



Forest Pests

Forest pests may be described as non-native insects and diseases that cause environmental or economic damage or harm to human health when introduced to new ecosystems.

The impact of non-native insects and diseases extends far beyond their effects on the host species they attack. Although damage is inflicted on the host species (e.g., the fungus which causes sudden oak death kills the oak tree), the impact also extends to the associated plants and animals. Some native species are dependent on a particular tree species or forest type and are threatened with extinction when that tree or forest disappears.

The destruction of food-bearing tree species, such as whitebark pine, interrupts food chains and forest energy cycles. The destruction of riparian hardwoods by sudden oak death could increase stream water temperatures and reduced the amount of habitat for native trout.

The destruction of a tree species by non-native forest pests can also have an indirect effect on

forest health. Forest ecosystems extend below ground level. For example, the beautiful flowering dogwoods are small, understory trees that contribute a significant amount of calcium to the soil. Ecological studies have shown that above-ground changes in tree species composition and population size affect underground food and energy webs with unknown long-term effects.

Yosemite National Park has so far been spared from a critical level of infestation of non-native forest pests. Of the 16 pest species listed in the table below, only white pine blister rust (pictured above center) has become established in the park. Park managers conduct aerial surveys, monitor traps and forest health, identify potential pathways for introduction of pests, and educate the public. Preventing is easier than controlling outbreaks.

Above from left to right: Mediterranean pine engraver beetle, white pine blister rust, and light brown apple moth. All photos courtesy Bugwood.org

Nonnative Insects and Diseases that Threaten Yosemite's Forests

Agent	Already In	Potential Hosts
White pine blister rust	Yosemite NP sugar pines	Western white and whitebark pines
Goldspotted oak borer	Southern California	Oaks
Mediterranean pine engraver beetle	Fresno, California	Pines
Sudden oak death	Coastal California	Oaks, maples, and white firs
Pine pitch canker	Coastal California	Pines
Light brown apple moth	Coastal California	Most trees and shrubs
Red-haired bark beetle	Southern California	Pines
Imported fire ants	Southern California	Ecosystems and people
Dogwood anthracnose	Pacific NW, Eastern states	Native and garden dogwoods
Asian long-horned beetle	Great Lake states	Willows, aspens, maples, and cottonwoods
Emerald ash borer	Great Lake states	Ash
Oak wilt disease	Midwest to Texas	Black, white, and live oaks
Sirex wood wasp	New York, Pennsylvania	Pines
Hemlock wooly adelgid	Eastern states	Mountain hemlock
Gypsy moth	Northeast	Oaks, alders, and sequoias
Formosan termite	Gulf Coast states	Trees, buildings, utility poles, and pipelines

How are forest pests introduced?

Global and local trade and travel increase the potential for the introduction of non-native insects and diseases because insects and pathogens “hitchhike” on commercial shipments of goods, plants, and packing material. Recent establishments of serious pests in American forests such as the emerald ash borer, sudden oak death, and koa wilt were all introduced in this way. Because non-native pests developed elsewhere, they often have no naturally-occurring predators

in their new “home.” This can allow them to spread unchecked.

The latest invader to the wider California region is the goldspotted oak borer. Found in southern California’s oak trees, it has not yet been detected in Yosemite. Anecdotal reports suggest the gold spotted oak borer may have been brought into the state on oak firewood from Mexico.

Your role in protecting Yosemite’s forests

Don’t transport firewood outside a 50-mile radius: Forest pests don’t stop at the park border, and they can cause serious problems when they spread to wild areas. Firewood may contain non-native insects and diseases. Bringing firewood into the park from other areas may accidentally spread pest insects and diseases that threaten park resources and the forest health. Use local firewood, leave unused wood behind when you go home, and burn firewood where you got it. Prevent a forest pest outbreak in your own community by following the same recommendations for firewood.

Don’t bring outside plant materials into the park: It might seem attractive to brighten your campsite with a supermarket azalea, or, if you live in the park, to plant a row of rhododendrons from your favorite nursery in front of your cabin. However, plants from outside nurseries can bring new insects and diseases into Yosemite. If you live in the park, be aware that the NPS Housing Office also maintains a list of plants to avoid introducing into Yosemite’s landscapes. For more information contact the Housing Office at (209) 379-1879 or (209) 379-1839

How do I obtain safe firewood in Yosemite?

Wood permits are available for *anyone* to cut wood from Yosemite wood lots. Wood lots are located in El Portal, Foresta, Hodgdon Meadows, Wawona, and Yosemite Valley. Gathering wood is prohibited in Yosemite Valley, the Sequoia groves, and above 9,600 ft elevation. Permits are issued in the El Portal Fiscal Office (by mail or in person) at \$10 per cord with a 6 cords per year max. Wood is for personal use only—not for sale or exchange. Contact the Fiscal Office for more information at (209) 379-1869.

Wood may also be available for sale by the park concessioner.

Campfires may be built using established fire rings located in developed campgrounds. Campfires in Yosemite Valley are limited to the hours between 5–10pm from May 1 through September 30 to help improve air quality. Unattended campfires must be thoroughly extinguished.

Participate in Yosemite’s future

Public support is essential to protect Yosemite’s forests. The success of this effort and all other park projects depends upon public participation.

Here are some ways to stay involved in the park:

- Attend a National Park Service public Open House to talk with project specialists and obtain more information on this topic. Visit the park’s planning website (listed below) for upcoming dates.
- Add your name to the park’s planning list and receive the *Planning Update* newsletter as well as other planning-related notices. You can also submit your email address to receive the park’s periodic electronic newsletter.

- Additionally, you can submit comments with your thoughts about this topic or any other project in the park by any of the following means:
 - Mail: Superintendent
P.O. Box 577
Yosemite, CA 95389
 - Phone: (209) 379-1365
 - Fax: (209) 379-1294
 - E-mail: Yose_Planning@nps.gov
- Visit online: www.nps.gov/yose/parkmgmt/planning.htm to find out about plans and projects or www.nps.gov/yose/naturescience/index.htm to find out about science and nature in the park. To find out more about forest pests and their impact on Yosemite visit www.nps.gov/yose/naturescience/forest-pests.htm