



Pacific Northwest Research Station  
USDA Forest Service



# Wildlife Ecology Group

**OSU**  
Oregon State  
UNIVERSITY



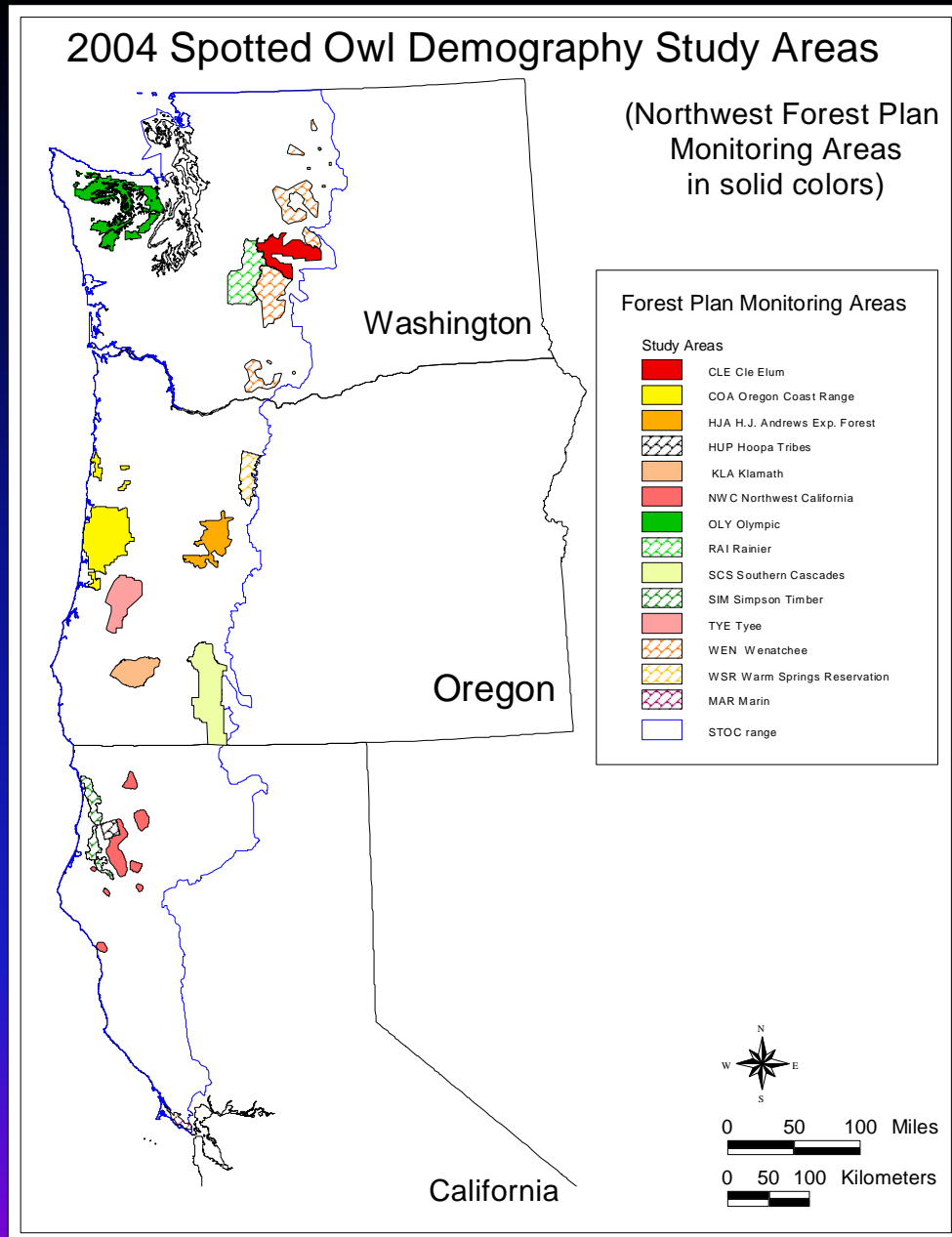


# Northwest Forest Plan (NWFP): 8 monitoring areas

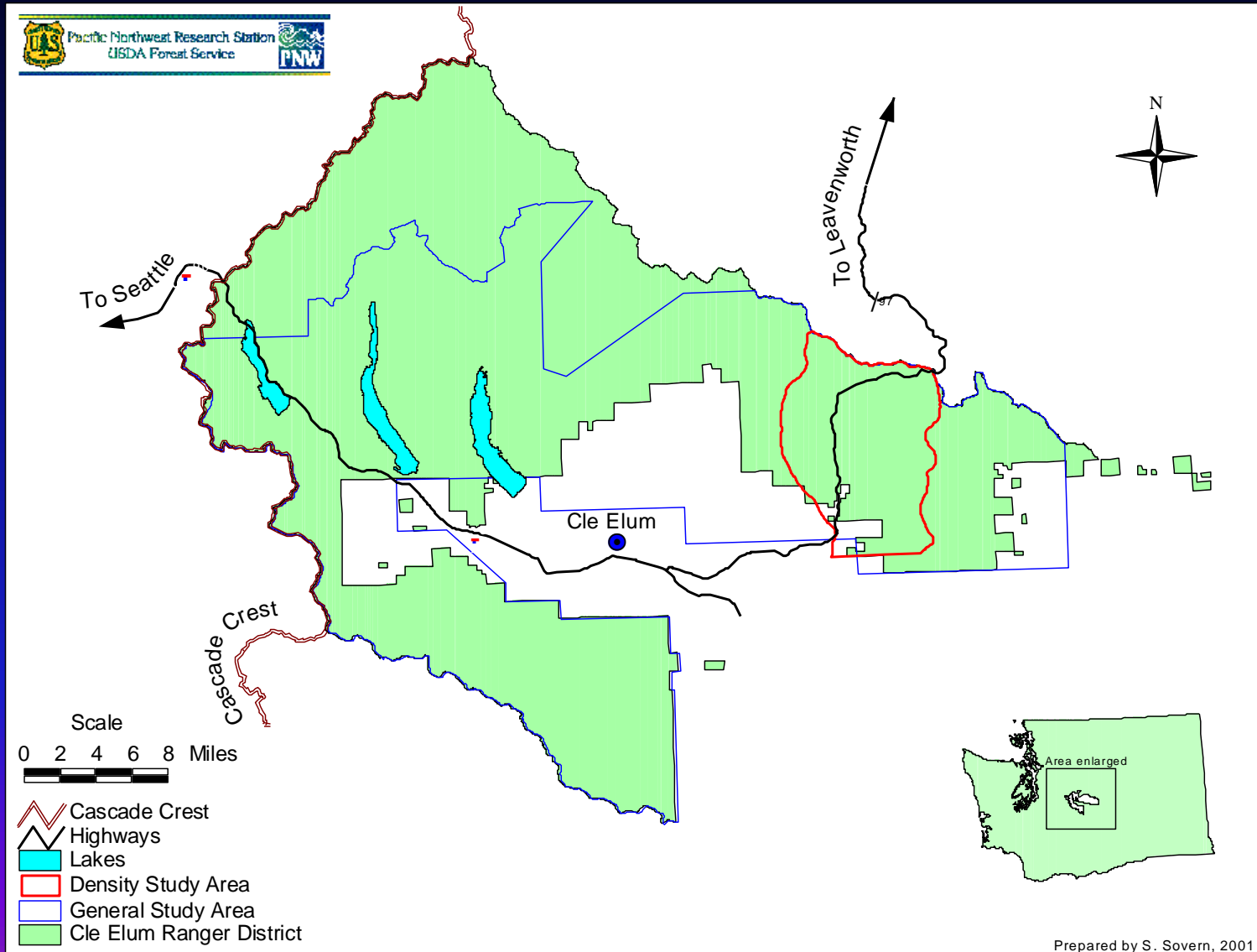
Meta-analyses:

2004 --14 study areas

2009 --11 study areas



# Cle Elum Study Area/Cle Elum Ranger District:



**Because of the mixed ownership on the Cle Elum Study Area, we have cooperated with the following landowners/contractors:**



