatively optimistic argument that changes in technologies and institutional structures will promote ecological sustainability without the necessity of alternating the fundamental structures of capitalism. By examining how the generation, treatment and redirection of NHIW in Pennsylvania has occurred over time, we can begin to determine whether contemporary society has the capacity and willingness to make the necessary reforms to fundamentally reduce the environmental footprint of production and consumption.

Martinez, Vanessa, The University of Texas at Austin; “Place and Legality: A Gendered Analysis of Migrant Political Participation in Fremont, Nebraska.”

In June 2010, voters in Fremont Nebraska, a city of about 26,000, passed a local ordinance restricting the employment and housing rights of migrants, based on issues of “legality.” While pending lawsuits have delayed this legislation from going into effect, its passage reflects an increasingly divisive local debate regarding changing community demographics, primarily in reference to undocumented immigrant and Latino populations. Drawing from interviews with Fremont community members, this paper explores how gender and place, as put forth by various feminist geographers has influenced the nature of involvement in debating the ordinance. Place became very important for Fremont residents; but the ways in which discourses were developed depended largely upon local power relations and legal residential status. For instance, place (re)making by non-migrants often challenged or changed boundaries in very public ways, while place (re)making by migrants tended to be more anonymous and subtle. Additionally Latino community member reactions to involvement and support from non-Latinos in opposing the ordinance differed significantly based on gender. Using gender as an analytical tool, these preliminary findings comprise a first step toward a feminist ethnographic enquiry regarding debates over legality in Fremont.

Matthews, Olen Paul, University of New Mexico; “Federal Power, the Commerce Clause, and Health Care Reform.”

The Constitution’s Commerce Clause grants the federal government power to regulate many aspects of life within the United States although this power has not always been as extensive as it is today. The Commerce Clause molds the geography of the country by defining relative power between the states and federal governments. The clause also affects “geography” in areas ranging from environmental protection to food safety. Within the past 70 years only a few Supreme Court challenges have successfully limited federal commerce clause power, and those have all been within the past 20 years. Today a major issue working its way through the federal court system is federal health care reform. Federal District and Circuit Court opinions are inconsistent, meaning the

Supreme Court will ultimately decide on the extent of permissible federal power in this area. My paper examines the current federal court health care decisions and evaluates their consistency with past commerce clause cases. The paper also examines implications in other areas of federal law if the Supreme Court finds the act unconstitutional. A “best guess” on the Court’s final decision will be provided.

McEwen, John W., Louisiana State University; “Identifying the Gulf Coast-Mardi Gras Culture Region.”

Cultural landscape studies demonstrate that culture and vernacular regions can be defined by various characteristics such as housing architecture, food, business toponymy, or a common history. This study applies data types and methodologies used in previous culture region studies to examine the Gulf Coast region from Pensacola, Florida to Galveston, Texas. The result is recognition of a core and periphery of a region whose sphere of influence emanates from New Orleans. For this study, material culture artifacts and landscapes serve as clues to the history of the region’s distinct culture and are central to understanding both why and where the region exists today. Business directory listings and observations of material culture paired with GIS tools result in the delineation of the Gulf Coast-Mardi Gras region emanating from its core at New Orleans. Although this study does not present how the New Orleans’ identity diffused throughout the region, this research does provide a starting point for such an undertaking.

McGregor, Kent M., University of North Texas; “Causes and Dynamics of Heat Wave and Drought during the Summer of 2011 in Texas and Oklahoma.”

This paper explains why the summer of 2011 will be remembered as one of the very hottest and driest on record. By some measures it was the hottest on record. In the Dallas area, it broke the record for total number of days with temperatures above 100° F. but not the record for number of consecutive days with temperatures above 100° F. Virtually no rain fell for over two months. The causes of such a heat wave and accompanying drought were similar to similar extreme summer of 1980. During both events, the atmospheric circulation over the central and southern plains was dominated by a large, strong anticyclone that was locked in place for the entire summer. This blocking high pressure cell cut off any possibility of precipitation, and the subsiding air pushed temperatures above 100° F nearly every day.

McNair, Matthew R., University of Oklahoma; “Making a Name for Ourselves: Commemorative Toponymy in Little Rock’s Urban Geography.”

Toponyms, or place-names, are iconological building blocks of a literate society, and in the United States one can trace the tracks left by a colonizing power as it inscribed its own cultural reality on a land held for millennia by peoples with no conception of, or use for, Euroamerican map-writing. The collection of these colonial and frontier toponyms has long been an amusing pastime for American scholars, especially geographers, with Stewart and Zelinski holding places of prominence in such “accumulative” toponymic study. Later investigations of toponyms reveal a much more critical faculty of place-names, though, namely the power to codify the accepted history and cultural normalcy of both places and entire societies. This is especially true of the urban environment, with Alderman and Azaryahu pointing out that, in particular, the naming of streets can hold significant

cultural and iconological significance. In this paper, I will explore three cases of toponymic (re)inscription—that of President Bill Clinton Avenue, Springer Boulevard, and Martin Luther King, Jr. Drive in Little Rock—that lay bare conflicting narratives of Arkansas history and show how the naming of urban thoroughfares contributes to the codification of a society's self-identifying myths.

McWatters, Mason, The University of Texas at Austin; “Worlding an Ethics of Descriptive Outreach.”

