

Ponderosa pine trees live in San Bernardino National Forest. They have thick bark, deep roots, and needles. These features help them hold water and survive fires. Seeds grow into new trees after fires.

Mountain yellow-legged frogs live in mountain streams and lakes. There once were no fish in these streams and lakes. When people put trout in the streams and lakes, they ate most of the frogs.



Mountain yellow-legged frog



Damage from mountain pine beetles

Many insects feed on pines. In normal times, the trees make sticky sap that floats the insects out. Weak trees do not make enough sap to keep out the beetles. Mountain pine beetles attacked ponderosa pines. They fed on the inner bark of the trees, killing them. Beetles killed pines on more than half the land in the forest. Dead trees are very dry.

Most mountain yellow-legged frogs probably survived the fire. Some may have been washed from their pools during floods. Mud and ash filled some pools and other pools dried up. Almost all the frogs disappeared from the forest.

Scientists saved some frogs. They are now trying to raise them in a zoo. They hope to return the frogs to the forest someday.



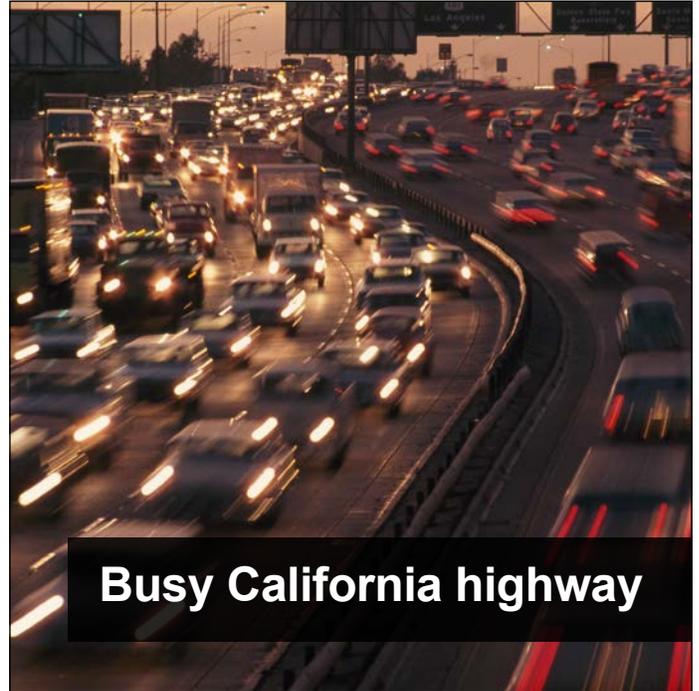
Mountain yellow-legged tadpole



Ponderosa pines

This forest suffered four years of severe drought. Trees like the ponderosa pine are adapted to drought. Only a few died from lack of water. But, during a drought, these pines lose more needles. Their trunks do not grow much taller or wider. The trees are weaker, too.

People have polluted the air for many years. They create pollution when they drive their cars. They also create pollution by running factories. The ponderosa pine cannot grow well when the air is dirty. Dirty air also makes the trees weak. Many insects attack weak trees.



Busy California highway



In 2003 people started fires on purpose in two places in the forest. Dead, dry trees burn faster and hotter than live trees. The Santa Ana winds spread the fires until they joined. The fire burned for more than a week. It burned about one fourth of the forest. More than 1,000 nearby homes were destroyed.

The winter rains came. With no plants and roots to hold the ground in place, mud flowed down the hills. It carried dead wood that clogged the rivers and creeks below.

