Whitlock, Cathy and Margaret A. Knox. "Prehistoric burning in the Pacific Northwest" in *Fire, Native peoples and the Natural Landscape*. Ed. Thomas R. Vale. Island Press, Washington DC: 2002. (Reviewed by Eleanor Gordon)

In the document, "Prehistoric burning in the Pacific Northwest" Cathy Whitlock and Margaret Knox address the question of to what extent early humans influenced or altered ecological processes and vegetation in the Pacific Northwest. This is discussed mainly by contrasting anthropogenic disturbance with climatic ecological change and consequential human land use patterns. The most highly debated issue is the amount of ecological alteration that is due to the use of fire by early humans. They address this topic by delving into a discussion of Native American activities as were recorded in settler accounts and by using archaeological evidence. They discuss the historical evidence of natural disturbance regimes versus evidence of human-set fires. In order to support the assertions made in this section, the paper outlines the historical climate and vegetation data and the methodology and scientific processes behind this data. For example, looking at dendrochronological and lake sediment data can reconstruct prehistoric records of fires. Whitlock and Knox cover in detail the climatic vegetation and human changes in the Pacific Northwest since the end of the last ice age. For example, between 11,000 and 7,800 years ago, so-called 'drought and disturbance' species were more common in the Willamette Valley because of the hotter, drier summers. Starting around 7800 years ago the climate became somewhat cooler and moister, diminishing the prairie land. Change in vegetation matter and aridity has a direct effect on the amount of land that is affected by fire and the frequency of naturally started fires. The human activity portion of the paper is introduced with various case study examples, including an in depth discussion of the Willamette Valley. This is comprised of records of prehistoric burning as well as Euro-American descriptions of burning and analysis of these primary documents. There are tables, maps and graphs throughout that serve to illustrate the fire frequency levels and changing vegetation. In the conclusion the topic is brought into discussions of fire ecology as debated at present and makes this paper relevant to many issues being discussed in Oregon recently.

Critique

Whitlock and Knox do an excellent job assessing this broad topic in a very concise yet detailed manner. Their research methods are clear and well defended, as is the logic in their arguments. This paper should serve as a good guide to historical climate change's effect on vegetation in the Willamette valley as well as details concerning the role of the Kalapuya people. They do a good job of presenting both sides of the anthropogenic fire debate by presenting many different researchers, and discussing the reasons why much of their data was skewed or biased. Their re-analysis of many of the primary documents, many of which are often overlooked or ignored in other papers, makes it even more pertinent. I found that the graph and map were especially helpful and a concise way to summarize some of the key information. The map is a summary of pre-settlement vegetation around 1850, and would be useful to compare to vegetation patterns at various future dates. This paper is necessary to consider when researching the history of the Willamette River valley and change in species composition due anthropogenic sources, both prehistoric and modern.

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