Among all the tools and technologies that geographers use to sense and make sense of the world, perhaps one of the least reflected upon is language itself. In this paper I intend to reflect upon the hold language has over our ability not only to represent the world, but also to relate to it in an ethical way. In particular, I am interested in thinking about how geographers might better utilize descriptive language and creative writing to ‘make public,’ or draw into realms of social understanding, parts and experiences of the world that generally remain unaccounted for in conventionalized ways of thinking, writing and relating – or ‘worlding’ – in geographical scholarship. To concretely explore these ideas, I shall draw upon my current research into how individuals suffering with agoraphobia struggle to make sense of the world. Drawing upon examples from this research, I wish to highlight a uniquely ethical capacity of unconventional, descriptive language to reach out toward human experiences of the world, like suffering, that are literally inappropriate, nonrepresentational, and out-of-place. I develop this argument about writing as a way of ethically relating into a methodology of ‘descriptive outreach.’

Mendive, Juan S., University of Central Arkansas; “The Economic Geography of a Micropolitan City: A Case Study of Alice, Texas.”

Micropolitan cities in the United States are now experiencing similar trends to those experienced by larger cities decades earlier, albeit with some distinct variations. Although under studied, micropolitan cities actually comprise the vast majority of U.S. cities, making them worthy of research. While diverse in many aspects, micropolitan cities are experiencing similar trends: sole industry dependence, suburbanization, decline of downtown vitality, construction of highway bypasses, decline of agricultural activities, and the establishment of retail chains. To examine these trends and their impact on the local economy and the economic geography of a micropolitan city, a case study of Alice, Texas, a city located in the heart of South Texas, was conducted. The economic dependence on the petroleum industry, the construction of a highway bypass on the city's west side, suburbanization, and downtown deterioration have had an impact on the local economy and economic geography of Alice. Data was gathered on Alice from the U.S. Census Bureau, interviews, and field observations. This study found that Alice is experiencing similar trends to those occurring in other micropolitan cities throughout the United States, and are having both positive and negative impacts on the city's local economy and economic geography.

Milbauer, John A., Northeastern State University; “Oklahoma County Courthouse Monuments”

Humankind possesses a burning desire to erect monuments to events, ideas, and individuals that it reveres. Topics of memorialization are many. Monuments are usually created by the powerful, and usually it is their perspective that we see. Women and minorities often get short shrift. Frequently monuments are unveiled long after the event or lifetime of the person recognized, and they could be placed some distance away. Queries that I attempted to answer include the following: What are the

themes of Oklahoma monuments? Who creates them? What perspective do our monuments present? Are women and minorities well represented? Are memorials created long after the event? How do Oklahoma monuments compare to those elsewhere? I carefully observed all monuments on the grounds of all past and present Oklahoma county courthouses in 2005-2006. I visited local libraries, historical societies and museums to learn what I could of the subject. In 2011 I examined the newspapers of Oklahoma county seats online. In addition, I searched Oklahoma newspaper archives on line. Also in 2011 I returned to the field to investigate recent developments. The most important monument theme is tribute to veterans, and a host of other topics are present. Monuments are usually erected by the European American elite, and their viewpoint is presented. Women and minorities receive few monuments. Monuments are often created many years after the event they commemorate, and they might be a considerable distance from the site of the occurrence. Oklahoma county courthouse monuments are generally compatible with those elsewhere.

Miyakado, Haruna, University of North Texas; “Relationships between Food Deserts and Areas of High Crime in Dallas, Texas”

It is known that residents living in areas of low socio-economic status have inadequate access to grocery stores that provide healthy food options. It has also been suggested that areas of high crime deter the establishment of such grocery stores. However, the question that remains unanswered is the distance relationships between where such grocery stores chose to locate and areas of high crime activity. We use a bivariate K function to assess the degree of spatial clustering of crime at different distance thresholds from grocery store locations in Dallas. Our preliminary results show that there is minimal clustering of crime in the immediate vicinity of such stores and that crime tends to increase with distance. We are able to use this method to quantify these distance thresholds in Dallas, Texas. The results from this paper can provide useful insights for intervention strategies that can help reduce the social, health, and economic disparities that are caused as a consequence of inadequate access to health food.

Morren, Sophia, University of Oklahoma; “Beyond Bread and Circuses in Oklahoma City?”

Oklahoma is often thought of as being 'late to the game,' from statehood to current fashion trends. When it comes to urban development, however, this characteristic had the potential to serve Oklahoma City well. Whereas most American urban development since the 1960s has followed the politics of bread and circuses, Oklahoma City combined the lessons from their initial entertainment-focused projects and the experiences of those ahead in the game with a large-scale development focused on the educational built environment. This was succeeded by the current grouping of development projects approved by voters, which includes both venues for the tourist class and infrastructure encouraging residents from a variety of classes to engage in healthy lifestyles. While the development focused on education and some of the current proposals are a baby step towards social justice, the civic rhetoric remains focused on elite values, realigning the agenda towards a focus on downtown and putting Oklahoma City back in step with national development trends.

Nagaoka, Lisa and **Matthew Fry**, University of North Texas; "Undergraduate Choice of Majors: Why not Geography?"

Choice of majors by undergraduates is often driven by perceptions about what a field of study does, as well as potential job opportunities and earning power. In addition, students are often attracted to disciplines such as accounting, education, or engineering, because they have well-laid out pathways from college to career. As a result, liberal arts disciplines such as Geography can have a difficult time recruiting majors unless the question of "what do you do with that degree" is clearly addressed for students. Geography can have an additional hurdle in that the "geography" taught in high school bears little resemblance to the geography taught in college or practiced by professionals. As part of an undergraduate recruitment project, we surveyed Geography majors and non-Geography majors to understand how the self-selected group of majors and the larger undergraduate population perceived Geography as a discipline and as a career. The two groups differed in their demographic representation, the pathways they take to their majors, and their perceptions about geography. By understanding student motivations and perceptions about choice of major, we will be able to develop a more effective marketing strategy to target potential majors.

