Spring Issue 2016

OREGON Fish&Wildlife JOURNAL

WHAT'S INSIDE...

My Voice... By Cristy Rein... 5

Four Of A Kind Lonesome Creek 2015...
By Mickey Bellman... 7

Why Do Forest Animals Live Where They Do?...
From Oregon Forest Resources Institute... 15

BLM Forest Planning... By Dr. Bob Zybach...17

Muzzel Loading Where It All Began... By Bill Palmroth...27

Accountability For Lack Of Forest Management ...
By Nicole de Leon... 39

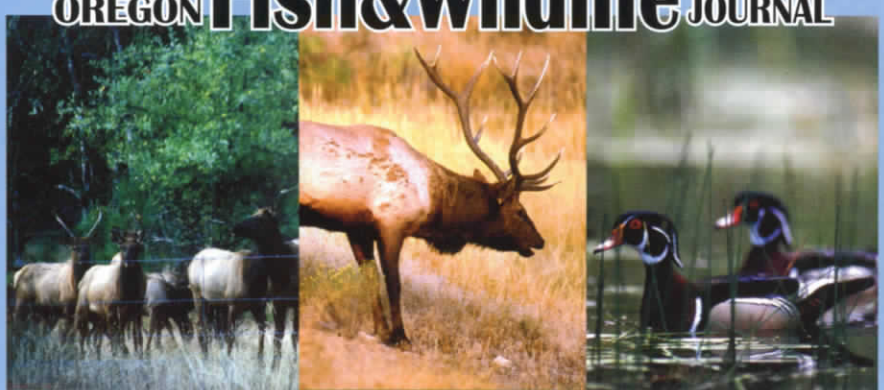
First Light: NRA Youth Hunter Education Challange...
By Jon Draper... 41

What!?... 45

The Final Hunt... By Mickey Bellman... 47

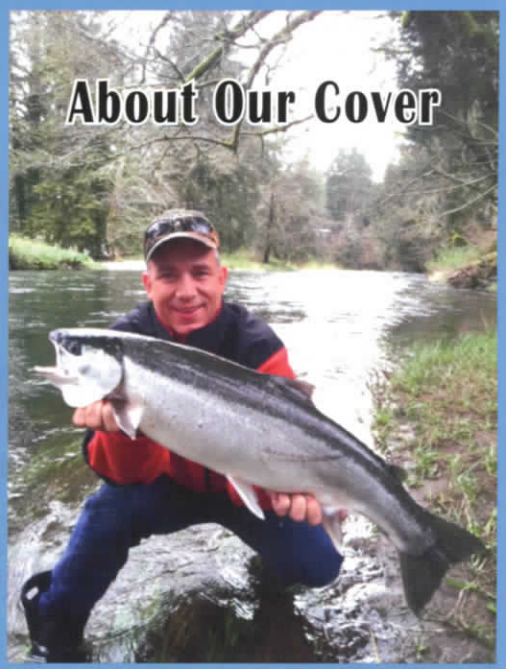
Spring Steelhead... By Jimmy Keitges... 51

Subscribe Today!
OREGON Fish&Wildlife JOURNAL



To Subscribe: Send a check or money order to, P.O. Box 1325, Clackamas, Oregon 97015
To use your VISA/Mastercard call 503-657-6962 or fax information to 503-657-3410
or email to, RZPublish@aol.com • www.OregonFishAndWildlifeJournal.com
One Year (4 issues) $24.95 • Two Years (8 issues) $46.50 • Four Years (16 issues) $83.95

OREGON Fish&Wildlife JOURNAL
Spring Issue 2016
Volume 38, Number 2



Jimmy Keitges of Portland, Oregon lands a nice steelhead! See page 51 for more.

