

Time zero



+ 60 years



Without fire suppression

+ 20 years



+ 60 years



+ 40 years



With fire suppression

+ 80 years



Types of species interactions

Species A x B

→ Predation → Organism eats other organism

$+ , -$

$+ , +$

→ increase in population (fitness)

→ Competition → Acquisition of limiting resources

→ Mutualism → Both species benefit

$+ , +$

→ Commensalism (live)
 $+ , 0$ → Woodpecker living in a dead tree

→ Parasitism
 $+ , -$ → Mistletoe → community level could be $+ , +$

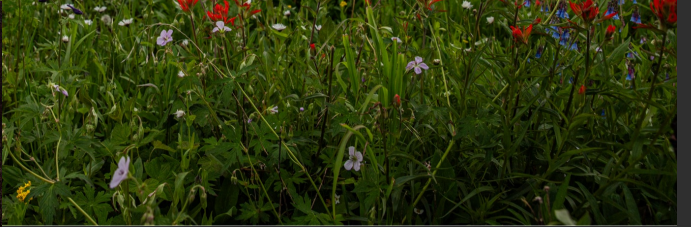
All species interactions are happening in
the forest at all times



Disturbance and Biological Legacies

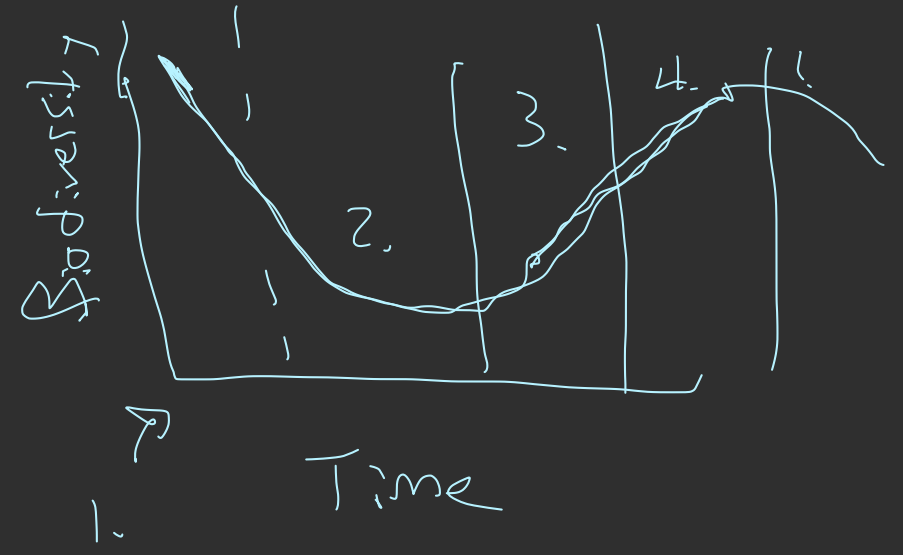
	Wind ↙	Fire ↙	Bark Beetle ↙	Clear cut ↓
Live Mature Trees	Few	Few	None - Many Species/site dependent	None
Snags	Few	Abundant	Abundant	None
Seed Bank	Abundant	Few - Many Depending	Abundant	None - abundant
Understory	Abundant	Altered - few	Abundant	<u>None</u>
Mineral Seed Bed	Some	Abundant	None - very little	Abundant