Ostrander, Anthony, and **Murray D. Rice**, University of North Texas; "Firm Change and Development: An Analysis of Walmart's Retail Expansion Strategies."

This research provides insight regarding the retail site selection strategies employed by Walmart in the United States. The study investigates the spatial and temporal patterns characterizing the firm's store and distribution center expansion across the United States from 1990 to 2005. A time-series examination of store and distribution center locations indicates that Walmart targeted specific target markets in its national expansion, bypassing many opportunities closer to its distribution centers. In so doing, Walmart demonstrated a willingness to incur elevated transportation costs in its quest for early entry into lower-income markets wherever they were found.

Parafina, Ben, and **M. Anwar Sounny-Slitine**, Southwestern University; "Rooftop Solar Potential of Southwestern University: LiDAR application to Solar Mapping."

Southwestern University is one of the highest rated campuses for sustainability according to the College Sustainability Report by the Sustainable Endowments Institute. Thanks to student efforts over 90% of the University's energy comes from wind power and the school has reduced building energy consumption through energy management systems, building metering, and light sensors. Photovoltaics could potentially further offset Southwestern's energy usage. Previous studies on campus have studied the effectiveness of single Photovoltaic cells, but not for the entire campus. Widespread use of Photovoltaics across campus could potentially provide a significant source of on-site energy. This study uses LiDAR and GIS to estimate the solar potential of the Southwestern Campus rooftops and aid in development plans for continued sustainability.

Park, Edward, The University of Texas at Austin; "Estimating Land Cover Change using Image Pre-processing of Landsat images."

It is not too much to say that image pre-processing is one of the most important steps in remote sensing analysis. Image pre-processing should be performed in advance of every analysis and therefore there are numerous methods developed for image pre-processing. At this time, I would

like to introduce one of the methods of image pre-processing of cloud removal that I have developed. Cloud cover in the image affects the radiometric value of some pixels across the image. To remove the reflectance effects of cloud cover and restore the pixels under the cloud, I secured two backup images which were taken within a similar time period as original image (subset 2, subset 3) that could be used to replace the cloudy region in the base image. For this pixel replacement, image rectifications to identical projection including defining sub-images for all images are done in advance of any processing. Histogram adjustment to match the spectral value was performed to subset 2 and subset 3 and then correlation of each class (urban, swamp, forest, farm, shallow water, deep water) was calculated to support the appropriateness of the replacing pixels. Finally, some of the pixels from the overlapping region in subset 4 (adjacent image) were used to assess the precision by comparing pixels at the region under cloud in base image which has been replaced by pixels to recover surface data from subset 2 or subset 3 and the same region in subset 4 which is not covered by clouds. I estimated a 18-year Land Cover Change around Peace River Mouth in Florida with Landsat images through this method; however this method could be applied to other places in the world and have more precise analysis by sensors with higher temporal resolution (e.g., MODIS, SPOT, etc.).

Polk, Molly, The University of Texas at Austin; “The Missing Link? Wetlands and Glacial Retreat in the High Andes of Peru.”

In the high Andes of Peru, mountain glaciers and proglacial lakes provide ecological services to human settlements lower in the watershed, including household water and irrigation for farming. Positioned between the glaciers and their lakes and the downslope populations are wetlands that also provide ecological services. They are responsive to biophysical changes and human manipulations that alter soil moisture. These wetlands thus provide a way to link recent shifts in the glacial-hydrological system with demand for water resources. A change detection technique on Landsat TM imagery was used to explore the spatial dynamics of high Andean wetlands in the Cordillera Blanca of north-central Peru. From 2000 to 2011 wetlands shrank by 17% in the studied watershed and became more fragmented. The data suggest that after 2000, wetlands began to shrink, which implies that peak hydrological discharge from glacial retreat has already moved through the watershed and the associated wetlands. Further research will be needed to clarify and explicate the generality of the patterns found. However, it is clear that these sensitive wetlands indicate that environmental change is altering a variety of coupled natural-human systems in the study area.

Ponette-González, Alexandra G., University of North Texas; and **Kenneth R. Young**, The University of Texas at Austin; “Seedling Regeneration above a Tropical Treeline in Northern Peru.”

Tropical treeline position in the Andes has shifted up- and downslope in the past as a result of land use and climatic change. Yet, little is known about the underlying mechanisms that control the current treeline boundary. Hypotheses posited to explain treeline spatial patterns and dynamics include growth, disturbance, and reproduction limitation. This paper examines past land-use effects on seedling regeneration and mortality at treeline following 10 years of decreased grazing pressure and fire exclusion in Río Abiseo National Park, Peru. In summers 2010 and 2011, 50 vegetation transects were laid perpendicular to forest-grassland boundaries in 14 forest patches ranging in size from 225 m² to >1 ha. Trees >5 cm diameter were inventoried in contiguous 100 m² plots, and seedlings and sprouts were counted within nested 2-m² subplots. Preliminary observations indicate

that seedling and sprout abundance decrease significantly with distance from forest edge. Moreover, species of few forest tree genera are found regenerating in grassland plots, and most woody species regenerate through sprouting. Based on these initial findings, we suspect that low rates of seedling survival and growth play an important role in structuring this high Andean treeline ecotone.

Porter, Jess C., and John A. Kirk, University of Arkansas at Little Rock; “A Divided City: Mechanisms of Segregation Before and After the Little Rock Central High Crisis.”

