GeoNews

Fall 2023 Department of Geography and Environmental Studies Faculty Photo

NAMES: *Top Row From Left*: Dan Hemenway, Richard Dixon, Jason Julian, Brandon Radoman-Shaw, Alberto Giordano, Ron Hagelman, Charles Robinson, Robby Longoria, Dane Atkins. *Middle Row from Left:* John Tiefenbacher, Shelly Wernette, Nathan Currit, Brian Cooper, Yanan (Nancy) Li, Edwin Chow, Soe Myint, Sarah Blue, Jennifer Devine, Rosalie Ray, Samantha Krause, Rebecca Davio, Stephanie Avila, Robert Mace. *Front Row from Left:* Su Y Han, Injeong Jo, Colleen C. Myles, Ben Prince, Eric Sarmiento, Christi Townsend, Jennifer Jensen, Thomas Ptak , Allison Glass-Smith, Erin Elliott, Yongmei Lu. *Front:* Osvaldo Muñiz Solari.

Texas State University Department of Geography and Environmental Studies

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Front Cover: The mosaic on the front cover is composed of an image of Spring Lake, courtesy of The Meadows Center for Water and the Environment, and Mental maps drawn of Spring Lake used in Swienton, Giordano, and Hagelman. 2023. For more information see the feature on Heather Swienton and the article introduction under Faculty Publications.

Letter From the Chair

Greetings fellow Geographers and welcome to the Spring 2024 edition of GeoNews!

The past year has brought about several changes in the department including a change in department leadership. Dr. Yongmei Lu stepped down from the Chair position in December to begin a new journey as Associate Dean of Research for the College of Liberal Arts and I completed my first semester as the new Chair. Thankfully, Geography and Environmental Studies faculty and staff are wonderful colleagues, and everyone pitched in to make the transition as smooth as possible. That being said, I extend a thank you to Dr. Lu for her 5.5 years of service as department Chair and wish her success in her new professional endeavor.

Speaking of success, we've had many reasons to celebrate our programs, faculty, staff, and students this year. In September, we held the annual Welcome Back Picnic in the Pauline Espinosa Community Hall at City Park with well over 100 students in attendance. Throughout the fall semester, faculty and students presented research at several conferences including the Race, Ethnicity, and Place conference in Washington, D.C.; the Applied Geography conference in Pittsburgh, PA; the National Council for Geographic Education conference in Columbia, South Carolina; and the Southwest American Association of Geographers conference in Laredo, TX. The department also hosted two colloquium speakers in the fall: Dr. Atul Jain and Dr. YooJung Ahn. To round out the fall 23 semester, the Graduate Forum held their annual Thanksgiving/Friendsgiving event that drew the largest audience since the pandemic of graduate students and faculty.

The spring semester was even more eventful. The department welcomed three additional colloquium and honorary speakers including Dr. Yunuen Reygadas, Dr. Scott Wing, and Dr. Kendra McSweeney. In early April, we hosted the Promoting Advancement in Nature, Geography, and Environmental Analysis conference (PANGEA; formerly GSRS and GESSERS) with great success including 24 student paper presentations, 12 poster presentations, a virtual session with international participation, and a GeoBowl. Dr. Sharolyn Anderson delivered the keynote presentation on Dark Skies and the National Park Service. On the heels of PANGEA was the annual AAG meeting held in Honolulu, HI in mid-April with strong physical and virtual attendance by faculty and students. In late April, we held our 30th Alumni Reunion and Student Celebration at Spring Lake and the Meadows Center for Water and the Environment where the department awarded over $60,000 in scholarships and awards and welcomed over 200 attendees.

We have a lot of things in motion in the department right now and are anticipating changes that may come with a new Provost and budget model. One major change that is occurring is that several of our faculty will enter into a new title series and promotion pathway. Starting in Fall 2024, our current Lecturers and Senior Lecturers will now have titles of Assistant, Associate, or Professor of Instruction. We are also now offering a new Minor in Spatial Data Science and Health beginning in Fall 2024. Other changes are in progress, and I hope to announce them in the next edition of GeoNews.

On a personal note, I have very much enjoyed serving the department as Chair this past semester. As a faculty member, it is very easy to focus on teaching, advising, and research but never really get the birds-eye view of department activities as a whole. This new perspective has truly been the best part of my job. I have had the pleasure of learning and sharing that our department has applied for over $8 million in external funding last year, that four of our faculty were awarded Research Enhancement Program grants, Dr. Sarah Blue was selected as a Fulbright Scholar, our students are winning outstanding student and research awards as well as highly competitive scholarships, we graduated 11 Ph.D. students this year, and that alumni are reaching out to be more involved in mentoring and providing internship opportunities for our current students and recent graduates – to name just a few things!

In conclusion, I am excited for this upcoming academic year and the opportunity to support the continued success of our students, faculty, staff, and alumni.
Sincerely and best wishes to all,

Jennifer Jensen

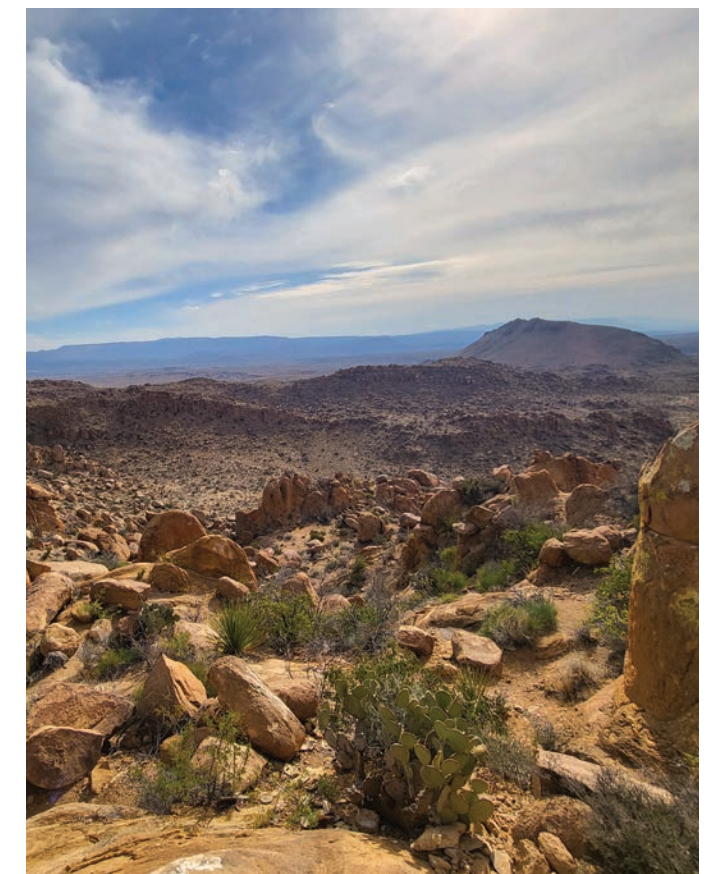# GEOGRAPHY AFIELD:
DISCOVERING THE MAGIC OF BIG BEND

Spring Break is a sacred week for college students. It is a time to recuperate after months of challenging homework assignments, exams, and projects. Many students relish the opportunity to go home while others may opt for a beach vacation or a trip to a crowded amusement park. One intrepid group of Geography and Environmental Studies students opted for a much different spring break experience, choosing to spend their week exploring the wonders of the Chihuahuan Desert.

Named for the large, southerly bend in the Rio Grande River, Big Bend National Park and the adjacent Big Bend Ranch State Park (the largest state park in Texas), lie at the northern end of this UNESCO-designated biosphere ecoregion. Although very isolated (the nearest commercial airport is a 4-hour drive), geoscientists flock here to see diverse ecosystems, magnificent river-carved canyons, towering rock formations, and miles of extraordinary views.

