The Sure-Fire Poison Oak & Poison Ivy Identification System

Sandra J. Baker

THE SURE-FIRE POISON OAK & POISON IVY IDENTIFICATION SYSTEM

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DISCLAIMER
This book is intended as an informational guide only. There is no guarantee the user will be able to identify poison oak or poison ivy by using this guide.

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IDENTIFYING POISON OAK & POISON IVY

This booklet is an excerpt from *The Poison Oak & Poison Ivy Survival Guide*

Print this out and keep in your outdoor trip pack.

Leaves of three, let it be.

This scene is played out every spring, summer, and fall. Someone will yell out, "STOP! Three leaves! Don't go any closer!"

Three leaves hanging around together seem to get everyone in a dither. Want to know if you really should worry?

Take a deep breath and walk up close to the plant. Yep, real close. Solve each clue before you go on to the next.

1. Leaves

a. Start at the **very end** of one branch. Do you see three leaves grouped together?

Good. Now look at the rest of the leaves.

1. Are *single* leaves growing up the rest of the branch instead of groupings?

If so, this plant is out of the running. (You saw the last leaf at the tip of a branch and thought it was part of a threesome).

2. Or, do you see groupings of three leaves all the way up the branch? If so, this plant is possibly poison oak or poison ivy.

No—3 leaves grouped at tip of branch but not elsewhere

Yes—groups of 3 leaves going up the branch

b. Okay, lets say you definitely have groupings of three leaves going up the branch.

There are a couple of possibilities.

l. The stems of the three leaves could be joined together on one main stem, creating *one* leaf.

- Botanically, each of the three is now called a *leaflet*.

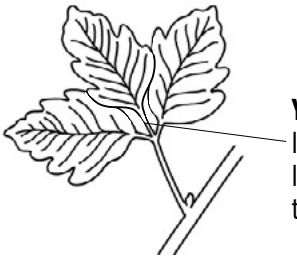
• Poison oak and poison ivy, plus some other plants, fall into this category).

2. But, you also might be looking at groupings of three single leaves that happen to be in close proximity to one another. These are out of the running.

At this point we will assume you are looking at three leaflets on one stem.

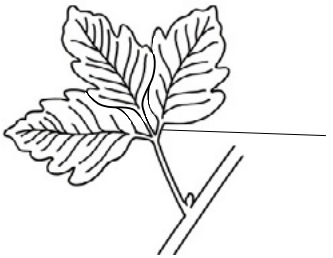
2. Leaflets

a. Look at the *middle* leaflet. Its stem should be longer than the stem of the two side leaflets. It might be slightly longer or much longer, but it will never be the same length or shorter.



Yes—middle leaflet stem is longest of the three.

b. Check out the two side leaflets. They should have short stems in relation to the stem of the middle leaflet.



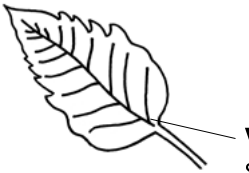
Yes—short side leaflet stems (often almost too short to detect)

c. If all three leaflets seem to be missing stems, this is *not* poison oak or poison ivy.

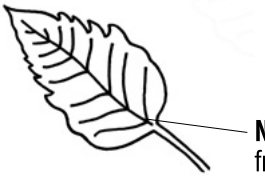
No—leaflet stems are absent

3. Leaflet veins

Find the main vein of a leaflet. There will be side veins. A side vein will not be directly across from another side vein. They are in alternate positions off the main vein.



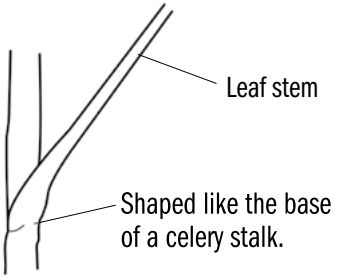
Yes—alternate side veins



No—veins are across from each other

4. Leaf stem

Each leaf stem (remember it has three leaflets attached) has a distinctive base, which is slightly thickened and shaped in a curve like a celery stalk. It might or might not have a bud or new leaf stem at the base. Stems are very small, and this clue is hard to see.



5. Leaf placement on branch

• Once you have identified the leaf stem, study the placement on the branch in relation to the other leaf stems.

• Just like the veins, no leaf stem is directly across from another. This is called an *alternate* leaf pattern.

• Some plants have an *opposite* leaf pattern (leaves are directly across from each other), which puts them out of the running.


Yes—alternate leaf pattern

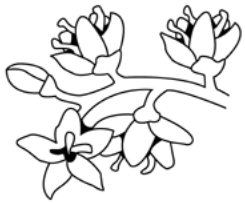

No—stems are directly across from one another

6. Flowers

• You might spot hanging clumps of tiny white flowers.

• Flowers grow alternately on flower stems just as leaves do on branches.

• Female and male plants produce flowers, which may or may not be fragrant. If so, the scent is lovely.



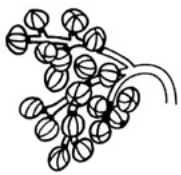
7. Fruit

• The fruit (drupes) are round and light green when young.

