



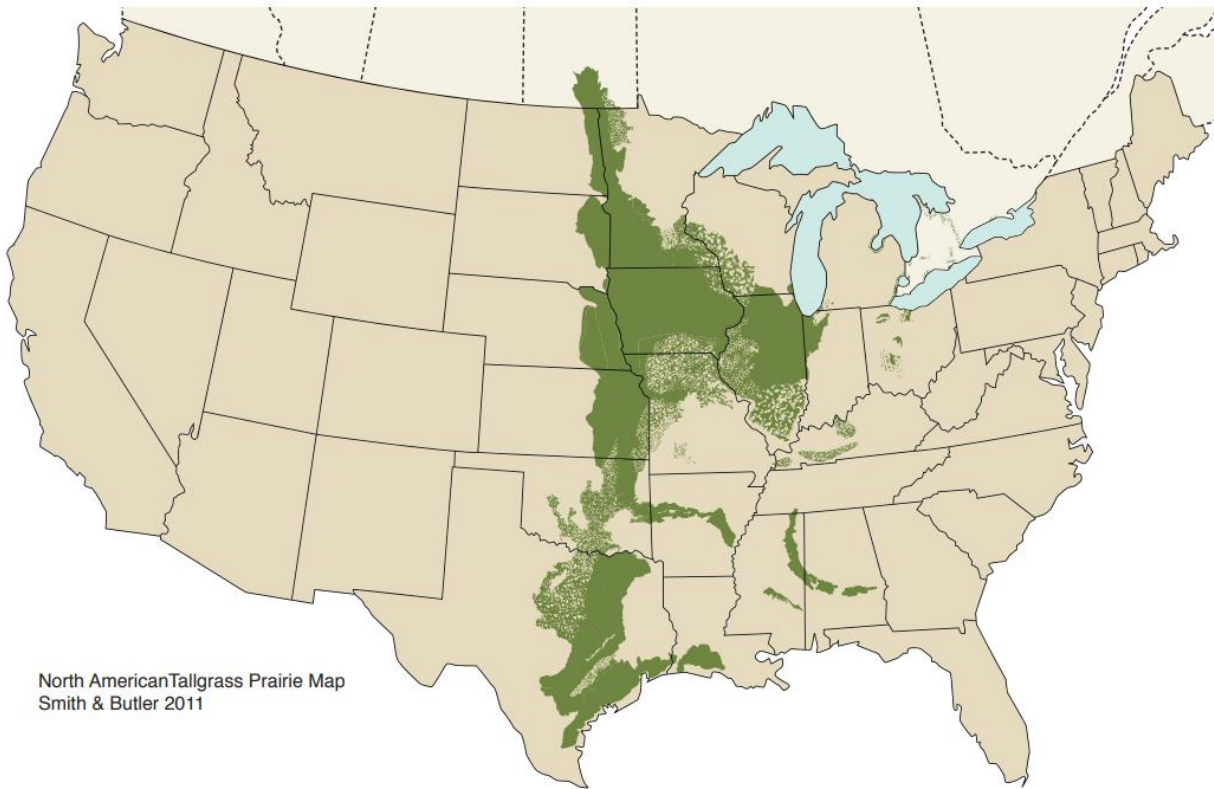
GREAT PLAINS  
FIRE SCIENCE EXCHANGE

# Introduction - Fire on the Tallgrass



Name: <b>KEY</b>	Period:	Date:
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**Tallgrass Prairie Distribution** A variety of initial boundaries are possible. All corrected boundaries should be similar to the presentation's map.



What evidence/information did you use?	For example : "The map." "Color variations on the map"
As you referred to your evidence/information, what reasoning/rationale did you use to determine the tallgrass prairie boundary?	For example: "Using the satellite layer, the westernmost edge of the eastern deciduous forest can be seen. Since the tallgrass prairie has few trees, the tallgrass prairie would begin at the transition from trees to grasslands. The western edge of the tallgrass prairie would occur before the vegetation becomes too "brownish" or dry. The same type of boundaries would occur to the north and to the south."