Cordylus aurea
Golden-smoke
"Annual" plant -
Altered

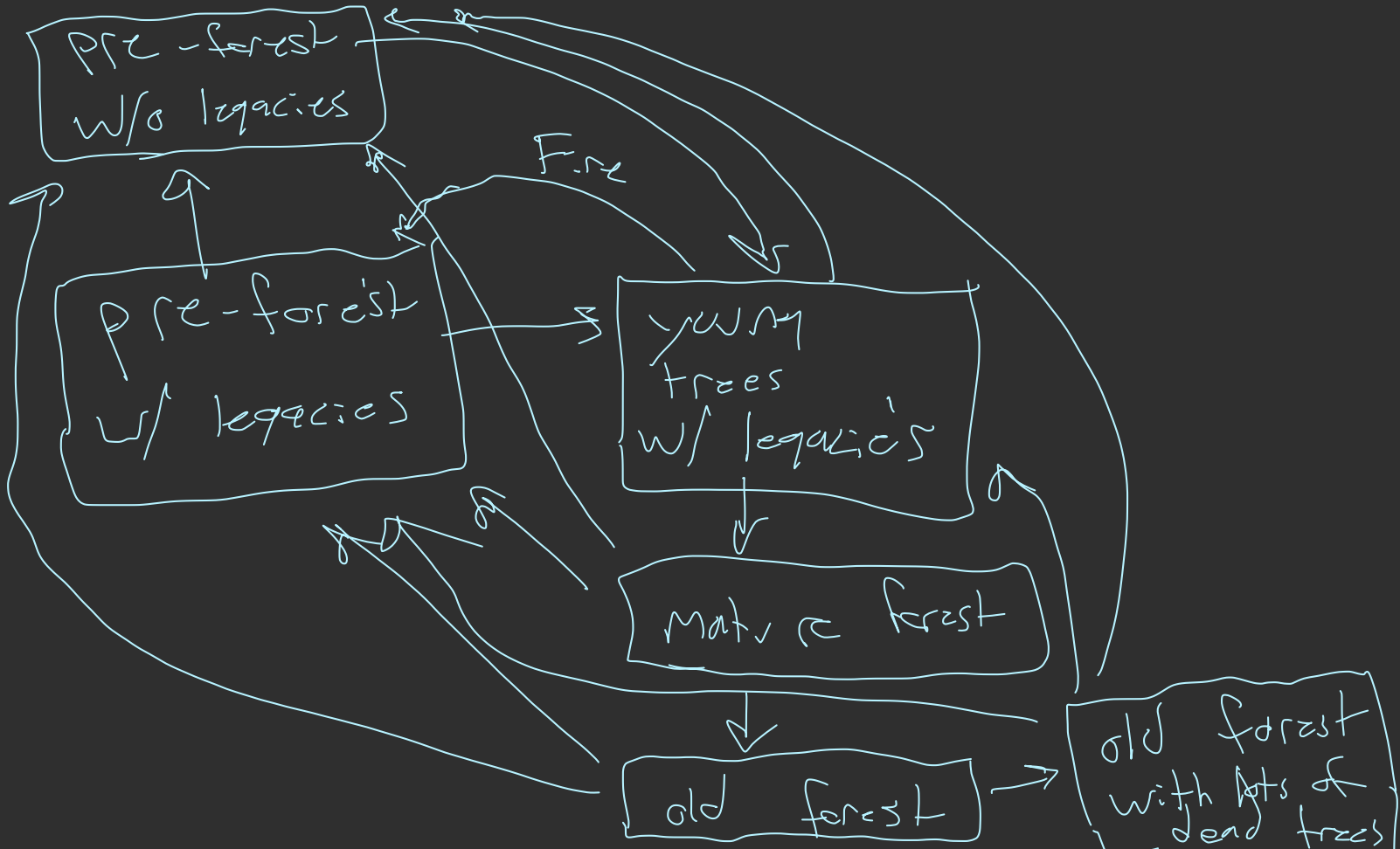


Abundant

1. Stand Initiation (pre-forest)	2. Stem Exclusion (young forest)	3. Understory Reinitiation (mature forest)	4. Old Growth (old forest)
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1. → 2. → 3. → 4.



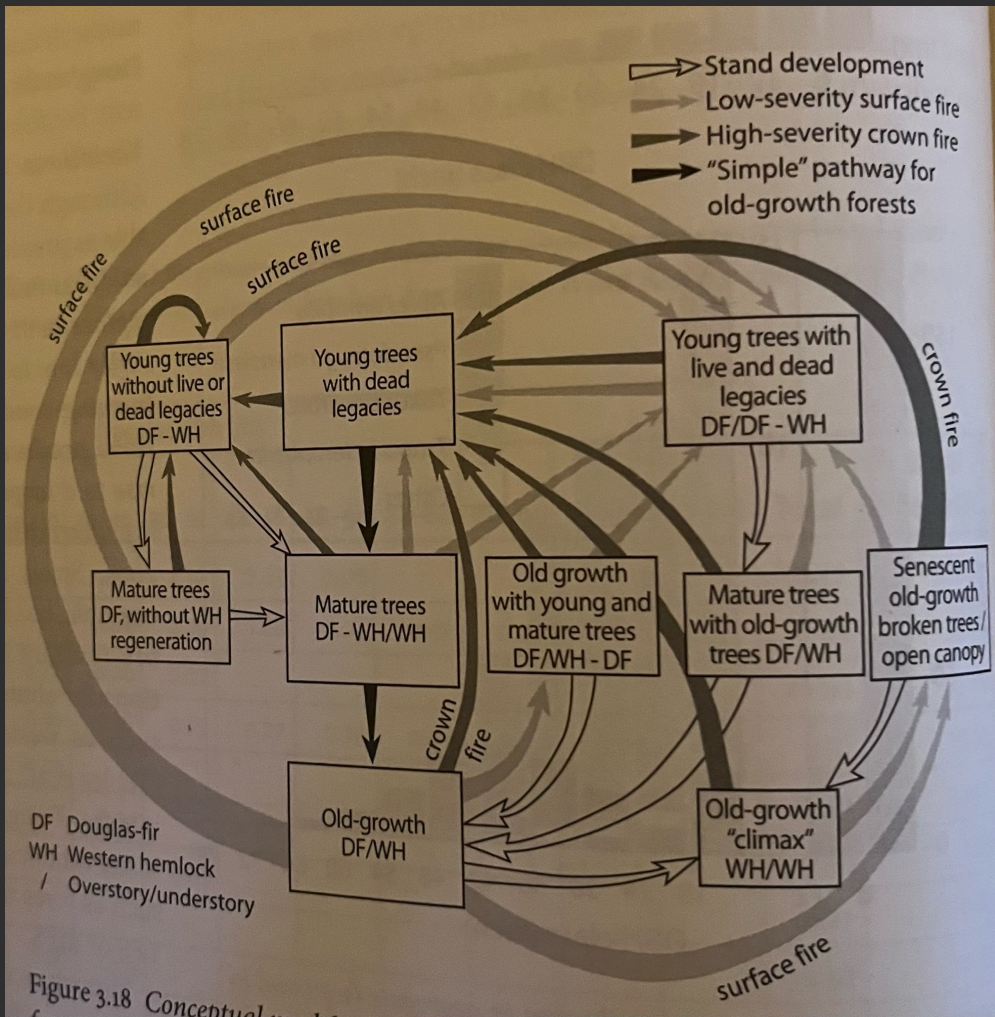


Figure 3.18 Conceptual model of forest succession