

# Rare and Endangered Wildlife of Appalachian Spruce-fir Forests: Considerations for Ecological Restoration

Corinne A. Diggins and W. Mark Ford

Virginia Department of Fish and Wildlife Conservation

USGS Virginia Cooperative Fish and Wildlife Research Unit





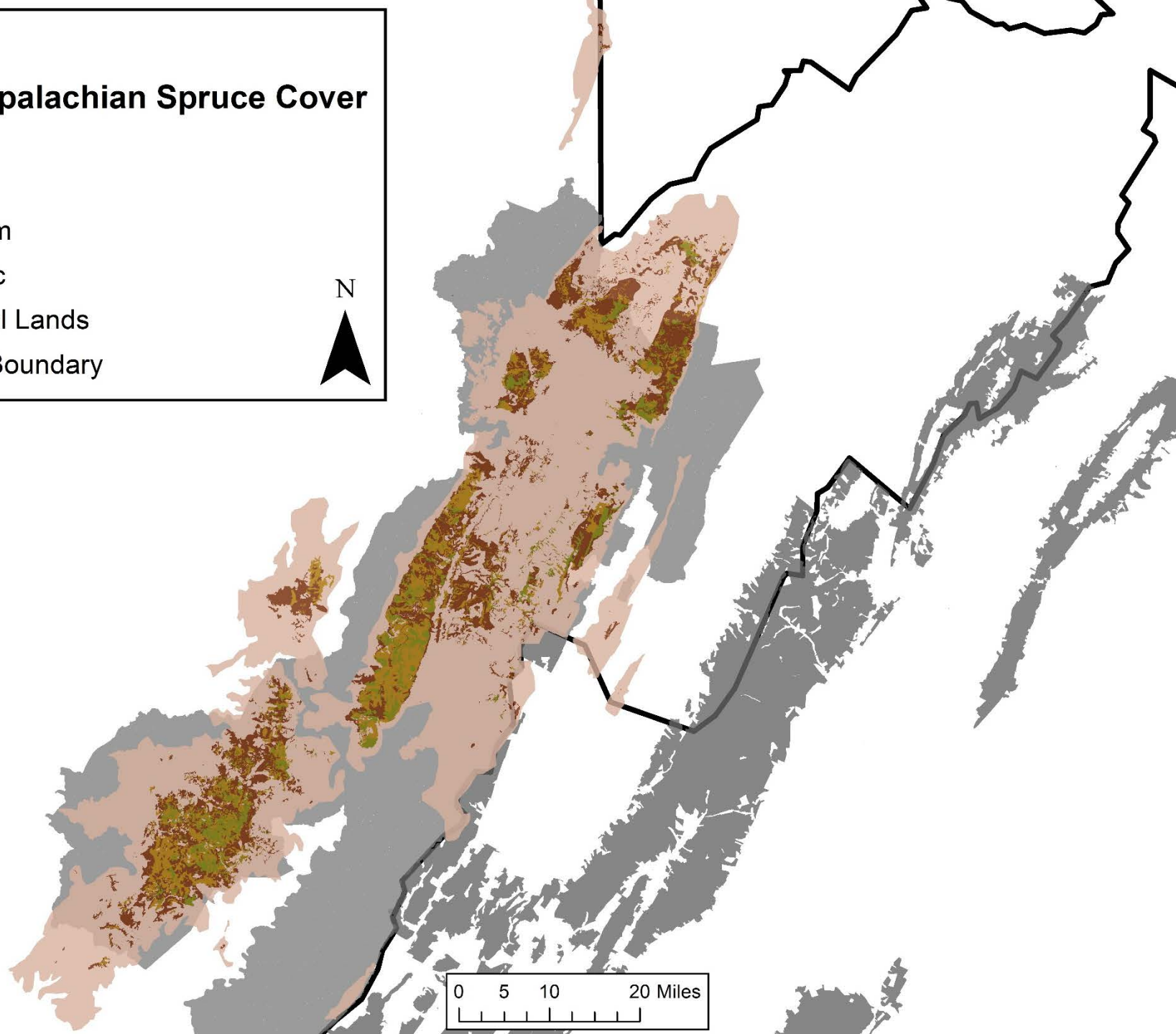
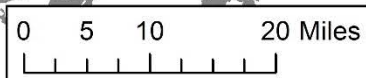


