

New elevation records for Jeffrey pine

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Proud recipient of 2025 Dean Taylor Award!

The world as we knew it, before summer 2024

California subalpine forest trees with recorded elevations above 3500 m (11,484') plus Jeffrey pine for comparison

Species	Name	Jepson elevations	CCH1 highest elevation (m)	GBIF highest elevation (m)
<i>Pinus albicaulis</i>	Whitebark pine	2000-3700	3658 (12,000')	3658 (12,000')
<i>Pinus balfouriana</i>	Foxtail pine	2700-3700	3225 (10,581')	3688 (12,100')
<i>Pinus contorta</i> m.	Lodgepole pine	1000-3500	3658 (12,000')	3658 (12,000')
<i>Pinus flexilis</i>	Limber pine	1830-3700	3658 (12,000')	3536 (11,602')
<i>Pinus longaeva</i>	Bristlecone pine	2200-3700	3658 (12,000')	?
<i>Tsuga mertensiana</i>	Mountain hemlock	1200-3500	3444 (11,300')	?
<i>Pinus jeffreyi</i>	Jeffrey pine	450-3100	3291 (10,798')	3441 (11,290')

Jeffrey pine is the dominant pine in California montane forests between 1500 and 2500 m elevation, sometimes found in lower subalpine forests on warm slopes

Then I took a hike on the High Sierra Trail...

September 2024



The Kaweahs from Wallace Creek, looking across the Kern River Canyon



Mt. Kaweah from the Chagoopa Plateau

And on an o

P jeffreyi: 12,658'; 3858 m

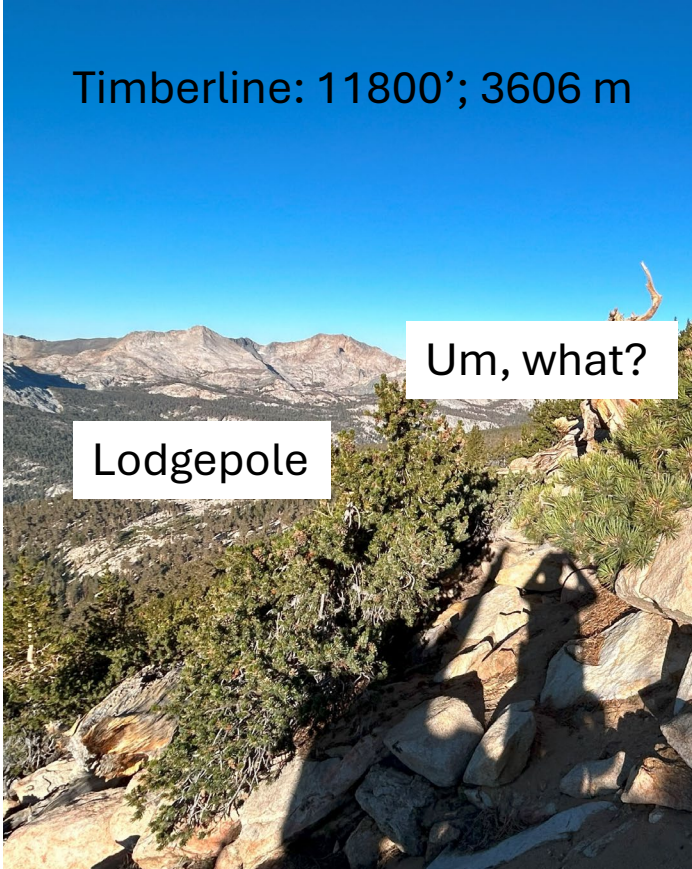
Highest tree on Mt Kaweah,
above lodgepole and foxtail

