Of all the wonders of nature, a tree in summer is perhaps the most remarkable; with the possible exception of a moose singing "Embraceable You" in spats. Woody Allen

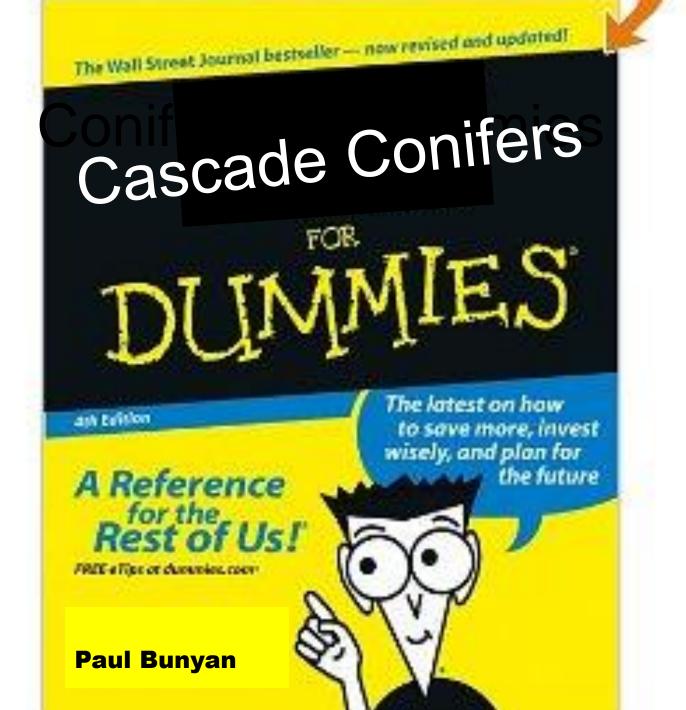
Conifers

Mickey Eisenberg Dave Shema

Hundreds of birds Thousands of flowers But only 18 conifers!

Conifers: Only 18

Pines (4) Playing in the Firs (5) Forest Spruces (2) Should Hemlocks (2) Help You Yew (1) Larches (2) Learn Cedars (2) Conifers



Q: How do trees get on the internet?

A: They log on.

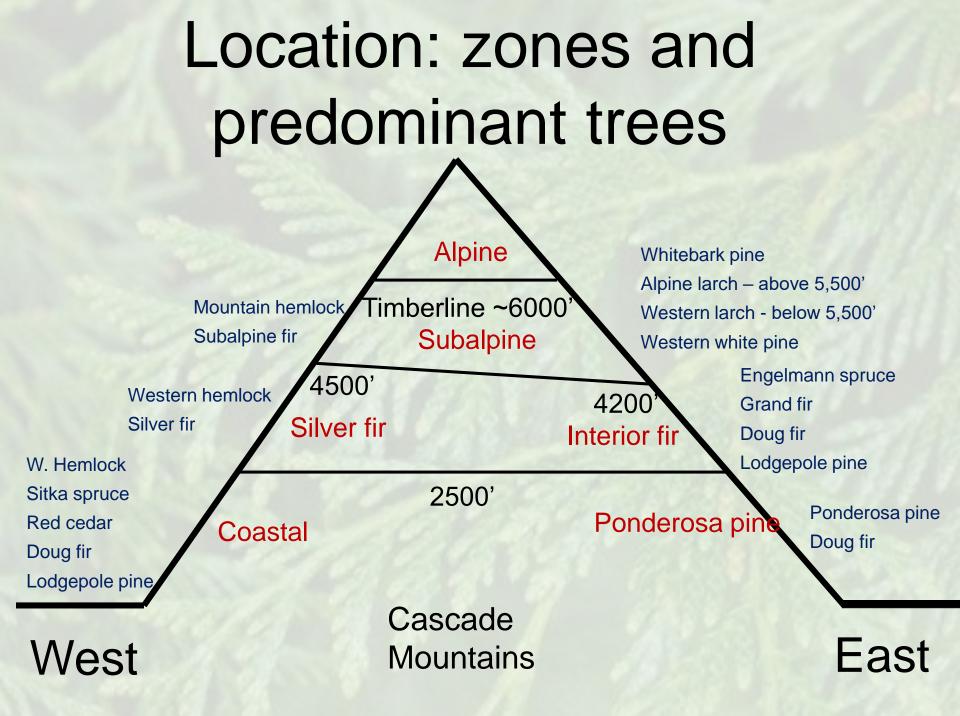
Identification

Emphasis on:

- Needles
- Cones
- Appearance
- Elevation & location

Not much emphasis on bark or size of tree

Conifers may try to trick you, especially in sunny areas



Needles **Scales** Not clustered Clustered Cedars (2) Spruces (2) Pines (4) Hemlocks (2) Larches (2) Firs (5) Yew (1)

Key

Scales: Cedars (2)

Western Red Cedar

- Smooth scales when rubbed
- Reddish bark, rosebud cones
- Looks "happy", with uplifting branches – The "Happy" Cedar
 Generally below 4000'

Western Red Cedar

Alaska Yellow Cedar Other names are Alaska cedar, Nootka cypress

- Prickly when rubbed
- Droopy branches
- Looks sad The "Sad" Cedar
- West of Cascade crest
- Above 3,000'

Alaska yellow cedar

Q: Why didn't the tree want to play checkers?