The department's iconic Big Bend regional field course, now in its fifth decade, offers students the opportunity to observe firsthand topics they have learned about in their geography lecture courses in a unique field setting. The week-long excursion began early on the Friday morning before spring break with an 8-hour road trip. As we traveled west, students got to see how the physical and culture landscapes of Texas transform from the Balcones Escarpment, though the Hill Country and Edwards Plateau regions, and into the Trans-Pecos.

Inside the national park, students hiked the legendary Lost Mine, Santa Elena Canyon, and Grapevine Hills trails. They explored a Rio Grande wetlands ecosystem and relaxed in the geothermal waters of Langford Hot Spring. In the state park, students traversed a narrow slot canyon through the Colorado Mesa and met with the park archeologist and lead park interpreter to learn about career options in the state park system. At night, the group observed the Milky Way and International Space Station as it appeared in the desert's dark night sky. Other highlights included a visit to the Terlingua Cemetery, Sul Ross University's Museum of the Big Bend, a privately owned Bentonite mine, and a tour of the Civil War-era Fort Davis.

The rich history and culture of far west Texas was also brought to life during this trip. Students were regaled with tales of larger-than-life figures of the old West, from the tortured travels of Cabeza de Vaca, to the "Law West of the Pecos" Judge Roy Bean. They even got to enjoy lunch with the Mayor of Lajitas, Clay Henry, who they were delighted to discover is a cantankerous beer-guzzling goat. Like many of the students who came before them, students began their journey as strangers and ended the trip as lifelong friends with a newfound love of the desert.

GEOGRAPHY AFIELD: IMMERSION IN TAIWAN

In July of 2023, a group of Texas State students led by Dr. Edwin Chow ventured to Taiwan. The main island of Taiwan, roughly the size of the state of Maryland, is composed of forested mountain ranges in the east and densely urbanized population across its western plains.

From the capital city Taipei students used the country's extensive public transportation infrastructure of high-speed railway and buses to explore the island. They hiked the Yangmingshan National Park's volcanic landforms, biked through the costal wetland and mangrove forests, and learned about the erosion of coastal landforms in Yehliu Geopark. In Taipei students examined street design, evaluated urban planning, and visited the human right museum to learn about the dark history of Taiwan and its geopolitics. Food was never far away, and students were able to sample a wide variety of cuisines, including notable trips to night and fish markets. From cultural exchange activities with the Atayan aboriginal Taiwanese to visiting cutting edge drone manufacturers, the course offered students an immersive experience, that will not soon be forgotten.

GEOGRAPHY AFIELD: FOOD, AGRICULTURE AND ETHICS IN TUSCANY AND UMBRIA

Spend nearly a month exploring the food, life, culture, and environment of the Tuscany and Umbria, Italy… yes please. First offered in 2016, this course co-taught by Dr. Colleen Myles (Geography) and Dr. Vaughn Baltzly (Philosophy), offers students an opportunity to think, eat, and think about eating in one of the epicurean epicenters of the world. Along the way students experience the entire process of farm-to-table and are encouraged to ruminate on the impacts of food choices and food systems.

You can read Dr Myles and Dr Baltzly's take on the complexity of running a study abroad program that involves several different overlapping and interconnected courses with undergraduate, masters, and PhD students in their 2021 paper, "Enacting interdisciplinarity: Lessons from crafting a multi-dimensional, experiential field study," published in The Geography Teacher.

"I recommended this program to other students in my department before I had even left, and now that I am back in school, I tell everyone I talk to about my experience to go for themselves…There's something so exciting, nerve-wracking, and ultimately enlightening about experiencing college in a country that you're not from. It is an opportunity to learn so much, not only about other cultures, but also about yourself as an individual and a student."

THE POWERFUL GEOGRAPHY OF GEO EDUCATION

Every summer, the AAG's Geography Faculty Development Alliance hosts a week-long workshop for early career geography faculty. It's become a tradition to start the program by asking the participants to introduce themselves by sharing their "a-ha!" moment — the point in time when they realized that geography was their calling. Over the years we've heard memorable stories about inspirational college professors, study abroad experiences, and other influences during college that led people to discover and choose the geography discipline.

In response to a recent call issued by the National Center for Research in Geography Education, an educator network has been organized to support state-based collaborations as part of the **Powerful Geography movement.** The network currently includes geography teachers and academic geographers in nine states. Powerful Geography aims to attract diverse youth of all backgrounds to geography learning opportunities and careers, starting in middle school and continuing through high school and beyond. Members of the Powerful Geography network met at workshops held over two weekends in September 2023 to initiate the creation of geography educational resources that raise awareness and appreciation of the relevance of geography for what they aspire to be and do in the future.

The Powerful Geography approach to geography teaching and learning starts by asking students to identify their life and career aspirations. Students have expressed a wide variety of interests in their future careers. Young people tell us they want to work related to environmental protection, public health, national security, social justice, and the arts. Others are less certain, yet still express interest in improving their communities and other activities that speak to their sense of altruism. Drawing on these aspirations, teachers use Powerful Geography resources to engage students in activities and projects inspired by the work and civic engagements of geographers employed in business, government, and nonprofit organizations.

Powerful Geography is fighting to ensure that all students have an equal opportunity to learn geography and use what they learn to make a difference for themselves, their communities, and the planet. This ambitious movement will not be easy, but if we want more of those "a-ha!" moments to begin in middle school and high school geography classes across the country, commitment and coordination among geographers, geography educators, and geography organizations seems a small price to pay.

Participants in the *Powerful Geography workshop* hosted by the Grosvenor Center for Geographic Education at Texas State University, September 23, 2023. Pictured from left: Richard G. Boehm, Brendan Vander Weil, Shana Crosson, Jess Winkelaar, Stacie Aguirre, Mark Revell, Michelle Crane, Harris Payne, Carissa Stowe, Kyle Tredinnick, Michael Solem, Kelly Swanson, Scott Greene

Sojung Huh, Ph.D. Geographic Education, awarded the 2023 Phi Kappa Phi Honor Society Dissertation Fellowship

Two Ph.D. students in Geographic Education, Lisa Elikan and Kelly Nolan, were each awarded $30,000 Texas State Dissertation Completion Fellowships.

The People of Texas State Geography and Environmental Studies Department

Our people make the place. From undergraduates to PhD candidates, new faculty to long serving staff, we are a generational crossroads of Geographers. This year GeoNews is highlighting some of the members of our community. We wanted to underscore the diversity of people, interests and stations that make up this department. To this end we asked what made each person tick, how they got here, and what words they had for future generations. Their responses on the following pages, are insightful, profound, and reflect the character of who we are. These are just a handful of the people that made the Geography and Environmental Studies Department special in the 2023/2024 School year.

From Top Left: Rebecca Davio, Kimberly Meitzen, Julie Brooks, Samantha Krause, Eric Sarmiento, David Hernandez, Thomas Ptak, Ariana Martinez, Richard Dixon

Environmental Advocate

Undergraduate Class of '24
Caleb Rodriguez

Focus: Water resources and sustainability Geography

Background: I just really enjoyed spending time outside growing up and the things that my parents exposed me to helped me build up my relationship with the environment. Riding the mountain biking trails around San Antonio, Spending weekends in our pop-up camper at Mustang Island, and growing up 4 blocks away from the historic San Pedro Springs, all my time spent having fun usually involved some aspect of the natural world, so growing up I really learned to love it.

Lesson Learned: That there is indeed hope for our future, and that we as a species aren't entirely screwed yet. Within our department alone I have stumbled across numerous like-minded people who are willing to be on the frontlines of environmental activism. I also learned that trying my best is sufficient, and that no one really knows what they're doing sometimes, this is everyone's first time in college, just like me.

Proudest Achievement: Graduation; I am the first in my family to graduate from college. Navigating college was completely new to me, there was no one in my family to give me advice or share experiences about their time in college. It was also up to me to support myself financially through college, so I am proud of myself for also holding down the same job these past four years, on top of being an active member on campus and in the community.

