

# Connecting with Nature on Fiscalini Ranch Preserve: Monterey Pines and Their Relationship With Fire



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You do not have to live in Cambria very long before you learn that Monterey pines are adapted to fire. This somewhat unsettling idea – are they adapted to *respond* to fire or *catch* fire? – is quickly offset by the realization that there has not been a big fire in Cambria for more than 100 years. (And no, they are not adapted to burst into flames.)

Fire adaptation in Monterey pine (*Pinus radiata*) shows itself in a few ways. Most notably, the scales on its cones open when they get hot, but they really don't need fire to do this. Look up and you will see that many cones that are still on trees have already opened. A hot day will melt the resin that holds the scales closed. Sometimes you can even hear them pop. With climate change, there will be more hot days and less need for fire to free the seeds.

Like many pines, Monterey pines have thick bark. This adaptation protects them from the quick, low intensity fires that were once common in their range. A tree with mature bark would be scorched but could survive a mild fire while younger trees might perish. This reduced the number of trees, leaving each more resources, including space to grow.



Another adaptation to fire gives Monterey pines one of their distinct characteristics: older trees lose their lower branches. In addition to lifting up their needles so they get as much sun as possible, bare trunks do not provide a ladder for flames to climb up into their crowns. A crown fire is likely to cause much more damage than a ground fire.

Next time you walk through a Monterey pine forest, look for the signs that these trees evolved with fire. Forest managers today try to keep the forest both healthy and unburned, of course, but that job is easier if you pay attention to how these trees lived for thousands of years before Cambria was built. The disturbance of fire must be replaced with other forms of disturbance if the forest is to continue to thrive.