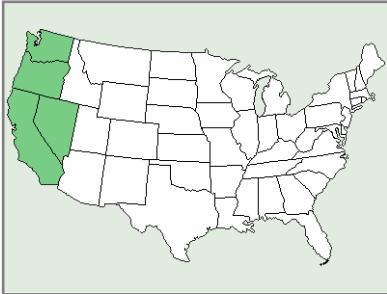




## Just the Facts...

## Pacific Poison Oak



**Range.** Pacific poison oak occurs generally west of the Cascade Mountains in CA, NV, OR, and WA (shaded states). Highest densities are found in CA west of the Sierra Nevada Mountains and the Mojave Desert.

*Pacific poison oak grows as a shrub or vine. It is found in the Pacific coastal states of Washington, Oregon, and California, as well as western portions of Nevada. Plants can survive under a wide range of temperatures, elevations, soil types, moisture conditions, and light intensities. In southern California, where Pacific poison oak is a ubiquitous shrub, this plant has a serious economic impact due to lost employment time as a result of dermatitis it causes. Plants are poisonous at all times of the year and at all stages of growth. All parts of the plant, except the pollen, contain urushiol, a toxin that causes irritation and blistering of the skin. To cause injury, urushiol must contact the skin, either directly by touching the plant, or indirectly by touching things that have touched the plant such as clothing, tools, animals, or firewood. Although some skin-applied products are marketed that claim to protect against or reduce the severity of dermatitis, the best prevention is to learn to recognize Pacific poison oak and always avoid it.*

**Q. What does Pacific poison oak look like?**

**A.** Pacific poison oak [*Toxicodendron diversilobum* (Torr. & Gray) Greene] grows as a multi-stemmed shrub or woody vine. Shrubs are erect with stems from 2 to 6 feet tall. Vines

commonly reach 10 to 30 feet, but can grow as long as 100 feet. The leaves are bright green in the summer (reddish in the fall) and usually have three, round to ovate, diversely lobed or toothed leaflets. The leaflets resemble oak leaves. Small flowers occur in leaf axils. Male and female flowers grow on separate plants. The fruits are white drupes. Plants are reproduced from seeds in the fruit, and sprouts from creeping rootstocks (rhizomes).



**Growth Habits.** Pacific poison oak can have a shrub or vine form. In open areas under full sunlight, it grows as a dense leafy shrub usually 2 to 6 feet in height (right). In shaded areas, such as forests, it grows as a climbing vine, up to 100 feet in length (left).

**Q. Where am I likely to encounter Pacific poison oak?**

**A.** Pacific poison oak occurs in all the Pacific coast states (CA, OR, WA) as well as western portions of Nevada. It is widespread in California, west of the Sierra Nevada Mountains and the Mojave Desert. Pacific poison oak can survive under a wide range of temperatures, elevations (sea level to 5,000 feet), soil types, moisture conditions, and light intensities. Favored habitats include open woodland, grassy hillsides, coniferous forests, and open chaparral. Pacific poison oak grows in greatest densities where established vegetation has been disturbed by cultivation, construction, road building, or wildfires. It is also commonly found in wood lots, Christmas tree plantations, rangeland, and recreation areas.



**Recognizing Pacific Poison Oak.** Leaves normally consist of three leaflets (left). Each leaflet is 1 to 4 inches long and smooth with toothed or somewhat lobed edges. In the spring, Pacific poison oak produces small, white-green flowers at the point where leaves attach to the stem (top, right). Whitish-green, round fruit (drupes) form in late summer (bottom, right).

**Q. Why is it important not to come in contact with Pacific poison oak?**

**A.** All parts of Pacific poison oak plants, except the pollen, contain a toxic, oily substance, called urushiol (pronounced "you-ROO-shee-ol"). It is present in the plant throughout the year. Urushiol causes irritation and blistering of the skin. To cause dermatitis, the oil must contact the skin, either directly by touching the plant, or indirectly by touching things that have touched the plant such as gloves or other clothing, tools, animals, water, or firewood. The dermatitis is apparently an anaphylactic reaction; that is, it occurs only after sensitization by previous exposure. Individual sensitivity can vary from extreme susceptibility to near immunity. Dermatitis usually appears within 12

to 24 hours, but may appear in as little to 3 or 4 hours or be delayed for several days. In California, the number of working hours lost as a result of dermatitis caused by Pacific poison oak causes a significant economic impact, especially in the forestry, landscape, utility, and agricultural industries.

