**Western Juniper Encroachment Ecology East of the Cascades**

Oregon Field Guide, first 11 minutes: <https://watch.opb.org/video/oregon-field-guide-season-22-episode-4/>

Background: In this Madro-Tertiary derived environment, Western Juniper, bunchgrass, bitterbrush and sagebrush all are descendants of the old migration story from the Sierra Madre of Mexico. (and other plants too)

In general, what has happened to the Juniper population numbers in the past century?

How many Junipers were estimated to be the region in 1934?

How many Junipers were estimated to be the region in 2010?

Explain all of the causes of this change:

What plants do not grow under Junipers in the absence of fire?

What two things happen to soil where Junipers are allowed to dominate?

Effects on sage grouse:

How much water can a mature juniper use in the heat of summer per day?

What does the juniper do in the winter that its other competitors cannot? (John)

Describe briefly the OSU two watershed experiments basic question: (at ~4:55)

In what setting does a raindrop not soak into the ground?

Describe the “aha” of what is going on in the systems:

Describe changes in streamflow volume and changes in seasonality:

Next video, approx. 8 minutes

<https://www.youtube.com/watch?v=LrW-WyMp7ho>

What does this video add to our knowledge gained from the previous one, particularly about cultural history (how humans understand and manage the landscape)

…and the effects on animals both wild and domestic?

There is a follow-up video that is optional.