

Socio-ecological Patterns and Processes in the Blue Mountains Ecoregion of the Pacific Northwest – *a MtnSEON Working Group*



Mary Rowland, USDA Forest Service, PNW Research Station
Blue Mts. Research Forum, 5 March 2015, Portland, OR



Genesis of the Working Group

- Starkey Project meeting held in December 2013 with OSU and others to address long-term funding needs for Starkey and leveraging Starkey data for research across Blue Mountains
- Became aware of MtnSEON and potential for Starkey research to tie into this endeavor

Blue Mtns. Working Group Objectives

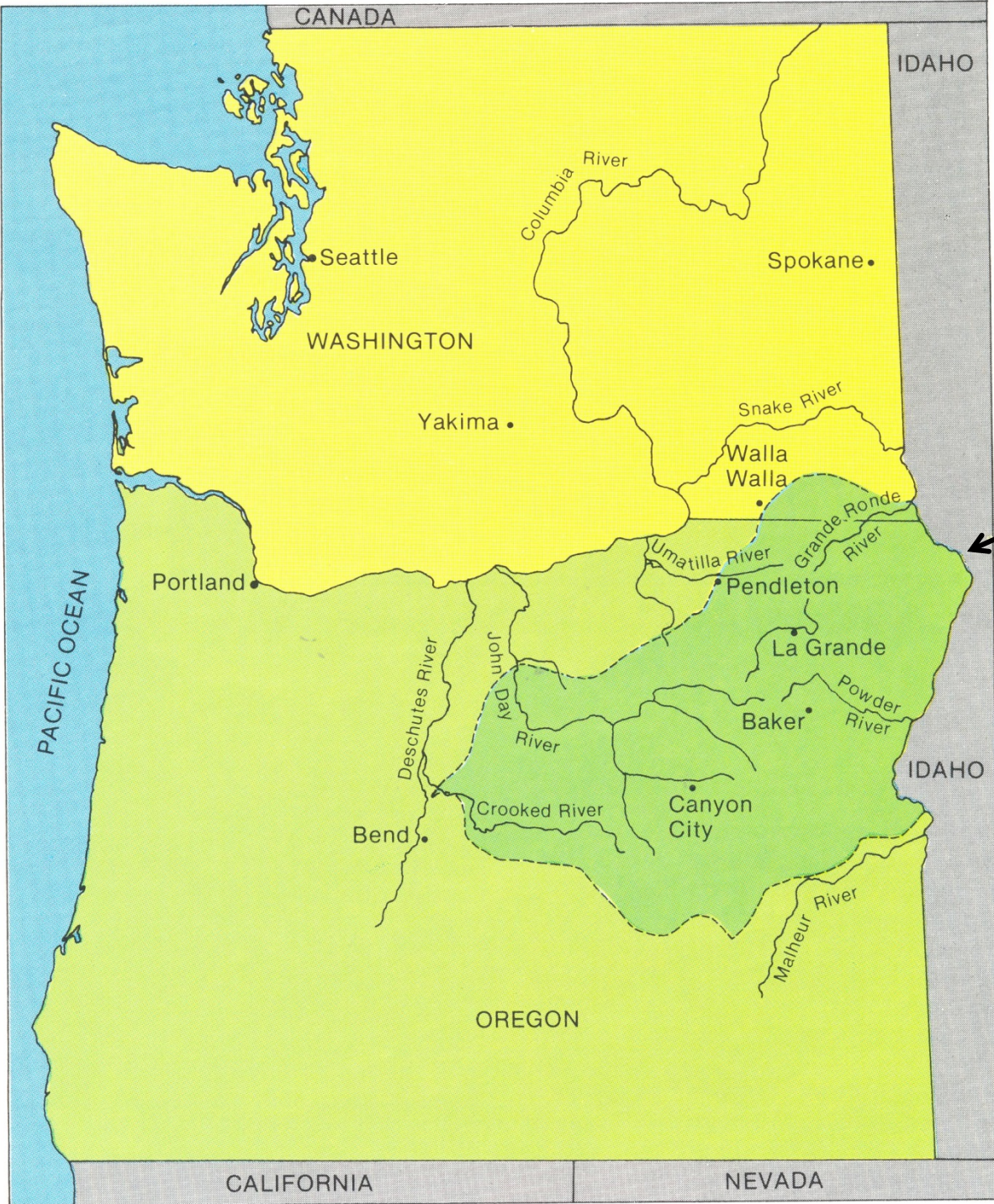
- Build upon and expand research opportunities in the Blue Mountains Ecoregion of eastern Oregon and Washington
- Capitalize on the long-term ecological data available from the Blue Mountains national forests, Starkey Project, and other sources
- Use socio-economic information about local, natural resource-based communities from ongoing and new research