• Ripened fruit is white or cream and looks like a tiny peeled orange with a thin black line between the segments, an effect that is quite distinctive even if a bit small, being of lesser diameter than a pea.

• Later the fruit looks a bit shriveled; not as distinctive as when plump.

• Fruits hang in small, messy-looking clumps on stiff stems. *Only female plants* (having been pollinated by male flowers) *produce fruit*.



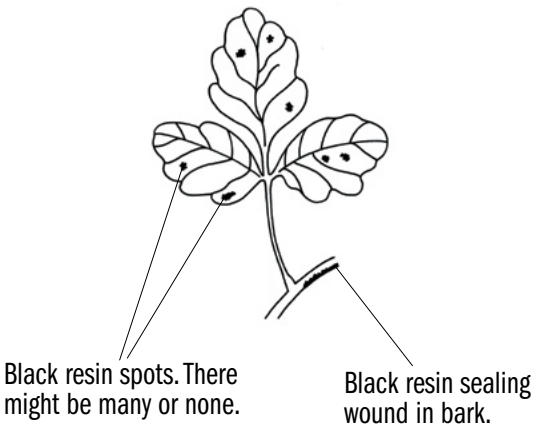
There is an alternating pattern you may have noticed—alternating leaflet veins off main vein, alternating leaf stems on branch, alternating flowers on flower stem (then the fruit).

8. Pitch-black resin spots

• Check a number of leaflets for *tiny* pitch-black spots where bruising or insects have punctured resin ducts. Like a leaky pipe, a bit of clear or milky resin has seeped to the surface, turned black and hardened.

• Sometimes there are many black spots on a leaflet, but usually there are none. Check stems, branches and trunks.

• Large pitch-black splotches on trunks and branches indicate that a deep wound in the bark was sealed with resin; a positive identification.



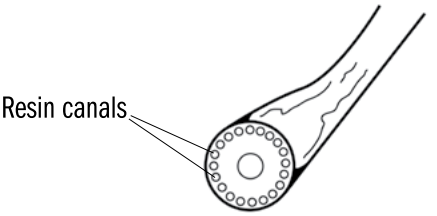
9. Forcing resin out

• Another means of identification, if you have time to spare, is to place a small stem between two sheets of white paper.

• Crush the stem with a stone, freeing the resin. Shortly—maybe in twenty minutes—the resin will turn dark yellow. In an hour it probably will have turned brown. By twenty-four hours there is a good chance it will have hardened and turned black. The timing can vary, depending on humidity and temperature.

• Cutting into the bark of a trunk will also bring forth the resin. If you have a magnifying glass handy, slice a stem and observe the resin ducts arranged like numbers on a clock.

• The emerging resin will later turn the cut end black, except maybe during fall or winter when there is less resin.



Now look at the *whole* plant. The plants can grow either as ground-crawling vines, short bushes, tall bushes or vines growing up a tree or post.

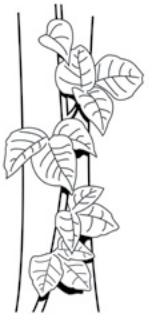
10. Vine growth

• A suspicious vine is climbing up

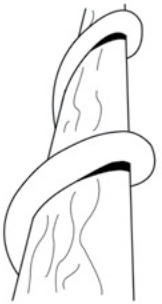
a tree and you can't see the leaves, which are often out of view as they attempt to breach the canopy.

• This part is easy: Does the trunk twine like a barber pole? If so, it is *not* poison oak or poison ivy, which, if in a climbing mood, grows almost straight up because the trunk either leans against something or is held against the host by its aerial roots (above-ground roots on the trunk).

• If there is a bush nearby, the vines might fall over the bush and use it for support, growing almost horizontally, while the tips of the stems have a distinctive slight upward curve.



Yes—growing almost straight up tree

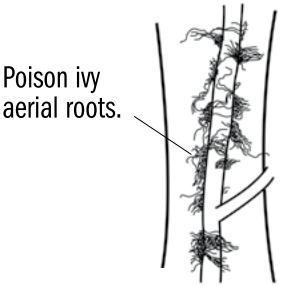


No—poison oak and poison ivy do NOT twine

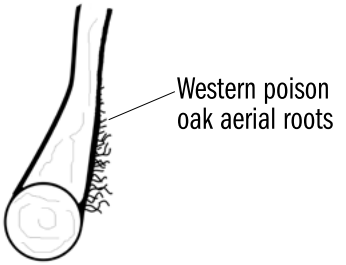
11. Aerial roots

• Eastern poison ivy tends to grow prolific grasping (aerial) roots on mature vines and can resemble a beat-up old rope, a strong identifier.

• If a western poison oak vine grows aerial roots, they are short, sparse and barely noticeable.



Poison ivy aerial roots.



Western poison oak aerial roots

12. Stems

• There are no wispy endings to these plants.

• When you brush against a stem you will feel resistance.

13. Bark

• Bark is smooth red-brown on new wood, becoming gray-brown and weathered gray on older wood (often covered with lichen).

14. Fall colors

• One sees a full range of bright fall colors, although plants in dry, sunny meadows may simply turn tan and dry up.