Discussions of ethnic geography in Little Rock, Arkansas have often been couched in terms of their relation to the landmark civil rights event known as the Central High School crisis of 1957. In the dominant ethnic geography narrative, a more segregated city emerges as a direct result of the subsequent forced school desegregation. Our preliminary research addresses the policies and events that predate and postdate the events at Central High. Specifically, the policies of slum clearance and urban renewal developed by city planners in the late 1940's and the construction of the city-bisecting Interstate 630 that opened in 1985 have proven to be principal actors in the creation and perpetuation of a hyper-segregated city. This poster illustrates the opening stages of research that will explain and visually portray the evolving ethnic landscape of a city that has and continues to substitute state-sanctioned segregation with geographic separation.

Powell, Lisa J., The University of Texas at Austin; “Coal Floats in a Corn Parade: Examining Performance and Representation of Farming and Mining Identities in a Kentucky Corn Festival.”

The Western Coalfields Region of Kentucky is one of a handful of places in the United States where the idealized agricultural landscape of gently rolling green and gold fields coexists with the gritty industrial landscape of coal mining. The region hence presents a valuable case study for examining the historical and contemporary power struggles within a hybrid landscape of food and fuel production, a type of landscape which is becoming more widespread with increased development and use of alternative fuels and emphasis on local food production. Much of the conflict (and cooperation) between coal and corn in this region has played out culturally, as the identities of farmers, miners, and the associated agribusinesses and coal companies have been portrayed and performed. This paper centers around the Union County Corn Festival, where the dual identities of a Western Kentucky farming and mining community have been performed and negotiated for nearly 40 years. Though by name the festival celebrates the agricultural economy and identity of the area, coal companies have long been a part of the festival in ways that illuminate the delicate cultural balance between farming and mining in the area.

Preston, Joyce N., and Kristopher L. Burch, Stephen F. Austin State University; “Using GIS/GPS to Reconstruct a Historic African-American Cemetery in East Texas.”

St. Paul Cemetery, located in Nacogdoches, Texas, is a historic African-American cemetery established during the 1870s. The original church is no longer present and vegetation (underbrush) has significantly encroached on the forested gravesites. Stephen F. Austin State University's Geography Program is in the process of restoring the cemetery to its previous maintained status. This poster describes efforts to map existing gravestones and research historical records of those interred. Two forms of technology are used to map the graves to compare mapping abilities of each device: a Total Station and a Juno GPS unit. A database is being set up to include names, military information

and other gravestone information, along with information from publicly available death and census records. Future work will include mapping potential unmarked graves identified by funeral home markers, planted vegetation, or other indicators such as depressions in the ground. In a sense we will reconstruct St. Paul Cemetery by mapping it, learning who is buried there, and discovering information about their related lives and families. This project will serve as a pilot for future mapping projects for this and other cemeteries.

Rainey, Steven, McNeese State University, **Linda Langley**, McNeese State University and Coushatta Heritage Center, and **Jay Precht**, University of Pennsylvania; “Creating the Coushatta Migration History Map.”

This presentation details the development of the Coushatta Migration History Map, which provides a visual presentation of the movement of the Louisiana Coushattas from the first record of a Coushatta settlement on the Tennessee River near the Alabama-Tennessee border to its present location in Kinder, Louisiana. Many indigenous mapping projects involve consulting community members’ collective memories, or tribal traditions, to map present or past territorial boundaries, migrations, or the locations of resources or culturally significant sites. This project involved the additional challenge of retracing a past migration for which collective tribal memory is incomplete, at best. Given this limitation, the authors found it necessary to rely on explorers’ accounts and historical maps to recreate the route taken by the Koasati Coushattas between the time of the De Soto expedition of 1539-1543 and their settling at the present location in the latter half of the nineteenth century. The mapping project was commissioned by the Coushatta Heritage Center in Kinder, Louisiana to create an interactive map that would enable visitors to the Center to learn about Coushatta tribal history as they use the map to trace the tribe’s path from its location in 1540 to its present location.

Rizzo, Rosario; University of Texas at Austin; “Coping with Neoliberalism: The Case of Corn Farmers in the Totonacapan.”

At the end of the 1980's and beginning of the 1990's, the Mexican economy collapsed, along with one of its main sectors, agriculture. Meanwhile, a series of neoliberal reforms were put in place: drastic reduction in government agrarian subsidies and social programs, and privatization of state-owned enterprises. These events placed small corn producers in an unsteady situation, and in the search for alternative forms of income, often leading to migration. In this context, smallholders of Veracruz participated in the emergence of an alternative market: cornhusks. The production and processing of the husks has become increasingly important. The objective of this paper is to: 1) explain the context in which the Totomoxtle emerged; and 2) determine women’s participation in the industry. Based on qualitative data gathered during 2011 through semi-structured interviews and, participant observation, as well as the examination of secondary data, I provide preliminary findings. Results suggest that the Totomoxtle trade has expanded considerably in the last few years becoming the main source of income for many marginal households. Furthermore, It has opened up a space for women’s participation in waged labor.

Rodriguez, Jonathan, University of North Texas; “Texas HIV Prevalence in the 25-49 Age Group.”

According to the CDC, 63% of all new HIV and 69% of all new AIDS diagnosis in 2009 occurred among the 25-49 year age group. Yet, little work has been done on the predictors of HIV in this age group, the transmission pathways, and how their risk varies spatially in Texas. My initial research examined the relationships between HIV/AIDS rates and unemployment, education, income, and race/ethnic groups using county level data. While significant correlations were found with unemployment and education, correlation with income was not significant. Finer level data is needed to explore this issue further, to determine what neighborhood characteristics are associated with high HIV infection, and where to locate effective interventions. This is the goal of my current research. Using de-identified zip code level data on every case diagnosed in Texas from 1999-2008, disease mapping and statistical analysis, this study probes the geographic patterns of HIV infection in Texans aged 25-49. In addition to providing insights into the geographic distribution, the results shed light on the neighborhood characteristics associated with high HIV rates and provide crucial information for targeting intervention activities.