Mt. Kaweah

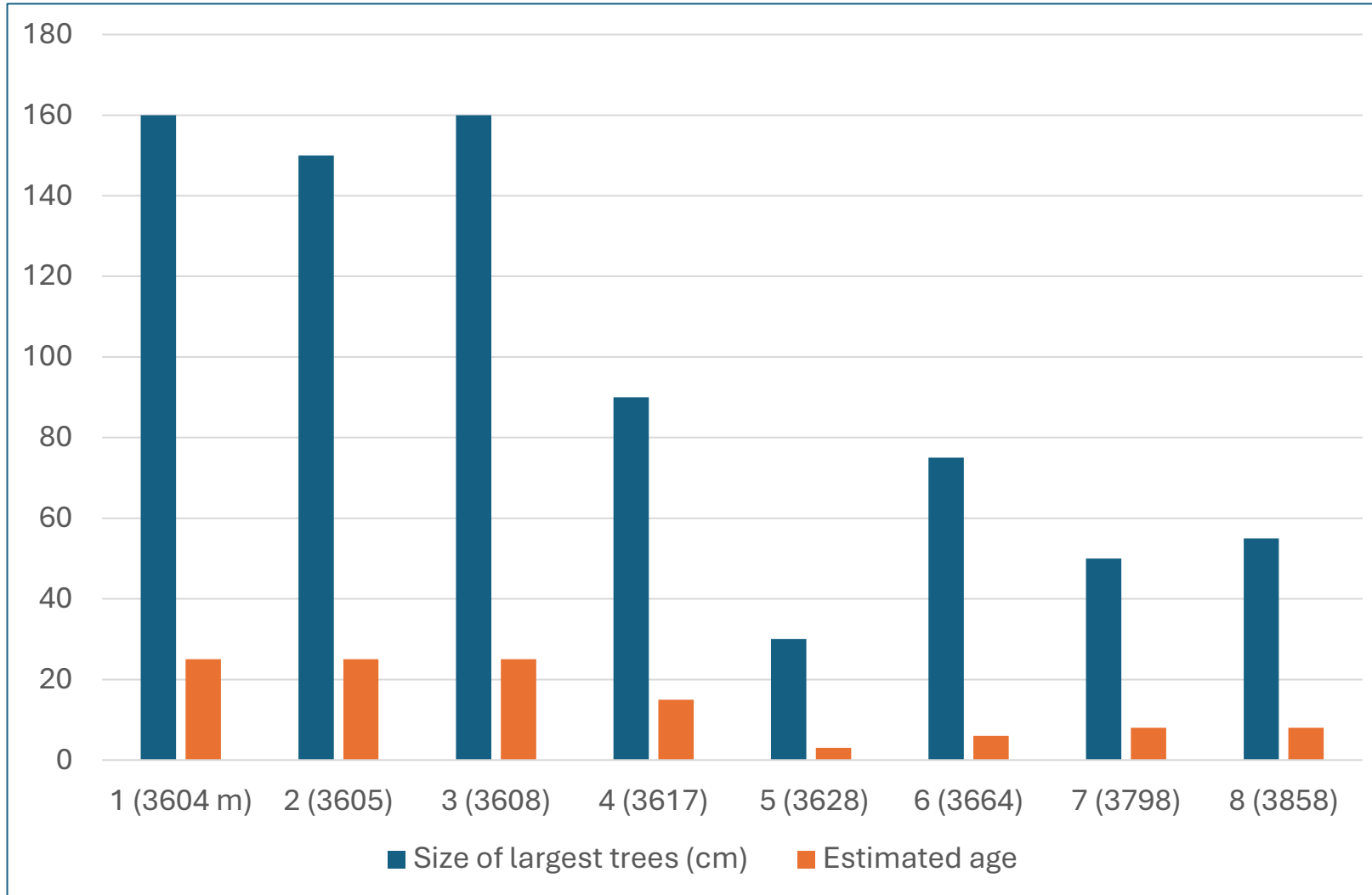
Timberline: 11800'; 3606 m

Um, what?

