

Dry Forest Wildlife Habitat: Objectives & Tradeoffs



Kim Mellen-McLean
Regional Wildlife Ecologist
USFS – Region 6
Portland, Oregon

Wildlife Associated w/ Old Forest, Ponderosa Pine Cover Types

Family 1, Group 1 – Wisdom et al. 2000



Pygmy
nuthatch



White-breasted nuthatch



White-headed woodpecker

Other Wildlife Associated with Old Ponderosa Pine Forests



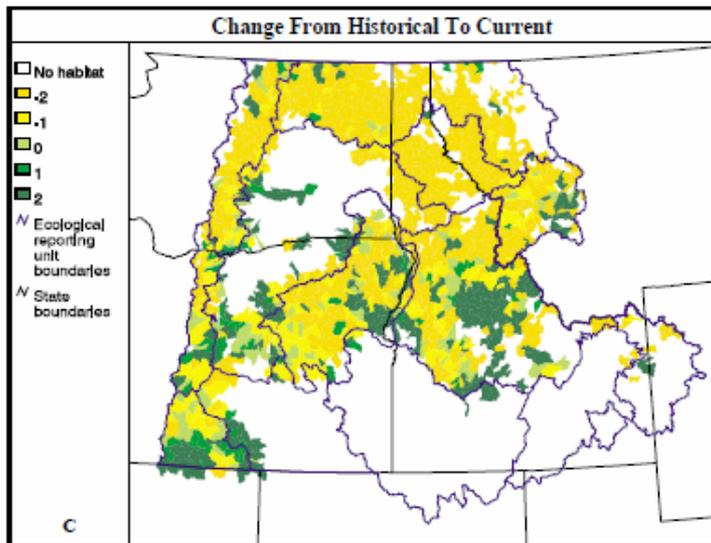
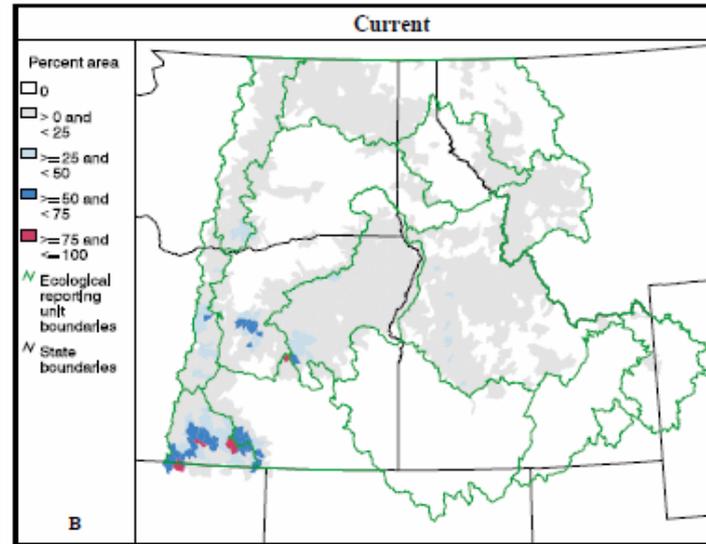
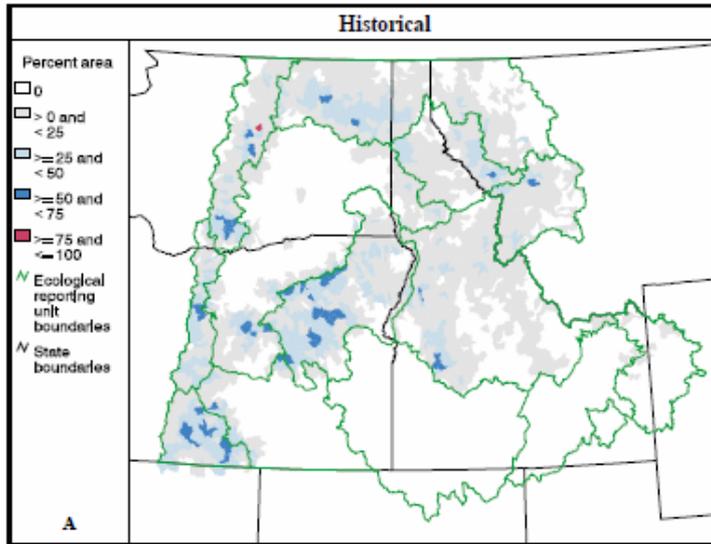
Lewis woodpecker



