

# 30 YEARS OF THE ENDANGERED SPECIES ACT

## PINE HILL PLANTS

The Pine Hill plant community is a collection of native plants, including eight rare species, which have adapted to unusual soil and climate conditions in a small area in the foothills of the Sierra Nevada. Approximately 740 distinct plant species have been recorded in the Pine Hill area, and five Pine Hill plant species are protected under the Endangered Species Act.

### HISTORY OF ENDANGERMENT



Habitat loss has been the most significant risk factor for Pine Hill plants. Extensive housing construction and commercial development have reduced their habitat to a small fraction of original gabbro soils, which are generally deep red, mildly acidic, rich in iron and magnesium, and low in calcium.

In addition, human suppression of fire, once a natural process in the California foothills, has restricted the normal reproduction of fire-adapted species and allowed other plants to move into the ecosystem. Non-native plants threaten Pine Hill plants by competing with them for water, nutrients, and sunlight. Declines in native wildlife such as native insect pollinators further imperil the rare plants.

In 1996, concern about five Pine Hill plants—Pine Hill ceanothus, Stebbins' morning glory, El Dorado bedstraw, Pine Hill flannelbush, and Layne's butterweed—resulted in their listing as threatened or endangered under the Endangered Species Act.

### ROAD TO RECOVERY

To protect this unique plant community, a consortium of state and federal agencies, local governments, and the local na-

tive plant society established the Pine Hill Preserve. The Preserve provides a safe and stable habitat for the preservation of the Pine Hill rare plants and the ecosystems in which they live.

When complete, the Preserve will comprise about 5,000 acres of habitat. Though only about one sixth of the original reach of the plant community, this area should be large enough to maintain the viability of the species. By covering as much of the gabbro soil region as possible, the Preserve maximizes the biological integrity and diversity of the original plant and animal communities.

### CONSERVATION TODAY

A centerpiece of the Preserve's management is its fire plan. In order to keep the risk of catastrophic fire to a minimum and to maintain the health of the fire dependent rare plant community, an ongoing program of fuel reduction and careful prescribed burning on Preserve lands is critical. Protection of human life and property is the highest priority.

### ECOLOGICAL & ECONOMIC VALUE



All native plants are integral to the function of ecosystems. For humans, their inherent beauty and diversity attracts wildflower watchers and naturalists. But plants also offer an irreplaceable bank of chemical products and genetic traits—over half of all medicines are derived from wild plants. Humans already rely on the genetic diversity in wild plants to protect crops from disease

and climate change. Because the rare plants in the Pine Hill Preserve thrive on inhospitable and infertile soils, they may eventually teach us lessons about rehabilitating degraded lands and using marginal lands.

### OUTLOOK FOR THE FUTURE

The Endangered Species Act saved Pine Hill plants from an almost certain extinction. But protecting enough habitat for Pine Hill plants to recover is an ongoing challenge. The plants are part of a unique community of nearly 10 percent of the native plant species in California. All of these plants are confined to an area of 30,000 acres, making it a nationally significant site of species diversity.

Three rare plants are endemic to the Pine Hill region, meaning that they grow nowhere else in the world. Thus, if we lose even a small portion of this habitat, these plants could quickly be extinct.

The Pine Hill Preserve encompasses 3,100 acres, more than 60 percent of the ultimate goal for protected land. Procuring the remaining land and continuing to fund management of the Preserve is the key to the species' survival.

