

Prairies in a Changing World, 5th Annual State of the Prairie Conference

Fort Worth, Texas

May 29 -31, 2014

Here are the note I took from some of the presentations.

Keynote Address by Tony L. Burgess

Savannas and Grasslands in a Biological Confusion Zone: Coevolution: Opportunities and Challenges

inherently unstable in structure

no climax system, etc.

instability is how this system works

new models: sky islands (Arizona)

mixture of zones > differences due to changes in limitations (climate and recent histories of burning, rainfall, etc.)

habitats/areas/regions of disturbance

site history, topography, soil

heterogeneity on multiple scales > temporal, spatial (within region – local scale)

“tropical level” of vegetation diversity

β diversity

expect high β diversity (but I’m not seeing that for ants among these different

prairies with different vegetations)

general areas:

forest

woodland

shrubland

prairie

savanna

slide diagram: Where Landscapes Meet

Western Cross Timbers (left)

Fort Worth Prairie (right)

Soils:

Mollisol (prairie)

Alfisol

barrens → prickly pear, yucca – my Bison Range site

sandstone: Cross Timbers

limestone: Fort Worth Prairie

Savanna Oak Foundation: in Wisconsin

oaksavanna.org

climate change, etc. impacts

reconciliation ecology: human utility with diversity
novel ecosystem: new assemblages > naturalization of foreign organisms
recombinant ecology

Urban Shaman: more than inform, enchant, cultivate naturalist intelligence
“rooted life in place” – adapt to the restrictions and limits imposed by environment/climate

Rob Denkhaus: Hooves on the Prairie

animals of disturbance > promotes diversity, mosaic dynamics

impact: prairie dogs > bison grazing shortens grass which the prairie dogs prefer for colony establishment

> Is there a similar impact for ants?

Bison wallows > hold water

-- ant nests and abandoned ant nests?

hooves breaking up soil – benefits

what about cryptogamic soils, disruption of the rhizosphere – since the wallows are isolated, not covering the whole area, re-colonization and dynamics supported.

“Even in death, bison are prairie managers.” – creating microhabitats

Fort Worth Nature Center

3600+ acres

West Fork of the Trinity River

1964 established

1914-1918 acquired by eminent domain

used for benign agriculture until 1964

different forms of management of the herd

ecological management

conservation herd – for genetic purity

control and directed breeding

exhibition herd – for education

Is this management wise?

given ecological/habitat changes > maintaining herd at a fixed genetic point? etc?

is this ethical? are animals objects? Do we need to re-define management and ourselves as managers → especially given the idea that bison are prairie managers?

My Comment: Tony’s address was inspiring and informative. He confirmed some of the ecological musings I had been entertaining and especially what these may mean for my ant research – that although the area is heterogeneous, I am not finding high β diversity. I also like his idea of an Urban Shaman. A lot to think about.

Jim Giocomo: The Geography of Grassland Bird Conservation

coordination of cool or warm season grasses > when to cut vs. bird breeding

habitat diversity

within habitat

but also many different habitats

My Comment: Giacomo made a good point about the timing of haying and other land use activities – which was later emphasized in another presentation. I wonder if this consideration would be important for insects – to avoid their mating times, etc.? Mostly we think about the pretty or large, mostly vertebrate species – we need to broaden this perspective.

Michael Warriner: Managing your Land for Pollinator Diversity

timing mowing and other land management use issue – may not affect ants in the same way
complexity of land management
even if want to focus on wildlife management, really can't – it's all connected
food webs, habitat engineering, direct and indirect impacts

Xerces: Bumble Bee Watch

My Comment: A lot of good general information and resources but also a lot on native bees specifically. Warriner underscored the necessity of land management being connected across species and ecosystem concerns.

Matt Wagner: Regional Efforts to Conserve Prairies

economic complexity
whooping crane – migratory and resident populations in LA that expands into Texas
deer management
Bob white quail – habitat
complexity of management plans – based on funds from hunting and fishing licenses
what seems to drive conservation in Texas is that people want to be able to hunt and fish the organisms you are trying to save...and therefore, they may be willing for you to conserve habitat
confidentiality between state biologists and landowners – information cannot be made public by state law.

My Comment: I appreciate Wagner's comments about the economic realities faced by the park service – we do not fund them, so they are strapped to focus on what those who pay for licenses want. – which means a focus on a minute portion of species and little concern for habitat integrity. I find this problematic in that it offers very little for the conservation of prairie. I also find the confidentiality law rather unsettling though I understand the "Texan" attitude about freedom and ownership. This confidentiality obstructs study and conservation because it prevents the larger world of biologists from having potential access to critical information as well as to the land and landowners. Where do we draw the lines of the law – if you own the land, do you own the species?

For me, all of these land issues (not just the ones addressed in this conference) are beginning to underscore the American Indian sentiment and understanding that we do not own the land.