For Future Generations: Get involved on campus, do more than just go to school, and volunteer, volunteer, volunteer. I regret waiting so long to get involved on campus, the benefits of being involved and the networking I experienced felt like it was so short because I started getting into it my last year and a half of college. Meet as many new people as you can. Take advantage of the free food and events.

Focus: Natural Resources and Environmental Studies, and GIS

Background: As a kid I visited the San Marcos River, and other natural wonders of Texas. My love for the outdoors, and the knowledge of impending threats on our natural environment pushed me to study geography and environmental studies. One thing about geography that sparks the most joy is learning about how our systems interact. I love learning about how identity, culture, resources, physical landscapes, infrastructure, climate, etc. all interact to produce this moment in time and space.

Lesson Learned: One of the most important lessons I've learned through the geography department is to build friendships. In the geography department I've made the best friendships I've ever had in my life, and they are interested in the things that I am interested in. Be open, be forgiving, be patient, love others, be fun, struggle a bit, share your interests and experiences, just start talking, and you will have the time of your life in the geography department.

Proudest Achievement: At Texas State I was as involved as I could be, while staying on top of my work. I was involved in organizations like ECO, Stelos Scholars, and I was vice-president of and Bobcat Stream Team (BST), helping run the club with my amazing team of officers. I tried my hardest to serve San Marcos and learn as much as I could about the things I was passionate about. Overall, I think I was a pretty normal student.

For Future Generations: Take risks, and don't settle. If you dislike the direction of your life, try something new. Go places, quit that job that you hate, apply your skills, and don't be afraid to be yourself. Do what your heart wants you to do. The only way you will learn about yourself and what you are capable of, is if you test your limits and take (smart) risks.

Professional Geographer

Undergraduate Class of '24
Tyler Hartwick

Urban Designer
## Undergraduate Class of '24
Ty Cantu

Focus: Urban Planning and Design

Background: For as long as I can remember, I have been using Adobe Photoshop and Illustrator. Around 2019, I wanted to use graphic design to help people. I'd make fliers and album covers for small San Antonio artists, create calendars for my family, colorize old photos. Eventually I recognized I wanted to apply this to something "Real".

Lesson Learned: It wasn't until I finally entered the Evan's Liberal Arts Building that I realized I could use scientific knowledge and design in the same project. My first experience with GIS was a revelation; nothing made me happier than making data look good.

Proudest Achievement: In Cities and Urban Design for our final class project I was able to combine physical geography, GIS, urban design, and graphic design to produce a scaled wooden model of our campus. I gained a real sense of personal fulfillment, bringing together skills sets I never imagined would be compatible.
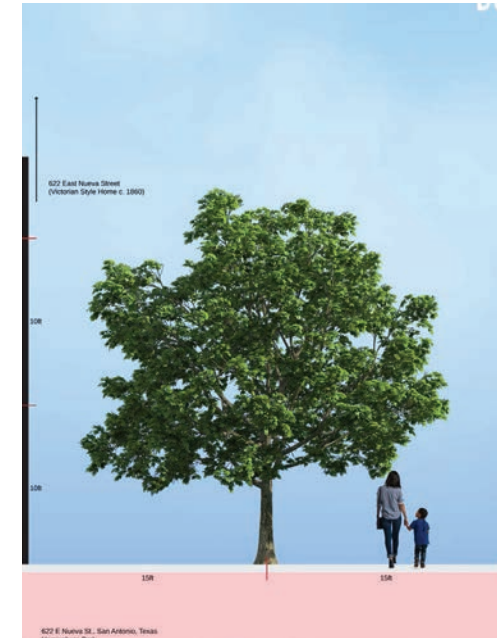
Geoarchaeologist

Ph.D. Student
Marie White

"In geoarchaeology, I'd found what I was looking for – the ability to pursue my interests, work in the field and in the lab, and be able to tell stories with my data. "

As a kid, I spent my summers with my grandparents at the family farm in Missouri. When I helped my grandpa in the garden or in the cattle pastures, we'd often find stone tools in the churned-up soil. We would go looking for fossils and geodes in the creek, my grandparents telling stories about the marine creatures fossilized in the rocks, and legends about the property passed down through the generations of my family that had lived there since the 1800's. As an adult, I see the pressures faced by them trying to keep the land as the area around it is rapidly developed.

Years later, I've been able to find my research niche that combines all of what interested me as a child: geology, archaeology, paleontology, land management. Beginning my undergraduate degree in Earth Sciences, I'd been discouraged by the job prospects: I didn't just want to work in a lab and report data, I wanted to tell a story. During my junior and senior years of my undergraduate, I accompanied my advisor to work at a paleoanthropological site in Ethiopia. It was my first time in the field – enduring 100-degree days, camping, and eating nothing but canned tuna – and I was hooked.

Geoarchaeology combines information from the geological and archaeological records. Analysis can span the regional scale to the micro scale, reconstructing natural resource exploitation, climate, ecological communities, and human-land interactions. In geoarchaeology, I'd found what I was looking for – the ability to pursue my interests, work in the field and in the lab, and be able to tell stories with my data.

In Texas State's Geography and Environmental Studies department, I am working with Dr. Samantha Krause to understand the evolution of environments, ecologies, and human-land interactions within the Rio Grande region of New Mexico since the onset of the Holocene, ~9,000 years ago. My dissertation will focus on geological deposits associated with archaeological sites during the time spanning the transition from small, mobile hunter-gatherer groups to larger, semi-sedentary agriculturalists, emphasizing shifts in climate and the resulting land management responses such as anthropogenic burning and the cultivation of edible species.

Working with Dr. Krause has also given me the opportunity to conduct geoarchaeological work in Belize with the Belize River East Archaeological Project (BREA), an NSF-funded and community-based archaeological project. An focus of the team is understanding ancient Maya wetland agriculture, irrigation, and land management around a system of highly dynamic lagoons, rivers, and sand dunes.

Throughout my work in Ethiopia, the southwestern USA, and Belize, I've addressed issues of humans and their relationship with their evolving environments while being able to understand modern challenges faced in these regions after industrialization and globalization. While joining a Geography department was not something I originally intended, I've found my interests expanded yet again to understand my research about the past in a contemporary, global framework. I love being able to discuss wildly different research interests with my cohort and find that we all share a passion for understanding the world.

Geographic Educator

Ph.D. Student

Bren Vander Weil

Focus: Geographic Education

Background: Both of my parents are teachers. I often joke when it came to choosing a career path, I didn't have a choice, I just had to figure out what subject and grade level. I started with a bachelor's degree in social studies secondary education. After graduation I taught high school for three years, in Nebraska. Then spent two years teaching in South Korea. Following my time overseas, I jumped into the Masters of Geography program at the University of Nebraska Omaha and now I am working on a PhD here in Geographic Education.

