

California Native Plant Society

CNPS MONTEREY PINE FOREST POLICY

Adopted March 1995

Policy Statement

Because of habitat fragmentation and other cumulative impacts to Monterey Pine Forests, CNPS recommends that there should be no further removal of healthy, non-hazardous native Monterey Pine trees, except for minimal removal on existing lots of record and to meet fire safety requirements. Preservation efforts should be concentrated on stands 20 acres or larger and contiguous stands of smaller acreages that provide wildlife corridors, habitat connectivity, or occupy rare terrace soils. Fire resistant construction should be required for homes located in and near Monterey Pine Forests.

In landscaping, reforestation and/or mitigation projects, replanting of native Monterey Pine Forest habitat with trees grown from locally-collected seeds, preferably from trees uninfected with pitch canker, should be encouraged. Special care should be taken to avoid contamination of seedlings with pitch canker. Monterey Pines propagated from non-native genetic stock should be replaced when they occur near native forests. In some cases where Monterey Pine Forest stands are not regenerating, management techniques that encourage natural seedling establishment and forest rejuvenation should be considered. This includes prescribed fire where appropriate. As new information is developed, additional management techniques may be identified.

While breeding programs for resistant strains will be a part of the response to the pitch canker threat, the primary emphasis of action should be on maintaining the maximum appropriate natural genetic and ecological diversity in the native forest habitat.

CNPS recommends that all remaining natural stands of Monterey Pine Forest be incorporated into an effective regional forest conservation plan, with specific criteria for identifying areas essential to maintain the full complement of genetic and floristic diversity. The plan should propose a strategy, alternatives and a timeline for achieving permanent protection of the Monterey Pine Forest.

Background

Native Monterey Pine Forest provides the scenic backdrop highlighting the distinctive character and ambience of the Monterey Peninsula, Cambria, and Swanton-Ano Nuevo areas. These three Monterey Pine Forest areas are relicts of the Pleistocene coastal coniferous forest that supported Monterey Pine from modern Marin County in the north to Riverside County in the south.

In 1994, CNPS considered the native Monterey Pine to be Rare and Endangered (List 1B) because this forest type is naturally confined to these three small areas on the central California coast and two small Mexican islands. Throughout its natural range, Monterey Pine Forest is subject to increased threats from clearing, fragmentation, feral animals, and disease. Monterey Pine is also on the California Department of Fish and Game Special Plant List and is a federal candidate for endangered species listing and protection.

A recent study finds that the native Monterey Pine Forest on the Monterey Peninsula is grouped into distinct community sub-types based on soil and geomorphic surfaces. Further, pine forest sub-types found on the six granitic marine terraces in the Del Monte Forest area differ from the pine forest sub-types found on sandstone and shale terraces of Jacks Peak. Subtypes are also expected to exist in Cambria and Swanton-Ano Nuevo. The natural stands of Monterey Pine Forest form plant and animal ensembles found nowhere else on Earth. For example, Del Monte Forest supports 10 rare and endangered plant species.





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Monterey Pines propagated from nursery stock of unknown origin have been widely planted in and near the native Monterey Pine populations. If these introduced trees hybridize with native Monterey Pines, the offspring may lack genetic traits necessary to adapt to changing conditions.

Pitch canker, a fungal disease introduced to California in 1986, has been spreading rapidly throughout the central coast. Pitch canker has infected planted stands of Monterey Pine, as well as native trees on the margins of developed areas. Preliminary research suggests that between 5 and 15 percent of the pines in the affected stands are resistant to the disease. Trees weakened by pitch canker are susceptible to fatal attacks by a variety of beetles for which there is no practical control. Foresters and scientists have recommended funding a breeding program to develop trees that are resistant to pitch canker; this may result in the loss of genetic diversity among native stands that support trees resistant to pitch canker and other pathogens. Some authorities have recommended that there should be no further extensive planting of Monterey Pines in order to limit the spread of pitch canker; but unless native forests can be restocked to balance tree removal and mortality, the long-term survival of the forest may be threatened. Experts agree that the largest possible stands of native trees should be preserved as a buffer to pitch canker and a reservoir of potential resistance.

Recent fire protection proposals have recommended that the "defensible space" around dwellings be expanded to 150' in Monterey Pine Forest areas. This proposal threatens to result in the removal of large numbers of Monterey Pines and the increase of "edge effect" on remaining trees, thus exacerbating the disease hazard. Such proposals may be inconsistent with Local Coastal Plans and county ordinances, as well as with the fire hazard rating of Monterey Pine Forest habitat. Although the Monterey Pine is a closed-cone species with a reproductive strategy that benefits from fire or hot temperature, the existence of fog in its habitat during much of the fire season reduces the actual danger of fire occurring.

The preservation of the full genetic heritage of the Monterey Pine Forest is a matter of global concern. Monterey Pine is the most widely planted timber tree in the world and could provide a source of wood that reduces logging pressure and potential extinction trends in tropical rainforests. In tree plantation settings, cultivated Monterey Pines selected for rapid growth, straight trunks and maximum height, may not have critical genetic traits and disease resistance that could be provided from breeding with native stock.

(Most of the information on which this policy is based appeared in the January 1995 Fremontia. For documentation of issues not covered in the January 1995 Fremontia, contact the Monterey Bay Chapter of CNPS.)

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