

Society for Ecological Restoration

Texas Chapter



Restoration Field Notes

March, 2014

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TXSER Newsflash

We want to hear from you. We are always looking for information to share with our readers about ecological restoration issues and events taking place around the State. Please send us your announcements for local events, job openings, internships, and volunteer opportunities. If you have a project or essay that you would like to see highlighted in our newsletter or on our Facebook page or website, send along your ideas. We would love to learn about what you are doing and to share them with the rest of our readership.

All communications should go to our Chapter Coordinator, Gwen Thomas at: info@txser.org. We look forward to hearing from you.

Member Spotlight

Name: Meg Inglis

City: Dripping Springs, TX

Affiliation: Owner, Hill Country Land Restoration Services; Past President, Austin Native Plant Society

Briefly describe your ongoing efforts/interest in ecological restoration: When my husband and I built our house in Dripping Springs 14 years ago, we made a lifestyle decision - to be 100% dependent on our rainwater

Central Texas Rep.
Ingrid Karklins

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system. With water conservation as a focus, our 2 acres became my first land restoration project, beginning with the septic field. From the start, I used native plants exclusively - restoring the predominate grasses of the hill country, re-introducing endemic woody plants and wildflowers, and removing invasive plants. The over 150 native plant species (35 grasses) on our lot have created great habitat for the local wildlife.

As my current interest and knowledge grew, I became a strong advocate for restoration and sustainability - volunteering



Meg Inglis, March 2014

for numerous organizations, advising others on their land restoration projects, giving presentations, writing a column for the local Homeowner's Association, and becoming involved in the Austin Native Plant Society and the Native Prairies Association of TX.

My current focus is small-scale land restoration.



**Rusty Blackhaw
Viburnum (Viburnum rufidulum)
Photo Credit: Sally & Andy Wasowski**

outdoor activity: My favorite spring activity is to walk the property searching for new native plants popping up (and caging them before the deer can consume them).

What is your favorite plant and/or animal?

Current favorite plant: Rusty Blackhaw *Viburnum (Viburnum rufidulum)* - What is not to love about this plant? (nectar, berries for wildlife, adapted to many soils, fall color, hardy)

Current favorite animal: Greater Roadrunner!! (*Geococcyx californianus*)



**Greater Roadrunner
(*Geococcyx californianus*)
Photo Credit: Google Photos**

Controlling the Uncontrollable: Fire Regulation and

Incentives at the Wildland-Urban Interface

By: Ingrid Karklins

BA Candidate, Department of Ecosystem Science & Management

College of Agriculture & Life Sciences, Texas A&M University, College Station, TX

In 1984 wildland fires damaged 900 acres in a Bastrop County subdivision. 25 years later, 70 additional subdivisions had been built in high fire risk areas. The disastrous

2011 Bastrop fires did not come as a surprise to authorities (Dexheimer & Plohetski, 2011). Crises can drive new statutes and regulations but regulatory ultimatums are hard to set, incentives are foggy, and establishing the costs and benefits of prescribed fires is difficult (Stone, 2012).



Bastrop Fire, 2011.
Photo Credit: San Antonio Express-News

There are few established rules for prescribed burns in the wildland-urban interface (WUI). If anything, the inverse held true in the past. Policies such as the 1935 U. S. Forest Service policy to extinguish every fire by 10 am indoctrinated several generations (Forest History Society, 2012). Burn bans are accepted and welcomed by society. Command-and-control regulations often "lose sight of their original purposes ... and focus on efficiency of control" (Holling & Meffe, 1996).

As a result, local authorities have limited regulatory prescribed burn authority. In 2003, Austin assistant fire chief Kevin Baum found that much of Austin was "ripe for a massive wildfire" and "tried to get more regulatory control over how many homes were built in vulnerable areas, the type of construction materials used and the amount of defensible space required" but "there was too much resistance, primarily from developers" (Dexheimer & Plohetski, 2012).

The Travis County Community Wildfire Protection Plan is working towards establishing regional fire-adapted communities. Rather than enforcing regulations, government entities are hoping for cooperation (Austin, 2013). The Travis County Firewise program suggests simple, low-cost activities that homeowners can undertake (Travis County Community Service Association, 2013). Given an incentive, people are more likely to "do something we want them to do;" driven by unofficial "moral rules and principles" with the perception that these choices are "good and right" (Stone, 2012). The incentive in this case is a strongly self-motivated desire to protect lives and property, and to keep insurance costs in check.

The hazards of smoke from wildfires and the accompanying negative public sentiment are a powerful incentive to conduct prescribed burns in more controlled conditions.

Deterrence policies could easily come into play in the future, instituting penalties for non-firewise-compliant properties and public practices. Rewards and penalties often go hand-in-hand; both part of an effort to change behavior to meet the goals of the greater community, or the "commons" (Stone, 2012).

Firewise goals often come into conflict with a growing emphasis on native plant gardening, as well as policies supporting protection of



Successful prescribed burn by the Cedar Island National Wildlife Refuge in North Carolina reduces the risk of Cedar Island homes by reducing the amount of fuel available for burning during an unplanned ignition.
Photo credit: USFWS, Swan Quarter, NC

endangered species habitat (Dexheimer & Plohetski, 2011).