Lesson Learned: Our geography department is a unicorn. While other Geography programs across the country are fighting to keep lines open, ours is robust, welcoming, and a hoot to be around.
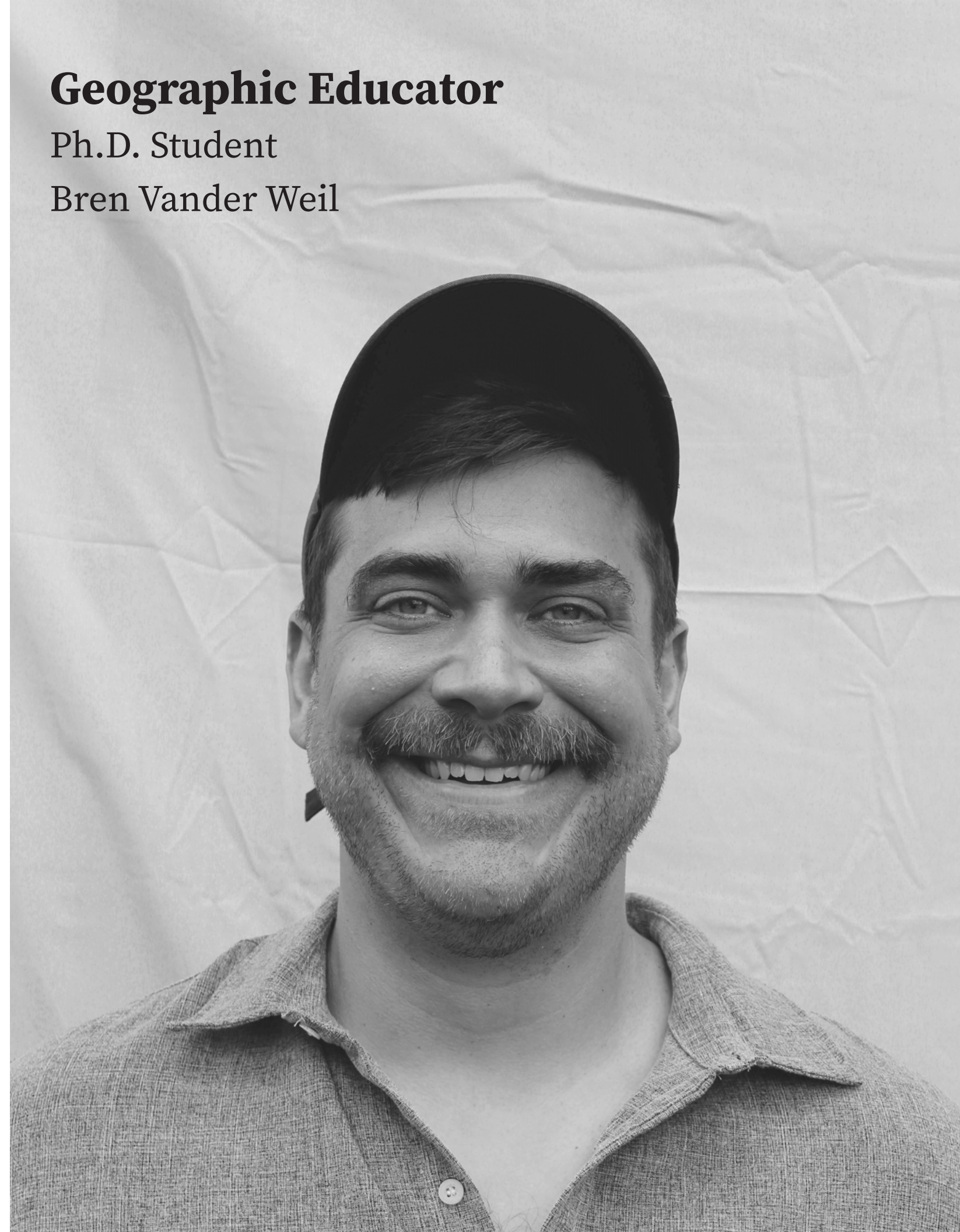
For Future Generations: Find the time of day you're most productive, for me that's 6am-Noon, others are night owls. Either way stay at it until the job is done. Say you don't know when you don't know. It's okay, chances are you'll know how to find out and get back to whoever is asking. Find some hobbies outside of school. Hiking, boardgames, video games, fantasy football, fantasy novels, whatever it is, finding your escape is important. Some of my best breakthroughs in writing or teaching activities have come to me during a hike or while hanging out with friends outside of the department.

"One thing I enjoy most about Geography is how most people stumble into the field, it's a discovery degree."

GIS Hazards Researcher

Ph.D. Candidate

Nakky Ekeanyanwu

Focus: Hazards geographer and GIS Analyst with a focus on public health, flooding and vulnerable populations

Background: I got my Bachelor's degree in Geological Science at Nnamdi Azikiwe University, Nigeria in 2015. I worked in advertising for two years, then moved to the US for my masters in GIS in 2020. I got hooked, and decided to start a PhD in 2022. I have a passion for hazards and findings solutions to curb their effects on vulnerable populations. Asides being an academic nerd, I'm also into fitness and movies/tv shows.

Lesson Learned: I love the GEO department. Since I joined, I have received nothing but love, support, encouragement and a sense of community. The faculty and staff really do care about the students and want to see us succeed when still in school and after graduation.

Proudest Achievement: The thing I'm most proud of is surviving in the U.S. and in grad school on my own. Moving to a new country and starting over, especially as an adult is really hard. Regardless, I've been able to get my master's degree, secure multiple internships, receive multiple awards and scholarships and very soon will be a Doctoral Degree Holder.

For Future Generations: It's okay to cry and break down sometimes; that's just a part of the journey/process. Have a strong support system (be it family or friends) and don't be afraid to ask for help. Also, do what you think is best for you because at the end of the day it is your life and journey and you're the best pilot.

# Cartographer and Educator

PhD Candidate

Heather Swienton

Like many of my peers, I didn't seek out the field of geography. As an undergraduate I was interested in Geology, and somehow found my way into a Cartography and Visualization course. I have been hooked ever since. Now 7 years and 2 degrees later, I am a PhD candidate teaching maps and mapmaking and conducting cartographic research. Funny how life works that way!

As an important subfield within geography, cartography utilizes visual communication to represent the where behind Earth's patterns. Since my childhood, I have found art to be a way not only to express myself, but to make sense of the world and visually curate the beauty I find in it. While I never really knew what I wanted to do or be "when I grew up," I did know that I loved learning and that I wanted to use art as a means to contribute to our understanding of the world. Now as a geographer, I have found joy and a sense of personal fulfillment in balancing both critical and creative thinking through course work, research, teaching, and in designing maps, blending a scientific approach with artistic design and communication.

In finding a niche within cartographic research, I am very grateful to a professor who shared a large collection of children's hand-drawn maps (over 3,000 of them!). This opened my eyes to the genuine joy of researching children's cartography. These spatial vignettes are a window into their humor, imagination, creativity, and connection to the environment, bringing a sense of playfulness and novelty to my cartographic research.

My journey to finding a home within geography and cartography has aligned my personal and professional passions, enriching my understanding and appreciation of both the art and science of mapmaking.
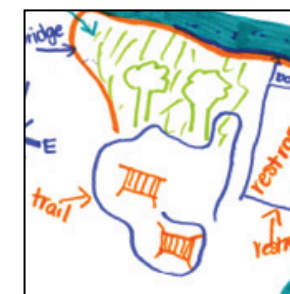
The Institution
Graduate Staff Advisor
Allison Glass-Smith

If you have spent any time in the department, you know Allison Glass Smith. To our community she is so much; organizer, institutional memory, skeleton key, mentor, advocate... There is a lot more to Allison, here are some of those things you may not know.

Focus: Since 2002, I have been the Graduate Staff Advisor for the Department of Geography & Environmental Studies. The position was created in 2002 and I was the first person hired to fill this position. My job is to assist both students and faculty with all aspects of the graduate program. Some of my duties include mentoring and advising current and incoming graduate students, administration, and recruitment for our graduate programs. I have had the privilege of working with five Graduate Coordinators and now six Chairs.

Background: I was born and raised in Austin, Texas many years ago. I have lived and worked in and around Austin for most of my life. Growing up I loved to read National Geographic magazines and through those pages as a young girl I was able to explore the world. I would fantasize about traveling to visit those places and meeting the people who lived there.