A: Because it was a chess-nut!

Key Needles **Scales** Not clustered Clustered Spruces (2) Pines (4) Cedars (2) Hemlocks (2) Larches (2) Firs (5) Yew (1)

Needles

Clustered Pines (4) Larches (2) Not clustered Spruces (2) Hemlocks (2) Firs (5) Yew (1)

Needles: Clustered

Pines (4) Larches (2)

Lodgepole Pine

Lightweight wood and easy to peel bark made it preferred for tepees and log cabins.

Costal relative is known as Shore pine or Contorta (Twisted) pine.

- 2 needles
- Needles are 1-3"
- Above 3,000 in the mountains

Lodgepole pine

Ponderosa Pine Named by David Douglas for its ponderous size

- East of crest only
- Bark can look like jigsaw puzzle and may smell like vanilla or butterscotch
- 3 long needles, 5-10" in length
- Up to 5,000'

Ponderosa pine

Ponderosa pine



Western White Pine

Largest cones in Washington

- 5 needles
- Long cones 6-10" in length, often with a banana-like curve
- 3,000-5,000'

Western white pine

Western white pine

Whitebark Pine Symbiotic relationship with the bird Clark's Nutcracker.

5 needles, tightly bundled, 1-3" in length
Cones 2-3" but rarely seen
5000'+, at timberline

Vhitebark/pine

Whitebark pine

Western Larch Yellow needles in fall 3-sided needles in bundles of 15-25, > 2" long Up to 6,000', central/south Cascades, and NE corner of Washington, Idaho Grows tall and straight

Western larch

Alpine Larch

Yellow needles in fall

- 4 sided, clustered needles 20-40, 1-2" long
- 5500+, at timberline, central/north Cascades
- Grows where it is too cold, rocky, snowy, windy, for other conifers

Alpine larch

Needles

Clustered Pines (4) Larches (2) Not clustered Spruces (2) Hemlocks (2) Firs (5) Yew (1)

Needles: Not Clustered

Spruces (2)

Hemlocks (2)

Firs (5) – Upright cones

Yew (1)

Sitka Spruce

- Spikey, flat, needles (won't "roll")
- Paper thin, 3" cones
- Coast and Puget Sound Iowlands, within reach of ocean fog. (< 700')

Sitka spruce

- Engelmann Spruce • Needles are less spikey and square-shaped (will roll between fingers)
- Cones are paper thin, 3"
- Cascades & Eastern
 Washington mountains
- 3,000-6,000 feet

Engelmann spruce

Western Hemlock Washington State tree

- Droopy crown
- Tiny cones < 1" in length
- Short flat needles of 3 lengths, mostly flattened on twig.
- Below 4,000'

Western hemlock

Mountain Hemlock

- Droopy crown
- Short flat needles of two lengths
- 2" cones.
- Needles radiate from all sides of twig like a bottle brush.
- The "Sparkle" Hemlock
- 4,000+ to timberline

Mountain hemlock

Pacific Silver Fir

- Side-by-side needles with row down spine (ski jumpers)
 3-6" cones, upright, green to Purple
- Underside of needle is pale (silver)
 Above 3,000'



Silver fir

Grand Fir Flat branches used for bedding by Lewis and Clark

- Needles lie in flatted rows, bare twig. 3 needle lengths.
- Dark, shiny green needles needles have grapefruit smell & taste.
- Upright cones fall apart at maturity
- Up to 5,000'

Grand fir

Subalpine Fir

- Needles curve to densely crowd top of twig
- Upright, purple-to-gray, cones
- Tree has steepled appearance
- 4,000' to timberline

Subalpine fir



Noble Fir Named by Douglas for its beauty and majesty

- Blue-green needles, bent like hockey sticks.
- Whiskery bracts on upright cones, at tree-top, 4-6" in length
- Mostly south of Rainier
- Above 2,000'

Noble fir



Douglas Fir Not a fir, not a hemlock

- Needles stick out in all directions but can lie flat.
- Mouse tail bracts on cones
- Up to 5,000'
- When in doubt of conifer ID, guess Douglas Fir – correct 80% of time



Pacific Yew (bush)

- Side-by-side short, flat, needles: non-prickly, glossy dark green top
- No cones is a hardwood
- Red aril (seed coat) tastes like mild cherry Jello. Seed is poisonous!
- Below 5,000' in wet shady areas





Yew

100

Q: Where does a tree like to spend the night?