Working Group Members

- **TAAL LEVI**, *Oregon State University (co-chair)*
- **SUSAN CHARNLEY**, *USDA Forest Service, Pacific Northwest Research Station (co-chair)*
- **MARY ROWLAND**, *USDA Forest Service, Pacific Northwest Research Station (co-chair)*
- **MICHAEL WISDOM**, USDA Forest Service, Pacific Northwest Research Station
- **BEA VAN HORNE**, USDA Forest Service, Pacific Northwest Research Station
- **HANNAH GOSNELL**, Oregon State University
- **JAMES GOSZ**, University of Idaho
- **LILIAN NA'IA ALESSA**, University of Idaho, Director, Alaska Experimental Program to Stimulate Competitive Research (EPSCoR)
- **PAUL DOESCHER**, Oregon State University
- **DAN EDGE**, Oregon State University
- **SHILOH SUNDSTROM**, Oregon State University
- **STEVE TESCH**, Oregon State University
- **KENDRA WENDEL**, USDA Forest Service, Pacific Northwest Research Station

Other MtnSEON Working Groups

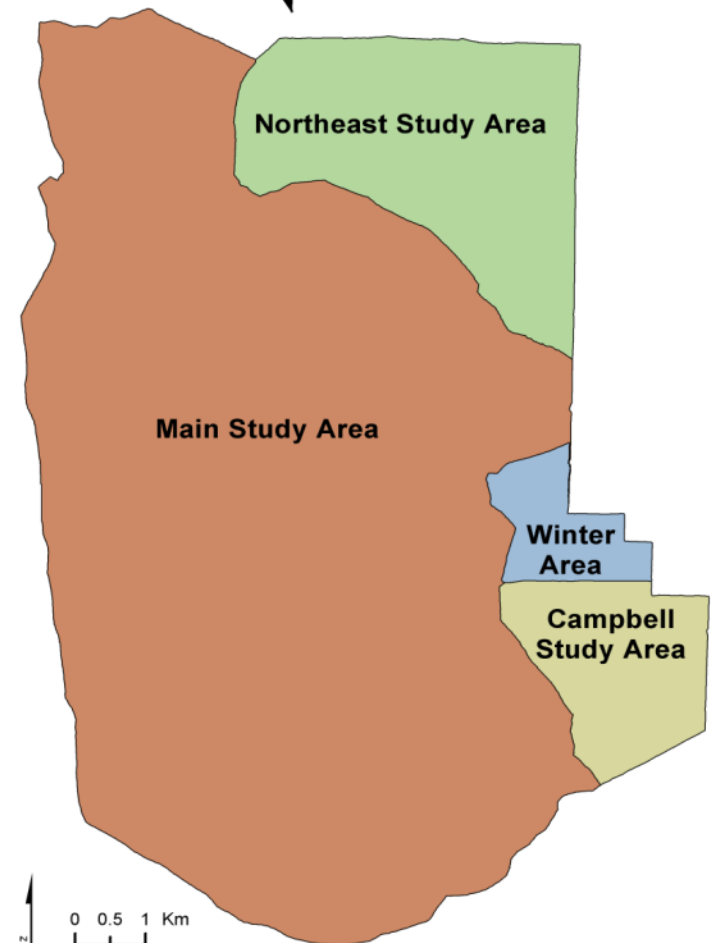
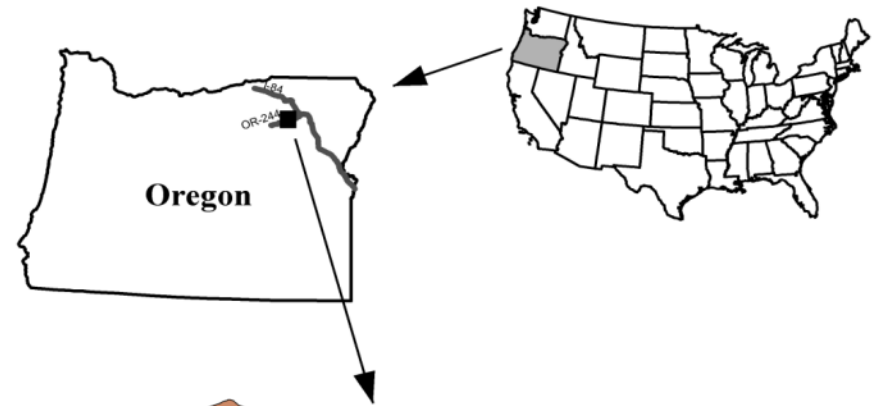
- Bark beetle disturbance and social perspectives on outbreaks
- Large carnivore conflicts in mountain valley systems of the western US
- Patterns and processes of *Venttenata* invasion in complex mountain landscapes
- Governance – role of science in decision-making
- MtnSEON website:
<http://webpages.uidaho.edu/mtnseon/index.htm>
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Blue Mountains
Ecoregion