PUBLISHER
EDITOR-IN-CHIEF
Cristy Rein
FORESTRY EDITOR
Mickey Bellman
OFFICE MANAGER
Nicole Howard de Leon
ADVERTISING SALES
Desiree Harris
CONTENT CONTRIBUTORS
Cristy Rein, Mickey Bellman, Oregon Forest Resources Institute, Dr. Bob Zybach, Bill Palmroth, Nicole de Leon, Jon Draper

We can be reached at (503) 657-6962
FAX (503) 657-3410 • P.O. Box 1325
Clackamas, Oregon 97015
email: RZPublish@aol.com
www.OregonFishAndWildlifeJournal.com

Oregon Fish & Wildlife Journal is published quarterly by R-Z Publishing, Inc. Unsolicited editorial contributions are welcome but should be accompanied by return postage. Editorial contributions will be handled with care; however, the Publisher assumes no responsibility for safety of artwork, manuscripts or photographs. Publisher is not liable for any claim based on contents of published advertising. Publisher is not liable for content supplied by contributing editors.

© Copyright 2016 Oregon Fish&Wildlife Journal

BLM Forest Planning:

Putting the Quotation Marks in "Scientific" Management

By Dr. Bob Zybach

Last August I received a request to review a 10-year old paper regarding Oregon Coast Range wildfire history – a topic that had also been the specific focus of my PhD research at Oregon State University a few years before the paper had been published.

The organization wanting the review was responding to the public comment period regarding the USDI Bureau of Land Management Draft Resource Management Plan/ Environmental Impact Statement for Western Oregon ("BLM Draft Plan") proposed planning alternatives to manage BLM forestlands in western Oregon. Because this is a government document that is partly being used to justify hundreds of government jobs and dozens of lawyers over the past several years, it is four volumes and 1,506 pages in size.

The Draft Plan could have seemingly been eight vol-

Structional Stage	BLM - Administered Lands		All Ownershiips	
	(Acres)	(Percentage)	(Acres)	(Percentage)
Non-Forest Habitat	91.752	4%	4,342,361	20%
Early-successional Habitat	46,249	2%	1,112,694	5%
Stand Establishment Habitat	388,767	17%	2,473,304	11%
Young Forest Habitat	622,916	28%	9,807,038	45%
Mature Forest Habitat	515,234	23%	2,431,709	11%
Structurally-complex Habitat	588,435	26%	1,578,370	7%
Totals	**2,253,442**	**100%**	**21,745,475**	**100%**

The 2008 RMP/EIS summarizes the average historical conditions of forest structural stages in Western Oregon from Nonaka and Spies (2005), which is incorporated here by reference (USDI BLM/EIS 2008, pp.211-212). The summarization of average historical conditions from the 2008 RMP/EIS combined the stand establishment and early-successionsl stages descibed in this Draft RMP/EIS into a single syage of "stand establishment," This characterization of everage historical conditions correlates to 5 percent stand establishment, 15 percent young, 25 percent mature and 55 percent structurally complex, respectively, and is displayed in Figures 3-161 and 3-162.

Table 3-248 and caption from page 684, Vol. 2 of the 2015 BLM Draft Forest Plan. Note that Nonaka and Spies (2005) are listed as sole authority for these 2013 catagories and percentages, and that the 2008 BLM Draft Plan is the sole reference cited for this use. Also note the "55 percent structurally-complex [habitat]" figure given as the "average historical condition."

umes excepting there are so many thousand RMPs, EISs, WSOs, HRVs, PDQs, etc., etc., to "shorten" and obfuscate the content it is difficult to figure out WTF is being talked about through most of it. Where is Plain English when it is needed most? When the government claims it is trying to directly communicate with its citizens? Volume 2 contains two full pages of listed acronyms and abbreviations that are larded throughout the entire compilation, the large majority seeming entirely unnecessary and confusing (at least to me).

Fortunately, I was only asked to specifically address pages 683-694 of Volume 2 of the BLM Draft Plan, which lists estimated conditions, ages and areas of early historical forestlands in the Coast Range based on their fire histories -- my particular area of expertise. Oddly, the BLM Draft relied on a single document to develop this information: a published "peer reviewed" OSU student paper based entirely on computerized "modeling" to generate its numbers for "average historical" tree ages, locations, and "habitat conditions" (see Table 3-248).

