



S.J. & JESSIE E. QUINNEY  
COLLEGE OF  
NATURAL RESOURCES  
UtahStateUniversity

S.J. AND JESSIE E. QUINNEY COLLEGE  
OF NATURAL RESOURCES



WILDLAND RESOURCES

**ALUMNI**

NEWSLETTER

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KNOWLEDGE IN ACTION

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WINTER 2021

DEPARTMENT OF WILDLAND RESOURCES • USU

# GREETINGS WILD ALUMNI & FRIENDS!

I hope you are all doing well as we approach the holiday season. The Wildland Resources Department has recently added two new faculty members: **Erica Stuber**, who is a spatial ecologist and the new Assistant Unit Leader for the USGS Coop Unit, and **Julie Young**, who has been hired as a WILD faculty member after many years with the USDA National Wildlife Research Center in Millville. We are very happy to have these two talented researchers in our ranks. In other faculty news, **Tom Edwards** will be retiring at the end of the year but will continue to teach two courses for us: (1) Management and Manipulation of Data in R and (2) Species distribution and Habitat Modeling Using R. If any of you are interested in taking these courses, both are offered for Continuing Education credits for a very low price, and you should contact Tom directly about that. **Karen Beard** is now serving as the Associate Dean for the College of Natural Resources. **Juan Villalba** was recently awarded a \$6M grant from USDA NIFA to study nutritional strategies to produce beef in an environmentally and economically sustainable way. For more news, check out [the WILD news page](#), and see more headlines coming out of our department on the last page of this newsletter!

Many of you have been sending us job postings, which we post on the [QCNR jobs](#) site and also distribute to undergrads, grads, or faculty as appropriate. These are very helpful, so keep them coming ([email allison.cochley@usu.edu](mailto:email.allison.cochley@usu.edu)). An especially big **thank you** to those of you who have been mentoring undergraduate students and allowing them to interview you. That has meant a lot to students, who are still feeling a bit isolated with all the COVID-19 issues. Please do keep your status and contact information updated with Allison (above) so we can keep this mentoring going.

For this issue of the newsletter, we've started a more detailed list of WILD Alumni and Friends members. Check it out to see what some of your colleagues are up to! We will eventually make this a web page for the group, so if you're not on this first list, please send me a photo and short update so we can share that. We are also highlighting Dr. Joe Sexton's career with his company terraPulse, which I think you'll find very interesting.

**KAREN MOCK**  
WILD Department Head  
[karen.mock@usu.edu](mailto:karen.mock@usu.edu)



**WELCOME**  
**ERICA STUBER**

Spatial Ecologist and new Assistant Unit Leader for the USGS Coop Unit



**ASSOCIATE DEAN**  
**KAREN BEARD**

Representing WILD in a leadership position in QCNR Dean's Office



**WELCOME**  
**JULIE YOUNG**

New Associate Professor in WILD after long-term work at USDA National Wildlife Research Center in Millville.



**GRANT AWARDED**  
**JUAN VILLALBA**

Awarded \$6M grant from USDA NIFA to study nutritional strategies for sustainable beef production



**RETIRING**  
**TOM EDWARDS**

Stepping down after 33 excellent years in the department.



**GO WILD!**  
**JOIN WILD ALUMNI & FRIENDS** for opportunities to network, learn, mentor, meet and support.  
Email: [allison.cochley@usu.edu](mailto:allison.cochley@usu.edu)

## ALUMNI HIGHLIGHT



### JOSEPH SEXTON, PH.D. CHIEF SCIENTIST AND CO-FOUNDER TERRAPULSE INC.

When Joe Sexton was a Master's student at Utah State University in 1999, he was a bit of a unicorn.

"GIS and remote sensing were still this rare thing back then," he said. "Most ecologists didn't even know what I was doing in the lab. But the USU RS/GIS lab has always been a hotspot for that kind of research."

The Western United States, in the larger sense, requires remote sensing, he said. Coming from a Bachelor's degree at the University of Florida, his background was in forests intensively managed for timber and wildlife—but to manage land at the scales of the West required a bigger perspective, so Sexton came to USU to dive deep into ecology, remote sensing, GIS, and statistics.

