

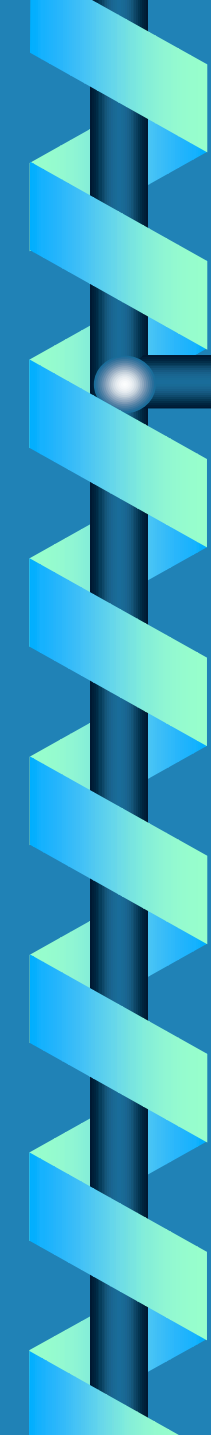
Compared to other endangered species, how would you characterize the knowledge base of the NSO?

1.

Major information gaps 2

Minor information gaps 2

Well understood 3



In your opinion the overall quality of the information available during the review process (across all subjects considered by the panel) was:

- High quality, majority of conclusions strongly supported 1
- Generally high, most conclusions strongly supported 3
- Mixed quality, some conclusions based on limited evidence 3
- Very mixed, some conclusions based on sparse evidence
- Generally low, many conclusions based on weak evidence

# In your opinion, the SEI review process comprehensively addressed all major issues affecting NSO populations

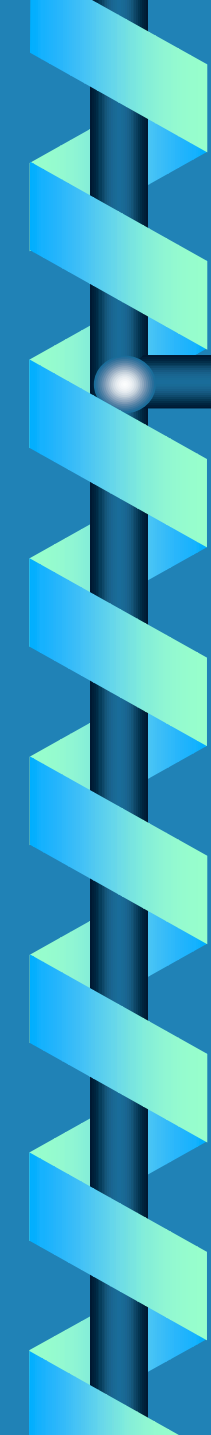
☉ Strongly agree 7



☉ Agree with qualification

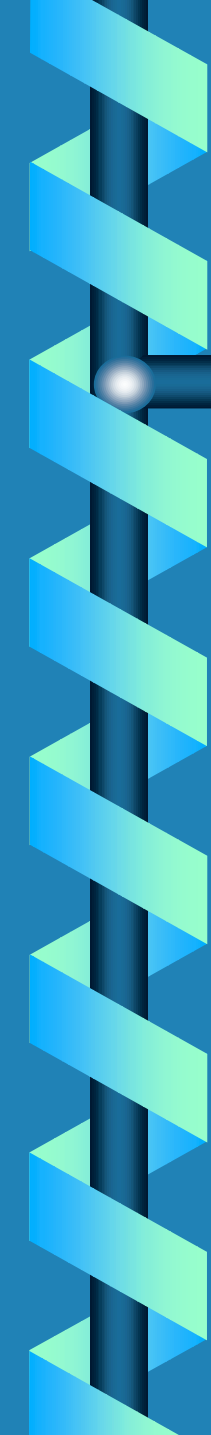


Disagree



## In your opinion the best available scientific evidence supports

- ☉ A significant evolutionary separation between California Spotted Owls and NSO 7
- ☉ Lack of significant evolutionary separation between California Spotted Owls and NSO
- ☉ There is insufficient and/or contradictory evidence so that it is hard to form a strong conclusion



