Chapter 6: Other Species and Biodiversity of Older Forests

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Other Species and Biodiversity

Landscape

Ecosystem, Community

Ecological Functions

Population

Genetics
NWFP Survey and Manage Program

- Annual Species Reviews
- Identified species for specific survey & management protocols
  - ~400 species initially listed
  - ~68,000 sites surveyed
  - ~100 species removed from list
Agency Species Programs

Survey and Manage Program

Interagency Special Status and Sensitive Species Program (USFS & BLM)
Is the NWFP Working for Other Species & Biodiversity?

• Scientific understanding has expanded
  • occurrence, distribution, ecology, threats

• Surveys revealed many more locations
  • species removed from survey lists
Is the NWFP Working for Other Species & Biodiversity?

- Many old-forest spp. remain rare & vulnerable
  - need fine-filter management
  - viability studies

- Biodiversity depends on coarse-filter assumptions
  - protecting ecosystems will protect species
Widening the Playing Field

- Early seral vegetation
- Full range of conditions & environments
Widening the Playing Field

- Consider key biotic functions
- Project climate change indicators & thresholds of change
Issues – Fungi, Lichens, Bryophytes, Vascular Plants

- Key ecological roles, 234 species rare or little-known
Issues – Invertebrates

- Key ecological roles
- Fire sensitive
- Headwater streams
- Invasive species
Issues – Amphibians

Values
• 50-ft stream buffers
• down log retention
• headwater streams

Threats
• fire
• timber harvest
• climate change
• fungal pathogens
Issues – Carnivores

- Fisher, Pacific Marten, Lynx, Wolverine
- value – large legacy trees, large down wood
- threats – habitat fragmentation, predation, rodenticides, wildfire, down wood removal
Overall Challenges

- Testing efficacy of coarse- and fine-filter approach
Overall Challenges

- Maintaining old-forest biodiversity
  - imbalances in seral stages
  - increases in fire severity
  - climate change shifts of forest vulnerability
Overall Challenges

• Studies to identify popn isolates, new taxa
  • Humboldt’s flying squirrel, *Glaucomys oregonensis*
  • Humboldt marten, *Martes caurina humboldtensis*
  • Scott Bar salamander, *Plethodon asupak*
  • Forest sharp-tailed snake, *Contia longicaudae*
  • Aquatic snails, *Fluminicola* spp., *Colligyrus greggi*
Biodiversity ... ?

- No biodiversity monitoring program
- No effectiveness monitoring program
Solutions

• Restoring natural early seral vegetation and a full range of environmental conditions
• Novel species combinations & ecosystems
Solutions

- Connecting old-forest reserves through matrix lands and across elevations
Solutions

• Balancing fuels management with reestablishment of natural disturbances
• Continuing species and biodiversity studies
Current Agency Directions

- BLM: Resource Management Plans
- USFS: 2012 Planning Rule

- Coarse- & fine-filter management
- Species of Conservation Concern
- Interagency Special Status and Sensitive Species Program