Lodgepole



My day in the mountains turned into a science expedition

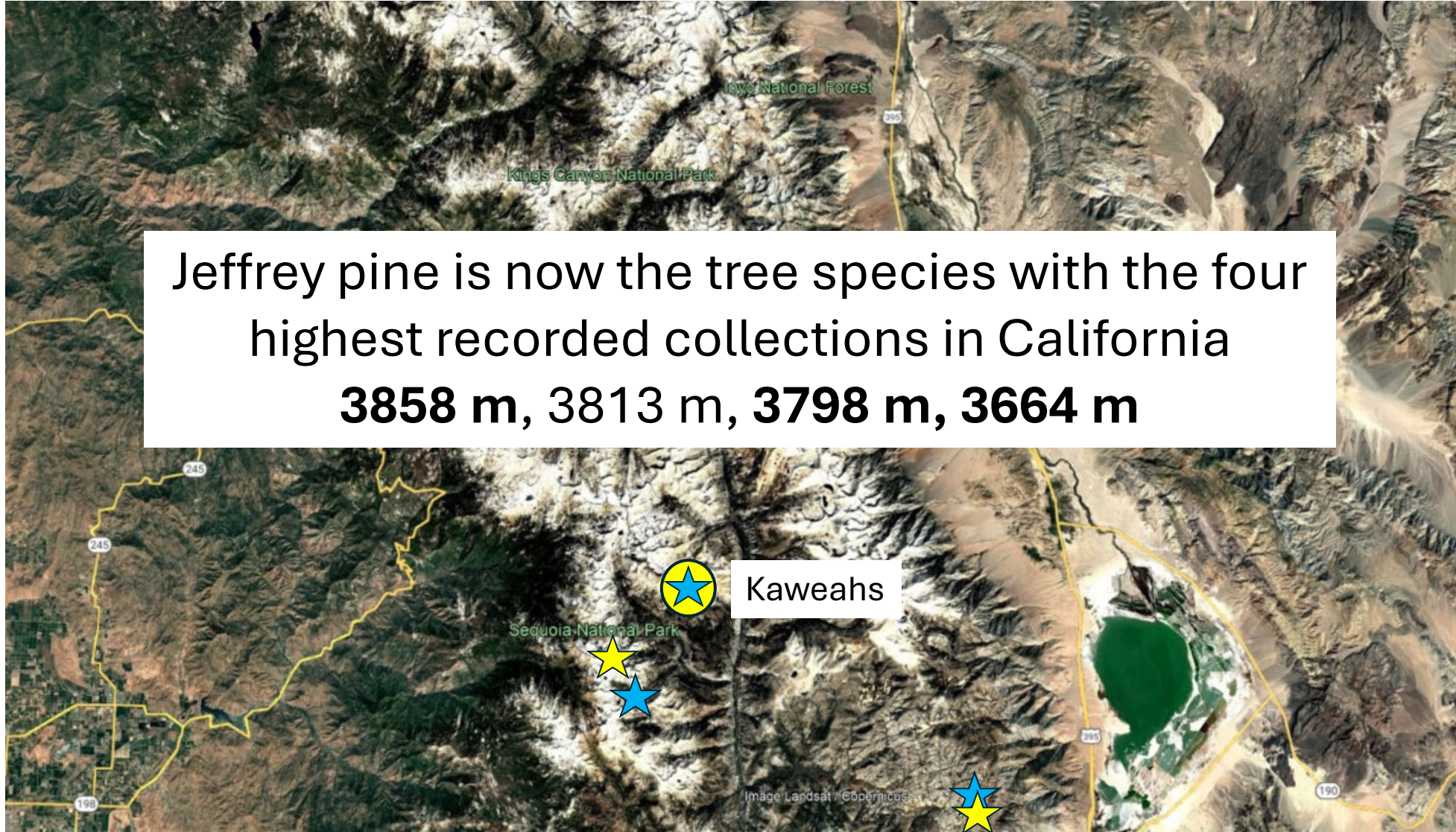


Clues to Mt Kaweah PIJE:

- Nonreproductive (no cones)
- Upper branches on large trees are dead
- Oldest trees are c. 25 yrs
- Population gets smaller and younger with elevation
- Nearest adult PIJE are 2.5 km distant and 600 m lower
- Jeffrey pine seed 4.5x heavier than Foxtail pine



Locations with Jeffrey reported/collected from above 3200 m elevation



Jeffrey pine is now the tree species with the four highest recorded collections in California
3858 m, 3813 m, 3798 m, 3664 m

Kaweahs

Guess what I'm doing next summer?



The culprit