# The differentiation between California Spotted Owls and NSO can best be characterized as that between:

- Separate evolutionary species
- Distinct subspecies 5
- Poorly defined but biologically significant subspecies 1
- Distinct Populations with extensive gene flow
- Clinal variation within one interbreeding population



## Gene flow between NSO and CSO populations is:

- Likely to have negative consequences for NSO fitness.
- Unlikely to have negative consequences for NSO fitness 3
- Insufficient evidence to evaluate



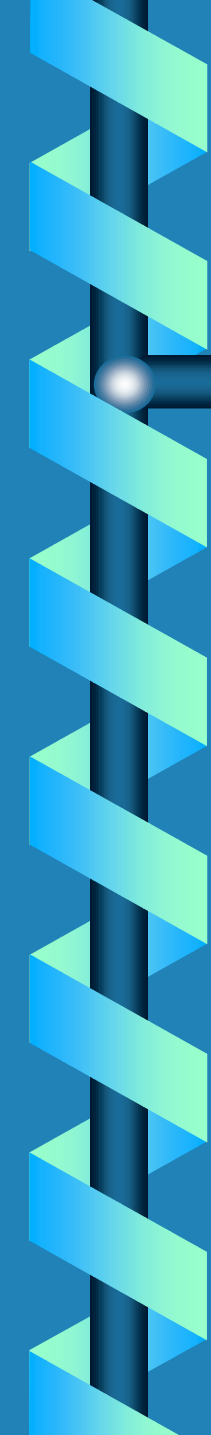
The effects of variation in prey abundance, habitat use, and availability on NSO populations are:

- Well understood
- Understood in broad terms, but not in detail 3
- Not well understood 4



# Population dynamics of major prey species are

- Well understood
- Understood in broad terms 1
- Not well understood 5



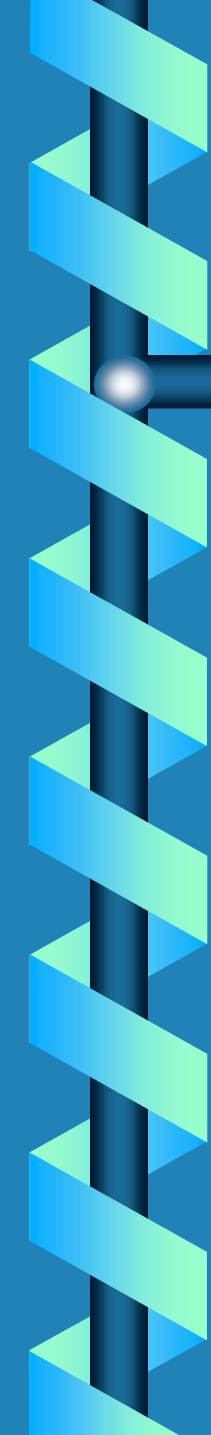
Initial findings on habitat associations are generally confirmed by results published since 1990

☀ Strongly supported	5
☀ Supported	2
☀ Weakly Supported	
☀ Not supported	
☀ N/A	



In general, demographic performance of NSO is related to availability of late successional forest habitat.

☀ Strongly supported	1
☀ Supported	5
☀	
☀ Weakly Supported	1
☀	
☀ Not supported	
☀ N/A	



# Late successional habitat is a limiting factor for NSO populations in significant parts of the subspecies' range

☀	Strongly supported	4
☀	Supported	2
☀		
☀	Weakly Supported	1
☀		
☀	Not supported	
☀	N/A	



Home ranges composed entirely of pristine old forest are optimal for spotted owls throughout the species' range