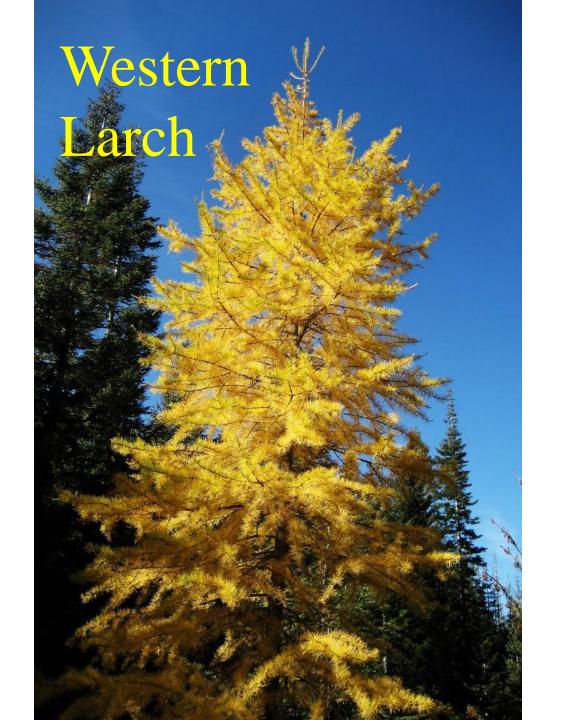
A: In a seedy motel

Q: What is a tree's least favorite month?

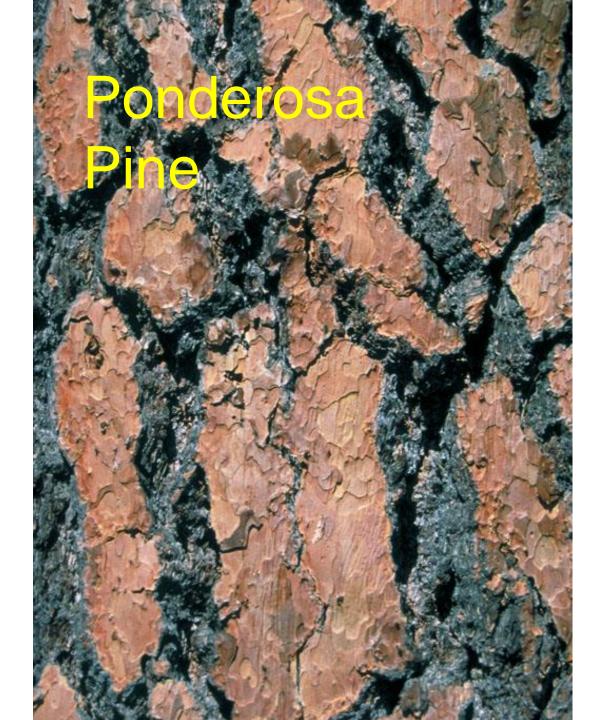
A: Sep-timber



Ponderosa Pine



Engelmann Spruce



Whitebark Pine



Subalpine Fir

Q: What did the beaver say to the tree?

A: It's been nice gnawing you

On-line reference – nwconifers.com

Excellent conifer hike – Crystal Peak, Mt Rainier NP Time fir me to leaf yew

18 Cascade Conifers	Description	Elevation	Cones	Needles	Stomata	Other
Douglas Fir	Bottle brush	Up to 4500	3-4 in, 3 pt bracts	1 in, flat, pointy tip	2 bottom	Not true fir
Western Hemlock	Droopy top	Up to 4500	.575 in	Unequal 3	2 bottom	State tree
Mountain Hemlock	Less droopy	Over 4000	1-3 in	More equal2	Top & btm	larger cones
Silver Fir Loves up	Pale btm need	2000-5000	3.5-6 in	Sides & top	2 bottom	Silver bark
Grand Fir 11 grape fruit	2 rows of needles	2000-5000	2-4.5 in, grn-brn	Equal, side by side	2 bottom	needles not sharp
Noble Fir 11	Blue green	3000-5000	4-7 in, bracts	4 sides, top groove	2 top	Rainier and south
Subalpine Fir 11	Bottle brush	Over 4500	2.5-4 in	Equal	2 top, faint	Steeple
Ponderosa Pine	Distinctive	Up to 4500	3-6 in	3 5-10 in	- 1934	East only
Lodgepole Pine			1-2 in	2 1-3 in		L = 2
Western White Pine		Up to 5000	6-11 in	5, splayed		W = 5
Whitebark Pine		5000+	2-3 in	5, stouter, bundled		W = 5
Sitka Spruce	Coastal most	Up to 2000	2.5-4 in	Prickly	2 top	
Engelmann Spruce	Mountains	3000-6000	1.5-2.5 in	4 sides, prickly, blue green	Top & bottom	Can roll needles, East most
Western Red Cedar	Reddish bark	Up to 4000	.5 in, rosebud	Smooth scales		West mostly
Alaska (Yellow) Cedar	Droopy branches	3000-6500	.5 in, roundish	Prickly scales		West only, krummholz
Alpine Larch	High elev	Over 5000	Bracts	Clusters	4-sided need	East only
Western Larch	Deciduous	3000-5000	Bracts	Clusters	3-sided need	East only
Pacific Yew sharp	Bush in shade	Up to 8000	Red berry	Like Grand	No stomata	West only