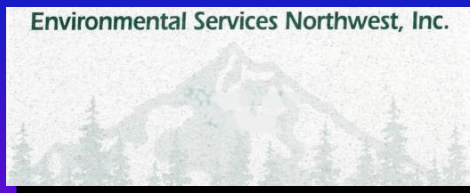
**Plum Creek Timber Company**



**Raedeke Associates**  
contractors



**American Forest Resources**  
**/ Boise Cascade Corp.**



**Environmental Services Northwest**  
contractors



**Washington State DNR**

# Methods for demography studies on the Cle Elum Study Area

## □ Two levels of survey effort:

### □ *General Study Area*

- Return to historic owl territories each year
- Determine territory occupancy
  - Multiple (3) visits to each territory
- Band new adults and all juveniles
- Determine reproduction

### □ *Density Study Area*

- General study area survey plus:
- Attempt a total population count by surveying the complete area 3 times/year

# Adult spotted owls with color bands

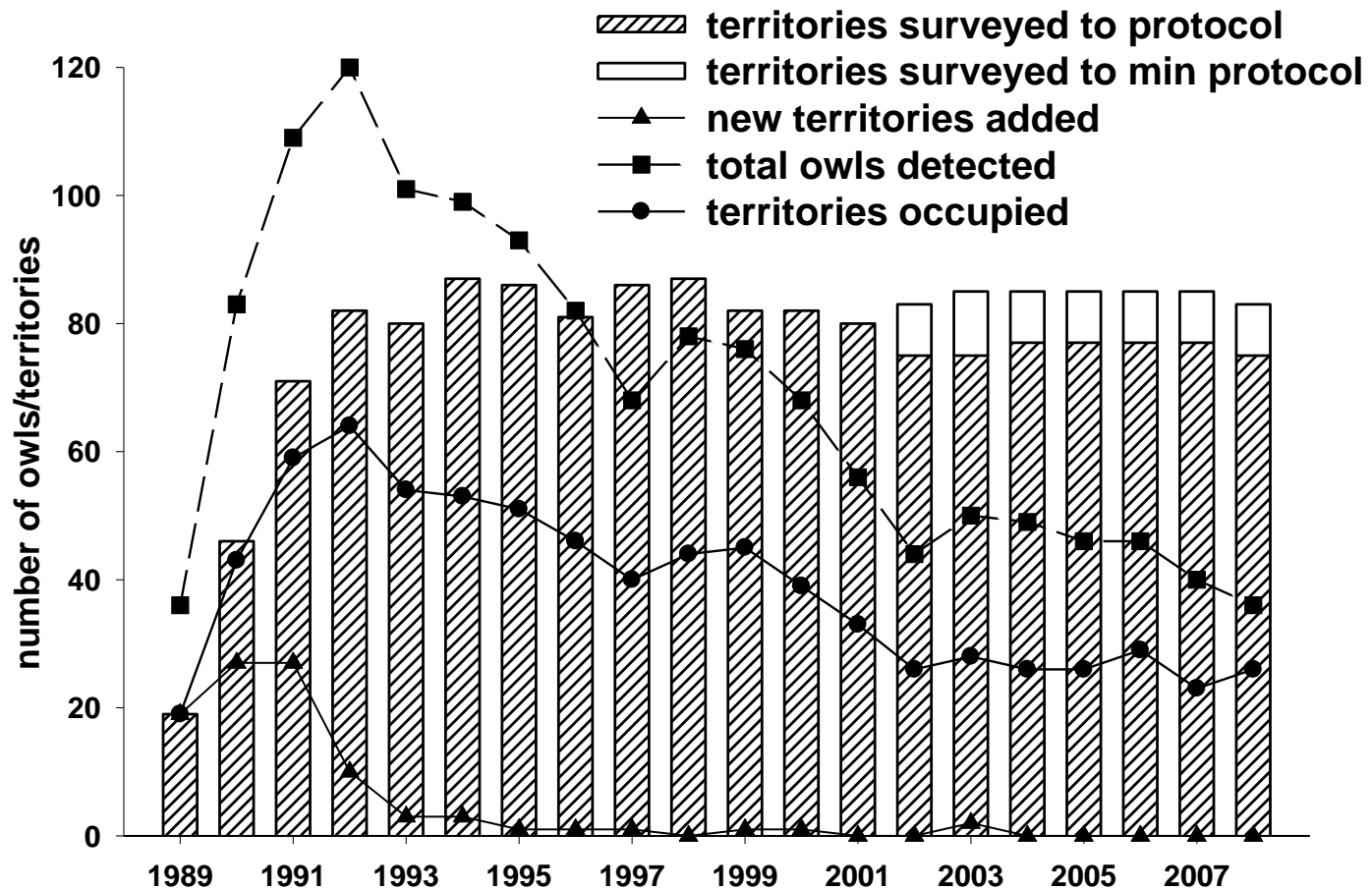


**Yellow band with  
black dots on left leg**

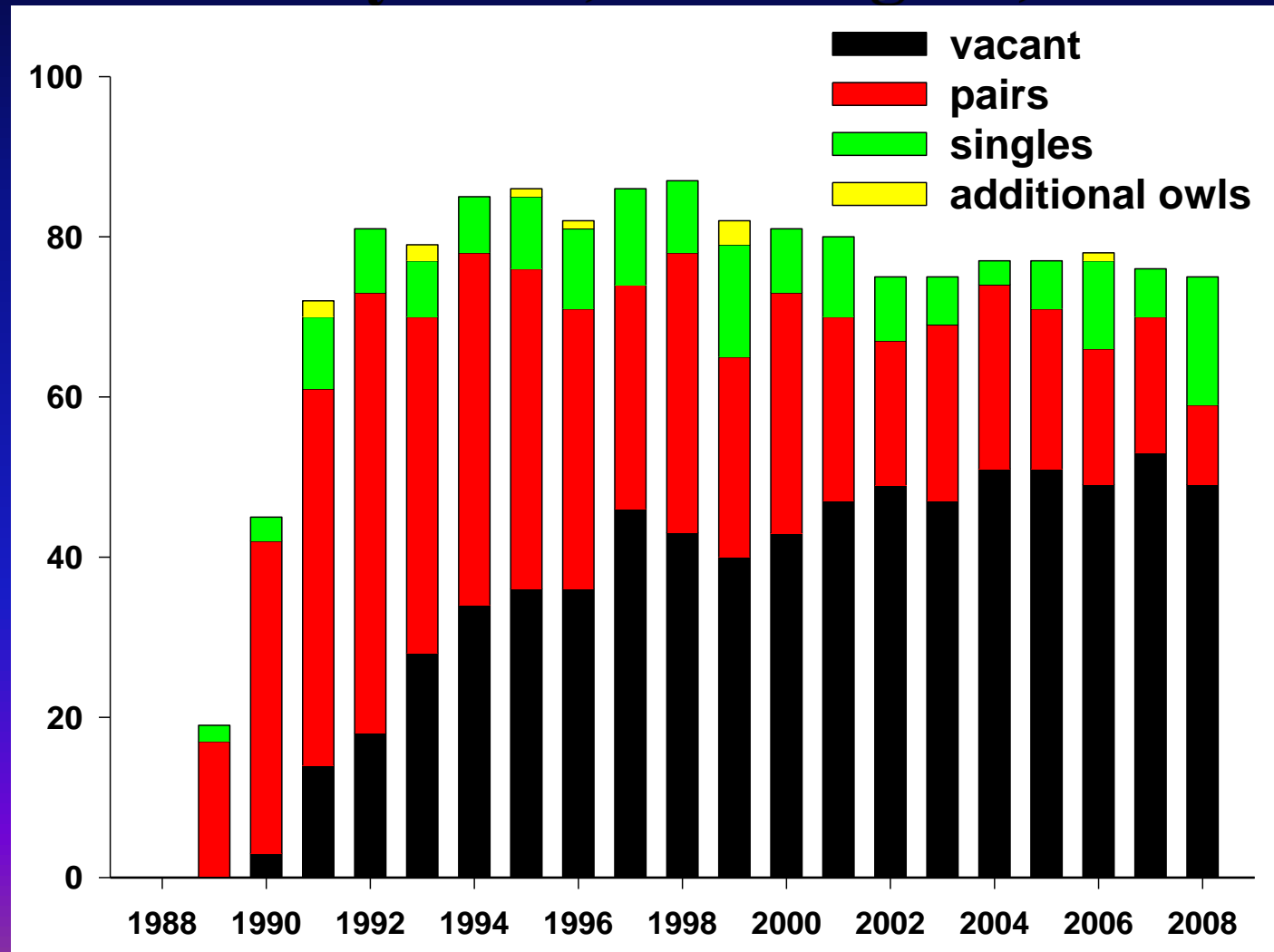


**Blue band right leg**

# Number of spotted owls detected, number of territories surveyed, and new territories added by year, Cle Elum Study Area, Wenatchee National Forest, Washington, 1989-2008