☼ Strongly supported

☼ Supported

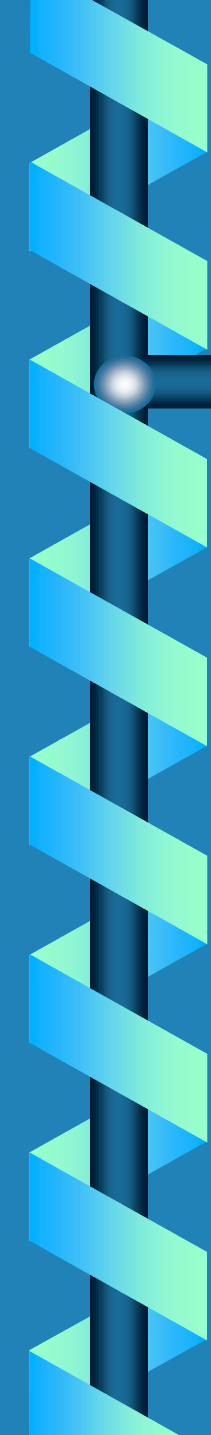


☼ Weakly Supported 1



☼ Not supported 6

☼ N/A



In the redwood zone, NSO use significantly younger forests, whose structure resembles old-growth forests elsewhere

☉ Strongly supported	2
☉ Supported	4
☉	
☉ Weakly Supported	
☉	
☉ Not supported	
☉ N/A	1



## In some areas, hardwoods are a significant component of habitat

☀	Strongly supported	4
☀	Supported	3
☀		
☀	Weakly Supported	
☀		
☀	Not supported	
☀	N/A	



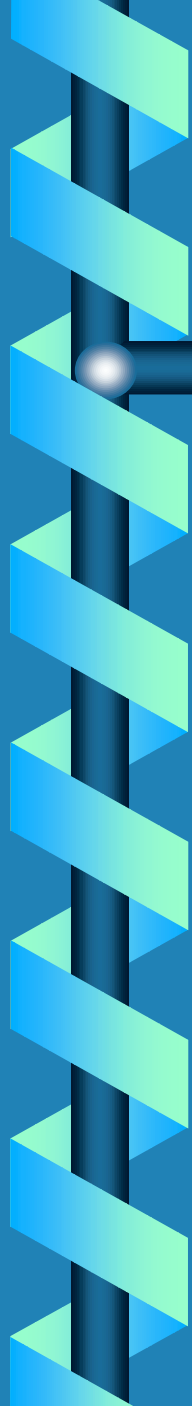
# In the Klamath region, heterogeneous landscapes may favor higher demographic performance

☀	Strongly supported	3
☀	Supported	4
☀		
☀	Weakly Supported	
☀		
☀	Not supported	
☀	N/A	



# Elsewhere in California and southern Oregon, heterogeneous landscapes may favor higher demographic performance

☀	Strongly supported	2
☀	Supported	1
☀		
☀	Weakly Supported	1
☀		
☀	Not supported	3
☀	N/A	



In other locations (e.g. Cascades) heterogeneous landscapes may favor higher demographic performance

☀ Strongly supported

☀ Supported 1

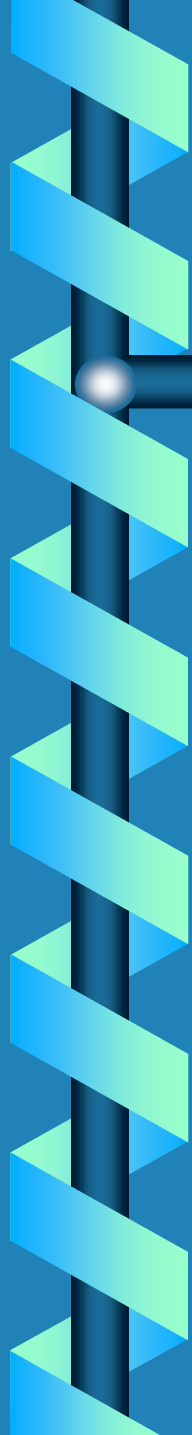


☀ Weakly Supported 2



☀ Not supported 4

☀ N/A



# Geographic differences in habitat use are generally explicable in terms of differences in prey availability and use

☉ Strongly supported	1
☉ Supported	3
☉	
☉ Weakly Supported	3
☉	
☉ Not supported	
☉ N/A	



Overall, the quality of data on current distribution and availability of NSO habitat as available to the review committee was

