





Plants!

Konza researchers + Kaw (Kaáⁿze) language
Joint perspectives on People & Land discussion part 3, 230713



Introduce Lydia, Charlee, Rissa

Participants please write your name, email, **location**, and primary interests in the Chat

Questions: will have open discussion at the end, please post questions in the Chat as we go

Land and Name Acknowledgement

The grasslands on which Konza Prairie LTER research is focused have been a home to people for thousands of years, including many named and unnamed peoples who lived and hunted here prior to European settlement. Indigenous people of the Kaw (Kanza) Nation inhabited and stewarded this area until their forced removal between 1846 and 1872, when they were relocated to a small reservation in what is now Oklahoma. The depopulated Kaw land was subsequently used to finance the Land-Grant University system under the Morrill Act of 1862, including Kansas State University, which administers the Konza Prairie LTER Program. Our LTER research program operates under a name, “Konza”, that is derived from the name of the Kaw, or “Kaá’ze”, People.


The Konza Prairie LTER acknowledges the immemorial connection of Indigenous peoples with these lands, and we pledge to respect and honor the past and current legacy, cultural history, and knowledge of the Kaw Nation. Through our professional capacity as scientists and educators, we will work to increase our knowledge of the human legacy of these lands, and in turn, will teach this history to others. The beauty of this land inspires our work to understand the tallgrass prairie and support conservation of this ecosystem. However, this inspiration also serves as a reminder of the Indigenous human history that has shaped the modern landscape, and the influence that our current actions will have on the prairie of the future.

<http://lter.konza.ksu.edu/konza-prairie-lter-land-and-name-acknowledgement>



Perspectives & Methodologies

- Understand scientific method and Indigenous perspective on prairie knowledge
- Consider humans' relationship with the Land in North America:
 - This was not "*Terra nullius*" (nobody's land) when Europeans arrived
- Establish a forward-thinking mindset, with an honest vision of the past and present



July 13: Plants...

- Naming of things: What is the dominant Flint Hills, KS grass called?
- Plant diversity, not monoculture, defines the prairie
- Many forbs help sustain people, such as *do* (“prairie potato”); *káʹje* (wild plum); mullein

Agenda:

13:30-13:35 Introduction / Review

13:35-13:50 Naming the grass of this region’s grassland...

13:50-14:00 Plant diversity is maintained by internal relationships; monoculture is different...

14:00-14:15 Three examples of not grasses (forbs) that are important: *do*, *káʹje*, and mullein...

14:15-14:30+ Questions...

What do we call the dominant grass in the Kansas prairie?





What is this grass named?



What is this grass named?

“Common” name(s)

Big bluestem...

Scientific name

Andropogon gerardii ...

Kaw name

maⁿhíⁿ ...



What is this grass named?

Scientific name

Andropogon gerardii ...

“Genus name comes from the Greek words *aner* or *andros* meaning man and *pogon* meaning beard in reference to the hairs on the spikelets of some species in the genus.

Specific epithet honors Louis Gerard (1733-1819), French physician and botanist.”

(from <https://www.missouribotanicalgarden.org>)



What is this grass named?

Kaw name

maⁿhíⁿ or *maⁿhíⁿtóho*

máⁿhiⁿ n. knife

máⁿhíⁿ n. grass

maⁿhíⁿtóho a blue grass

maⁿhíⁿego vi. green ♦ Lit. "like grass"

tóho vi. blue or bluish black; green

Kaw color terminology lumps blue and green together

all other "green" terms are variations of *tóho*,

except *maⁿhíⁿego* which is the first listed translation of "green"

Many types of *maⁿhíⁿ* ...

Also different types of *pézhe*: "sweet" grasses

(these are plants that smell good! may not all be grasses)



Some other names that came up in the discussion

bazó n. pokeberry

bazó egó vi. purple, lit. the color of pokeberries

Similarly, there is a specific word for “red” but not purple,
and *bazó egó* is the first listed translation for purple

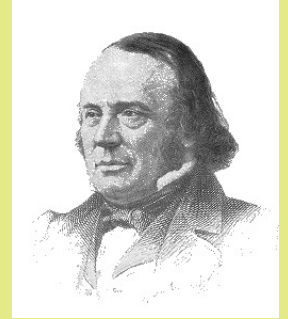
zhúje vi red

zhúje shábe vi purple ♦ Lit. "dark red"

shóje egó vi purple, lit. "smoke-like"



Scientific naming... what is the goal?