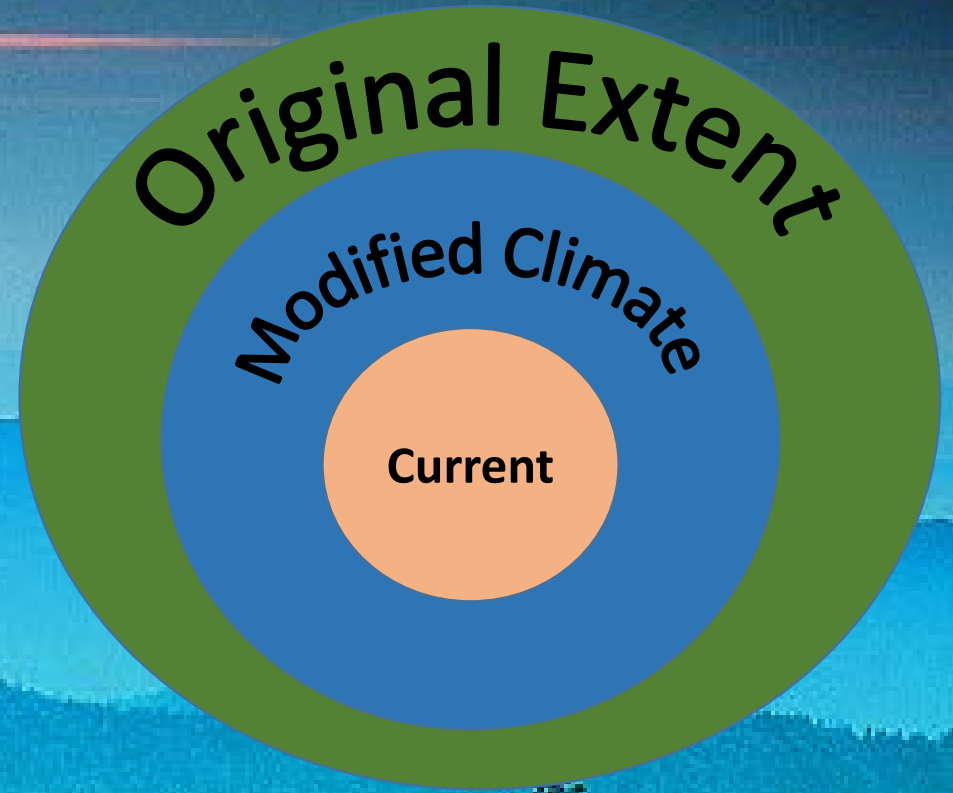


# Legend

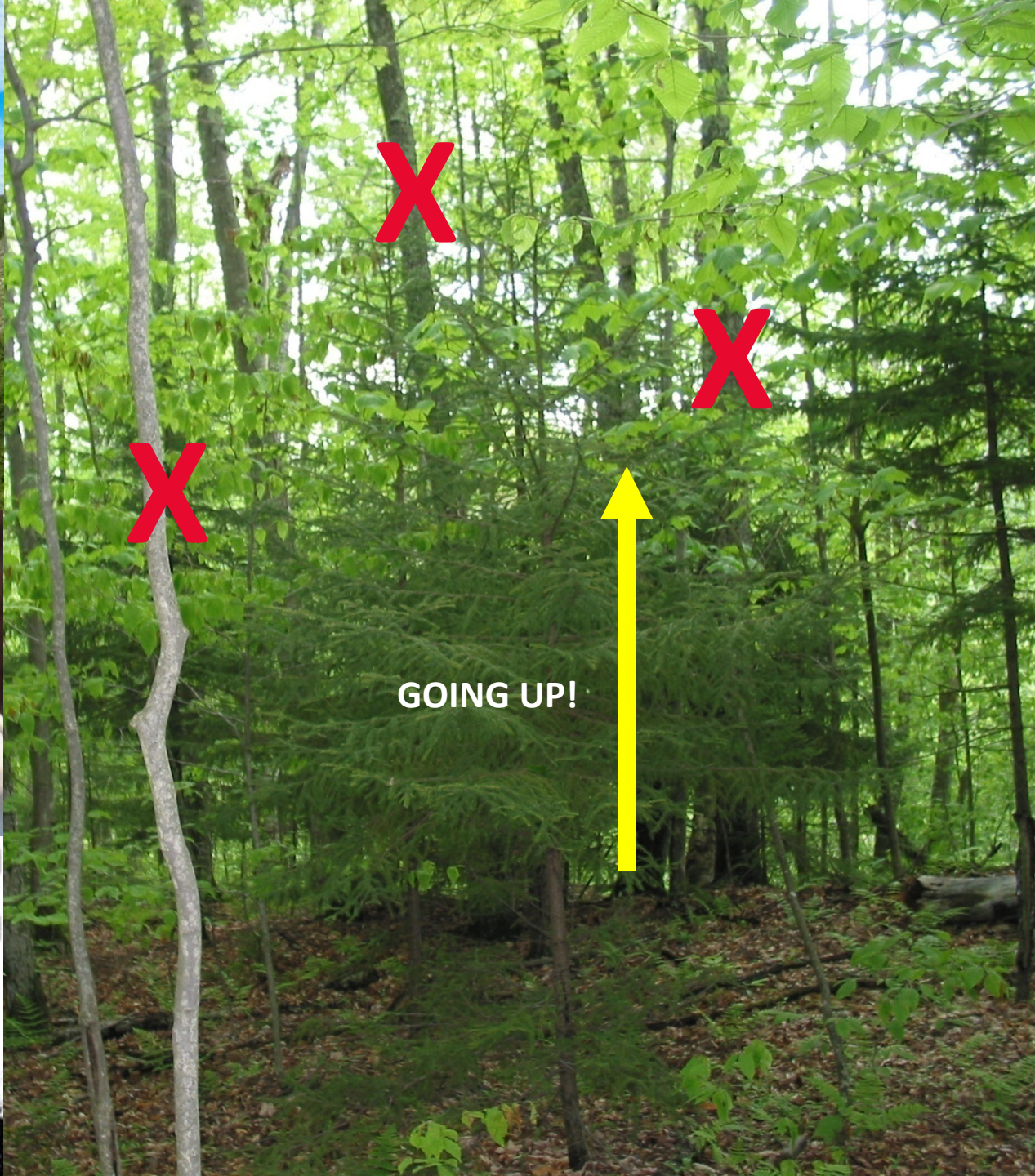
## Central Appalachian Spruce Cover

- High
- Low
- Medium
- Historic
- Federal Lands
- State Boundary







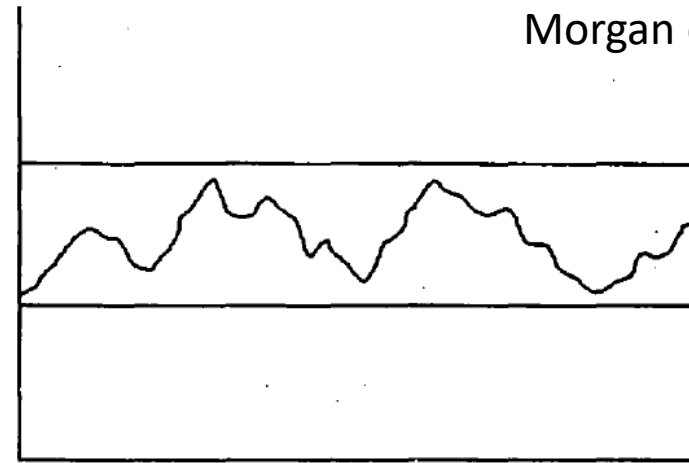


GOING UP!



Morgan et al. 1994

Ecosystem variable



Upper limit  
of range

Lower limit  
of range

Time





## Federally Listed

- Carolina Northern Flying Squirrel
- Spruce-fir Moss Spider
- Cheat Mountain Salamander