The 2003 Healthy Forests Restoration Act emphasizes fuels management in the WUI. Frequency and severity of escaped prescribed burns are lower in states with stricter laws and regulations (Yoder, 2008). Holling & Meffe (1996) recommend regulations that eliminate rebuilding in fire-prone ecosystems and incentives to distance new developments away from these areas.

In 2011, prescribed burning legislation was introduced to the Texas House. One bill established prescribed burning standards, as well as training, education and insurance standards. Another limited prescribed burn liability on

government-owned agricultural lands. Both bills died in a House committee (Gordon 2013).

Prescribed burns cost \$5 per acre in wilderness and about \$50 per acre in developed areas - a minimal expense when compared with the costs of fighting wildfires (Holestege, 2013).

Because these costs would be primarily paid by property owners, potential regulations would not be neutral (Stone, 2012). However, although all policies have immediate "winners and losers," the long-range perspective benefits future generations (Arrow et al, 1996). Ultimately the costs of no action far outweigh the costs of prescribed burn policy and regulation.

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What Can Restoration Science Do For Green Infrastructure?

By: Mary Carol Edwards

Stormwater Wetland Program Coordinator, Texas Coastal Watershed Program, Texas Sea Grant, Houston, TX

Each time a natural area within an urban center is conserved or restored it is a cause to celebrate. In my region, we are cheering the recent purchase and conservation easement placed on the remarkable Lawther Deer Park Prairie near Houston. You may recall an article in the March 2013 TXSER newsletter profiling a 200-acre restoration of the coastal prairie pothole complex at Sheldon Lake State Park, another site which adds immeasurably to the environs of the Houston-Galveston metroplex.

As important as restoration and conservation are, I would like to bring attention to another critical effort: creation. Green infrastructure creates "natural areas" in the urban, suburban or industrial landscape so that some critical environmental functions can be replaced. Planners of green infrastructure can learn much from the scientific ecological community.

The prime reason for a green infrastructure project may be a single purpose-for example, water quality improvements from stormwater wetlands

designed into flood control basins. The site may be isolated from other green spaces, and will certainly lack the complexity of an undisturbed natural area. Engineered, planned, maintained and monitored: green infrastructure makes a natural function operate as if it is a machine. However single-purpose the intent, in reality, a bit of green space attracts wildlife, volunteer species, and humans. Green infrastructure projects are opportunities for multi-purpose planning, taking into account the "side benefits" of habitat for wildlife, and public park space.

How can restoration scientists contribute? Urban planners, landscape architects, municipal staff, and engineers need access to ecological knowledge when planning sites. Restoration and conservation specialists can offer techniques, local sourcing, access to genetic diversity and seed stocks, reference sites, volunteer bases, and research.

I work in wetland restoration and wetland creation, but I have also worked in landscape



**Mason Park Stormwater Wetlands on Brays Bayou, Houston
Photo Credit: Texas Coastal Watershed Program**

architecture and landscape design firms. In my experience, a bridge between the design professions and the restoration profession is especially needed in these areas:



Red-Winged Blackbird on *Thalia* (*Thalia dealbata*) in the Mason Park Stormwater Wetland, Houston. Photo Credit: Milt Gray

Plant selection: Landscape architects develop a plant list based on local references, but also on what will be available in large quantities at the projected time of planting. This may mean contract growing plants in another region or state. Yet even in a green infrastructure project, the local genetic pool is preferred. The importance of local provenance was demonstrated by switch grass from the Hill Country that grew into dense near-monocultures when planted in several Coastal Prairie restoration projects and were removed only at great effort.

Likewise, species are selected by landscape architects for qualities like bloom time and mature height, but their

community interactions may not be known.

Soil biology: Mixed soil layers, sterile soils, lost hydric wetland soils, and other disturbed conditions provide a challenge to establish biological functions in the soil. Everyone wants to avoid trial-and-error in such matters as seeding natives on acres of bare slopes at risk of eroding.

Invasive control: How does one discourage the armies of invasive species moving in on a new project and what does one do about native successional species taking advantage of the disturbance? How does one deter nutria from eating a wetland at a school when guns, traps, and alligators are not feasible?

The answers to questions like these are critical to a green infrastructure project, and restoration scientists are the ones most likely to have those answers. If those who know local ecology and those who plan green infrastructure projects were on a first name basis, this would be a good foundation for successful green infrastructure projects.

The Society for Ecological Restoration, Texas Chapter promotes ecological restoration as a means of sustaining the diversity of life on Earth and re-establishing an ecologically healthy relationship between nature and culture.

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the opportunity to network with restoration practitioners and enthusiasts; discounts to our Annual Conference, an opportunity to share and learn; invitations to attend volunteer workdays around the state; and, monthly updates and quarterly newsletters with articles and notices about regional events that allow you to connect to the local restoration community.

Chapter membership fees of \$15 support chapter administration. The TXSER Board of Directors consists of volunteers who share a passion for furthering ecological restoration in Texas.

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