Louis Agassiz
1807-1873

Systematics = Taxonomy + Phylogeny

Indeed, when this practice began, scientists defined one “ideal” type of each organism and compared every real/imperfect example to that ideal

Agassiz defined a species as "a thought of God." As he wrote in his *Essay on Classification*:

- *The combination in time and space of all these thoughtful conceptions exhibits not only thought, it shows also premeditation, power, wisdom, greatness, prescience, omniscience, providence. In one word, all these facts in their natural connection proclaim aloud the One God, whom man may know, adore, and love; and Natural History must in good time become the analysis of the thoughts of the Creator of the Universe*

Scientific naming... what is the goal?

Systematics = Taxonomy + Phylogeny

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- *Naming: Taxonomy*

Names binned into hierarchical categories

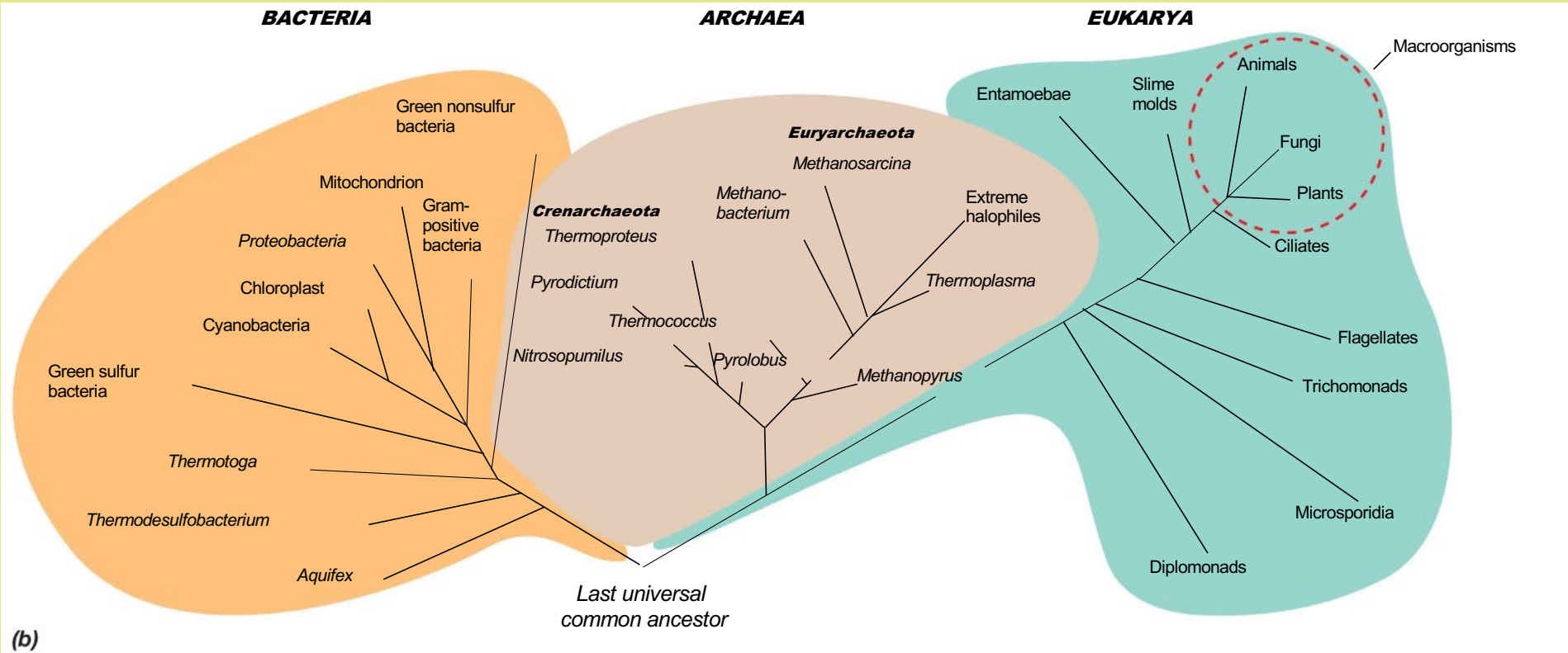
Domain > Kingdom > Phylum > Class > Order > Family > Genus > Species

Andropogon gerardii is the genus & species

- Understanding *evolutionary relatedness*: Phylogenetics...

All life is related, using the same genetic code and the same cell processes...

Phylogenetic tree of life... based on shared DNA




Of course, the grassland is not just grass...

| | Not burned or grazed | Grazed | Burned | Grazed & Burned |
|--|----------------------|-----------|-----------|-----------------|
| How many species of plants? (in a 50 m ² area) | 46 +/- 10 | 64 +/- 14 | 37 +/- 11 | 61 +/- 14 |



Of course, the grassland is not just
grass...

