Conservation Threats to the Northern Spotted Owl

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Outline

* Introduction to the Northern Spotted Owl
* Describe It’s Habitat
* Describe It’s Life History Strategies
* Threats Faced By Northern Spotted Owls
* Focus on Potential Competition & Displacement
Introduction to *Strix occidentalis caurina*

- One of three subspecies of spotted owl
  - Live in old-growth forests
- Color is dark-to-chestnut brown
  - Round or oval white spots
- Primarily nocturnal hunters
- Habitat loss → Population Decline!
- Very territorial & intolerant of habitat disturbance


http://1.bp.blogspot.com/_zNH-Z92VFDATDvfffXT8IHi/AAAAAAAAEBA/1mmHFOU5zpssT600/web-Northern-Spotted-Owl.jpg
Northern Spotted Owl Habitat

* Prefer old-growth forests
  * High & open tree canopies
* Large trees w/ broken tops, deformed limbs, or large holes
  * Nesting sites
* Need large area
  * Hunting & Nesting
* May migrate due to seasonal changes
  * Ex. Heavy Snow → Affects Hunting

http://ipsnews.net/pictures/timber.jpg
Life History Strategies

* Form long-term pair bonds
  * Significant Parental Investment
  * Associated w/ Higher Offspring survival
* Mating Season: Feb. or Mar.
  * Gestation: 1-2 months
  * Clutch Size: 2-3 eggs
* Tend to stay put at suitable habitats

Threats Faced By Northern Spotted Owls

- Primary Threat – Loss of old-growth forests
  - Solely prefer these forests; heavily affected by clear-cut logging
- Influx of the Barred Owl
  - Outcompeting for suitable habitats → Reduces it’s reproductive success
- Use of Detection Dogs To Survey Owl Occupancy (Wasser S. K. et al., 2012)
Barred & Spotted Owls have home ranges with similar characteristics

- Share similar prey species, nesting requirements
- Both show territorial behavior toward one another

Strongly suggests competition (Dugger KM et al., 2011)

- Partitioning of resources
- Barred Owls appear more dominant
- Spotted owls are being displaced!
Northern Spotted Owl populations have decreased drastically
  * Impacted by the loss of old-growth forests
  * Outcompeted by Barred Owls → Increased Displacement

Conservation?
  * Efforts to maintain the old-growth forests
  * Possibly lead to both Barred & Spotted Owls coexisting together!
References

* M. Zachariah Perry, R. J. Guitierrez. (2013) Life-History Tradeoffs in Spotted Owls (Strix occidentalis): Implications for Assessment of Territory Quality. The Auk 130(1)