After a decade of developing the core algorithms, Sexton joined a team at NASA and the University of Maryland to produce something literally unique: high-resolution, time-serial maps of tree and water cover over the entire planet. It was a new product, and they knew they were on to something. It wasn't that we weren't putting the data out there, said Sexton, we made our data products open access through NASA, USGS, and our own lab website. It just wasn't accessible, interpretable or easy to use for any but the most technical users. GIS was, after all, at the cutting edge of geospatial analysis, and Sexton was right at that edge, and pushing it forward. The three co-founders established a private company later that year to expose the world to science-grade data—[terraPulse](#).

The first to come knocking was National Geographic, seeking data to help them advocate for the creation of a national park to protect the headwaters of the Okavango River in Africa. Now, the customer base for terraPulse runs the gamut of land uses, from forest, agricultural, range and wildland management.

TerraPulse provides maps in 4D, said Sexton. They monitor the current status, history, and future potential

of large landscapes through satellite-based measurements of forest, crop, range, and wildland productivity; and they provide their information through user-friendly interfaces tailored to specific market and industry applications.

Sexton didn't aim on a career in the private sector, simply going wherever his vision could be realized. Now he sees the partnership of research and business as a useful model for funding science, as well as the dispersal of research and information into working hands. He appreciates the culture his company offers for creativity, strategic agility, and expertise, as well as the space it creates for cooperation between enterprises that would otherwise be competing for research dollars.

Carbon markets are creating an upswell of demand for terraPulse's work. Seeded by the World Bank and the United Nations' Green Climate Fund, the countries of Belize, Costa Rica, Laos, the Philippines, and the Dominican Republic are each using terraPulse to map their national forest cover and activity in order to register their forests in the emerging global carbon market. The company applies machine learning to satellite imagery to extract long-term datasets that support the countries' efforts to reduce deforestation emissions and foster sustainable management of forests.

A recent NASA/Smithsonian study also linked terraPulse analysis to armed conflict and geopolitics in Myanmar, using the country's conflict-affected borderlands as a case study. The [research found](#) that the rate and geography of deforestation were most influenced by the territorial jurisdictions of armed authorities, national political economic reforms and timber regulations, and proximity to national borders and their respective geopolitical relations, rather than simply the absence or presence of ceasefires.

Sexton often teams with Wildland Research Assistant Professor David Stoner. They are currently working [on a project](#) connecting the movements of large mammals in the western U.S. with big-picture information about an environment stressed by drought. The goal of the project is to map responses of migratory animals to landscape-level water stresses as the region continues to grapple with an ongoing 20-year drought.

"A key to success is presenting the complexities of the science in an intuitive format," Sexton said.

"We realized that in a world increasingly impacted by human decisions, sustainability requires a tighter coupling between information and action. People need information about the biosphere. Our company provides that information, and it empowers people to make better decisions."

## FEATURED ALUMNI AND FRIENDS



### **SHARON POESSEL, PH.D. WILDLIFE BIOLOGIST**

**USGS FOREST & RANGELAND ECOSYSTEM SCIENCE CENTER**

Sharon is working as a wildlife biologist at USGS in Boise, Idaho. She conducts research on a variety of wildlife species, with recent focus on California condors and other raptor species. She is currently beginning work on a desert kit fox study near solar facilities in the deserts of southern California.



### **BILL WOODY WILDLIFE LAW ENFORCEMENT CONSULTANT** WILDLIFE CONSERVATION SOCIETY

Bill works with the Wildlife Conservation Society, training border officers and wildlife inspectors in the Andes Amazon Region on detecting smuggled and other illegal shipments of wildlife. He is also working on another training project in wildlife forensics for Peruvian prosecutors who are taking courses to receive a recently developed diploma in Wildlife Trafficking.



### **LEAH DELAHOUSSEY FISH & WILDLIFE BIOLOGIST** US AIR FORCE, FLORIDA

Leah works on an Air Force installation in Florida monitoring threatened and endangered species. She is responsible for projects focusing on crested caracara and eastern indigo snakes. She also assists coworkers with projects on Florida panthers, Florida bonneted bats, snail kites, black rails, and gopher tortoises.



### **JER PIN TEACHING FACULTY** UNIVERSITY OF ILLINOIS AT CHICAGO

Jer Pin works as teaching faculty at the University of Illinois at Chicago. He teaches Ecology and Evolution and coordinates a genetics lab course. He studies conservation genetics of plants and freshwater mussels. He also participates in diversity committees to support underrepresented students.

