

FRA Step 4- Wildlife Benefits

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Succession

- ◆ Changes in community composition over time
 - Begin with pioneer plants (small herbs)
 - Replace with fast-growing, short-lived shrubs and trees
 - Follow with slow-growing, long-lived trees
 - Final stage is a climax community that is in dynamic equilibrium

Wildlife Response

- ◆ Early succession species
 - Birds
 - Small mammals
- ◆ Middle succession species
 - Rabbits
 - turkeys
- ◆ Late succession species
 - Large mammals
 - Interior forest birds

Early Succession Species

- ◆ Looser soils allow seeds to germinate and grow
 - ◆ Insects are able to move through the soil
 - ◆ Insects and seeds attract birds
 - ◆ Grassland birds move into early succession landscape
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- A decorative graphic at the bottom right of the slide, consisting of a silhouette of a mountain range in various shades of teal and blue.

Early to Mid Succession

- ◆ Looser soils and available food source (roots, seeds, leaves) attracts small rodents, mice, voles
 - ◆ Movement of birds and small rodents introduces seeds of shrubs & small trees
 - ◆ Shrubs & small trees attract rabbits, turkeys, other species
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Mid Succession

- ◆ Which in turn attract small to mid-size predators
- ◆ Deer move into the area
- ◆ Rabbits are common
- ◆ The abundance of prey attracts larger predators

Golden Eagle



Golden Eagle

- ◆ Early to mid succession
- ◆ Winters in Appalachian area
- ◆ Needs open areas with roosts to find prey
- ◆ Satellite telemetry studies indicate regular use of reclaimed areas with small tree/grass mix

Late Succession

- ◆ Large, long-lived trees attract forest interior species
 - ◆ Trees provide cover and food for larger species such as bears
 - ◆ Trees also shade streams which in turn provide food sources for the interior forest species
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- A decorative silhouette of a mountain range in shades of teal, located at the bottom right of the slide.

Cerulean Warbler



Cerulean Warbler

- ◆ Late succession
- ◆ Interior forest nesting bird
- ◆ Nests in closed canopy, deciduous hardwoods, large diameter trees
- ◆ Once abundant, logging removed nesting habitat, considered for inclusion on list of Federally-protected species
- ◆ FRA/ARRI part of conservation to keep warbler off of list

Indiana Bat



Indiana Bat

- ◆ Late succession
- ◆ Medium to large diameter trees with crevices, cracks
- ◆ Some sun exposure for maternity, so need some canopy openings
- ◆ Forages along streams for insects
- ◆ FRA practices included as part of Protection Plans as conservation effort

Artificial Mid-Succession

- ◆ Common practice prior to FRA/ARRI
- ◆ Plant quick growing, tolerant species to stop erosion (often invasive or exotic)
- ◆ Example: autumn olive, lespedeza shrub species
- ◆ Deer, rabbits, rodents, robins, mourning doves common

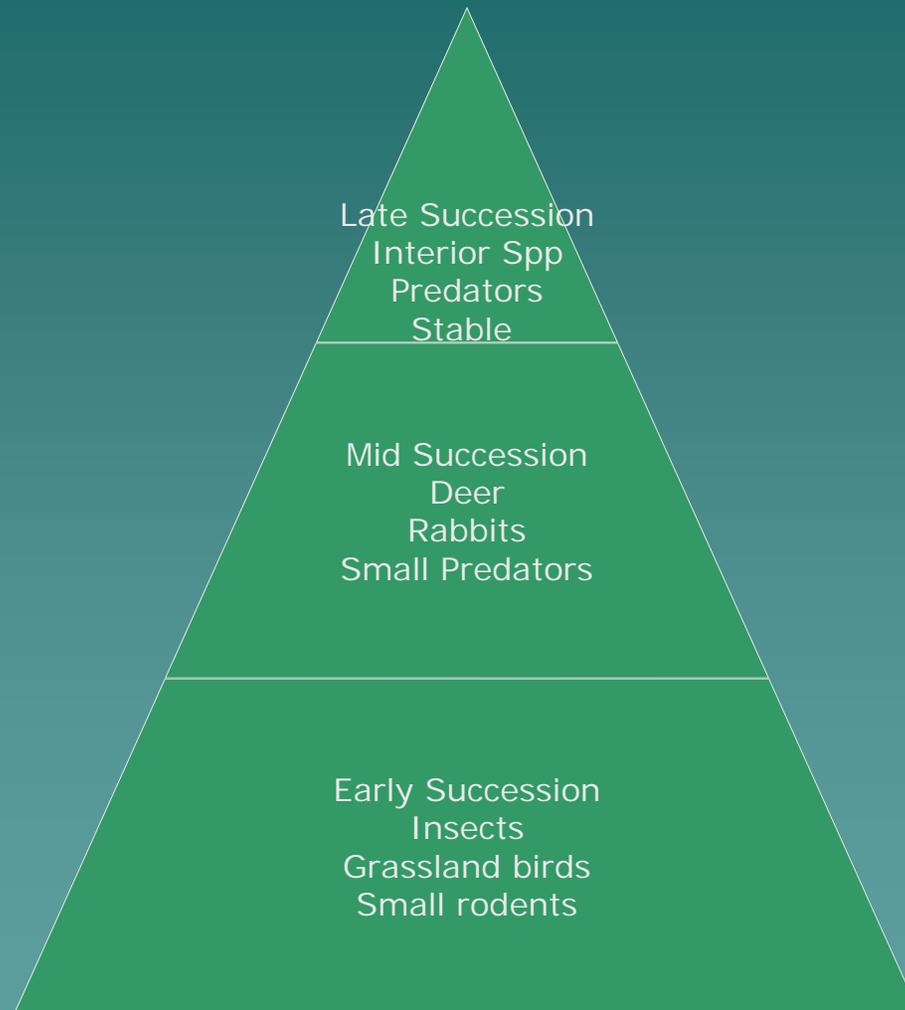
Why Not Stop at Mid Succession?

- ◆ Many game species do well in mid-succession communities
- ◆ Faster maturation of plants
- ◆ Species have more tolerance for human activity

Mid Succession Does Not Work

- ◆ System is not in equilibrium – arrested succession
 - ◆ Community is not diverse and is susceptible to disturbance
 - ◆ Not replacing the habitat that was lost
 - ◆ Does not provide habitat for species with low populations
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Laying the Foundation for Succession



Wildlife Benefits

- ◆ FRA promotes reclamation that mimics natural succession
 - ◆ Succession must have each component in place before reaching the next level, otherwise the system is not sustainable
 - ◆ It is crucial to replicate the lost system – without it, we lose the Appalachian forest community
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