- 🌟 Excellent
- 🌟 Generally good 3
- 🌟 Mixed in quality 2
- 🌟 Generally limited 3

In your opinion, major factors currently contributing to habitat loss/removal in different regions and on different ownerships are (check all that apply):

Area	Timber	Fire	Disease	Insect	Wind
BC	5	1			
Westside	5	3			
Eastside	2	5	4	2	
Klamath	1	5		1	
Redwoods	3			1	

In your opinion, major factors currently contributing to habitat loss/removal in different regions and on different ownerships are (check all that apply):

Area	Timber	Fire	Disease	Insect	Wind
Federal	1	5	2	2	1
State	4	3	1	1	1
Tribal	5	2	1	1	
Private	5				

In different regions and on different ownerships current habitat trends can be described as:

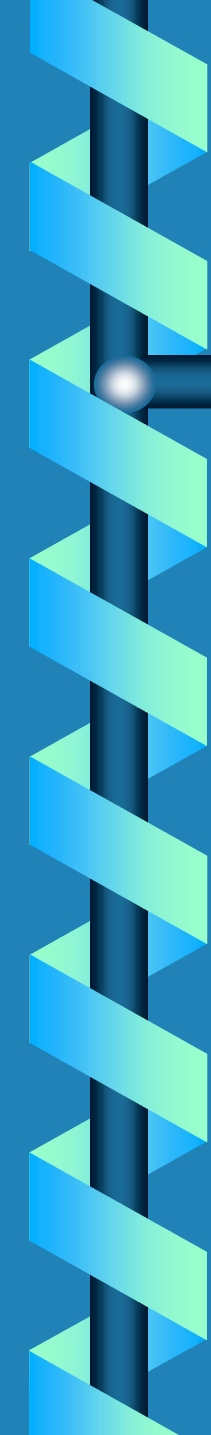
Area	+	+?	0	-?	-	?
BC				1	4	
Westside		1		2	2	
Eastside				3	2	
Klamath			3	2		
Redwoods			3	2		

In different regions and on different ownerships current habitat trends can be described as:

Area	+	+?	0	-?	-	?
Federal	1	1		3		
State				3	1	1
Tribal				2	3	
Private			1	2	2	

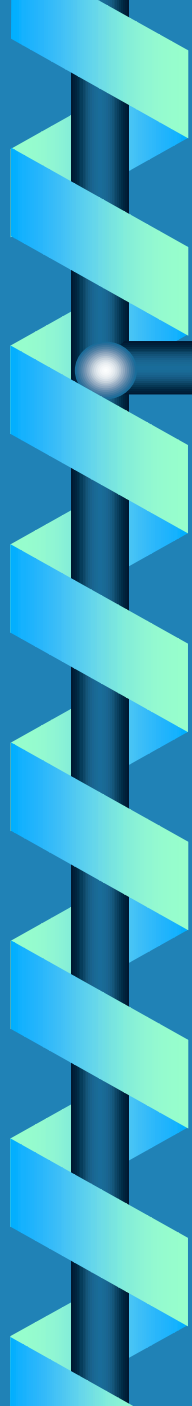
In your opinion, are Barred Owls currently having negative effects (on occupancy, survival and reproduction) on NSO populations in

Area	Strong	Slight	No	Insufficient data
BC	5			
WA	5			
OR	3	2		
Klamath		2	3	
Redwood		3	2	
Subspecies	3	1		1



The overall quality of the data on Barred Owl populations and their effects on NSO can be characterized as

- ☉ Generally high, most conclusions strongly supported
- ☉ Mixed quality, some conclusions based on limited evidence 4
- ☉ Very mixed, some conclusions based on sparse evidence 1
- ☉ Generally low, many conclusions based on weak evidence 2



West Nile Virus is known to affect owls in other parts of North America. The evidence that this disease will affect NSO is

- Compelling and based on firm extrapolation to NSO
- Logically consistent but essentially circumstantial 5
- Speculative at this point 2



How would you rate our understanding and degree of uncertainty on the following topics?