**Q. What can I do if I suspect that my skin or clothes have been exposed to urushiol?**

A. After contact with urushiol, it usually takes a little while for it to penetrate the skin. Washing thoroughly within 5-10 minutes after contact can significantly reduce likelihood/severity of dermatitis. Wash the exposed skin with soap and cold water, followed with rubbing alcohol or a solution of water and alcohol in equal proportions to dissolve the unabsorbed urushiol. Rinse thoroughly, since this solution only flushes away the poison, and does not inactivate it. Urushiol can remain active on contaminated clothing, bedding, tools, and other surfaces for years. Ordinary hot temperature laundering will usually get rid of urushiol on fabrics. Thoroughly rinse with water any contaminated tools or equipment.



**Contact Dermatitis.** Symptoms such as skin itchiness, swelling, inflammation, and the formation of blisters usually appear within 12 to 24 hours after contact with the sap of Pacific poison oak.

**Q. How can I protect myself against the dermatitis caused by Pacific poison oak?**

A. The best prevention is recognition of Pacific poison oak plants and appropriate avoidance. Barrier creams containing 5% bentoquatam, are the only FDA-approved, skin-applied products that have been proven to protect against or reduce the severity of the rash caused by Pacific poison oak, when applied at least 15 minutes prior to exposure.

**Q. What are some of the common myths associated with Pacific poison oak?**

FICTION	FACT
You can become immune to the effects of Pacific poison oak by eating the leaves.	Immunity not conferred by eating any plant part; ingestion can cause serious gastric disturbance.
The rash from Pacific poison oak is contagious; breaking the blisters will spread the rash.	Blisters contain only body fluids; they cannot spread the rash on the skin or to other people.
You can develop a rash from Pacific poison oak simply by being near the plants.	Rash results only if urushiol touches skin; airborne contact possible, burning/mowing plants.
It is safe to handle dead plants or dormant plants during the wintertime.	Plants are poisonous year-round; urushiol stays active on surfaces and in dead plants for 2 years.
If you don't develop a rash after touching Pacific poison oak once, then you must be immune.	First exposure seldom produces rash; sensitivity can change with age and repeated exposure.

**Q. How can I eliminate Pacific poison oak from my property?**

A. The presence of Pacific poison oak should not be tolerated around child day care facilities or schools, and can be a significant nuisance when present in the landscaping outside dwellings and workplaces. Consult with Preventive Medicine Activity personnel at your supporting clinic to identify suspect plants found around a building. Seek the assistance of the Installation Pest Control Office before applying herbicides for Pacific poison oak control.

**Nonchemical Approaches.** Young shoots can be repeatedly mowed/cut until the energy stored in the roots is exhausted and the plants die. Roots can be dug up and pulled out of the soil. All the roots must be removed to achieve eradication. Dispose of plant parts where they cannot contaminate people or animals. Never try to destroy Pacific poison oak with fire. When a Pacific poison oak plant is burned, urushiol goes into the air on the dust and soot in smoke, and this can result in an allergic reaction in the eyes and respiratory tract or on the skin.

**Chemical Approaches.** Compounds that are effective in controlling Pacific poison oak include glyphosate, and the auxinic herbicides triclopyr, 2,4-D, and dicamba. These herbicides can be applied as stump or basal applications, or as a foliar spray. Glyphosate is most effective when applied late in the growing season, after drupes have formed but before leaves lose their green color. Applications of the auxinic herbicides should be made earlier in the season, when plants are growing rapidly from spring to midsummer. Sprays must contact the leaves to be effective. However, care must be exercised when using these herbicides, since most shrubs, broadleaf ground covers, or herbaceous garden plants which are contacted by the sprays will be killed. Herbicides may not provide 100% control from a single application, and repeat applications to treat regrowth may be necessary.

**References:**

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