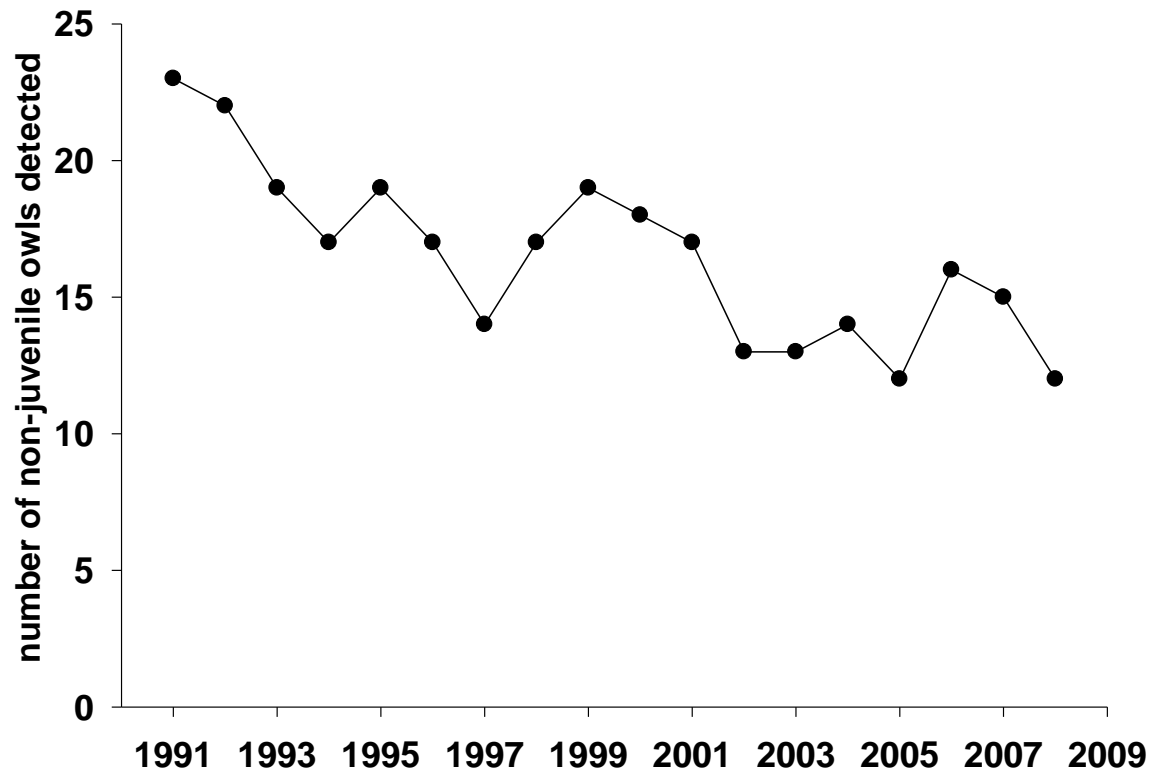


# Number of spotted owl territories occupied by pairs, singles, additional owls, or vacant, Cle Elum Study Area, Washington, 1989-2008