Where there are bison, there are more types of plants
the grazing relationship supports *diversity*



Of course, the prairie is a diverse polyculture of plants!

Diversity: What are these 60+ types of plants per 50 m²?

There's more than one type of grass, and also...

Forbs (flowering plants that are not grass)...

Three forbs to meet today:

do: the “prairie potato”

káⁿje: wild plum

Mullein

do: the “prairie potato”

Also

dopik'e Topeka (Kansas); lit. "good place to dig potatoes"
dóle n turnip, Indian turnip

Different from

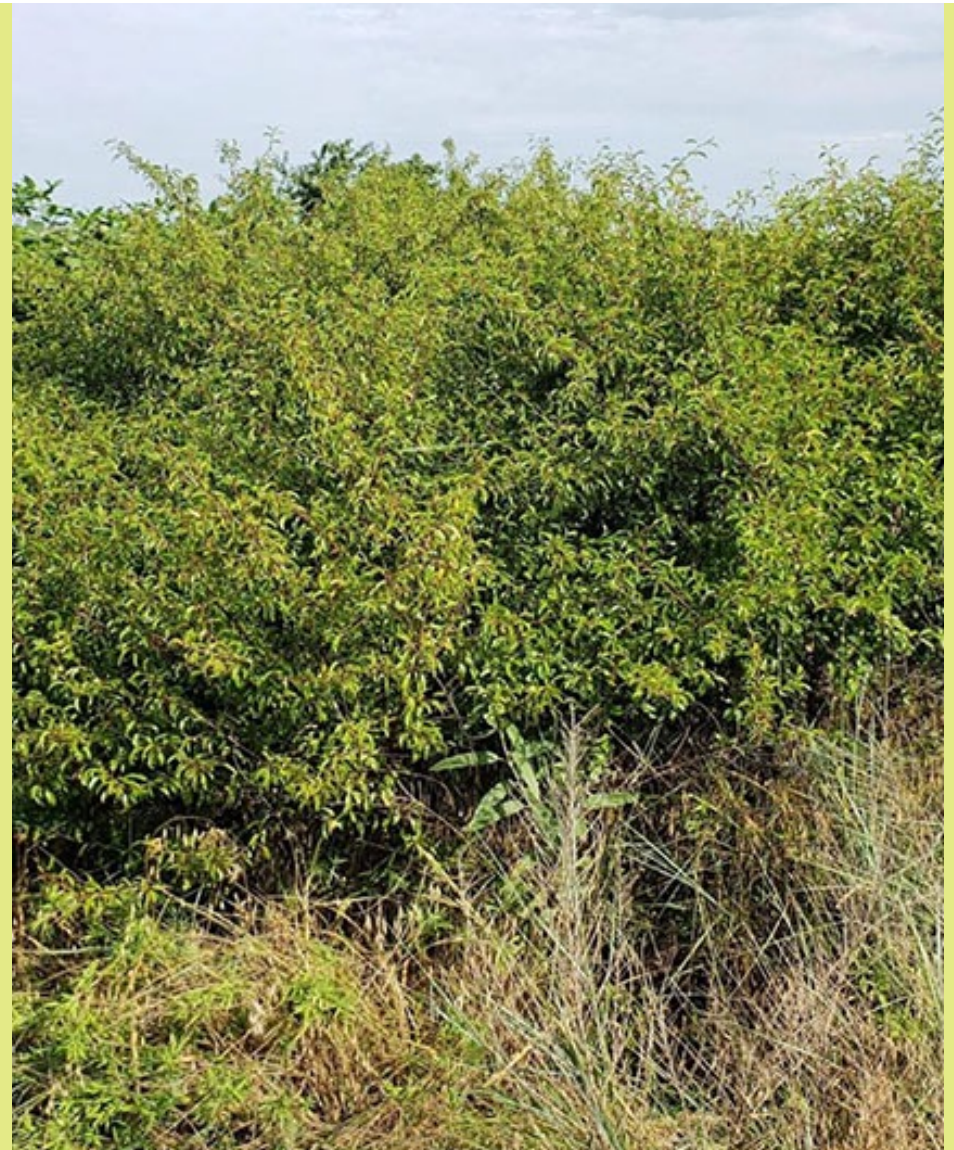
do ská n potato, commercial potato, "Irish" potato
dóle ghúje n radish
dóle zíhi n carrot



káⁿje: wild plum

káⁿje hu n plum tree


káⁿje ha shóga n thick skinned plum
(different from the *káⁿje*)



Mullein

No Kaw name on record –
European plant that was used medicinally





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