



Phoradendron

thief tree

→ Leaf x

Mistletoes

- Shrubs with broad leaves
- hemi-parasites
- Predominantly found on broadleaf trees
- Sycamore, Oak, Cottonwood



Arceuthobium → Dwarf mistletoes

"Juniper" "Life"

Growth

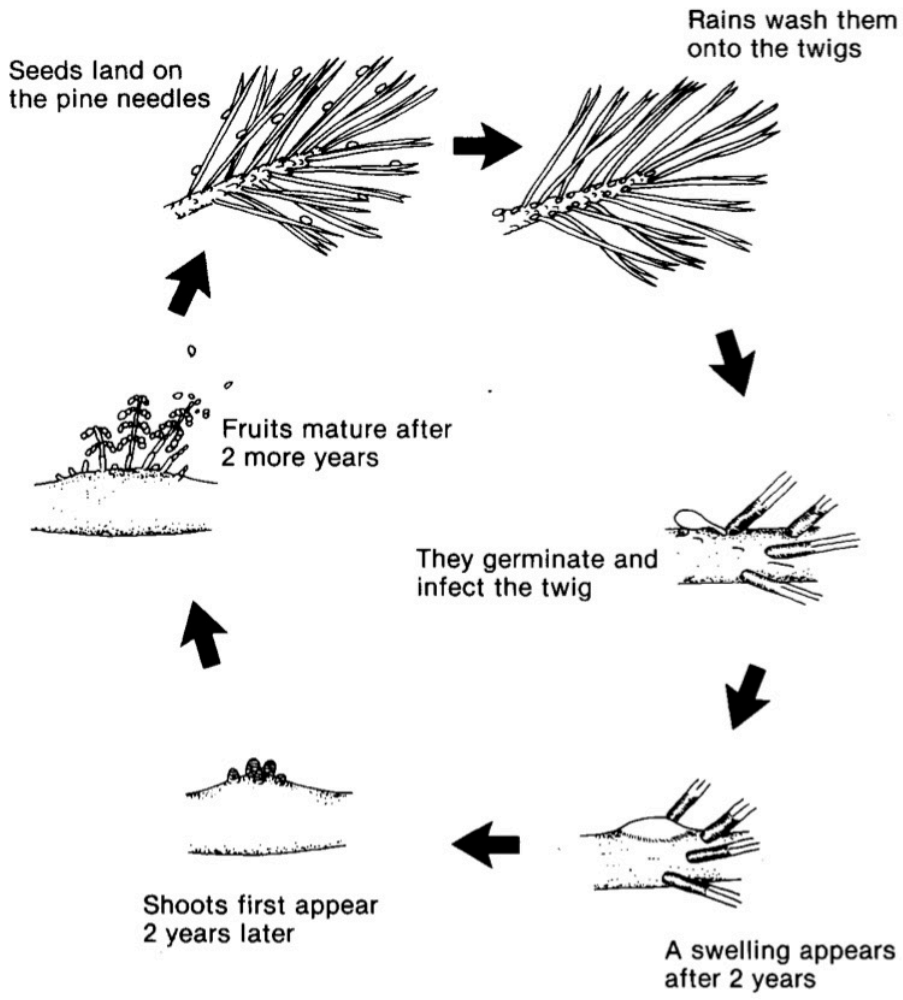
reminds people
of juniper needles

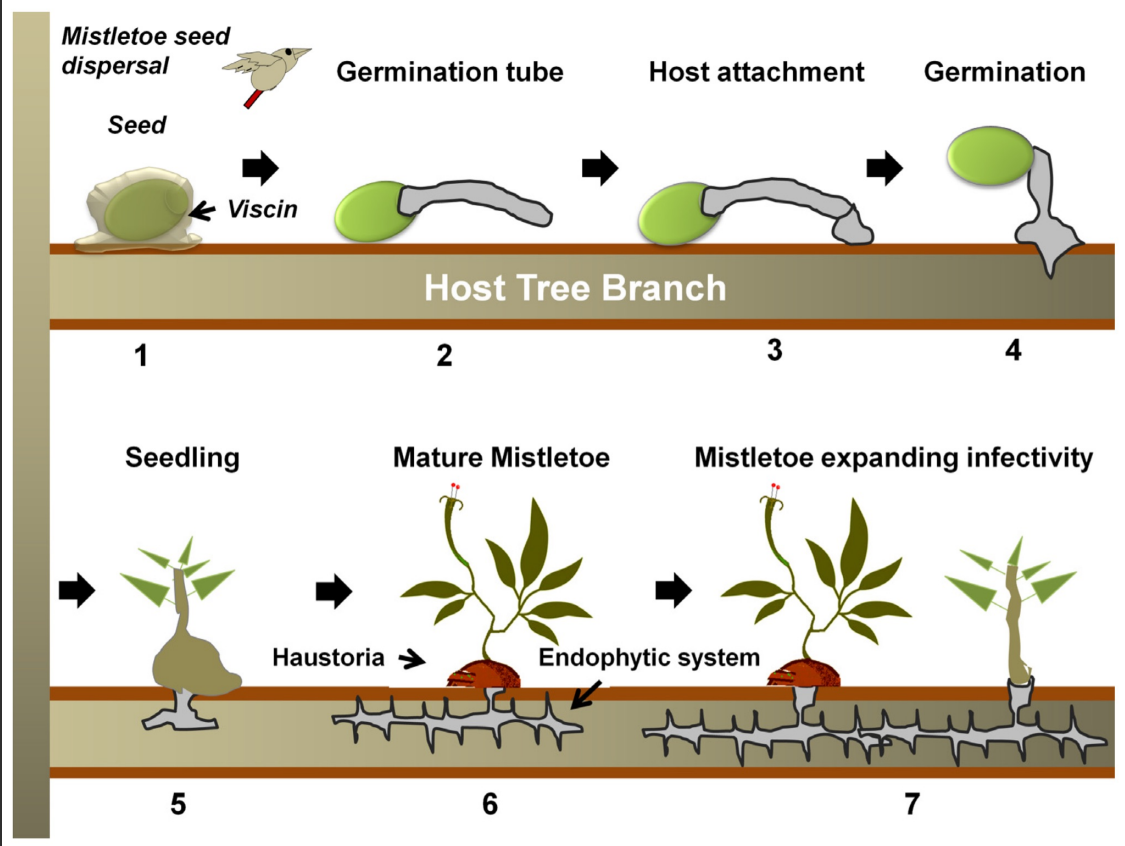
- True parasites

- Common mostly on conifers



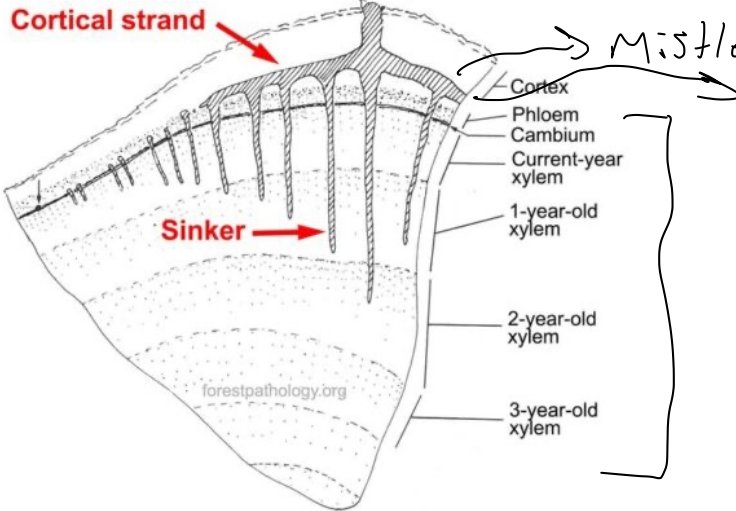
Dwarf Mistletoe





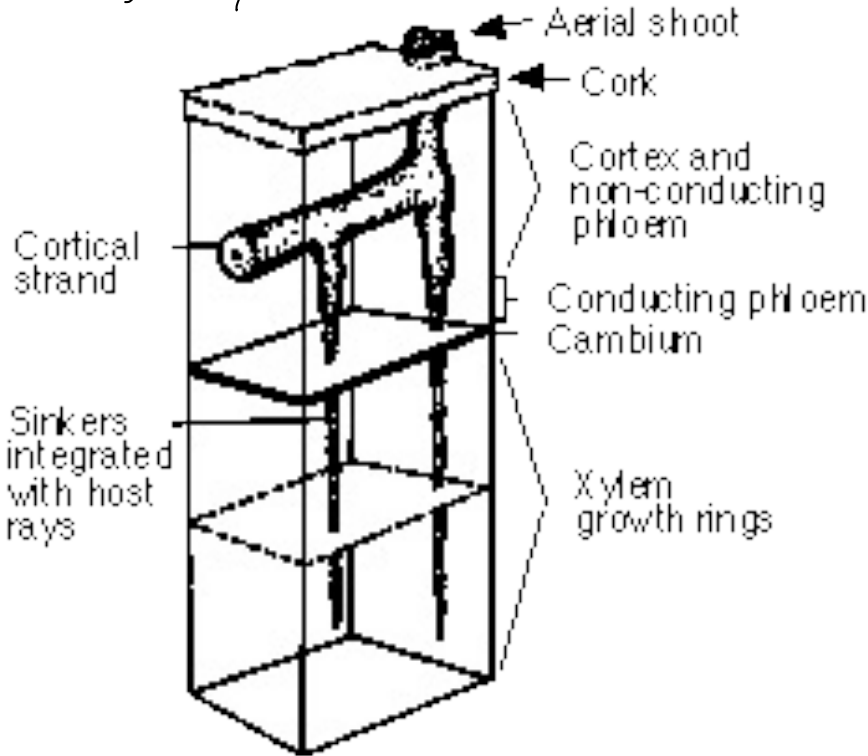


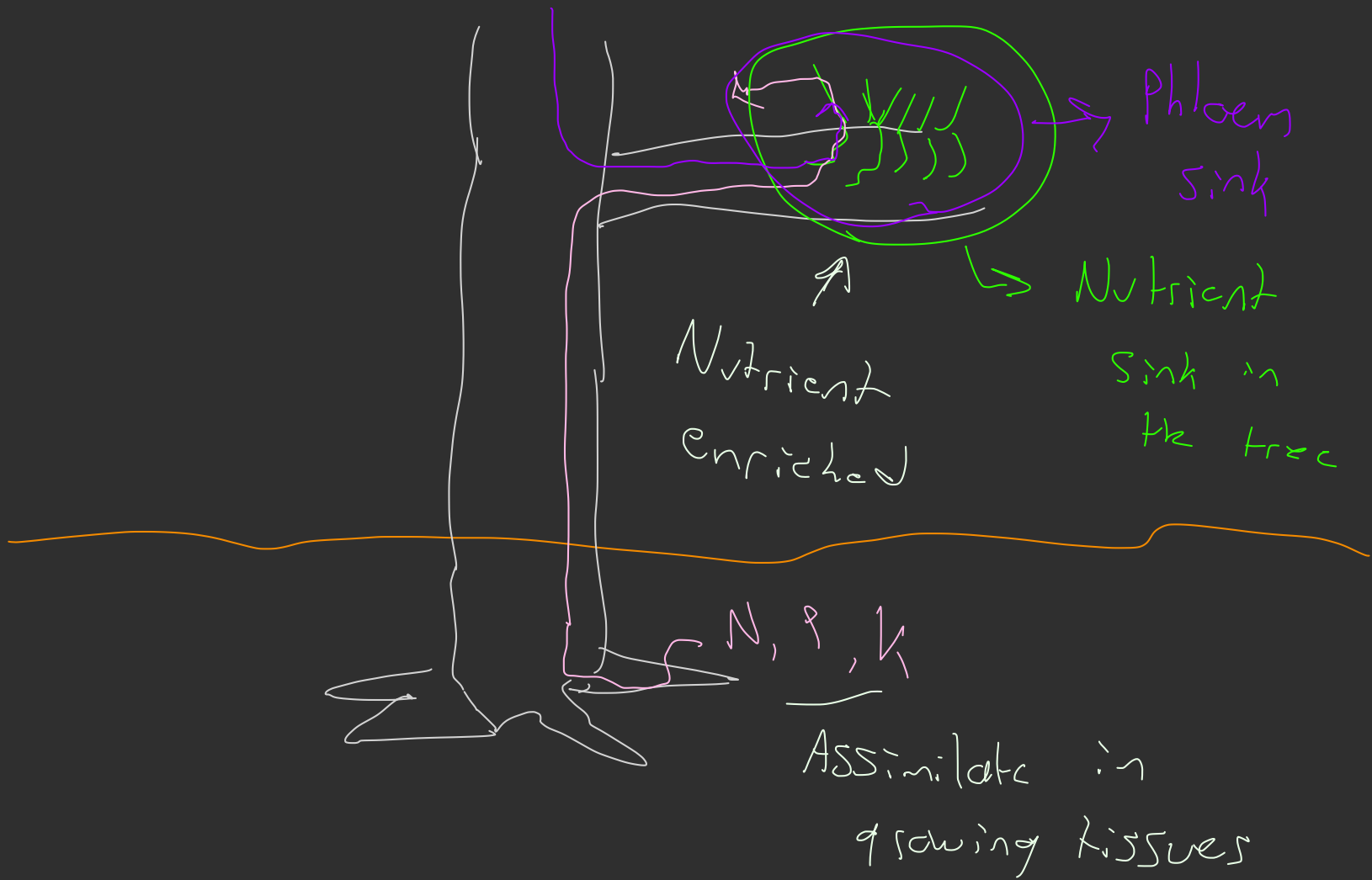