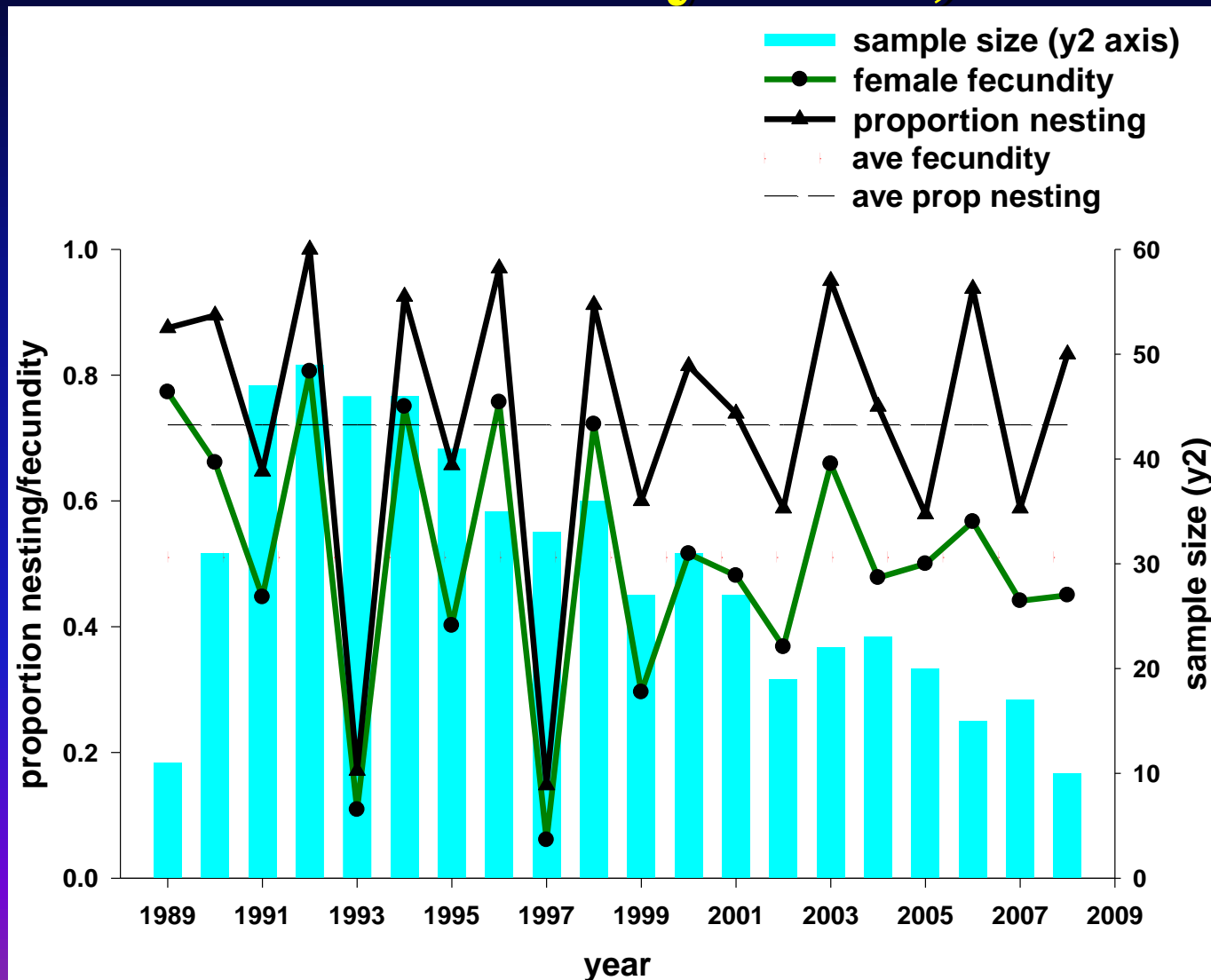




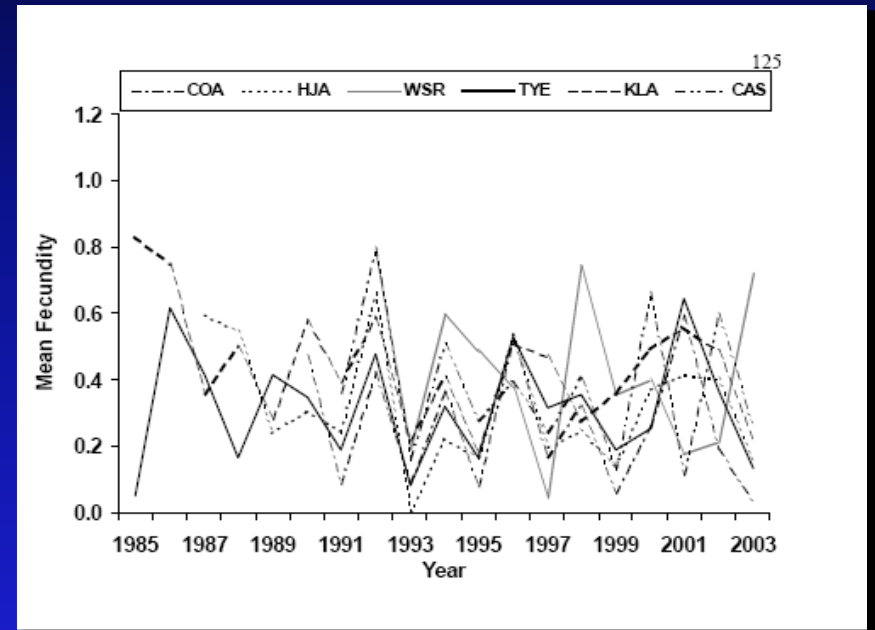
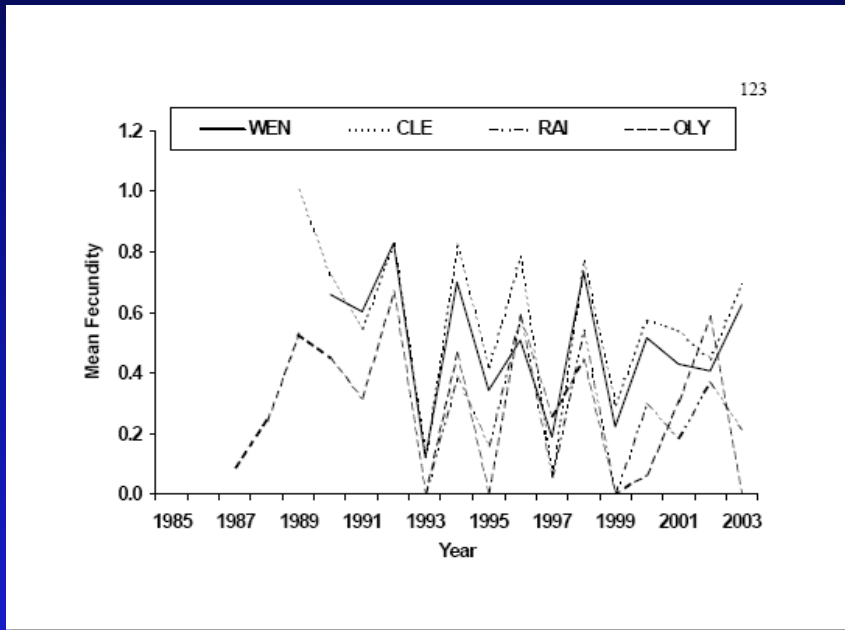
# Number of territorial spotted owls detected on the 204 km<sup>2</sup> Swauk Density Study Area, Wenatchee National Forest, 1991-2008