Rowe, William, Louisiana State University; “The Effects of Economic Chaos in Post-Soviet, Post-Conflict Tajikistan on Nutrition, Health, and Livelihoods.”

In the wake of the collapse of the Soviet Union, Tajikistan had perhaps the most difficult political and economic transition of the fifteen former republics. Following a civil war, the collapse of their currency, and the near destruction of their employment base, Tajiks were faced with the reduction of food consumption, worsening health conditions, and severe underemployment in the rural sectors. This study focuses on the Hisor Valley in western Tajikistan and charts that demise as well as the continuing vulnerability of the population through a decade of demodernization and a subsequent decade of 7% annual GDP growth while offering a geographic basis on which to analyze poverty, migration, and economic access.

Romig, Kevin, Texas State University-San Marcos; “Not Fade Away: Geographic Dimensions of Buddy Holly’s Meteoric Career.”

The career of native Texan Buddy Holly is often described as “meteoric.” Within eighteen months of his first hit, “That’ll Be the Day,” which charted on the *Billboard* Top 40 list in 1957, Holly released seven other songs that charted on the *Billboard* Top 40. Holly and his band toured extensively throughout the United States, Canada, Australia, and Great Britain while contemporaries such as Elvis Presley never toured outside of the United States. This paper maps nearly every professional performance by Buddy Holly and the Crickets highlighting the grueling schedules and travelling conditions that were normal during the late 1950s. Holly quickly established himself as a rock and roll pioneer before his untimely death, at the age of 22, in an airplane crash on February 3, 1959, while on tour in the American Midwest.

Roth, Jeffery, and Darrel L. McDonald, Stephen F. Austin State University; “Contested Cultural Landscape Artifacts: East Texas Cemeteries.”

The presentation will examine factors influencing the documentation, interpretation, change in and persistence of several African American cemeteries located in East Texas. The paper will discuss cemeteries are inactive and active. The importance of the meaning of cemeteries as a landscape artifact has a respected tradition in geography, particularly in Texas as exemplified by Jordan’s works. In recent years, cemetery research has become a more common interest to a broader audience

stretching across genealogist and public historians among others. In East Texas, geospatial technology is being utilized to enhance the understanding of cemeteries down to the individual grave. During these efforts interdisciplinary projects have resulted in, at times, differing perspectives on cemetery documentation procedures. Further, community attitudes vary on the significance of cemetery maintenance and value to their heritage.

Rudow, Joshua, The University of Texas at Austin; “Uncharted Territory: Agricultural Adaptations to a Changing Environment in the Sierra Tarahumara.”

The Tarahumara are one of the most isolated and intact indigenous groups in Mexico. Their agriculture has traditionally been practiced within the steep canyons and uplands of the Sierra Madre Occidental in southwestern Chihuahua. Adapting to these rugged conditions the Tarahumara developed a variety of agricultural techniques that allowed them to be self-sufficient in food production and independent of external inputs. As varied and ingenious as their techniques are, they share one main objective - to overcome the lack of organic matter in the stony mountain soils. Since the arrival of the Spanish, the addition of organic matter has involved large amounts of animal manure to increase organic matter in the soil and maintain fertility. The focus of this study is to investigate new agricultural techniques that the Tarahumara are adopting due to the pressures of globalization and climate change. These new technologies may still include many traditional agricultural methods, but they are increasingly using commercially available fertilizers and other modern agricultural additions, thereby losing self-sufficiency. This study includes in depth interviews with 28 Tarahumara farmers to better understand the modern agricultural techniques, their motivations, and overall sustainability. Soil samples, taken at all of the 28 interview sites will attempt to determine the viability of modern agricultural techniques on soil fertility by measuring organic matter content soil particle texture, and a chemical analysis.

Ruiz, Michelle, Texas A&M University; “How Will Climate Change Affect Florida’s Future Hurricane Event Risk?”

Hurricanes are powerful storms that form every year in the Atlantic Ocean basin during the months of June through November. An increase in frequency and intensity of hurricanes is a possible and dangerous consequence of future climate change. Florida is one region that is extremely vulnerable to hurricanes since it is a peninsula that can be impacted from both the west coast and east coast. This poster illustrates the methodology that will be used to find a relationship between hurricane landfalls in Florida and future climate change. Hurricane return periods for all Florida coastal counties will be calculated for the years 1900-2010. A Geographic Information System (GIS) will be used to map and display the spatial distribution of the frequency of hurricane landfalls. The Intergovernmental Panel on Climate Change (IPCC) climate scenarios from the Special Report on Emissions Scenarios (SRES) scenarios will be compared to the spatial distribution of hurricane landfalls for Florida. A statistical analysis will be used to identify the relationships between the set of scenarios and observed hurricane landfall risk for Florida. It is expected that future climate change will result in a decrease in hurricane activity but in an increase in hurricane intensity and that the southwestern and southeastern coasts of Florida will have the highest risk of future hurricane landfalls.

Schwan, Gavin D., The University of Texas at Austin; "Geopolitical Map Projections and Political-Economic Intersections."