In 1995, I moved my family to San Marcos to complete my undergraduate degree at Southwest Texas State University (now Texas State University). At the time I was an educational major and wanted to teach at the elementary school level. However, in the fall of 1995, I took my first geography course – World Geography. I had no idea at that time how that one course would change my life. Before the end of the first semester, I had changed my major to Geography and my life took on a whole new trajectory. I graduated with my BS in Geography in August of 1997 and started the master's degree in

Geography exactly two weeks later. I graduated with MAGeo in Geography in December of 1999. In January of 2000, I was hired by Texas Watch (now Texas Stream Team) to be the Education Outreach Specialist. I worked for Texas Watch for two years. In 2003 I was selected to be the Graduate Staff Advisor/Departmental Recruiter for the Department of Geography & Environmental Studies. I didn't realize it at the time; however, I had been selected for my dream job. Since 2003, every day I have come to the office, and I am able to assist our graduate students in achieving their personal and academic goals.

Lesson Learned: In our daily pursuits, each individual endeavors to overcome challenges and accomplish objectives. It is imperative that we cultivate an environment of mutual support and encouragement, recognizing that without the collective kindness and assistance of our peers, both faculty and students may encounter obstacles hindering their progress towards success.

Proudest Achievement: I take immense pride in my family, especially the recent addition of my grandchild. Family is very important in my life and I have been very fortunate to have wonderful and caring family and friends.

For Future Generations: I think the best thing a staff member can do working in a department with students is to listen to the students, be available as a resource and empathetic supporter, and to encourage them to find solutions to help them succeed in their graduate program and career path.

Faculty Publications

PRODUCING "ILLEGALITY": THE RACIALIZATION OF MEXICAN AND CENTRAL AMERICAN ASYLUM SEEKERS IN THE UNITED STATES

Dr. Sarah Blue & Alisa Hartsell, Ph.D. Student ●

As record numbers of Mexican and Central Americans arrive at the US-Mexico border, they encounter an asylum system that has evolved to exclude them. After detailing the specific legal changes that racialize these nationalities through criminalization, this study uses asylum data to illustrate how the current structure of the asylum process produces illegality for Mexican and Central Americans seeking protection in the US.

We draw on asylum data outcomes for the largest groups filing defensive asylum claims to tial their deportation over the past decade to emphasize the impact of changing laws and the divergent impact of the implementation of those laws on Mexican, Guatemalan, Honduran, Salvadoran, Chinese, and Indian asylum seekers. While Chinese and Indian nationals have relatively high rates of success obtaining asylum, their Mexican and Central American counterparts are consistently denied asylum, partially as a result of their criminalization in the US asylum system.
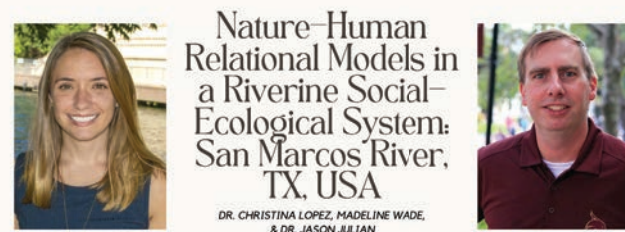
Nature–Human Relational Models in a Riverine Social-Ecological System: San Marcos River, TX, USA

DR. CHRISTINA LOPEZ, MADELINE WADE, & DR. JASON JULIAN

A social-ecological system is a highly connected organization of biophysical and social actors that interact across multiple scales, share resources, and adapt to the actors' changes. The ways in which humans and nature interact have traditionally been characterized and influenced by competing intrinsic and utilitarian values. However, recently, relational values and relational models have been used to unpack the myriad of values society assigns to nature and create general typologies of nature-human relationships. Here, we investigate the spectrum of environmental values that exist in the San Marcos River (SMR)—a social-ecological system (SES) in which a spring-fed river flows through an urban environment in central Texas (USA) including a university campus that attracts regional and international tourists. Recognizing that scholars have struggled to define a nuanced understanding of environmental values and how these values shape nature-human relationships in SES, we use the SMR case study to capture the nature-human relational models that exist among social and user groups of the blue space.

Analyzing different groups of visitors and stakeholders at the SMR (n = 3146), this study serves as a pilot to apply relational models using a variety of metrics to build a framework for understanding models of nature-human relationships, beyond ecosystem services and dualistic valuations. In our sample, most respondents were classified under the stewardship model (59%). The utilization model (34%) was the second most common, followed by wardship (6%). We found that patterns of place identity emerged to support the development of relational models beyond utilization. Despite the differences among perceptions, values, and some variation in relational models, one commonality was the innate, ubiquitous preference to protect natural habitat, water quality, and the river's aquifer water source. Our study contributes to the growing literature around relational values and is a pathway to integrate ecosystem services, environmental values, and human-environment interactions into a more holistic approach to environmental valuation.

A Survey of Peoples' Use and Value of the San Marcos River
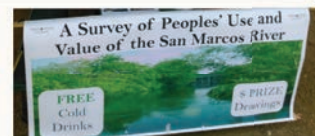
Legal bordering of asylum through liminality

ALISA HARTSELL, PH.D. STUDENT & DR. SARAH BLUE
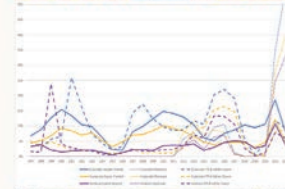
Unlike the permanent and legitimizing protections of asylum more widely available to other nationalities, current US immigration law and legal mechanisms maintain large numbers of Central American asylum seekers in a perpetual state of legal limbo and precarity. Those able to argue their case in immigration court are most often denied asylum but increasing numbers are allowed to stay in the US in a legally liminal status. The resulting legal limbo for t case would-be asylees subjects them to a permanent state of legal violence in the US' racialized immigration climate. Analysis of US immigration court outcomes from 1997 to 2022 traces the historical denial of asylum to Salvadoran, Guatemalan, and Honduran nationals. A recent administrative tactic to address the historic immigration court backlog of asylum cases, dismissal of cases, are the loses in a historic pattern of granting Central American asylum-seekers temporary status with no pathway to permanent legal status. We argue that the rapid rise in immigration court dismissals is the latest means of denying asylum and costing Central American asylum seekers into a prolonged state of legal ambiguity in the US. While allowing refugee-migrants who are fleeing violence to remain in the US, these same individuals are excluded from legal protections and are exposed to the racialized violence of living as a criminalized underclass in US society.
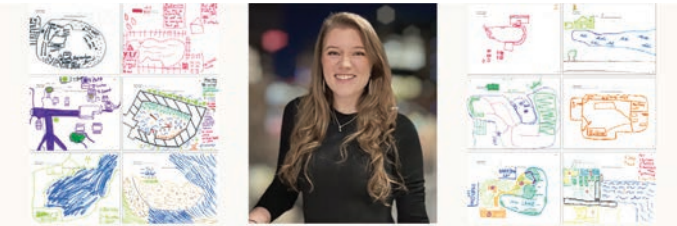
"WHAT DO CHILDREN DRAW WHEN ASKED TO DRAW A MAP?" RESULTS OF A MENTAL MAP EXPERIMENT

HEATHER SWIENTON, PH.D. STUDENT, DR. ALBERTO GIORDANO, & DR. RONALD HAGELMAN III

When asked to draw a map reflecting on their experience, what do children draw? The authors offer possible answers through the eyes of children aged 6 to 14 who visited the Meadows Center for Water and the Environment on the campus of Texas State University; the 332 maps children were asked to draw after their visit are the focus. Results indicate that according to children, a map can be qualitatively understood as a graphic representation of the child's experience that includes people and animals, places, and events, and natural and built environments. Children use both mimetic and abstract symbols that vary in shape, are often used repeatedly to create texture or patterns, and can vary in colour that often—but not always—abide by traditional colour denotations. Cartographic scales, legends, or north arrows are rarely used. The abundant use of written labels or descriptive words on their maps suggests that children understand maps as an expressive form that blends symbols and text. In efforts to contribute to the ultimate questioning of what makes a map a map, this study provides a strong empirical case for the what and how of children's map-making processes concentrating on traditional cartographic conventions and elements.