## FEATURED ALUMNI AND FRIENDS



### SCOTT FROST FORESTER

#### USFS UINTAH-WASATCH-CACHE NATL. FOREST

Scott is designing possible forestry treatments in the Strawberry, UT area for wildlife, fire, and watershed benefits across approximately 92,000 acres. He is continuing with layout and cruising for timber sales to salvage Engelmann spruce killed by spruce beetles near Kamas, and working with Forest Health Protection to determine the extent of invasion by oystershell scale in Wasatch Front aspen stands in the Provo area.



### TUCKER FURNISS POST-DOCTORAL RESEARCH

#### USFS PACIFIC NW RESEARCH STATION

Tucker is a postdoc with the Hessburg lab at the USFS Pacific Northwest Research Station in Wenatchee, WA. He uses forest landscape models to study how fire and climate will shape forested landscapes of the interior Columbia basin over the coming century, and he's exploring how various management strategies may be used to bolster landscape resilience and to maintain healthy functioning forests in a rapidly changing world.



### ELYSE DOTY WILDLAND FIREFIGHTER

#### USFS LOLO NATIONAL FOREST

Elyse is [wildland firefighter](#) on an engine based out of Missoula, Montana where her crew protects forests of alpine larch and whitebark pine in the Lolo National Forest. "The right kind of fire is so important to the health of our landscapes; it can make a big difference to an ecosystem if you can get it on the ground," she said. "I'll get to the point in my career where I'm not just reacting to fire, but using it to make forests healthier, more resilient ecosystems."

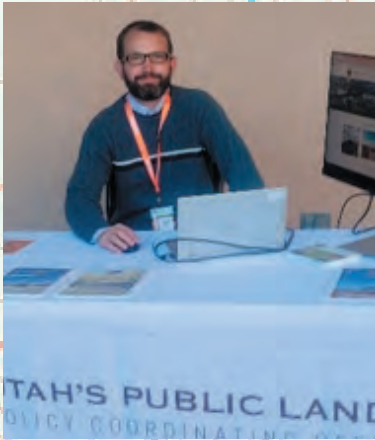


### MICHEL KOHL, PH.D. WILDLIFE BIOLOGIST

#### UNIVERSITY OF GEORGIA

After completing a PhD and Post-doc at USU, Michel began a position as an assistant professor at the University of Georgia. He is currently overseeing new research projects involving black bear-hound hunting in North Georgia, urban wildlife in both Atlanta and Athens, Georgia, black vulture space use across the southeastern U.S., and a nationwide extension program on the new Rabbit hemorrhagic disease spreading across the western United States.

## FEATURED ALUMNI AND FRIENDS



### **DILLON HOYT** **NATURAL RESOURCES PLANNER**

UTAH PUBLIC LANDS POLICY COORDINATING OFFICE

Dillon is the Natural Resources Planner at Utah's Public Lands Policy Coordinating Office (PLPCO). His primary responsibility is updating the State and County Resource Management Plans that can be found online at [rmp.utah.gov](http://rmp.utah.gov). His office consists primarily of policy specialists and legal counsel who work together to protect access to public lands and help Utah's natural resource agencies speak with one voice.



### **STEVE DEMPSEY** **WILDLIFE BIOLOGIST**

IDAHO DEPARTMENT OF FISH AND GAME

Steve has been working with the Idaho Department of Fish and Game in the greater Boise area. He is a wildlife biologist responsible with managing two wildlife management areas focus on waterfowl and upland bird production and also hosts a pheasant stocking program during the fall. He occasionally helps other departments with everything from electro-fishing surveys and enforcement activities, to helicopter capture of big game.



### **DUSTIN RANGLACK** **ASSOCIATE PROFESSOR**

UNIVERSITY OF NEBRASKA

Dustin is an Associate Professor of Range and Wildlife Management at the University of Nebraska, Kearney. His lab focuses on applied large mammal ecology, with current research on bison and pronghorn space use and conservation. He is the Vice Chair of the North American Section of the IUCN Bison Specialist Group, which is wrapping up the first ever Green Status Assessment of bison and starting the next Red List Assessment for the species.



### **SARA GOEKING** **SUPERVISORY BIOLOGICAL SCIENTIST**

USFS ROCKY MOUNTAIN RESEARCH STATION

Sara works in a leadership role for the USFS Forest Inventory & Analysis (FIA) Program at Rocky Mountain Research Station. Part of her tech transfer works includes co-managing the Data Component of the Global Forest Observations Initiative, which allows her to make connections among specialists from multiple countries who are using ground data and remote sensing to monitor forest carbon and biomass in accordance with climate agreements.