I have to admit being a little shocked at this development: the paper had significant shortcomings in both the research methods that were used and in the easily disproven and greatly exaggerated "outputs" of its model. To learn that BLM had been using this document for at least eight years as its sole source of determining "desired future conditions" of old-growth forests in the Coast Range plans was (and is) very concerning. Thus, my review largely focused on two questions:

1) What is the scientific and/or forest management value of the 2005 OSU paper regarding mathematical efforts to derive an "estimated average Historical Range of Variation (HRV)" for western Oregon forests?

2) Why is this single student modeling exercise the only apparent source of information used by BLM to describe precontact "fire history" and early historical forest conditions, abundance, stand ages and locations in the Oregon Coast Range?

Working Definitions Of "Historical," "HRV," and "Natural."

The OSU paper was published in Ecological Applications in 2005 under the title "Historical Range of Variability in Landscape Structure: A Simulation Study in Oregon, USA," and was apparently reviewed by a number of staff and other peers.

The word "historical" has two basic definitions in the English language: 1) the period of time that people have lived in a certain area; and 2) the period of time for an area beginning with the first reliable first-person records -- including written eyewitness accounts, maps, sketches, photographs and other recognized forms of acceptable documentation. Despite the presence of the word "historical" in the title to this study and throughout all of the arguments for and simulations of HRVs that form the basis for the paper, it is not used in either commonly accepted definition of the word nor is it defined any differently anywhere in the text. This critical word is simply used inaccurately and without explanation from beginning to end.

The so-called "HRV" stands for "Historical Range of Variation," but the actual historical record – which, by definition, can/must be documented and is not based on "estimates" or simplistic mathematical formulas – is hardly consulted at all in this exercise. Where are the historians, historical ecologists, geographers, cultural anthropologists, archaeologists and other actual experts in these topics of western Oregon forest and fire history? Where are Lewis and Clark, David Douglas, John Leiberg, William G. Morris, Henry P. Hansen, Carl Johannessen, Stephen Pyne?

Instead, the authors assert: "We defined HRV in this study as the variability in the amount and spatial characteristics of forests of various ages under the presettlement fire regime." Whatever that is.

The authors also defined HRV as an "estimate" of the historical range of "the variability (HRV) of forest landscape structure under natural disturbance regimes." Apparently their definition of "natural disturbance regimes" was limited to mechanical estimates of wildfire "return intervals" and does not include the thousands of years of daily and cumulative biological effects of stable, widespread Indian communities and human-caused fires from "presettlement" time -- and also seemingly excludes the effects of floods, windstorms, landslides, snowstorms, ice storms, earthquakes, droughts and tidal waves on coastal forests from their implied definition of "natural."

"Presettlement time."

Most archaeologists, anthropologists, historians, historical ecologists and many others believe people settled the Pacific Northwest more than 10,000 years ago and began using fire on a daily basis almost immediately. When the OSU authors refer to the Oregon Coast Range forests of "presettlement time" they are specifically referring to white occupation and settlement beginning in the early 1800s. Today the more accurate, and somewhat earlier, term of "precontact time" has come into common use.

Dr. Charles Kay and others have pointed out the underlying racist issues associated with this "presettlement" perspective of assuming precontact Indian people had only limited and occasional effects on the landscape they had successfully – and sustainably – managed and occupied for thousands of years. Unfortunately, this erroneous assumption – that precontact Indian populations were isolated and mostly inconsequential so far as "native habitat" is concerned -- is apparently shared by a large number of academic researchers, agency resource managers, and their peer reviewers.

The authors later refine their historical research period

to: "the 1000-year time period prior to the change that occurred after Euro-American settlement": presumably, then, from about 825 AD to about 1825 AD; no dates are actually given. Their rationale for selecting this time period -- which includes the entire Little Ice Age and the tragic decimation of western Oregon Indian families and communities from circa 1500 through 1825 via foreign diseases -- was "because the fire regime and vegetation composition were relatively stable over that time period." No real evidence is given to support this "fact" – the authors even admit as much, stating that their "choice of a reference period is, however, somewhat arbitrary, given the fact that fire regimes changed as climate and vegetation changed in the past . . ."