GOOGLE EARTH ENGINE AND THE USE OF OPEN BIG DATA FOR ENVIRONMENTAL AND CLIMATE-CHANGE ASSESSMENTS: A KOSOVO CASE STUDY

DUSTIN SANCHEZ, PH.D. STUDENT, P. AMETI, & DR. JOHN TIEFENBACHER

This paper presents a framework for utilizing available open data resources, such as Google Earth Engine, to assess environmental conditions and climate change vulnerability in Kosovo. This paper lays the groundwork for academic, government, and private sector institutions to develop strategies for addressing climate change and environmental issues in Kosovo and for other developing nations to understand the extent of change occurring. The study demonstrates the value of open data for environmental sustainability and resilience building. The framework is based on the analysis of air pollution, groundwater monitoring, urban environments, and deforestation in Kosovo using publicly available models. The model is re-coded for Kosovo in JavaScript using open datasets to create an environmental assessment of the scopes and scales of the environmental issues that plague Kosovo. The results show that there is a lack of institutional frameworks for assessing climate change impacts in Kosovo, with limited capacity for conducting environmental assessments, and with limited data capacity for resource and data science environments with community managed frameworks. By leveraging extensive amounts of data and applying analytical frameworks, this paper contributes to the knowledge base of environmental conditions in Kosovo with emphasis on open data and technological advancements.

A CYBERGIS APPROACH TO EXPLORING NEIGHBORHOOD-LEVEL SOCIAL VULNERABILITY FOR DISASTER RISK MANAGEMENT

Dr. Su Yeon Han | Jeon Young Kang | Fangzheng Lyu | Furqan Baig | Jinwoo Park | Danielle Smilovsky | Shaowen Wang

Timely identification of disaster-prone neighborhoods and examination of disparity in disaster exposure are critical for policymakers to plan efficient disaster management strategies. Many studies have investigated racial, ethnic, and geographic disparities and populations most vulnerable to disasters. However, little attention has been paid to the development of easily accessible and reusable tools to enable: (1) the prompt identification of vulnerable neighborhoods; and (2) the examination of social disparity in disaster impact. In this research, we have developed a visual analytics tool that allows users to: (1) delineate neighborhoods based on their selection of variables; and (2) explore which neighborhoods are susceptible to the impacts of disasters based on specific socioeconomic and demographic characteristics. Through an exploration of COVID-19 data in the case study, we revealed that the tool can provide new insights into the differentiation of vulnerable neighborhoods that need immediate attention for disaster control, management, and relief.

Teaching Climate Change through Powerful Geography

WRITTEN BY
JOANN ZADRONZY, PH.D. STUDENT, MICHELLE CRANE, DR. RICHARD BOEHM, & DR. MICHAEL SOLEM

Powerful Geography revolutionizes the traditional notion of geography education and makes it transformative by teaching content that connects with individual students' future career and life aspirations. We explore the history of prior teacher resources to teach climate change and provide a path to using the new approach to teaching powerful geographic knowledge, offering examples of how to integrate climate change into the classroom by reviewing the various teacher and student resources available on the Powerful Geography website (www.powerfulgeography.org).

"The impact of scale on extracting urban mobility patterns using texture analysis"

Khan Bin Asad, Ph.D. Student | Dr. Yihong Yuan

The development of high-precision location tracking devices and advancements in data collection, storage, transmission technologies, and data mining algorithms have led to the availability of large datasets with high spatiotemporal resolution. These geospatial big data can be used to identify human movement patterns in urban areas. However, identifying human movement patterns may yield different results depending on the scale size used. In this paper, we employed first and second order texture analysis algorithms to identify spatial patterns of human movement for various scale sizes based on taxi trajectory data from Nanjing, China. The results demonstrated that texture analysis can quantify changes in human movement patterns for different scale sizes in an urban area.

Furthermore, the results may differ based on the location of the study area. This study contributed both methodologically and empirically. Methodologically, we used texture analysis to examine the impact of different scale sizes on the extraction of aggregated human travel patterns. Empirically, we quantified the effects of different scale sizes on extracting aggregated travel patterns of an urban area. Overall, the findings of this study can have significant implications for urban planning and policy-making, as understanding human movement patterns at different scales can provide valuable insights for optimizing transportation systems and enhancing overall urban mobility.

We developed a floodplain inundation model to extract specific flood extent and depth parameters and combined these with vegetation land cover and historic flow data to quantify spatial habitat suitability and temporal hydrologic metrics that support Alligator Gar

Atractosteus spatula spawning within a 257 km segment of the lower Guadalupe River, Texas, USA. We modeled nine flows across a range of flood frequency recurrence intervals from 257 m3s−1 to ~4997 m3s−1 and estimated the availability of suitable spawning water depths (0.2 to 2 m) and lateral connectedness between the river and suitable floodplain landcover types. We estimated the ages via otoliths of 95 Alligator Gar collected in the reach to determine the year that they were recruited into the system. We analyzed a total of 30 Indicators of Hydrologic Alteration flow metrics to examine how the spatially derived suitable habitats related to the temporal aspects of flow occurrence during the spawning season for the period of flow record April–July (1935–2020) and to the years spanning the recruitment data of the Alligator Gar (1981–2010). A non-linear relationship existed between suitable spawning habitat area and the flow regime, with the most habitat availability corresponding to the 10–20-year flood recurrence interval frequency with peak flows of 2057–3108 m3s−1, respectively. The Alligator Gar recruitment data indicated that six years provided high recruitment, which correlated with peak flows of ~5-year frequency with an available spawning area of ~9000 Ha. moderate recruitment years related to peak flows with ~3-year frequency with an available spawning area of 6000 Ha. and low recruitment years where spawning was likely to occur at least every other year with at least 2500 Ha of available spawning area. The results of this model support the development of legislatively mandated environmental flow standards for the Guadalupe River Basin, inform field-based efforts for collecting empirical and observational data on the species' reproduction, and provide spatial and temporal information for designing conservation strategies for Alligator Gar.

Applying Floodplain Inundation Modeling to Estimate Suitable Spawning Habitat and Recruitment Success for Alligator Gar in the Guadalupe River, Texas

Dr. Kimberly Meitzen, Clinton Robertson, Dr. Jennifer Jensen, Daniel Daugherty, Thomas Hardy, & Kevin Mayes

MDPI.COM   05/31/2023

Tourism development as slow violence: dispossession in Guatemala's Maya Biosphere Reserve

Jennifer A. Devine,
Hannah L. Legatzke,
Megan Butler
and Laura Aileen Sauls
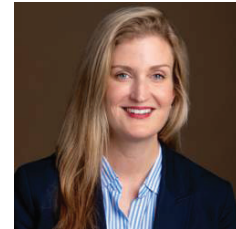
Introduction

The global tourism industry can build international solidarity, foster cultural understanding, and facilitate sustainable development (McCool and Bosak 2016). Yet, the tourism industry can also (re)create neo-colonial relations that include dispossession and violence (Devine and Ojeda 2017; Nixon 2013; Kincaid 1988). Dispossession and violence in tourism often occur swiftly and interpersonally, such as when communities lose land or usufruct rights, or in acts of sexual violence and human trafficking (Devine and Ojeda 2017). Dispossession and violence in the tourism industry, however, also unfold over longer space-time scales, transforming socio-ecological relations and the names, identities, and cultural practices of places and the people who inhabit them. Rob Nixon describes this type of "slow violence" as "a violence that is neither spectacular nor instantaneous but instead incremental, whose calamitous repercussions are postponed for years or decades or centuries" (Nixon 2013, p. 2).

