

# White fir and grand fir in northwest California and across the West



Range\* map for

- white fir (*Abies concolor* var. *concolor*)
- white fir (*Abies concolor* var. *lowiana*)
- grand fir (*Abies grandis*)
- hybrids (*concolor* x *grandis*)

\* based on Little (1971), Burns and Honkala (1990) and Van Pelt (2001)  
Michael Kauffmann | [www.conifercountry.com](http://www.conifercountry.com)

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Pinaceae  
*Abies grandis*

grand fir



◀ needles variable in length grow flatly (relative to the branch) in two rows

▼ greyish bark has long, shallow furrows

**Bark:** light brown with blister rusts when young becoming white and smooth at top of tree, dark gray or even purplish color develops at base with age, shallow linear to blocky furrows on the surface of the bark, inner bark reddish


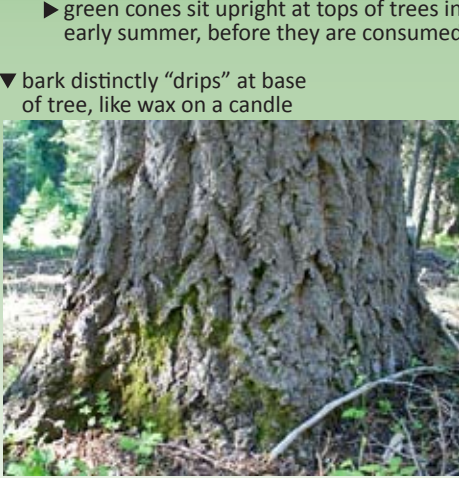
**Needles:** variable but up to 1", dark green above with groove, two rows of stomatal bloom below, lie flat relative to branch in two rows with needles on upper row slightly shorter than those below, notched tip

**Cones:** 2"-4", standing upright, green with purplish hues with maturity

**Habitat:** Cool, moist coastal forests south through California to Sonoma County, below 2000'

Pinaceae  
*Abies concolor*

white fir



▶ green cones sit upright at tops of trees in early summer, before they are consumed

▼ bark distinctly "drips" at base of tree, like wax on a candle

**Bark:** Light gray, smooth, with resin blisters when younger, becoming ashy gray and deeply furrowed at base with age; vertical "melting" appearance at base; when cut, yellowish or mottled yellow and red (grand fir purple)

**Needles:** 1"-2.5", grooves on upper surface, stomatal bloom on both surfaces, vary from lying flat (on lower limbs) to curving upward, soft to the touch, "pine scent" when crushed; notched tip unique to northwest California populations

**Cones:** 3"-5", standing upright, green in color when fresh, drying to brown

**Habitat:** dry and moist sites, varied soil, often in pure stands, 3000'-6500'