Despite the complexities and the manifold characteristics of the world, human nature shows a consistent preference for simple categorizations in their conceptions of worldly social relationships. This view is perhaps best reflected in the morality ascribed to concepts like globalization and capitalism, especially as manifested in geopolitical projections of the globe. Both the traditional Cold War projections (First, Second and Third Worlds) and contemporary postmodern projections (Global North and Global South), however, oversimplify reality in their reliance on polarizations that do not exist in a more complicated world where differences are quite subtle. This paper considers basic economic understandings and philosophical literature to analyze the underlying concepts of traditional and postmodern geopolitical map projections in order to reveal that the globe is more unified than is popularly conceived.

Sheehan, Rebecca, and **Jacqueline M. Vadjunec**; University of Oklahoma; "We're Called No Man's Land for a Reason: The Political Ecology of Land Use, Drought, and Contested Frontiers in Oklahoma's Cimarron County."

This poster explores the political ecology of land use under drought conditions in the highly contested frontier of Cimarron County. Drought is a normal part of Oklahoma's climate, and the semi-arid Panhandle is more susceptible to extremes both in temperature and precipitation. In recent years, Cimarron County has been the epicenter of an "exceptional" drought—the most severe drought classification. During intense drought, native grasses for grazing become insufficient to support cattle, pushing many ranchers to sell off more cattle than they originally intended to sell—sometimes selling their entire herds. This inundation of the market drives often drives market prices down. Furthermore, government policies, or lack thereof, also impact ranchers in the region. Generally, the state is viewed under rising contention. This research draws on census data, key-informant interviews, and secondary sources to explore the politicized and contested nature of governance and environmental issues increasingly facing ranchers in the region. We conclude that ranchers face increasing vulnerability in the region due to extreme climatic events and policies that do not generally help sustain local livelihoods. In order to make ranching sustainable, new policies that consider both social and environmental justice, and open dialog among all actors is needed.

Sobey, Allyssa, University of North Texas; "Gas'roots Movements in North Texas: An Analysis of Gas Drilling Resistance."

Over 14,000 gas wells have been drilled near suburban cities in North Texas, some within residential neighborhoods and near public parks, churches, and schools. As a result, confrontation between population and gas well expansion has produced the 'Gas'roots movement, a collective series of demonstrations fueled by Environmental and Not-In-My-Back-Yard (NIMBY) qualities. This research follows the development of localized social movements provoked by gas drilling and examines the following questions: 1) who is participating in 'gas'roots movements, 2) how does the medium of protest convey the motivations behind protesting and 3) what is the link between gas wells and protesting? Preliminary results show that movements surrounding gas drilling in North Texas largely manifest online and demonstrate key temperaments of NIMBY Syndrome. The Internet's contribution to the 'gas'roots movement wavers between its use as an organizational tool and the

primary medium of expression. The overall lack of traditional protest (i.e. marching and picketing) and increased usage of the Internet raises questions concerning the role of the web within social activity and its influence on community tolerance of environmental degradation and resource extraction.

Sounny-Slitine, M. Anwar, The University of Texas at Austin; “Where is the Southwest?: Neogeographic applications to Vernacular Geography.”

Vernacular Geography is the way that we see and talk about our world and is how we commonly described and navigate our environment. Research in vernacular geography was pioneered by Wilbur Zelinsky and Terry Jordan-Bychkov in the late 70s and early 80s. Zelinsky’s approach was to compile vernacular regions in the United States by surveying common geographic business names in telephone directories. Jordan-Bychkov took a direct approach through uses of surveys of freshman students throughout Texas to map with great detail the vernacular regions of Texas. This research updates this concept with web mapping, allowing people to interactively digitize their own vernacular geography through an online survey asking “Where is the Southwest?”

Su, Habin, Texas A&M University-Kingsville; “Integration of Morphological and Biological Information Derived from Remote Sensing Images for Improved Benthic Habitats Mapping.”

Coral reef ecosystems face increasing threats from anthropogenic activities and global environmental changes. To protect and manage these systems, there is an urgent need to document baseline information for critical habitats for long-term monitoring. Benthic habitats can be characterized and analyzed from two different points of view: geomorphologic structure and benthic biological cover. Most previous remote sensing studies on coral reef benthic habitats focused on biological properties of benthic covers based on spectral information from multispectral image data. The recent advent of bathymetric LiDAR remote sensors represents a technological breakthrough for mapping underwater topography of shallow coastal waters. Using a case study of Moloka’i Island, Hawaii, we evaluated the utility of numerical algorithms for deriving morphologic attributes from bathymetric LiDAR data for comparison with biological attributes derived from high-spatial-resolution multispectral satellite image data. We demonstrated that combining bathymetric LiDAR data with high resolution multispectral imagery allows a quantitative analysis of the association between geomorphologic structure and terrain complexity on one hand, and the spatial distribution of benthic species and biological cover on the other. A better understanding of this association is important for developing predicative models and integrated classification schemes for benthic habitat mapping.

Thomas, C., and C. Brule; University of North Texas; “Bike Rack Occupancy at the University of North Texas”

The presence of bike parking facilities has been shown to play a role in improving bike ridership. People are more likely to commute by bike if there are secure and well-located bike racks available. Within the last 5 years, the University of North Texas has made a concerted effort to improve the availability of bike parking for cyclists to encourage cycling as a commute mode. However, the placement of racks around campus has been based on perceived needs rather than documented patterns. The goal of our project was to document the occupancy rate of bike racks across campus to identify areas that were underserved. We also examined how rack installation practices affected the maximum capacity of the racks and occupancy rates. We found that overall the

campus had a sufficient number of racks. However, a few areas on campus were underserved, while in other areas, the racks were not being utilized. These patterns of use were linked to the types of buildings the racks were associated with, as well as where racks were placed and installed. The findings will allow the university to better plan where to target resources in order to provide facilities for cyclists.

