

The Central Texas Bioregion Is Bumping With Biodiversity

Travis County in Central Texas is 30°18' north latitude and 97°45' west longitude. The Texas Northern Blackland Prairies make up the majority of my bioregion but the Edward's Plateau Woodland, Llano Uplift, Limestone Cut Plains and the Balcones Canyonlands border its edges.

Classification of agroecosystems in this bioregion includes a variety of crops, cattle, sheep, grains, poultry, greenhouses, and mixed farming systems. There are a large number of backyard gardens and community gardens. Ecological energetic processes in the agroecosystem include the use of mechanization and chemical fertilizers on the non organic farms that grow grains. Intensified agriculture in this bioregion includes semi-industrial and full industrial (Altieri 1995, 50).

The growing season is about 270 days however there are crops that can be grown year round (Smyrl 2010). The Blackland Prairie is predominantly clay and the Edward's Plateau is a mix of caliche and clay. Agricultural systems include grazing systems for cattle, while there are wildflower programs in place to incorporate native species back into the land along the highways (Altieri 1995, 40). There are gradient changes where ecoregions intersect like in Edwards Plateau and the Blackland Prairies. Cropland, pasture, urban development, industrial growth, and organic farming have altered the Texas Blackland Prairies (Glenn Griffith 2007). "Less than one percent of the original vegetation remains. Restoration activities in some of the protected prairies include prescribed burning, haying, and bison grazing (Glenn Griffith 2007)."

Some examples of the biodiversity in this bioregion include native plants, grasses, trees, succulents, flowers, herbs, and cactus. Trees include Oak, Pecan, Black Walnut, Dogwood, Mesquite, Cedar, Mexican Buckeye, and Texas Ash (Texas A & M

Agrilife Extension Service 2013). Shrubs and smaller trees that can be found here include Bottlebrush, American Beautyberry, Crepe Myrtle, and Mexican Redbud (Texas A & M Agrilife Extension Service 2013)

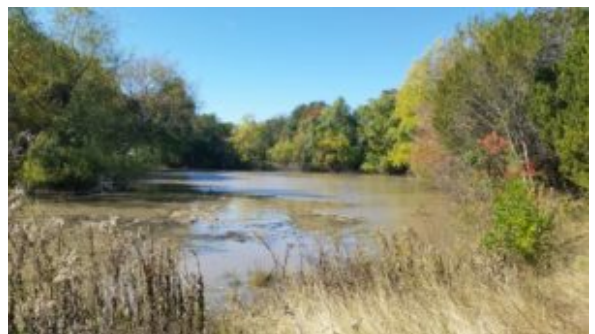
Some of the capital resources include the Ogallala Aquifer and the LCRA controls water from the Colorado River to six dams including the Highland Lakes (Lower Colorado River Authority 2014, Texas Water Development Board n.d.) An extinct volcano makes up part of the Edward's Plateau (Smyrl 2010). Soil formations are attributed to Cretaceous shale, chalk, marl and of these irregular plains, gradient streams of silt, clay, and sandy substrates are located at an elevation between 300-1050 feet above sea level (Glenn Griffith 2007). The average temperature for Travis County is 67.51°F and the average rainfall for my bioregion is 35.22 inches of rain per year (World Media Group, LLC. 2014).

Spanish settlers and the Mexican government have been a crucial part of indigenous lineage also in the Texas Blackland Prairies (Smyrl 2010). Human resources and the metapopulation include nonprofit organizations, parks, neighborhoods and east side organic farms. The ever-changing region hosts a myriad of culture, industrial development, fauna, agricultural opportunities, native and adapted flora, soil variations, geological land shifts, warm weather, light precipitation, and is a college mecca.



Just after you

cross the street to get back on the trail you are able to enjoy the beautiful maple trees turn colors in the fall. This illustrates how the landscape significantly changes within a 2 mile stretch.



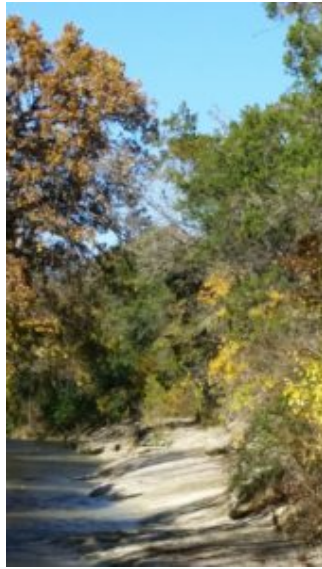
The Blackland Prairie ecoregion meets the Savannah ecoregion opening up into this beautiful wetland that is thriving as a result of habitat management.