Flammulated owl

Wisdom et al. 2000 – Source Habitats

Group 1



Change from Historical

Northern Cascades 89% decline

Southern Cascades 66% decline

Upper Klamath 13% increase

Basin-wide 81% decline

White-headed woodpecker

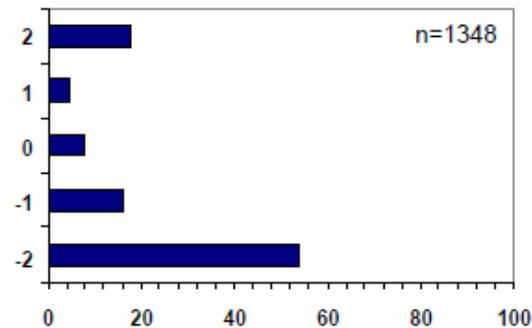
Pygmy nuthatch

White-breasted nuthatch

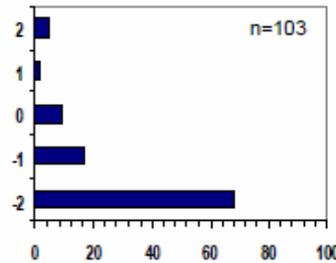
Wisdom et al. 2000 – Source Habitats

Group 1

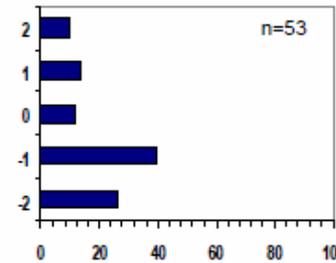
Interior Columbia Basin



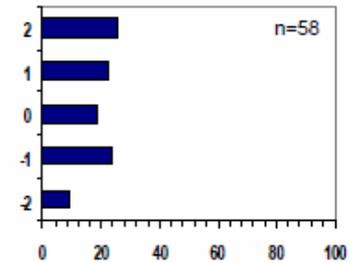
Northern Cascades-1



Southern Cascades-2

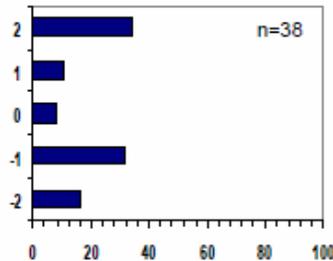


Upper Klamath-3

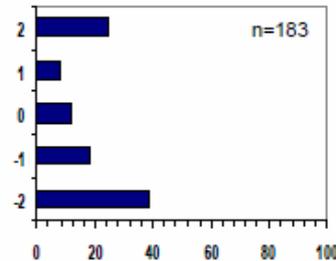


-- Trend categories --

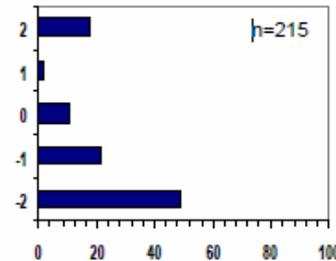
Northern Great Basin-4



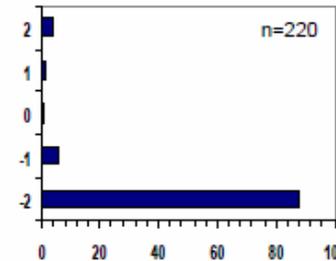
Columbia Plateau-5



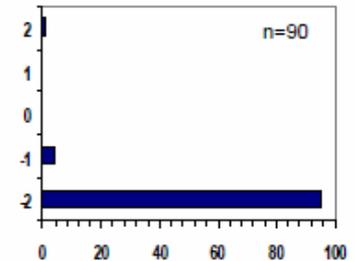