Tiwari, Chetan, and Hannah Gautsche, University of North Texas; “Relationship between Socio-economic Disparities and Clustering of Gas Wells around Public Schools in Denton County, Texas.”

The number of gas well operations within the Barnett Shale region in North Texas has witnessed rapid growth in the recent past extending from predominantly rural contexts in the 1980's and 1990's to urban contexts since the mid 2000's. The spatial patterns of this growth are unevenly distributed partly due to geologic and land-use constraints, but also due to complex interactions between permitting processes, the rights of corporations to compete fairly, local government regulations, land-owner decisions, and public opinion that either encourage or discourage the establishment of such activities within local communities. We hypothesize that the socio-economic status of local communities, measured using the socio-economic characteristics of school districts, is an important factor in this decision-making process. We measure disparities in the concentrations of gas drilling operations around public schools in Denton County, one of the fastest growing counties in the North Texas region in terms of population growth and gas drilling. We use a bivariate K function to quantify and compare the degree of gas well clustering around public schools classified by the socio-economic context of their catchment areas. Our preliminary results show that the concentrations of drilling activities around public schools are unevenly distributed across geographic space.

Turk, Yasmin, Texas State University-San Marcos; “Mapping Ethnic-Specific Programs for Survivors of Sexual and Domestic Violence.”

Three women in America are killed by a current or former intimate partner each day on average. Survivors of sexual and domestic violence from non-dominant culture groups can face additional barriers to intervention and prevention services including linguistic, cultural, and legal. The locations of sexual and domestic violence programs primarily serving culturally-specific groups are distributed around the periphery of the country, creating a large region of limited resources for minority victims of abuse. Culturally-specific service providers can increase collaborative resources for addressing abuse in their communities through mapping provider locations. Research shows that staying at a shelter or working with a domestic violence advocate significantly reduces the likelihood that a victim will be abused again and improves the victim's quality of life. Through improved networking, more immigrants experiencing violence can connect to relevant services and resources, thereby decreasing sexual and domestic violence fatality rates.

Wolf, Garrett, Louisiana State University; “A City and its River: The Urban Political Ecology of the Loop and Bridgeport in Chicago.”

This paper explores how today's urban environment is produced, both physically and perceptually, by a myriad of factors. Through a comparative study of two Chicago neighborhoods along the Chicago River, the Loop and Bridgeport, I construct the network of political, social, and economic factors that create the urban environment of the Chicago River in and along these places. I

explore residents' perception of who controls the production of the urban environment as it relates to the Chicago River, and how the socio-environment is created. My study utilizes an urban political ecology approach that recognizes that environments produced simultaneously by social and physical processes are historically situated and that there is nothing inherently unnatural about urban, produced environments, but that these environments are a result of historically and spatially contextualized socio-environmental processes. Using this approach in conjunction with interviews, surveys, and participant observation, I analyze these factors to determine who the residents of these neighborhoods perceive as exerting control over the production of the environment of the Chicago River and how these various entities, along with the numerous processes that influence the environment of the river, are mobilized to serve particular purposes.

Wolverton, Steve, and **James H. Kennedy**, University of North Texas; and **Charles R. Randklev**, Texas A & M University; “Applied Paleozoology, Biogeography, and Conservation Biology.”

Applied paleozoology is the study of animal remains from archaeological and paleontological sites to provide information of relevance to conservation biology and restoration ecology. Applied paleozoology and applied biogeography incorporate shifts in analytical scale (temporal, spatial, or both), providing important insights relevant to ecology. Some of the more meaningful examples of applied paleozoology are presence/absence studies of past species' biogeography that highlight interesting aspects of community composition. Such studies have been published in mainstream conservation journals for the last couple of decades, and recent research on freshwater mussel community ecology during the late Holocene in the Upper Trinity River drainage of north Texas provides a local case study.

Young, K. R., The University of Texas at Austin; “Biogeographical Processes and Coupled Natural-Human Systems: Examples from Utilized Tropical Landscapes in Botswana and Peru.”

Land use systems connect human decision making and livelihood activities to the Earth's surface. Biogeographers help understand these coupled natural-human systems by examining the 1) ecological processes that link resource extraction and agriculture to the substrates that permit plant growth, 2) biophysical controls that affect the distribution of species, 3) interactions among usage rates and the utilized system's capacity for self-replacement, and 4) differences found between perceptions of environmental change and actual land-use responses. For example, global change is affecting the species distributions, land covers, and land uses of the Andean highlands of Peru where there are important limits to whether native species can range-shift, if new land covers will have different ecological and hydrological functions, and how people respond to alterations in agricultural productivity and natural resources. Decreases in ice cover open sites to primary succession, while changes in glacial melt affect runoff; in turn, ecosystem services become modified for people living in the mountain valleys. Other examples will be based upon research in the Okavango Delta of Botswana where the need for housing and cooking materials (thatch, fuelwood) interacts with accessibility to the wetlands where grasses are harvested, and to the woodlands utilized for grazing and farming systems.

Zhan, F. Benjamin, Texas State University-San Marcos; **Jean D. Brender**, Texas A&M University; and **Bin Zou**, Texas State University-San Marcos and Central South University Changsha; “GIS-Augmented Human-Environmental Science Research: Maternal Residential Proximity to Superfund Sites and Low Birth Rate in Offspring.”