'WHEN THIS THING HIT':
Examining the impacts of the COVID-19 pandemic in the blues-based cultural economy of Clarksdale, Mississippi

Mandy Truman, Ph.D. Student, & Dr. Eric Sarmiento

Often considered the 'birthplace of the blues', the Mississippi Delta hosts a vibrant cultural economy based on blues music and culture. As this economy relies on embodied social practices in place, health and safety regulations issued to combat the SARS-CoV-2 virus had dramatic effects on musicians, business owners, and other cultural workers. In this paper, we examine the impacts of the pandemic on the cultural economy of the Delta, focusing on the city of Clarksdale, a primary destination for blues tourism. Situating the Delta's cultural economy and the blues music at its foundations within a broader historical arc of racialized struggle, we explore disparities in impacts of the pandemic on differently positioned individuals and group. We argue that, while racial inequities continue to structure the Delta's cultural economy, local communities' responses to the challenges of the pandemic

also demonstrate intergroup solidarities. Approaching these solidarities through Monica White's conception of collective agency and community resilience, we conclude that collective responses to the challenges of the pandemic in the Delta illuminate the potential for people from relatively privileged and marginalized groups in the region to come together to resist oppression and potentially drive social and political economic transformations.

TANDFONLINE.COM   08/22/2023

EXPLORE URBAN INTERACTIONS BASED ON FLOATING CAR DATA — A CASE STUDY OF CHENGDU, CHINA

Mei Yang, Ph.D. Student,
Dr. Yihong Yuan, &
Dr. F. Benjamin Zhan

Transport data are important for understanding human mobility and urban interactions within a city. As China's transportation infrastructure continues to grow, more research is needed to analyse the spatial patterns of travel flows and to understand how these patterns change over time. With the development of online car-hailing and ride sharing services, floating car data have become a new resource to facilitate the analysis of human mobility patterns and the interactions of urban mobility within a city. The detection of urban communities based on urban networks is a helpful way to represent urban interactions. However, understanding community changes using online car-hailing data remains an underexplored topic. To this end, this study applies a community detection method to explore community changes over time based on the newly available floating car data (DiDi Chuxing ('DiDi')) in Chengdu, China. We applied undirected graphs to examine the spatial distribution of DiDi usage and the spatial patterns of travel distance. In addition, we explored the spatial-temporal variations of the communities at the taxi zone level using Blondel's iterative algorithm,
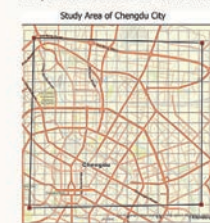
a modularity optimization approach. Results suggest that: 1) taxi zones on the south and west sides of Chengdu have more average daily trips compared to those in other areas; 2) residential taxi zones in the northeast area have a long median travel distance, indicating people living in those areas travel longer distances; and 3) the detected community structures change at different times. These findings provide valuable information for urban planning and location-based services in Chengdu.

Study Area of Chengdu City

UNDERSTANDING SUSTAINABILITY WITH PEDAGOGICAL PRACTIC
Dr. Osvaldo Muñiz Solari

Sustainability is an important concept in geography that can be used to analyze a great variety of topics related to nature, society, economy, and their interconnections and interdependence. The objective of this chapter is to analyze how the actors of the pedagogic environment, organized in the regulative and instructional discourses, function to recontextualize knowledge. Consequently, the pedagogic discourse focused on the concept of sustainability is examined in order to offer a general guidance about the conditions in which the concept could be recontextualized.

Understanding Sustainability with Pedagogical Practice
A Contribution from Geography Education
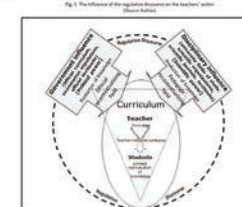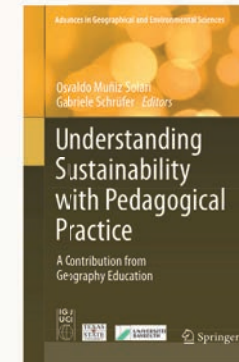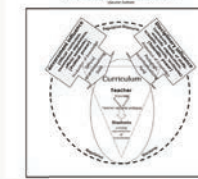
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MULTISCALAR DELIBERATIVE TRANSPORTATION PLANNING
"EMPOWERMENT WITHOUT AUTONOMY" AND BUS PRIORITY IN LONDON
DR. ROSALIE RAY

At what scale should we plan transportation to shift to more sustainable modes? In this study I explore the multiscalar effort by London's (UK) boroughs and the traffic director for London to expand bus priority in London, viewing it as a real-world case of Iris Marion Young's "empowerment without autonomy" regional governance model. Using archival data, media analysis, and interviews, I found that the boroughs acted as a source of policy alternatives to reshape the problem–solution nexus around congestion, a forum for diverse interests to discuss this transition to more sustainable transport, and a deliberative partner for the new regional actor with sufficient capacity and expertise to reshape the policy to better meet community needs. The establishment of the position of traffic director for London in 1991 created the empowered but not autonomous structure, giving the traffic director veto power over some borough roads but empowering them to manage parking.

Working together, the traffic director and the boroughs installed 524 bus lanes between 1991 and 2000, more than doubling the total number of lanes and demonstrating that a deliberative process need not sacrifice speed. Because this is a single case, more research is needed to confirm the mechanisms of the empowerment without autonomy model and how those mechanisms are most easily replicated in other contexts.

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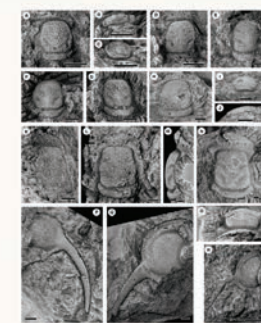
DR. SHELLY WERNETTE
NIGEL HUGHES, PAUL MYROW, & APSORN SARDSUD
"TRILOBITES OF THAILAND'S CAMBRIAN–ORDOVICIAN TARUTAO GROUP & THEIR GEOLOGICAL SETTING"

Tuff-bearing upper Cambrian to lowermost Ordovician strata on Ko Tarutao Island, Satun province, southernmost peninsular Thailand, contain a rich trilobite fauna relevant to global biostratigraphy, peri-Gondwanan palaeogeography and shifting evolutionary mode. This area of Sibumasu, a lower Palaeozoic marginal Gondwanan terrane, is shown to have been closely associated with Australia, North China (Sino-Korea) and other continental fragments from the supercontinent's northern equatorial sector, including South China at that time. Shared faunas also suggest a Kazakhstani and Laurentian association. Collections from eight sections yielded 10 newly discovered species and one new genus from ancient shoreface and inner shelf siliciclastic deposits. With the new taxa and revision of taxa known previously, we refine the age of the upper two formations of the Tarutao Group to the middle of Cambrian Stage 10, and lower-middle Tremadocian. Two biozones are erected for Sibumasu: the Eosaukia buravasi Zone, encompassing all Cambrian sections from Ko Tarutao, and the Asaphellus choroenmiti Zone, encompassing the Tremadocian fauna discussed herein. The new genus is Tarutaoia and new species are Tsinania sirindhornae, Pseudokoldinioidia maneekuti, Pagodia? uhleini, Asaphellus choroenmiti, Tarutaoia techawani, Jia talowaois, Caznaia imsamuti, Andersonella undulata, Lophosaukia nuchanongi and Corbinia perforata. Other taxa reported for the first time from Tarutao are Mansuyia? sp., Parakoldinioidia callosa Qian, Pseudagnostus sp., Homagnostus sp., Haniwa mucronata Shergold, Haniwa sosanensis? Kobayashi, Lichengia simplex Shergold, Pacootasaukia sp., Wuhuia? sp., Plethopeltella sp., Apstokephalus sp., Akoldinioidia sp. 1 and Koldinioidia sp.
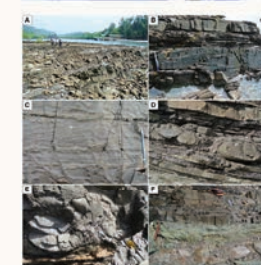
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CRITICALLY EVALUATING THE PURPORTED GLOBAL "BOOM" IN SMALL HYDROPOWER DEVELOPMENT THROUGH SPATIAL AND TEMPORAL ANALYSIS

Dr. Thomas Ptak, Arica Crootof, Tyler Harlan, & Sarah Kelly

Due to a rapid proliferation of small hydropower (SHP) in many parts of the world, a purported boom in SHP development globally has captured significant attention in recent research. While SHP is expanding rapidly in distinct places, the global landscape is more varied. Some regions are experiencing a plateau or even declines through decommissioning efforts. To date, research has predominantly drawn on national level data to interrogate empirical outcomes of the pronounced global boom in SHP development. National level data, however, can obscure spatiotemporal variations, which are critical to understanding empirical complexities.