The bottom line then is that the number "1000 years" was selected arbitrarily and without much research, and for purposes of containing some kind of theoretical, presumably stable, and predetermined "fire regime" in order to mathematically estimate the "average history" for the forests of the Oregon Coast Range. This is not science. It is probably not even very good modeling.

Wildfires vs. People.

The entire OSU paper is tied to the stated assumption that periodic "large-scale wildfire" was the "most important disturbance" for at least 1,000 years (ca. 825 – ca. 1825) in Oregon Coast Range forests. Further, the authors also state that "the fire regime was relatively stable" during those years -- but there is no citation for this claim. Both of those statements are provably false. Most historical research demonstrates that people were the "most important disturbance" during that time period, and that there is no way to accurately demonstrate a "relatively stable [wild] fire regime" during those years. It's just made up "facts."

In response to this historical reality, the authors claim: "Fires were set by Native Americans in the coastal valleys and adjacent Willamette Valley for agriculture and hunting . . . some of these fires may have occasionally burned into

Eyewitness drawing of a Kalapuyan man in 1841 along the eastern foothills of the Oregon Coast Range. Every year Kalapuyans set tens of thousand of acres on fire throughout much of the eastern Coast Range and other tribes to the south and west set tens of thousands of acres more on fire during that same time of year. Note the few younger Douglas Fir trees in the background and their lack of lower limbs.

the coastal foothills, but the evidence for this is not strong . . ." Actually, the evidence is overwhelming and even a marginal literature review should have been adequate to demonstrate this point. The 1841 drawing of a Kalapuyan and a detailed description of the local vegetation on that day is one excellent example.

For thousands of years and hundreds of generations, Oregon Coast Range families used fire every day; constantly gathered and stored firewood ("dead trees and large woody debris") in order to cook and to provide heat and light when needed; and seasonally burned patches of vegetation and broadcast burned millions of acres of oak savannah, tarweed, bracken fern, huckleberries, beargrass, and other desired food and fiber plants every year. This is not the invented "fire regime" imagined by OSU modelers; rather, it is the documented long-term use of purposeful fire in the environment, with predictable and observable results.

Computerized Modeling vs. Traditional Scientific Methods.

If the OSU researchers didn't use actual documentation to support their claims of historical accuracy, how then did they determine actual forest conditions 500 and a thousand years ago? According to the authors [italics mine]:

"Historical landscapes were simulated by using the Landscape Age-Class Dynamics Simulator (LADS), ver. 3.1 . . . LADS is a spatially explicit, stochastic cellular-automata model designed to simulate forest landscapes dynamics under fire regimes specified by the user. We applied this model to ask how forest age composition and spatial pattern in the Oregon Coast Range landscape varied historically."

The fact that LADS is a 13-year-old mostly untested computer model being used by a single graduate student and her professor and that has never gained general use or acceptance by anyone since is telling. The fact that LADS was fully intended to be manipulated in terms of "estimated fire regimes" as "specified by the user" is even more telling. The gobbledygook description of the model's base attributes is another strong indication of the near complete lack of substance in taking this digital short cut to actual scientific historical research.

Scientific research methods have traditionally involved observation, hypothesis, documentation, organization, analysis, prediction, experimentation, and replication as important steps in advancing knowledge. As clearly stated throughout the OSU paper, mathematical HRV modeling only attempts to approximates these standards via averages and estimates, and even then with an unnecessary lack of "available data" and by arbitrarily choosing from competing – and similarly unproven -- methods presenting "a wide variety of approaches."

The results of using a "not well established methodology," "insufficient data," and "estimations" to approximate historical events and conditions in order to "quantitatively estimate" an "average HRV" is not a formula for success. It is an admittedly compromised modeling formula, similar to those used by "Sims" computer gamers, not a scientific method. The "lack of available data" excuse does not work when abundant amounts of such data can be readily obtained at a library or via traditional scientific research methods.