One problem that the general public has been concerned with is whether there is any association between maternal residential proximity to superfund sites and low birth weight in offspring. This issue has also received significant attention by scientists in various environmental health research communities. We report a study attempting to provide an answer to this question using GIS, spatial analysis, and epidemiological analysis methods. We used the geocoded birth data in the entire state of Texas from 1996 through 2004 and employed a case-control study approach in the analyses. Case data were the births that are classified as ‘low birth weight’ (less than 2,500 grams). Control births (with birth weights of 2,500 grams or greater) were randomly selected from Texas birth data during the same time period with a ratio of 2 controls per case. The controls were frequency-matched by year of birth and public health region of residence from the Texas birth data databases over the same time period. The distance from a mother’s residence at the time of delivery to the nearest superfund site was used as the proxy of exposure. In performing the logistic regression, odds ratios were adjusted for a number of variables including maternal age, race/ethnicity, education, parity, multiple births, and proximity to toxic release inventory (TRI) sites. Overall, the results suggest that there is no compelling evidence that a maternal residence near hazardous waste sites at delivery was associated with low birth weight in offspring.

Zhao, Panshu, and **Andrew G. Klein**, Texas A&M University; “The Validations of Current MODIS Daily Snow Albedo Product and Relevant Spatial Analysis.”

Snow albedo is one of the most important factors for atmosphere-surface energy exchange in high latitude areas. Remote sensing provides continual observations of snow albedo. However, the reliability of snow albedos obtained from remotely sensed images can be problematic, especially when acquired over heterogeneous land surfaces. This research examines spatial variations in snow albedo observed under different conditions in order to assess how accurate an individual *in situ* observation of snow albedo is when compared to the Moderate Resolution Imaging Spectroradiometer (MODIS) daily snow albedo product (MOD10A1) and its relationship with land surface types. In addition to the field observations, albedos retrieved from stations are also examined. In order to further reveal how spatially representative one *in situ* measurement is, this research used geostatistics to examine the images retrieved from Landsat. The validations using both *in situ* and station data demonstrate that MOD10A1 works well in homogeneous areas. The geostatistics analysis also reveals that one *in situ* measurement within 500 m of a MODIS pixel is sufficient to characterize the spatial variations in that pixel.

Special Sessions and Panel Abstracts

Joy Adams and **Mark Revell**, Association of American Geographers; “Beyond the Ivory Tower: Geography Careers in the Business, Government, and Nonprofit Sectors”

Sponsor: AAG’s Enhancing Departments and Graduate Education (EDGE) Project

Chair: Joy Adams, Association of American Geographers

Panelists:

Max Baber, U.S. Geospatial Intelligence Foundation

Joshua Gibson, Chesapeake Energy

Dmitry Messen, Houston-Galveston Area Council

Anthony Morales, Cubit Planning

Wayne Prosser, National Geospatial-Intelligence Agency

William Rowe, Louisiana State University

Todd Votteler, Guadalupe-Blanco River Authority

Kathy Weimer, Texas A&M University Libraries

Jeff Widener, The University of Oklahoma.

This panel session will feature a dialogue about improving geographers' preparation for careers outside academia. Panelists will represent a diverse range of private industries, government agencies, nonprofit organizations, and academic programs. A principal investigator affiliated with the AAG's Enhancing Departments and Graduate Education (EDGE) Project will lead the panelists in a structured discussion of the following topics. 1) Important trends in labor markets and industry that are likely to impact geographers' careers, particularly within the SWAAG region; 2) The geographic skills, geographic information, and transferable skills today's employers need most; and 3) How curricula, internships, and other professional development experiences can enhance students' employability. Following the panelists' remarks, audience members will be invited to ask questions about employment opportunities and professional development for geographers.

Fry, Matthew, University of North Texas; “Contemporary Issues in Resource Extraction in the Southwest.”

The rapid expansion of natural gas drilling throughout the United States has led to growing concerns about social, environmental, and health impacts. However, relative to the scale of extractive activities, few scientifically-based studies are available to inform policy or public knowledge. As the first region to experience the boom in unconventional natural gas extraction (i.e. hydraulic fracturing and horizontal drilling in tight rock deposits), the Southwest provides an ideal setting to analyze how drilling impacts people and local communities. Papers in this session examine the development of social movements around drilling, how community socio-economic status relates to gas well clustering, public perceptions about water supplies and drilling activities, and other recent developments in mining and drilling in the Southwest.

Lemon, Robert Douglas, The University of Texas at Austin; “Film in Geography and Geography in Film.”

This session explores geographic themes within the framework of film production. That is, how can a geographic topic turn into a documentary film and what are the challenges of producing such a film. The session will show a short 15-minute documentary on food truck culture in Austin, TX (see abstract above). After the film there will be a brief 10-minute presentation by the filmmaker on his philosophy of documentary film making, which will be followed by an open discussion with the filmmaker on the challenges of film making as well as the topic portrayed; or how your geographic topic could be turned into a film.

Ponette-González, Alexandra G., and **Steve Wolverton**, University of North Texas; “Geographical Ecology.”

In the words of Robert H. MacArthur, “the science of geographical ecology is to search for patterns of plant and animal life that can be put on a map”. Over the past decades, this search for pattern coupled with advances in geospatial technology has allowed geographers and ecologists alike to produce biodiversity maps for large areas of the globe. With a burgeoning human population and global change, it is now clear that few areas remain uninfluenced by human action. This session examines the dynamic and evolving influence of human societies on the distribution of biodiversity and ecosystem function in past and present environments, as well as the effects of these patterns on the human condition. Through a series of papers, we address the following themes: (1) biogeographical processes within coupled human and natural systems; (2) effects of spatial patterns of biodiversity on conservation decisions, poverty and injustice; and (3) the value of adding time depth to the study, interpretation, management and conservation of contemporary landscapes.