Plants throughout the state are responding to warmer temperatures, extreme droughts and deluges, and rising levels of atmospheric CO₂. Each plant species responds distinctively, but they also influence each other, while simultaneously responding to changing patterns of wildfire, herbivore activity, and pathogens. People are not merely a passive audience either, since we have been shaping these ecosystems for thousands of years. Today, for example, we control wildfire, spread exotic species around, and plant hundreds of thousands of trees. In California’s forests, we are witnessing dramatic recent changes, including extreme wildfire behavior, bark beetle outbreaks, and climbing tree-lines. This talk tells several stories about forest change, including: how pine species are affected by bark beetles and novel pathogens, how giant sequoias are responding to intense wildfire, how bristlecone pines are moving up mountainsides, and how weather affects the growth of existing trees and the survival of new seedlings. The talk concludes by flagging some of the things we don’t know about the future of California forests and proposing actions we can take to improve the outlook.