# Reproductive indices of Spotted Owls on the Cle Elum Study Area, 1989-2008



# Raw estimates of mean annual fecundity of spotted owls from study areas in Washington and Oregon



*From Status and trends in Demography of Northern Spotted owls, 1985-2003*

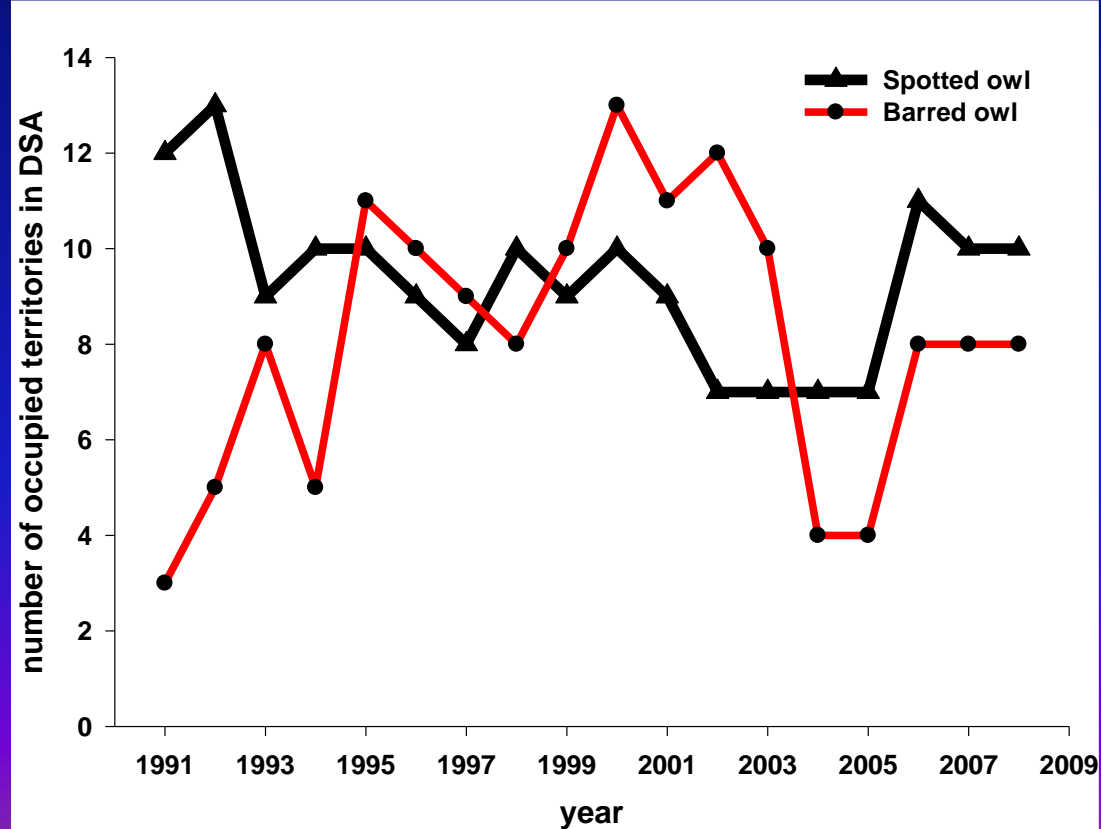
# *Status and trends in demography of northern spotted owls, 1985-2003.*

## *Wildlife Monographs: 163*

- ❑ Consisted of data from 14 study areas (including 8 NWFP monitoring areas)
- ❑ Indicated Spotted Owl populations, on average, declined by a rate of 3.7% per year 1987-2003
- ❑ Populations were declining on 9 of 13 study areas, 1 study area had insufficient data to derive estimates
- ❑ 5 of the 8 monitoring areas showed population declines. Average decline 2.4 %/year
- ❑ **Cle Elum population growth rate - 6.2% per year**
- ❑ 2009 Meta-analysis draft in preparation, to be released late summer, 2009



# Barred owls in the Swauk Cr. Density Study Area, Cle Elum Demography Study Area, Washington, 1991-2008



**More info:**

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# Cle Elum Crew

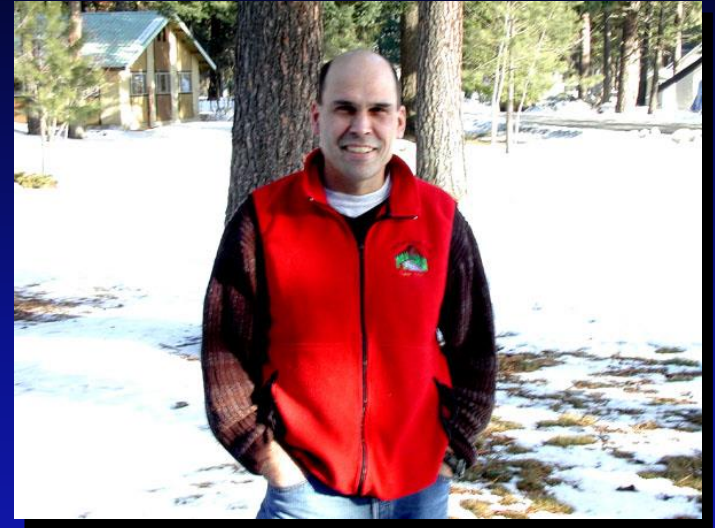
**Dr. Eric Forsman**

**(Principle Investigator, USFS)**



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Eric Forsman Watching Spotted Owl,  
Smirking for Photographer

**Stan Sovern**



**Margy Taylor**