- Very uncertain
- Uncertain
- Adequately understood
- Well understood
- No opinion

# Taxonomy of Spotted Owls

- Very uncertain
- Uncertain
- Adequately understood 2
- Well understood 5
- No opinion

# Effects of Past Habitat Loss

Very uncertain	1
Uncertain	4
Adequately understood	1
Well understood	1
No opinion	

# Effects of Current Habitat Loss

- Very uncertain
- Uncertain 2
- Adequately understood 4
- Well understood 1
- No opinion

# Population trends

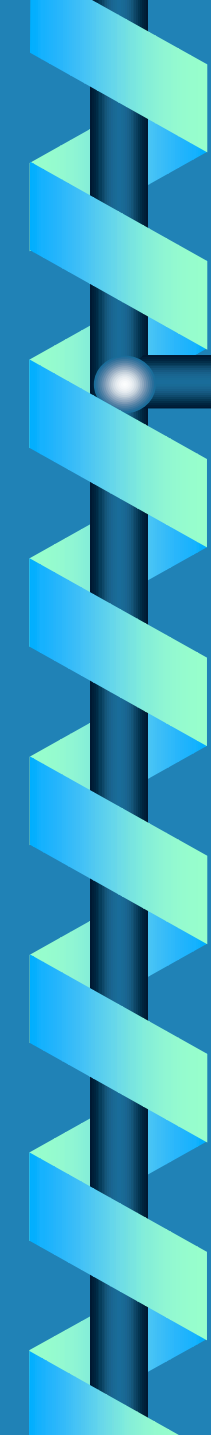
- Very uncertain
- Uncertain
- Adequately understood 4
- Well understood 3
- No opinion

which factors are currently significant threats to NSO populations, or may pose such threats in the near-term future (5-10 years)

	Current	Future
☼ Genetics		3
☼ Introgression		1
☼ Barred Owl comp	7	5
☼ Barred Owl hybrid		
☼ Past Harvest	5	1
☼ Current harvest	5	4
☼ Fire	4	3
☼ Windthrow		
☼ Insects	2	1

which factors are currently significant threats to NSO populations, or may pose such threats in the near-term future (5-10 years)

	Current	Future
☼		
☼ SOD	1	5
☼ Fragmentation	1	2
☼ WNV	2	7
☼ Other Disease		2
☼ Predation		
☼ Weather	2	2
☼ Demog isolation		5
☼ Synergistic	5	4
☼ -interactions		



In five years the USFWS may conduct another status review. In the interim it is to be expected that there will be ongoing monitoring and research on NSO and its habitat. Please indicate whether you expect the following data will be critical to a future review of NSO status

- ☉ Already well understood
- ☉ New information may be valuable
- ☉ Ongoing monitoring essential
- ☉ New information could alter status



# Population trends

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- ⊗ Already well understood
- ⊗ New information may be valuable 2
- ⊗ Ongoing monitoring essential 5
- ⊗ New information could alter status 2



# Prey Dynamics

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- ⊗ Already well understood
- ⊗ New information may be valuable 6
- ⊗ Ongoing monitoring essential 1
- ⊗ New information could alter status 2

# Effects of Barred Owls

- ⦿ Already well understood
- ⦿ New information may be valuable 1
- ⦿ Ongoing monitoring essential 4
- ⦿ New information could alter status 5



# Taxonomy

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- ⊗ Already well understood 6
- ⊗ New information may be valuable 1
- ⊗ Ongoing monitoring essential
- ⊗ New information could alter status



# Genetics

- ⦿ Already well understood 3
- ⦿ New information may be valuable 4
- ⦿ Ongoing monitoring essential
- ⦿ New information could alter status



Already well understood

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⊗ Taxonomy



# New information may be valuable

- ☉ Prey selection
- ☉ Prey dynamics
- ☉ Genetic differentiation
- ☉ Regional differences in habitat selection



# Ongoing monitoring essential

- ⊗ Population trends
- ⊗ Habitat trends
- ⊗ Effects of fire
- ⊗ WNV



# New information may alter status

- ☀ Relation between demographic parameters and habitat
- ☀ Barred Owls
- ☀ Ingrowth