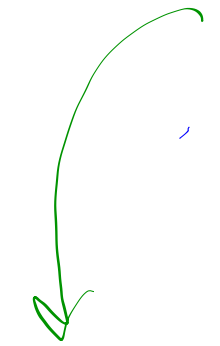


Reading a Scientific Paper:

- Expect not to understand everything^{*}
 - ^{*}If you can't figure it out, ignore it...
- You are reading & documenting for you
- Read, visualize & describe in writing
- Discuss/ask questions (each other/me)
- Approach the paper in terms of meaningful research
 - as if you were looking at something important to you
 - answer specific questions
- Skim the paper in search of relevant information

1. According to the evidence in this paper, how did Native Americans “manage” the Willamette Valley?

- Set prairie fires annually
- Created a prairie/open-woodlands complex



WHY?

What does
this accomplish?

↳ What is a prairie/
open-woodlands complex?

Ecology:

The study of interactions between organisms and their environment.

→ possibly historical

WITRB questions are the first step to seeing if there might be an interaction.

main questions:

1. Why are organisms found in certain locations?
2. Why are organisms found in certain abundance?

Why do we see the plants we see in the abundance that we see in the Willamette Valley?

Largely determined by historical factors...

2. How have European settlers and their descendents “managed” the Willamette Valley since the mid 1800’s?

- Livestock / crops

- Forestry system

- Reduced burning

What is this?

(confined burning to certain areas)

3. *In your own words* explain why firs now dominate many former prairies in the Willamette Valley.

- Firs continue vertical growth (grow
② taller than other plants) → "broadleaf trees"
- Lack of burning (succession
① doesn't "reset") — fire killed all plants — including baby firs!
- In the absence of burning,
③ Firs will eventually steal sunlight from other trees.

4. Why did prairie fires burn the grasses but not the oak trees?

Oak trees are "fire tolerant" they can withstand some fires

- Relatively cool, fast-burning fires — little large fuel (not many sticks, branches, logs)

• Thick bark (it burns, but tree doesn't)
Fires weren't all-inclusive — so oaks may have had a chance to grow.
Some oaks were in the valley prior to large-scale burning.

Other trees, like firs, weren't present when burning began.

5. Shantz and Zon characterized the native vegetation of the Willamette Valley as Douglas fir forest. However, it is clear that the dominant vegetation of the valley throughout recorded history has been prairies and grasslands. What did they mean by their characterization?

HYPOTHETICAL

It didn't exist then... but they predicted that over time (in the absence of fire) it would eventually appear.