We argue, the notion of a boom, particularly when applied without spatial or temporal context, can be problematic for adequately understanding a range of dynamics inherent within SHP planning, development, distribution, and empirical outcomes. Given regional differences, there is a need to critically investigate spatiotemporal dimensions of SHP development. Accordingly, we offer a multi-regional comparative case study analysis of SHP in four distinct region: West and Northeast United States, Southwestern China, Central and Southern Chile, and Central Nepal. Our research interrogates patterns of spatial distribution by focusing on concentrated hotspots and considers temporal dynamics through the lens of timepeaks. This approach allows for an effective capture of empirical complexities bound in ongoing SHP development (and decommissioning). We discover stark differences of growth and/or decline in SHP development vary substantially depending on both spatiotemporal criteria. Resolving spatial and temporal patterns and processes can be holistically analyzed to better understand empirical outcomes for policy makers, development practitioner, and environmental planners.
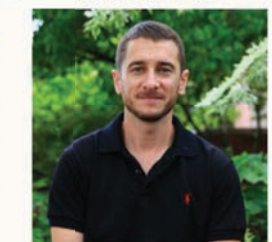
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GIS DAY 2023

Texas State University recently celebrated GIS Day, a special event organized by the Society of GIS (SOGIS) in collaboration with various GIS organizations in Central Texas. Spearheaded by SOGIS President Nakky Ekeanyanwu and Vice President Keenon Lindsey, the event aimed to showcase the diverse applications and advancements in Geographic Information Systems (GIS) technology. Held at the Alkek Library on campus, GIS Day featured an array of engaging activities and informative exhibits. One highlight of the event was the drone flight demonstrations, providing attendees with hands-on experience in aerial data collection and mapping techniques. Booth displays from GIS organizations offered valuable insights into the latest trends and developments in the field. A keynote address by Melissa Ruiz, a GIS specialist at TDEM Geospatial Services, highlighted the critical role of GIS in disaster response and emergency management. Ruiz's presentation shed light on how GIS technology is utilized to mitigate risks, coordinate resources, and facilitate rapid response efforts during crises. The event drew a large crowd of students eager to explore the world of GIS and its real-world applications. Attendees had the opportunity to interact with industry professionals, network with peers, and gain valuable insights into potential career paths in GIS. Overall, GIS Day at Texas State University served as a platform for fostering awareness, appreciation, and collaboration within the GIS community, inspiring future innovations and advancements in the field.

PANGEA 2024

The PANGEA (Promoting Advancement in Nature, Geography, and Environmental Analysis) Conference at Texas State University (formerly GESSRS), showcasing student research concluded successfully this semester. Over thirty presenters from diverse backgrounds shared their academic work, including presentations and posters on cutting-edge science. The conference, organized by graduate students Grayson Wylie and Garrett Pugh, featured sessions on various topics like environmental observations, public health, physical geography, and water conservation. Dr. Sharolyn Anderson delivered a keynote address on light pollution in national and state parks. Winners of the conference presentations included Sophia Staska, Tighearnan Juarez Murphy, Adam Clark for papers, and Taraja Oliver, Hilary Ansah, Sadia Ritu for posters. The Geobowl trivia contest also made a return this year, with the team consisting of Bren Vander Weil, Brock Burford, and Tighearnan Juarez Murphy taking home first. This team, with a few others, later took third place overall at the AAG conference in Hawaii. Cash awards were presented to the best presentations, and the GeoBowl champions were celebrated with trophies. The conference promises more geographic exploration next year.

Colloquium Series

SPRING 2024

Prohibition Geographies: the War on Drugs and Socioecological Change in Central America
Dr. Kendra McSweeney
Professor and Distinguished Scholar, Department of Geography
American Academy of Arts and Sciences Fellow
The Ohio State University

In the U.S., prohibition is often considered a thing of the past. This talk explores the geographies that arise from the global prohibition of drugs—in this case, cocaine. Drawing on a decade of team science spanning the many spaces of law-making and law-enforcement around cocaine, I lay out how drug prohibition exacerbates climate change and has profound social and ecological consequences in the Central American spaces through which cocaine is smuggled.

Connecting Space to Village: Forest Disturbances and Ecosystem Services in the Southwestern Amazon
Dr. Yunuen Reygadas
Assistant Professor of Remote Sensing of the Environment, Department of Geosciences, Texas Tech University

Dr. Yunuen Reygadas' presentation will focus on the effects of forest cover changes on ecosystem service indicators in one of the most preserved and ecologically important yet least studied regions of the Amazon basin, the Southwestern Amazon. She will address how the integration of geospatial modeling with indigenous ecological knowledge is essential to understand and cope with environmental change.

FALL 2023

Utilizing Big Data for Climate Change and Health Studies: A Focus on Extreme Heat
Dr. Yoonjung Ahn
Assistant Professor, The University of Kansas

The world is grappling with escalating summer temperatures and more frequent severe heatwaves. This summer, 2023, has witnessed an unprecedented global heatwave, making it the most intense on record. These extreme heat events have substantial health impacts, exemplified by the United States' higher death toll in 2022 compared to both ten and thirty-year averages. However, limited data availability hampers the development of targeted prevention measures for extreme heat. This presentation will showcase how utilizing spatial analysis and diverse spatial data can help overcome these limitations, supporting the formulation of effective heat prevention policies.

How Much Food Contributes to Climate Change
Dr. Atul K. Jain
Professor, University of Illinois, Urbana-Champaign

Our study shows that global food production accounts for over one-third of all planet-heating gases linked to human activities. This presentation will provide a detailed breakdown of how much each agricultural practice, animal product, crop, and country contributes to gas emissions to help focus and fine-tune reduction efforts and improve

The Geography and Environmental Studies Internship Program

The Geography and Environmental Studies Internship Program provides a win-win for students and employers. Students earning 3 credit hours and gaining valuable real-world experience, and employers extend their workforce.

Eric Weeks, the manager of the **City of San Marcos Discovery Center**, is a GEO alum, and he continues to give back to our students by providing internships.

"The long-standing partnership between the City of San Marcos and TXST Geography and Environmental Studies Internship program has benefited many students by providing hands on experience, opportunities to learn in the field, and introductions to professionals to help guide potential career paths."

Dakota McCallister, a Resource and Environmental Studies major, is one of the students who interned at the Discovery Center this past spring, working on skills related to native plant and wildlife management. Along with these hands-on skills, Dakota gained valuable knowledge about their strengths and workplace preferences.

"I am better equipped to advocate for my needs in the workplace and adept at discerning future career paths and environments that resonate with me. [This internship] provided me with the confidence to articulate my strengths to future employers."

Current students can find out more about the internship program on our *website or email geointernships@txstate.edu.* **Alumni** wishing to hire interns can get started on our website.

San Marcos Gambusia

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Mark Your Calendars !

SWAAG | AGX
CONFERENCES

October 6th to 8th, 2024

Texas State University, San Marcos, TX
Geography and Environmental Studies Department

We are honored to host the 2024 joint meeting of
The Southwest Division of the American Association of Geographers (SWAAG)
and the Applied Geography Conference (AGX)!

Fountain Darter

Texas Wild Rice

Images Cursosy of the Edwards Aquifer Authority. Endangered and Threatened Specis of the Edwards Aquifer Region