## State Listed or Conservation Concern

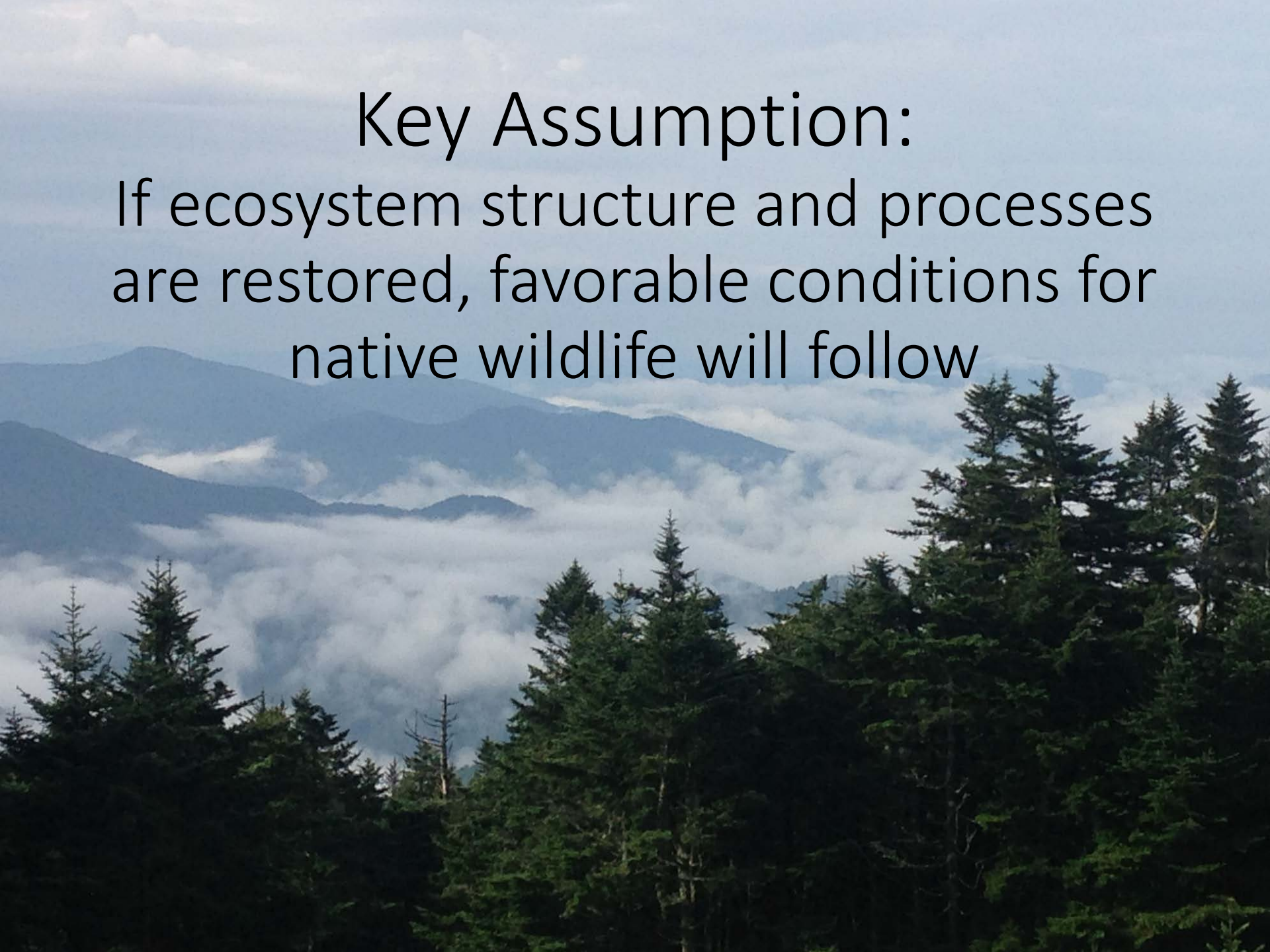
- Virginia Northern Flying Squirrel
- Snowshoe Hare
- Appalachian Cottontail
- Fisher
- Rock Vole
- Rock Shrew
- Water Shrew
- Saw-whet Owl
- Black-capped Chickadee
- Brown Creeper
- Weller's Salamander
- Pygmy Salamander





# Key Assumption:

If ecosystem structure and processes are restored, favorable conditions for native wildlife will follow



What considerations for rare  
wildlife need to be made when  
restoring Appalachian spruce-  
fir forests?

