

TECHNICAL NOTES

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ABSTRACTED STATEMENTS ON WESTERN JUNIPER

The following statements about western juniper were prepared by Warren Peden, Area Range Conservationist, USDA, Soil Conservation Service, Red Bluff, California.

These will be useful to conservationists interested in the management of this species.

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Enclosure

ABSTRACTS ON WESTERN JUNIPER

1. Western juniper (Juniperus occidentalis Hook) is principally a native to Central Oregon, with some distribution extending east into Idaho, north into southeastern Washington, and south into California and Nevada. It lives nowhere else.
2. Two important speculations:
 - 1 - many stands are relatively young
 - 2 - the trees within them originated at about the same time
3. Many stands germinated in different years, but mostly falls between 1870 and 1910.
4. Western juniper occurs on soils derived from a broad variety of parent materials--igneous, sedimentary, and metamorphic in origin.
5. It occurs most commonly in association with big sagebrush, bluebunch wheatgrass and/or Idaho fescue.
6. Soil textures vary from sandy to clayey.
7. Most soils supporting juniper are in the mesic temperature class, however, some are in the frigid class.
8. Western juniper occurs on essentially all exposures and slopes.
9. Elevational occurrence extends from 1600 to 6500 feet.
10. Soils supporting juniper at high densities are usually Mollisols, Argixerolls, Haploxerolls, and Haplaquolls are common great groups. Soils supporting scattered juniper are often Aridisols, including Camborthids, Duragids, and Haplargids; however, Argixerolls are also common. Substantial acreages of Durixerolls, Cryoborolls, Torriorthents and Chromoxererts also support varied stands of juniper.
11. Protection from natural fires during the last 100 years has resulted in expansion of juniper into mountain big sagebrush communities downslope from climax juniper stands which provided a seed source.
12. Eckert (1957) noted Cusick tickweed (Hackelia cusikii) to exist only under juniper crowns. We have observed association of grass species such as Idaho fescue on one side of the crown perimeter but not on others.
13. The change from juniper zone to forest zone is traditionally marked by an intergrade between juniper and ponderosa pine.

14. Juniper seems to be a good competitor and is sensitive to underburning. Many ponderosa stands have been maintained by underburning.
15. In most cases, juniper habitat in central Oregon supports larger bird populations and more species than does ponderosa pine, lodgepole pine, or big sagebrush habitats.
16. The Western juniper community can be improved for wildlife by development of water impoundments, openings, and placement of bird nesting and roosting boxes.
17. Seedlings - its foliage may be used as food.
Saplings - it is often used by some species of birds as singing or perching tree and is occasionally used for nesting.
Young/Mature tree - berry crops, though not regular, are a substantial source of food for birds and mammals.
18. The structure of juniper trees is well suited to nesting of mourning doves.
19. Western junipers are not only strong competitors for soil moisture, but appear to utilize much of the winter accumulated soil moisture before herbaceous plant competition for soil moisture begins.
20. Predominant deer use occurred in juniper stands during weather stress and in open shrublands during less severe conditions.
21. Forage production on sites containing seral stands of juniper will continue to decline regardless of grazing management.
22. Juniper is no respecter of range condition.
23. Burkhardt and Tisdale also observed that there was better juniper seedling establishment on deep, less well-drained bottom sites but a higher growth rate on the upper slopes with well-drained soil.
24. Juniper competes for moisture and nutrients and, in effect, contributes to a more arid environment.
25. Oregon cattle ranchers indicate from 50% to 300% improvement in stocking rates from juniper removal alone.
26. OFTEN little or no forage increases are observed where juniper on rocky and shallow sites is controlled.

REFERENCES: Proceedings of the Western juniper Ecology and Management Workshop. Bend, Oregon, January 1979. And the Pacific Northwest Forest and Range Experiment Station, USDA, Forest Service, Portland, Oregon.