## FEATURED ALUMNI AND FRIENDS



**MAKEDA HANSON**  
**PROGRAM MANAGER**  
UTAH DIVISION OF WILDLIFE RESOURCES

Makeda is the Southeastern region habitat program manager for the Division of Wildlife Resources. The habitat team is responsible for DWR land management, habitat restoration, impact analysis, and Farm Bill partnerships. Makeda has been involved in a variety of duties from wildlife highway crossings to facilitating stakeholder engagement in bison management.



**MARK KREIDER**  
**STUDYING FIRE & CLIMATE**  
UNIVERSITY OF MONTANA

Mark started a PhD at the University of Montana in January 2021, studying the effects of climate and suppression on fire. He also has a solo photography exhibit on display November–December on the campus of UM, entitled “[Wilderness Fire](#)”—the exhibit showcases the beauty of a landscape that is intimately tied to fire.



**SARAH DAWSON**  
**DIRECTOR, CENTER FOR SUST. ENVIRO.**  
FRANKLIN AND MARSHALL COLLEGE

Sarah has been the director of the Center for the Sustainable Environment at Franklin & Marshall College in Lancaster, PA for twelve years. She teaches classes related to wildlife conservation with a special emphasis on carnivores. Her students conduct research on a variety of topics, including natural resources management and Mexican gray wolf management.



**JENNIFER BAKKEN**  
**FOREST ANALYST**  
USFS ROCKY MOUNTAIN RESEARCH STATION

Jennifer works as a Forest Analyst for the Forest Service, RMRS-FIA program in Ogden, UT. Her Analysis Team is excited to be finishing up two reports, Utah’s Forest Resources, 2008-17 and Nevada’s Forest Resources, 2009-18 which are due out in 2022. She has been working on automating repeatable portions of our forest resource reports to allow for more time to develop special content sections highlighting hot topics or issues for each State report.



## WILD NEWS

### **[Beef Going Green: Major New Grant Supports Strategies for Sustainable Grazing](#)**

A new grant from the USDA National Institute of Food and Agriculture will allow Juan Villalba and a diverse team of collaborators work over the next five years toward resolving the tangled issue of how to produce beef as an environmentally, economically and socially sustainable food.

### **[USU Extension Specialists Hit the Road with Visiting Congressional Staff](#)**

Eric Thacker and David Dahlgren, Utah State University Extension Specialists, presented to U.S. congressional staffers during an August event on rangeland and wildlife science. The visitors included congressional leaders looking to become more familiar with rural Western management and policy issues.

### **[Busting Bison Myths: Wildlife Society Assists with Education at Annual Bison Roundup](#)**

More than 700 bison were rounded up and corralled as part of the annual event at Antelope Island State Park, which this year was supported by volunteers from the student chapter of the Wildlife Society.

### **[David Stoner Awarded Grant to Connect Animal Migration to NASA Drought Imagery](#)**

With support from NASA and satellite data taken from the International Space Station, Stoner is part of a team tasked with connecting the movements of large mammals in the western U.S. with big-picture information about an environment deeply stressed by drought.

### **[Capturing a True Picture of Wolves in Yellowstone: Reevaluating Aspen Recovery](#)**

The reintroduction of wolves in Yellowstone is an environmental success story that feels like a parable. But like many stories based on ecological realities, it's more complex than at first glance—aspen recovery in the park is not as robust as generally believed, according to new research from Elaine Brice and Dan MacNulty.

### **[Wildlife Students Hold Service Project to Help Clean Up Local Park](#)**

Volunteers from the Wildlife Society offered a hand in Logan to clean up after an early winter storm pulled down branches and did significant damage to local trees.

### **[Range Club Places Second at URME Competitions](#)**

The USU range club members placed second place in both the Plant ID team competition and URME team competition in Richfield UT. They'll travel to the national SRM competitions held in Albuquerque, NM in February 2022.

### **[MacNulty Book Wins Wildlife Society Publication Award](#)**

Dan MacNulty's book, *Yellowstone Wolves: Science and Discovery in the World's First National Park*, [won the 2021 TWS Publication Award](#) for Best Edited Book.