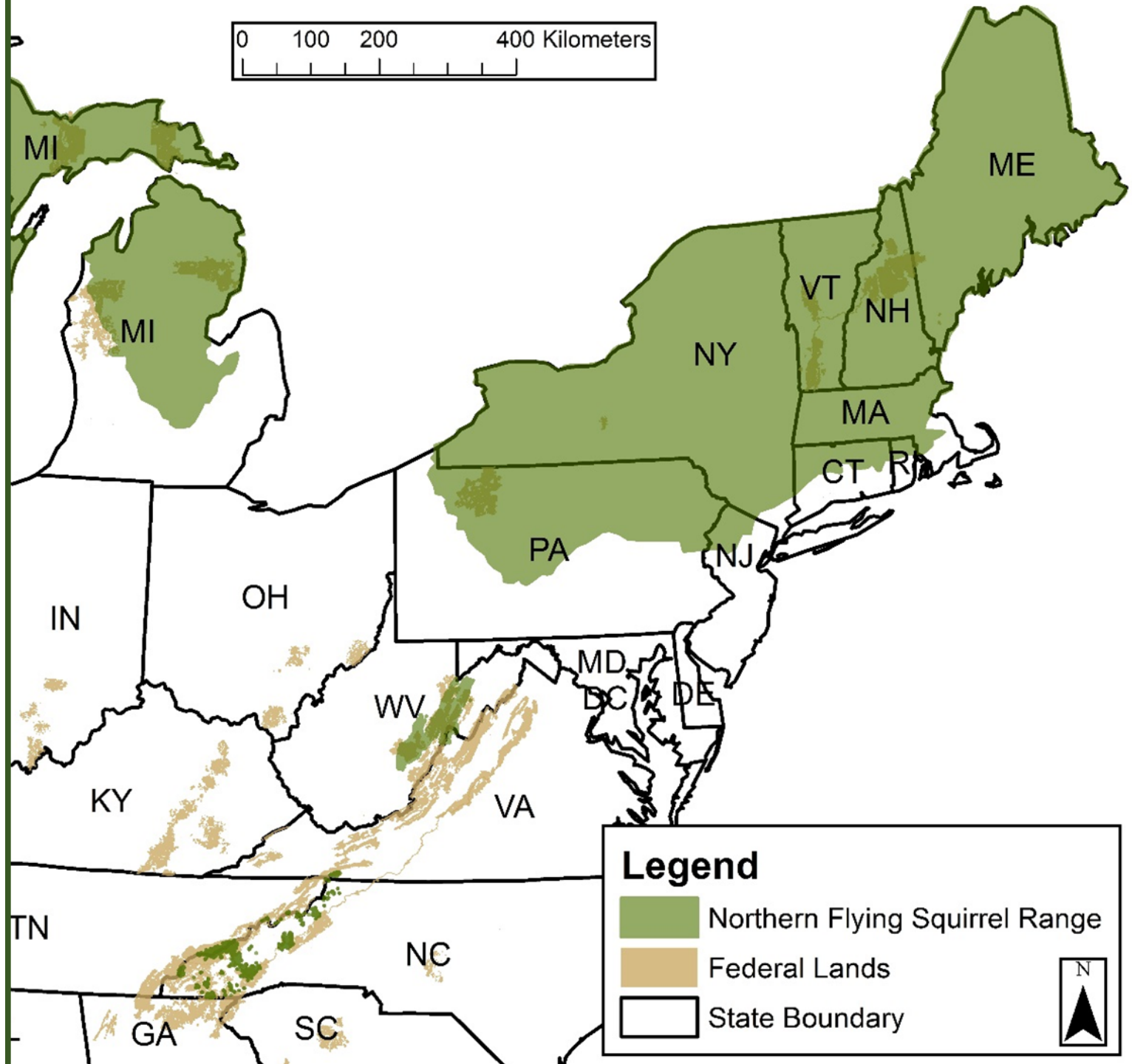
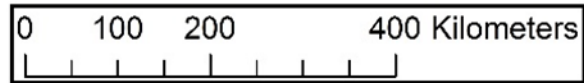






Northern Flying Squirrel  
*Glaucomys sabrinus*







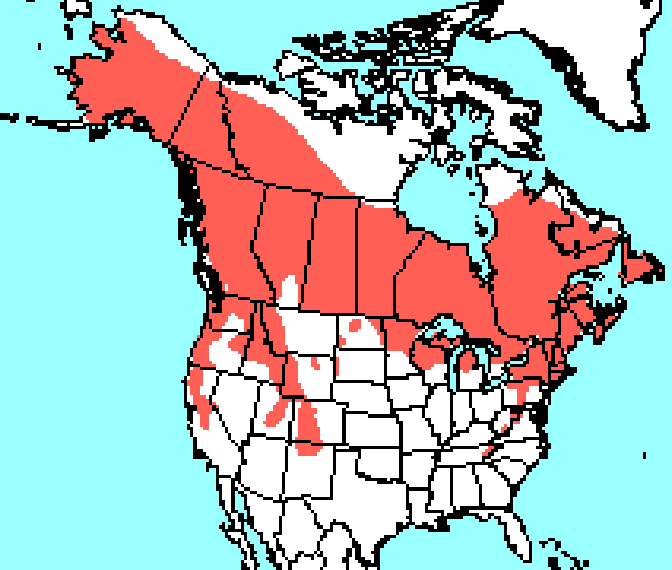


# Snowshoe Hare

*Lepus americanus*













Spruce-fir Moss Spider  
*Microhexura montivaga*









# Considerations for Restoration

