



## Woody East Bay Hills Species with Rapid Declines, Fall/Winter 2020-2021

In 2020, the species below have been stressed by drought and some high-heat days, and several days of smoke and ash, making plants more susceptible to insects and pathogens.

The East Bay Hills had pre-existing issues with dying Monterey pines, coast live oaks, tanoaks and pallid manzanitas. In some areas, there were already many dead trees per acre. This new wave of woody species diebacks, some surely from a pathogen, some possibly from drought and unusual high temperatures, creates a very dangerous fuel situation throughout the East Bay Hills.

Most of this data was compiled from explorations in Joaquin Miller Park and Dimond Canyon; many of the diebacks are known to be a regional problem.

### Non-native Trees

- ‡bluegum eucalyptus (*Eucalyptus globulus*): cause unknown
- ‡blackwood acacia (*Acacia melanoxydon*): cause unknown (leaves turn red/orange/yellow)
- ‡†silver wattle acacia (*Acacia dealbata*): cause unknown (leaves turn gray/black)
- ‡†black wattle acacia (*Acacia mearnsii*): cause unknown (leaves turn gray/black)

### Native Trees

- bay laurel (*Umbellularia californica*): SOD (pre-existing) plus new dieback issue
- madrone (*Arbutus menziesii*): SOD or other?; (trees die, turn black)
- toyon (*Heteromeles arbutifolia*): losing leaves, cankers; cause unknown
- coast live oak (*Quercus agrifolia*): some is SOD, some cause unknown
- coast redwood (*Sequoia sempervirens*): cause unknown

### Shrubs

- coyotebrush (*Baccharis pilularis*): acres of leaves turning brown, cause unknown
- huckleberry (*Vaccinium ovatum*): cause unknown
- ‡French broom (*Genista monspessulana*): leaves very brown, cause unknown
- ‡cotoneaster (*Cotoneaster* sp.): cause unknown

### Pre-existing Decline Problems

- oaks, 3 species (*Quercus agrifolia*, *Q. wislizeni*, *Q. chrysolepis*): SOD
- ‡\*Monterey pine (*Pinus radiata*): old age, pitch canker
- \*tanoak (*Notholithocarpus densiflorus*): SOD (possibly extirpated from our parks)
- pallid manzanita (*Arctostaphylos pallida*): *Phytophthora cinnamomi* (a type of water mold)

### Watch List Shrubs

- poison oak (*Toxicodendron diversilobum*): early color and leaf-drop, cause unknown
- sticky monkeyflower (*Diplacus aurantiaca*): severe leaf-drop, cause unknown

### Notes

- \*California native trees, but not East Bay local species
- † watch list: only a small number of ailing plants found; more field work needed
- ‡invasive non-native (or non-local) species