Starkey Experimental Forest and Range (Starkey)

- EFR established 1940
- Starkey Project: 1989



Starkey EFR

- Site of long-term studies of ungulates and other natural resources

- Starkey Project focus on effects of human activities (e.g., hunting, recreation), land uses (e.g., grazing, timber harvest), and disturbance regimes (e.g., fire, invasive spp.) common to public and private lands in the western U.S.



Starkey Project Goals

- To measure the habitat, behavioral, nutritional, energetic, and population responses of elk, mule deer, and cattle to managed forests and rangelands at landscape scales at which management occurs.
- To understand the role of ungulates in ecosystem processes and as “drivers” of ecosystem change.


Starkey Project Goals, cont.

To measure biologically significant responses and effects with studies that focus on disturbance ecology:

- Silviculture and timber management
- Fire and fuels
- Livestock grazing
- Wild ungulate herbivory
- Hunting, other recreation
- Roads and traffic
- Insect pests
- Vegetation dynamics
- Non-native plants



Unique assets of Starkey

- Ungulate-proof fence  manipulative experiments
- Automated radio-telemetry system
- Network of traffic counters
- Extensive environmental data systems
- Hunter management and telemetry tracking
- Winter feeding and animal handling facility
- Tractable (“tame”) elk, mule deer, and cattle
- Long-term, comprehensive climate monitoring with 2 permanent weather stations

Main Data Categories

- Telemetry data (elk, deer, cattle, and some human)
- Climate records
 - Temperature, precipitation, air quality, and acid rain data
- Animal handling records
 - Age, weight, disease testing, body condition...
- Other spatial data
 - vector base layers (roads, fences, vegetation...)
 - raster base layers (elevation, viewsheds, modeled layers...)
- Aerial photos/Satellite imagery
- Traffic records
- Study specific data
 - vegetation plots, recreation study, hunter/ATV study, energetics, production...

Short-term Goals of Blue Mtns WG



- Conduct 3 workshops
- *First* – elicit stakeholder input on key research topics and associated questions (La Grande, 27 January)

Short-term Goals of Blue Mtns WG



- *Second* – bring regional stakeholders together to build on topics and research questions identified in La Grande (Portland, March 4)
- *Third* – bring scientists together to brainstorm and focus on a few key questions based on stakeholder input (Portland, March 5-6)

Long-term Goals of Blue Mts WG

- Continue collaboration with scientists after the workshops to develop research proposals for selected topics
- Engage managers, students, and tribal members in the working group
- Keep interested stakeholders informed



Anticipated Products

- Expanded working group of scientists and managers to address Blue Mtns topics
- One or more research proposals to National Science Foundation and/or other funding agencies
- Guiding document to describe new lines of socio-ecological research in this ecoregion, building on existing Starkey and other Blue Mtns data sets

Next Steps

- ✓ Summarize input from La Grande Stakeholder Forum
- ✓ Present this summary to regional stakeholders and scientists at March meeting in Portland
- Create groups of scientists, guided by stakeholder priorities, to develop proposals
- Network with other MtnSEON working groups as needed

Thank you -