<https://www.youtube.com/watch?v=-fVX0WVGshQ>



establishes

- 1) Phloem to Phloem contact
- 2) Xylem to Xylem contact





Dwarf Mistletoe



Reduced leaves



Photosynthetic rates
are reduced.

Host tree photosynthetic
rates are ↑

d
Orange in color

because Chlorophyll is reduced

Anthocyanins and carotenoids

Host trees experience

→ ↑ photosynthesis ... ↑ ^{↑ transpiration} susceptibility to drought
(↓ WUE)

→ ↓ Growth rates.

→ ↓ defenses

↑ Mortality

DM is most damaging forest pathogen in the West



Witches Brooms

Lodgepole pine DM

Limber pine DM

Pinyon DM

Douglas-fir DM

Southwestern DM → Ponderosa pine

Juniper Mistletoe

→ Not managed for really at all
↳ leafy mistletoe

→ Leaf, mistletoe rarely affects tree health → full leaves and chlorophyll

Managed the same way

What is the relationship between stand structure and mistletoe?

↑ stand density = ↑ Mistletoe infection

... ↑ mortality ... ↓ stand density ... infection
on regeneration.

Manage w/ Silviculture

Friend or foe? → when numbers

→ Small populations can be fine!

- Beneficial; nitrogen fertilizer