Blue Mountains-6



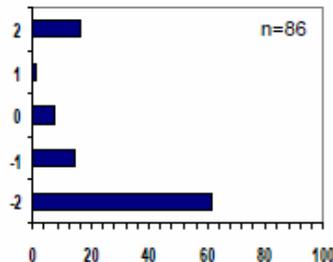
Northern Glaciated Mts.-7



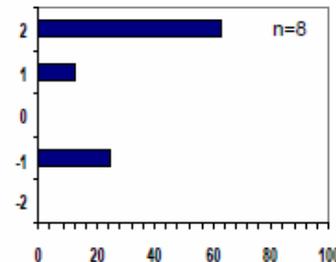
Lower Clark Fork-8



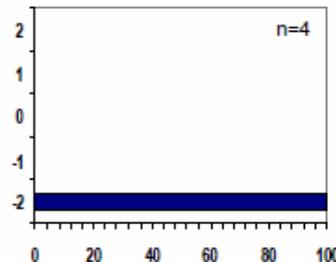
Upper Clark Fork-9



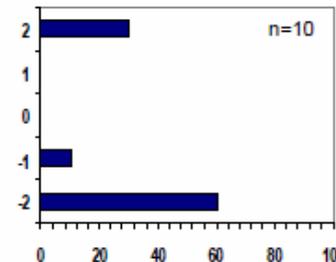
Owyhee Uplands-10



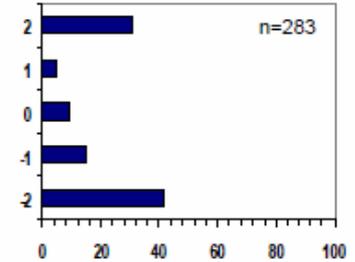
Upper Snake-11



Snake Headwaters-12



Central Idaho Mountains-13



-- Percentage of watersheds --

Conservation Strategy for Landbirds - East-Slope Cascade Mountains, Oregon and Washington

Partners in Flight - Altman 2000

Priority Habitat: Ponderosa Pine – 85 native landbird species

Focal Species

**white-headed woodpecker
pygmy nuthatch**

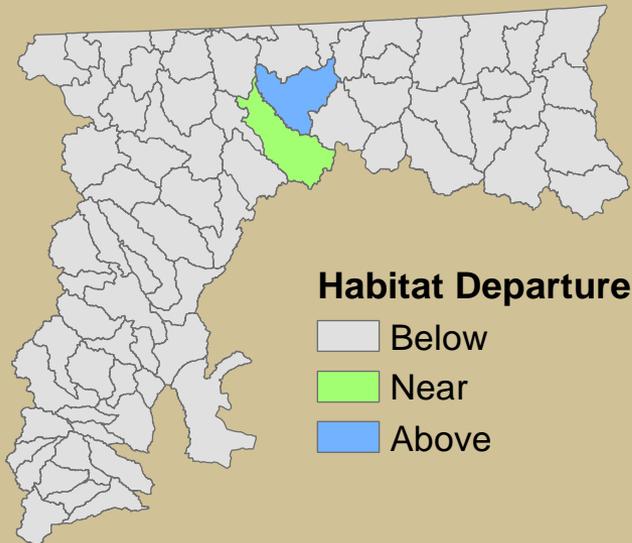
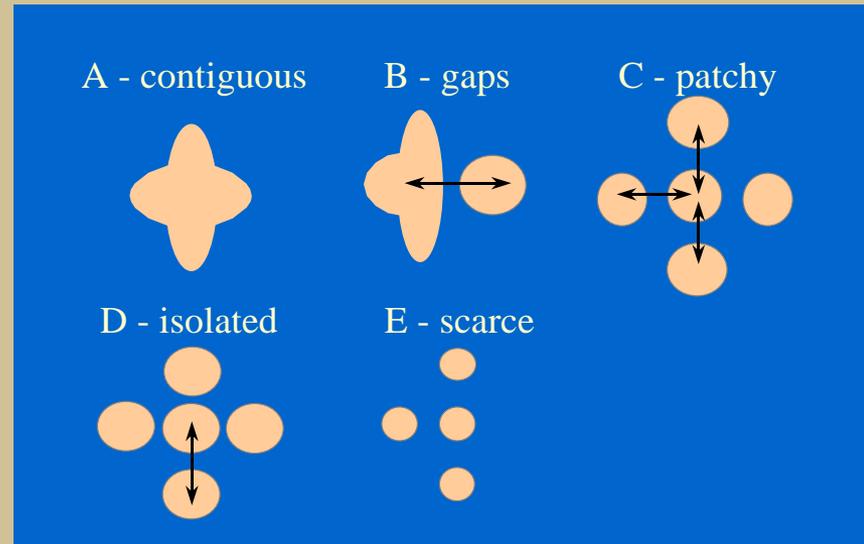
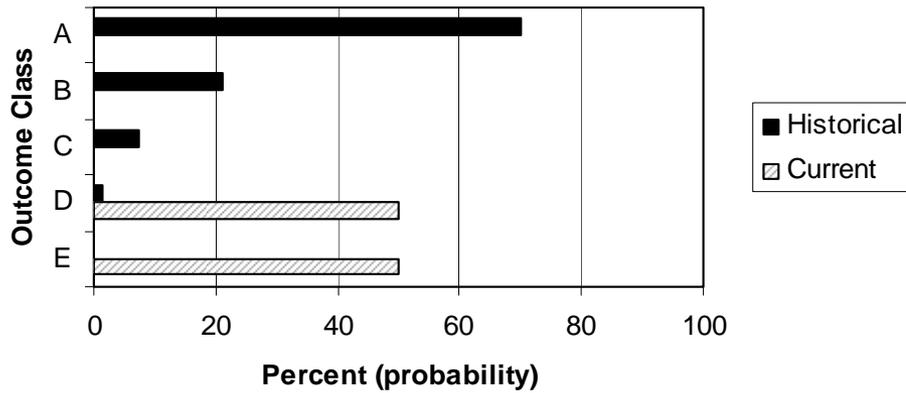
Habitat Attribute

