

Commonly Known as:

Conifers AKA Pine trees



How are they like Ferns?

1. Land Plants
2. Vascular
 - Xylem and Phloem
 - But now the vascular tissue has evolved to awesome new levels to let conifers become the tallest plants

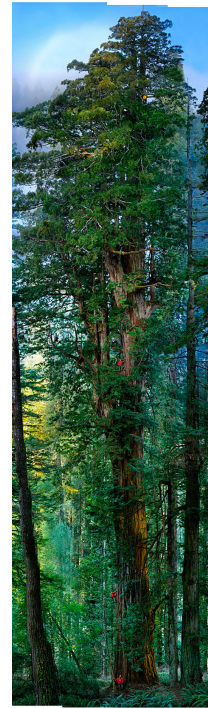


Where do they live?

On Land – and rocks at it!

- 3rd plants to make it to land
 - By far the best at living on land
 - Can handle arid (dry) areas
 - Awesome vascular tissue to transport water over great distances
 - No longer need water for reproduction because they have

SEEDS!



How do Conifers Reproduce?

- SEEDS!
 - The first seeds have evolved
 - Since they are the first they are more simplistic (less derived, AKA ancestral)
 - Naked seeds
 - In fact: “Gymnosperm” Means Naked Seeds
 - The ovule/seed is produced on a leaf-like structure and is **unprotected**, or naked
 - Use a **cone** to protect their seed instead



Pollen

–Structure

1. Air bags – to float
2. Cell
3. Long tube to spread genetics into the flower

–Function:

- Move through air
- Distribute male DNA
- Improved genetic diversity



Cone to Flower



Strobilus

- Protect the seed
- Help distribute it
- Attract pollinators
 - Diversify genetics = healthier

Vascular	
<ul style="list-style-type: none">• What does that mean?<ul style="list-style-type: none">– They CAN move water	<ul style="list-style-type: none">• How does this affect their shape?<ul style="list-style-type: none">– No longer constrained to have maximum SA for Osmosis• <u>AMAZING</u> Vascular Tissue<ul style="list-style-type: none">– <u>Allows:</u> Them to grow so tall– <u>How do they deal with the pressure?</u><ul style="list-style-type: none">• Wood/cellulose around tubes• <u>Why:</u> stop them from collapsing
