

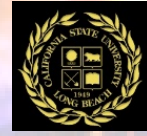
Department of Geography

Spring 2019 Colloquium

May 8th, 2019

7:00 PM – 9:45 PM

Program



Poster Session – 7:00PM – 9:45PM (Peterson Hall 2nd Floor)

Social Vulnerability in Communities Affected by the Thomas Fire Disaster

by Lluvia Lastra, Lilian Yang, Segnide Guidimadjegbe, and Andrew Siwabessy

The burden of hazard prevention and of loss in communities on the wildland-urban interface (WUI) is often unequally shouldered along socioeconomic lines. The changing nature of social vulnerability in these communities, in light of the dynamic fire regime, is not well studied in the context of southern California. In this study this shift is characterized by analyzing the 2017-2018 Thomas Fire and subsequent debris flow events using a mixed methodology approach. Maps of structural damage are created using Cal Fire parcel-level damage data in a geographical information system (GIS). Demographic data is reduced from Census block group information using principal component analysis (PCA) and is re-represented as a social vulnerability index (SoVI) after Cutter (2003). To identify socially vulnerable groups that are not obvious from Census data, we utilized a content analysis of newspaper articles published by the Santa Barbara Independent to further inform the geospatial analysis. Although the spatial analysis did not identify an explicit correlation between our SoVI and damage extent, qualitative enrichment offered explanations for damage extent outlier block groups and identified vulnerable groups that were missed by the spatial analysis.

A Spark of Life: California Coastal sage scrub regeneration post-Woolsey Fire

by Derek Emmons

Despite California coastal sage scrub (CSS)'s resilience to millennia of human interactions, losing 90% of its historic range to development has left the remaining islands of biodiversity sensitive to variations in disturbance (Engelberg et al. 2013). Highlighting both CSS and exotic species during successional thresholds over time can illuminate drivers and relationships changes of individual species over time. Through his 2006 thesis, Scott Eckardt examines native CSS composition in fire related boundary changes in the Santa Monica Mountains. This was followed by undergraduate documentation of species diversity in 2017 and pre-fire 2018. The purpose of this research is to re-visit and document species composition in Cheseboro Canyon and answer the question: How will 2019 data compare to those from 2005, 2017, and 2018 studies? There were notable differences in total species richness between our 2019 data and that of past research with marked heterogeneity of specific CSS and exotic species. Improving

the understanding of CSS response to interacting fire disturbance, moisture availability, and soil conditions will inform better conservation and management of these increasingly fragmented, yet resilient plant communities.

Tourism is on Fire: Yosemite's Ferguson Fire

by Neysha Pacheco-Colon & Christiana Saldana

Recent California wildfires have had a significant effect on local ecosystems and people alike. Yosemite National Park, located in the Sierra National Forest and Stanislaus National Forest, has experienced severe stress within the past decade resulting from several factors including drought, fire, increased traffic and invasion of the bark beetle. The Ferguson Fire, ignited on July 13th of 2018, burned for a shocking duration of over two months. This fire's proximity and direct effects on Yosemite National Park, arguably one of California's most sought after destinations, raises many questions about the long-term effects of wildfire on tourism. Documenting how long roads were closed (GIS), observing changes in visitor data and analyzing the condition of charred vegetation through NDVI help to highlight the spatial implications of where this damage occurred. Through these methods, we see how changes in picturesque nature of the park and unpredictability of park closures are all factors contributing to both short- and long-term degradation of the local tourism industry that are becoming all too common.

How Green is The Green Port? Shifting Community-Port Narratives in Long Beach, California

Seaports (ports) are a critical component of the U.S. economy and transnational goods movement system. To stay competitive, ports must undergo improvements and expansions. However, investments in infrastructure improvements come at a price, manifesting as negative environmental impacts, including increased noise, traffic, and air quality issues, which affect surrounding communities. The Port of Long Beach (POLB) faces opposition from the surrounding communities and environmental activists regarding impacts of existing operations and future Port projects. Thus, POLB is challenged to balance its economic growth with environmental and community concerns. The objective of this study is to trace and critically examine the narrative regarding the shifting relationship between POLB and the surrounding community over time, with a focus on the tension between economic expansion, environmental stewardship, and community investment. The findings of this research will be based on the examination of past POLB documentation and public meeting comments and interviews with decision-makers and community leaders. The goal is to document the shift in governance over time at POLB as well as determine the drivers, agents, and outcomes of the growing focus on and participation of the community. It is expected that this research will build a narrative that demonstrates a shifting governance trajectory at POLB to include more engagement and public input towards a more cooperative port-community

relationship, while highlighting what remains missing from the relationship, and making suggestions for moving forward.

Paper Session 1 – 7:00pm – 8:00pm (PH-230)

Critical Biogeography – Vegetation Change, Rephotography, and Constructions of Nature in Yosemite’s High Country by Shane Eaves

This work seeks to understand and analyze the biophysical, historical, and sociopolitical realities governing vegetation change in subalpine meadows within Yosemite National Park. The degree to which meadows have experienced or resisted conifer encroachment is a primary concern, both ecologically and socially, within this work. In order to understand the scale of these changes, fourteen locations were rephotographed, creating, in many cases, a visual lineage of over one hundred years. Supplementing the rephotography, quantitative data from belt transects and vegetation quadrat readings, along with soil pH, nitrogen, phosphorous, and potassium were gathered from five locations nested within rephotographs. In hopes of broadening the contextualization and scope of scientific inquiry, the socioeconomic and political ramifications of this research are grappled with throughout. This follows in the tradition of critical physical geography and other such disciplines that attempt to locate the knowledge that they produce within the epistemological framework that produced it.

Brought to you by the GEOG 640 Seminar in Physical Geography

Thank you for coming!