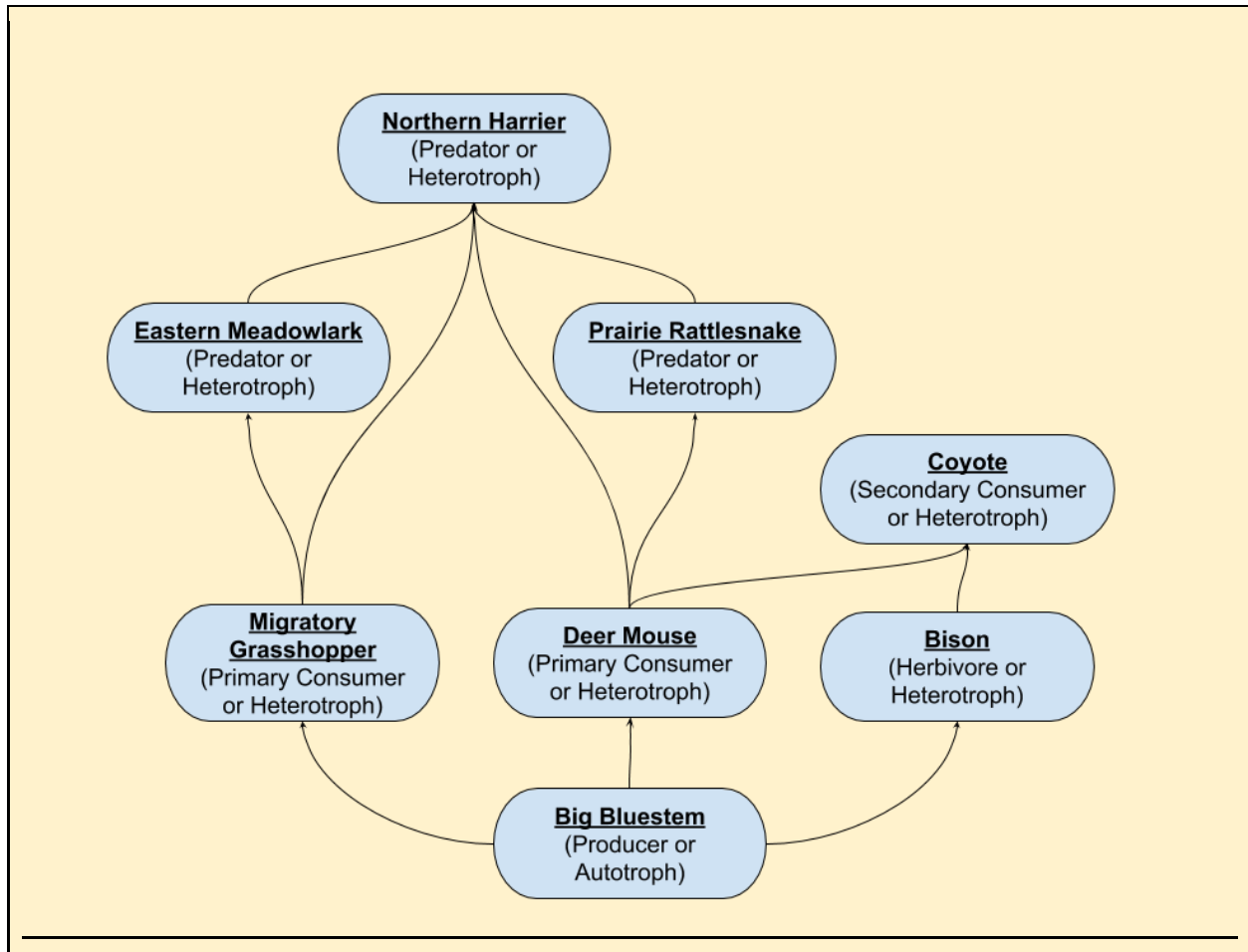
### Factors Contributing to Tallgrass Prairie Distribution

Abiotic Factor	Description of the Factor's Map For Example....
Temperature	Average annual temperature has a gradient from north to south (or south to north). Either the average annual temperature increases as you move from north to south, or the average annual temperature decreases as you move from south to north.
Precipitation	Average annual precipitation has a gradient from east to west (or west to east). Either the average annual precipitation decreases as you move from east to west, or the average annual precipitation increases as you move from west to east.
"Other"	Types of soils. Rocks. Bison. Rivers. Trees. Competition with other vegetation. Fire. Tornadoes/Storms. Mountains.

### Fire - Disturbance on the Prairie

Drawing For Example....	Type of Fire & Description For Example....
"Box A" Drawing/sketch showing flames the same height as the grass or slightly higher. Flames/smoke angled in the direction of movement. Flames spread over a large area.	Dormant season burn. This fire appears to burn off all of the "dead" vegetation leaving a large area of "black" and rocks. This fire could be difficult to control.
"Box B" Drawing/sketch showing flames shorter than the vegetation. Flames/smoke angled in the direction of movement. Flames aren't as "deep" as the dormant season burn.	Growing season burn. This fire appears to burn off most of the vegetation, but there are patches within the burn unit that haven't been consumed. Fire could be controlled easily.
"Box C" Drawing/sketch showing that the flames are much higher than the trees. Flames/smoke angled in the direction of motion. Tree "skeletons."	Wildfire. This is an extremely large, intense fire. This fire would be very difficult to control.

**Tallgrass Prairie Food Web** For Example.... This food web does not include detritivores or decomposers since these were not discussed in the presentation. Students may have included these categories of organisms in their food webs.



### Conclusion For Example....

1) Short-term fire impacts would include most of the vegetation being top-killed and either animals being killed or forced to leave the area. Long-term fire effects would be minimal since the vegetation would grow back quickly allowing animals to return to the area. The tallgrass prairie would continue.

2) Short-term impacts of the area having no fire would not be noticeable; the ecosystem would continue functioning with minimal changes in vegetation and animal populations. However, over the long-term, trees would become established and begin to convert the area into a woodland. This would displace the tallgrass prairie species.

3) Fire is an important disturbance on the tallgrass prairie. Without fire, this ecosystem would transform into a woodland dominated by trees such as post oak and eastern redcedar. With the conversion of the dominant vegetation changing from grasses to trees, the tallgrass prairie species populations dependent upon grassland vegetation will decrease or be displaced. Fire allows tallgrass prairies to persist in areas where trees can also grow. Without fire on the tallgrass prairie, these ecosystems will disappear.