BLM Forest Management Implications.

In the portion of their paper dedicated to forest management implications of their estimated averages of supposed historical events and conditions – which should be of most interest to BLM planners – the authors make a series of apparently worrisome assertions [italics mine]:

"This study confirms the findings of previous work that several components of the current forest landscape structure are outside the HRV that probably occurred in the pre-European landscape . . . It goes beyond the previous work to demonstrate that additional characteristics of the landscape, such as current amounts of very old forest (>450 years old) . . . also lie outside the HRV."

Apparently, anything lying "outside the HRV" is perceived to be a problem for some reason. Evidence indicates otherwise. Here is an example of what estimated "historical averages" using a rudimentary computerized simulation model for 200 claimed iterations actually yields [italics mine]:

"Third, the oldest old-forest age class, 450-800 years and >800 years, which are largely absent from the Coast Range today, probably occupied a significant portion of this landscape under the HRV. Without a long-term commitment to growing old growth, this structurally distinctive stage of old growth will not occur."

Not only will this "structurally distinctive stage of old growth not occur" -- even with a "long-term commitment to growing [it]" – it does not even exist, has not existed during historical time (the last 250 years), nor did it likely ever exist during the past 1,000 years. These numbers aren't "estimated" at all – they are completely fabricated. Why that is so would be interesting to know.

Table 3-248 indicates how this happened. The six "structural stages" of "habitat" directly correspond to a table of forest age classes in the OSU paper. "Structurally-complex Habitat" -- which was claimed to "average" more than half (55%) of the coastal forestland for 1,000 years during precontact time – is a combination of three listed age classes: "early old growth" (201-450 years of age); "mid-old growth" (451-800 years); and "late old growth" (>800 years).

If this "structurally complex habitat" condition had ever really taken place even once during the study period – 55% or no -- there would be significant evidence remaining to this day. Instead, there is no evidence of a single Coast Range tree ever achieving even 600 years of age, much less half the landscape being covered with

old-growth trees typically more than 800 years of age. Corresponding descriptions of the various age classes of "habitat" are likewise invented and meaningless.

The use of "average" to describe historical conditions is even more confounding. Coast Range forests are subjected to "stand replacement events" in which most or all of a stand of trees is destroyed in a fire, windstorm, flood, etc. Under such conditions a large forested area may go from an average of 100 year old trees to an average of 0 years in the space of a few hours or days. The "average" age of the trees would then be 50, even though this circumstance only occurred once (1% of the time) during the previous century. If you have one foot in boiling water and the other in a block of ice your "average" temperature might be quite comfortable. Is that a desirable management objective? Even if it were possible?

For more than eight years BLM planners have been relying on an invented mythical and mathematical past in which people were isolated and inconsequential components of the environment, trees typically lived to be more that 600 or 800 years of age and routinely existed over most of the landscape, and in which clockwork wildfire events ("fire return intervals") were said to have had the greatest influence on forest vegetation patterns for more than 1,000 years prior to white settlement. And for some reason this falsified past is being used as an ideal that forest managers should strive to achieve. Because it is "habitat."

Recommendations

The current use by resource planners and managers of such a limited, flawed and outdated computer model is unacceptable, particularly for long-term public forest management purposes, and should be discontinued.

The current approach by BLM of determining an "average historical" condition based on a computer simulations should also be reasonably abandoned and replaced by one that relies on actual historical data. BLM would develop far more realistic forest management options if it relied on factual and more reasonable information when developing its proposed forest management plans.

The future management implication is, of course, that BLM should be far more selective in determining their sources of scientific information -- and should also include a much wider range of expertise during data selection and review processes.

Old-growth Douglas Fir tree and Wayne Giesy in Alsea, Oregon, 2003. Age of tree is approximately 200-350 years. No tree of this species is known to have become 550 years of age in the Coast Range.