When the river is high you can kayak alongside.



Fossilized seashells indicate oceanic activity years ago. This indicates Edward's Plateau ecoregion.



Hiking along the
bank of Walnut
Creek



Hiking with my cousin
Tabitha near the end of the
2.2 mile hike one way, at
Copperfield Greenbelt Trail
in Austin, Texas. Loop back
for a hike over 4 miles.



Balcones
Canyonland
Ecoregion near
the trailhead.

These photos were taken with my cousin Tabitha while on a hike at Copperfield Greenbelt Trail in Austin, Texas in the fall of 2015. We will cherish these memories forever as we instill her passion for adventure, nature, and life in our hearts.

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Benefits of Using the Polyface Farm Model in Central Texas

Organic Red Hard Wheat growing in our largest garden bed and planted as the first crop to build the soil! We purchased this seed from [Thayer Feed and Seed LLC](#) at the Mother Earth News Fair in Kansas 2014.

There are many benefits to the Polyface Farm model. Joel Salatin isn't caught up in labels but believes in the essence of husbandry practices and stewardship (Salatin, *A New Old-Fashioned Food System* 2015). His model aides the local community with access to affordable food and he shares his knowledge with those willing to learn how to incorporate biodiversity while turning a profit. Central Texas is a difficult region to be a "grass farmer." Land varies depending on the ecoregion and is a mix of rocky cavernous ridges, limestone, savannah, piney woods, and blackland prairies (Library of the University of Texas n.d.). Drought and a hot climate bring about other challenges that Salatin doesn't necessarily face in Virginia.

Salatin claims that his beef is "[salad bar beef](#)" because of the variety of leafy greens that are found in his fields (Salatin 2014). So every day he provides a different polyculture, diversified, paddock for nutrition which consists of dandelions, Kentucky blue grass, onion, narrow leaf plantain, wide leaf plantain, orchard grass, fescue, red clover, white clover, and

buttercup (Salatin 2014). Although our region has the capacity to produce a variety of forage crops, different seasons really dictate what is grown but rebuilding the soil is a necessity.

Native grass seed by **Native American Seed** company would be introduced to the grazing system because it's what the buffalo used to forage, is extremely hardy, requires minimal watering and does well in Central Texas. We have access to organic feed from a local mill just a few miles away so it is ethically important we purchase soybean free, Non GMO feed from **Coyote Creek** as the most sustainable option. However gleaning food from other farmers and businesses is another great sustainable feed source that works well in a zero waste system.

A mixed farming system is sustainable as long as the number of animals and crops produced stays in balance with nature and production demands. A grazing pasture management system must be in place on any farm with livestock. Efficiently maintaining a sustainable pasture requires incorporating the forage-producing capacity and stocking rate to achieve the target level of animal performance over time without causing deterioration of the pasture's ecosystem (David L. Greene 2002, 1).

Salatin grows on a large scale farming system and a smaller scale farm could; be more attainable; require less labor input; be more manageable; be financially feasible and sustainable. I also believe that food crops should be integrated in order to be more self sufficient. Salatin raises beef, chicken broiler meat, chicken eggs, rabbits, and pigs on between 100-500 acres (Pollan, Joel Salatin's Polyface Farm 2006). By reducing farm scale to accommodate smaller percentages

of livestock while encouraging heritage breed diversification is imperative to the preservation of endangered species. In my experience, raising heritage breed chickens in Central Texas creates more resilient food systems. Reducing farm size would allow the farmer to have a better quality of life. (Pollan, Joel Salatin's Polyface Farm 2006). There is a demand for access to healthy and affordable food in Central Texas as well as markets to sell value added products through CSA, farmers markets, and restaurants (Austin Energy Depletion Risks Task Force, Roger Duncan 2009).

Austin needs to minimize food security issues in order to be more sustainable but Austin only represents a fraction of Central Texas. Having access to a farm store and being able to visit the farm to understand where your food comes from plays a crucial role in establishing a better food system. Building a farm brand using a sustainable whole farm model will encourage community members to become a part of the food movement. Educational opportunities aid in the development of future farmers which is essential to making our bioregion more sustainable.

"When we say we are grass farmers, what we're saying is we are honoring and producing the most historically normal, carbon cycle, nutritive cycle, energy cycle that is solar driven in real time and actually builds soil like nature has done forever (Salatin, Episode 516 – Polyface Farm 2014)."

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