**old forest-large patches
large trees**

- Old Ponderosa Pine forests have undergone the most widespread and strongest declines of habitat types in the Interior Columbia Basin.
- Bird species associated with Ponderosa Pine forest have suffered the greatest population declines and range retractions in the planning unit (east-slope Cascades).
- The desired condition in Ponderosa Pine forest is a large tree, single-layered canopy with an open, understory dominated by herbaceous cover with scattered shrub cover and pine regeneration.

Northeast Washington Forest Plan Revision Analysis Results

White-headed Woodpecker



Causes of Decline: Late-seral, single-story, Ponderosa Pine Forests

Timber harvest:

- Loss of large ponderosa pine trees and snags
- Replaced late-seral forests with mid-seral forests

Fire exclusion:

- Shift to more shade-tolerant species - Douglas-fir and white/grand fir
- Shift to multi-storied, dense stands
- High risk of loss of remaining ponderosa pine overstories from stand-replacing fires due to high fuel loads in densely stocked understories

Other factors effecting associated wildlife

- Increased road density results in increased loss of snags
- Disease – loss of white pine and sugar pine – alternate food for white-headed woodpeckers
- Increase in shrub cover and down wood cover increases nest predation
- Ecological traps?



Small mammals are nest predators



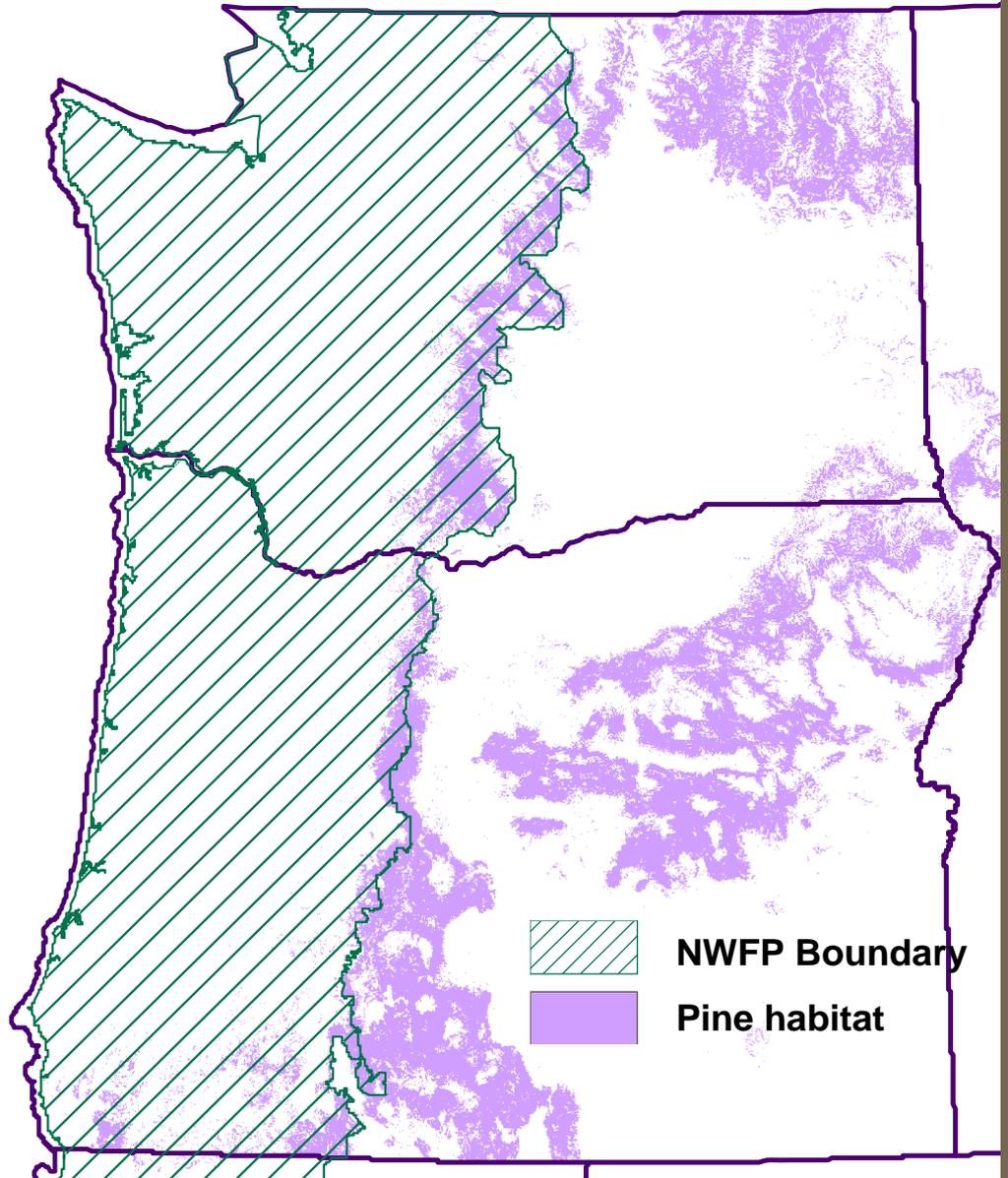
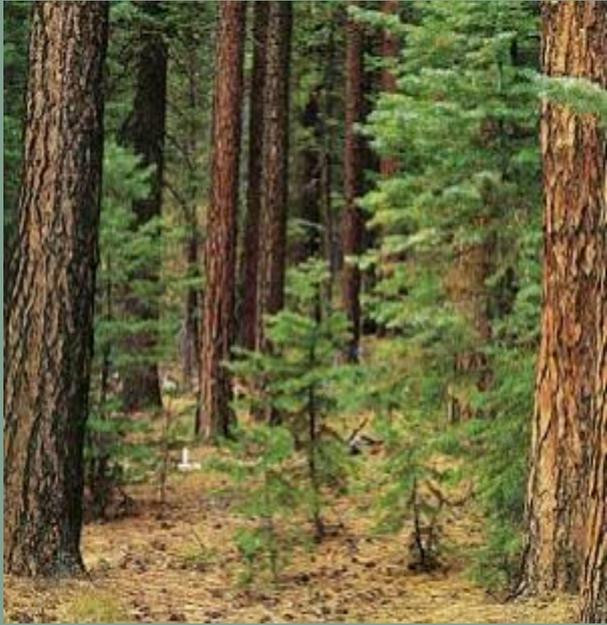
Golden mantled ground squirrel survival and densities were higher in areas with higher down wood volume

**Central Oregon study
by
Troy Smith**

Yellow-pine chipmunk density increased with increases in total shrub and live Bitterbrush cover



Pine Habitat within NWFP Area





Tradeoffs

Maintain habitat outside
“natural” conditions

Restore natural processes

SPOW habitat or WHWO
habitat?

How much?

Where on the landscape?