BELOW IS THE SAME INFORMATION IN A CONCENTRATED FORM. IF YOU CAN IDENTIFY POISON OAK OR POISON IVY WITH THIS, YOU ARE ON YOUR WAY.

Remember the alternating pattern you learned.

l. Leaves

• Three leaflets on one leaf stem, continuing up the branch in sets of three.

• More than three leaflets is possible, but not probable.

2. Leaflets

• The middle leaflet will have a longer stem than the other two.

• The other two leaflets will have short stems.

3. Leaflet veins

• Side veins of a leaflet are placed alternately off the main vein.

4. Leaf stem

• Base is thickened, like a celery stalk.

5. Leaf placement on branch

• Alternate pattern, not across from each other.

6. Flowers

• Tiny, white and hang in clusters. May or may not be fragrant.

• Flowers alternate on flower stem.

7. Fruit

• Smaller than a pea. Light green when young; white when ripe, resembling a tiny peeled orange. Black stripes between segments.

8. Pitch-black resin spots

• Search on leaves, stems and trunks.

9. Forcing resin out:

• Crush stem for definite identification. Will probably take hours to turn black. Caution encouraged.

10. Vine growth

• Almost straight up, no barber-pole twining. Parts of the plant sometimes lay over bushes with the tips curving upward.

11. Aerial roots (help the vine climb by grasping host)

• Older eastern poison ivy vines resemble old ropes. Western poison oak aerial roots will be absent or not obvious.

12. Stems

• Strong and flexible. No wimpy thin stems.

13. Bark

• Old weathered grey to newer smooth red-brown.

14. Fall colors

• Variable, from dull to bright.

WINTER IDENTIFICATION

When you develop a feel for the winter look, identification can be easier than in other seasons.

1. Leaves will have dropped, leaving a raised U or V-shaped scar, where the leaf stem was attached. This is very distinctive. Scars will alternate on the stem rather than being across from each other.

2. During winter, languid-looking vines draped over sturdy shrubs are typical, as is the gentle curve of the tip toward the sun. Notice the short side stems growing alternately up the larger stems, and the small pointed buds on their tips.

3. Without leaves, trunks and stems are easily observed. As your eyes move back from the tip of a stem, the smooth wood will become grayer. Lichen and moss may be present and the wood begins to look old and weathered.

4. Short shrubs in meadows are a bit harder to identify. Leaf scars get you on the right track. You will notice multiple branches growing upward, but without the here-and-there branching style of most shrubs. Instead, short side shoots are placed alternatively on each branch in a tidy way.

5. In balmy Southern California, leaves may not drop during the winter.

WHAT YOU WILL *NEVER* SEE ON POISON OAK OR POISON IVY PLANTS

- Flowers growing from the end of a stem.
- Single large flowers.
- Flowers any color other than cream or white.
- Upright flowers.
- Fruit larger than a pea.
- Red, blue or purple fruit.
- Leaf stalks directly across from each other on the stem.
- Sharp spines.
- A vine twining like a barber pole.

OTHER VARIETIES OF *TOXICODENDRONS* WITH THEIR OWN IDIOSYNCRASIES

Eastern poison oak. *Toxicodendron pubescens*

- Does not grow as a vine. Has the characteristics of a poison oak shrub form.
- Leaves are often covered with short, downy hairs, giving the plant a velvety look. This is a variable trait.
- Grows on barren, gravelly soil in the southeast.

Western poison ivy. *Toxicodendron rydbergii*

- It is a short scrubby shrub, averaging about three feet tall. May grow up to ten feet, but is usually no taller

than three feet, with only a single stem.

• The leaflets fold upward at the rib like a butterfly. This is a variable trait.

Poison Sumac. *Toxicodendron vernix*

• The leaflet midrib is red.

• Likes marshes. Regular sumacs cannot survive in water.

• There are four to seven sets of leaflets per stem with a leaflet at the end.

• White flowers, white berries.

• Leaflets have smooth edges and are shaped like rabbits ears three to four inches long.

• The sumacs it resembles have red flowers and red berries, and sawtooth leaves or a winged leaf stalk between the leaf sets.

PLANTS THAT RESEMBLE POISON OAK & POISON IVY

Virginia creeper. *Parthenocissus quinquefolia:* This plant is often mentioned as a poison ivy look-alike. Not so. Virginia creeper has *five* leaflets, not three. It has aerial roots, but they have flat adhesive discs at the end, very different from poison ivy's short, fuzzy aerial roots. Virginia creeper also has purple berries.

Box elder. *Acer negundo:* Called the most common look-alike for poison ivy, the pictures certainly resemble the plants. This is a tree; consequently, only small saplings will look suspicious. Yes, it has three leaflets per leaf, but *the leaf stems are directly across from each other on the branch*. Case closed. You don't even need to know what this plant is; you now know what it is not.

Wafer ash. *Ptelea trifoliata:* This shrub or tree resembles the box elder. There are three leaflets per stem, but there is no little stem at the end of *any* of the three leaflets.

Bladdernut. *Staphylea trifolia:* The leaves are *opposite* on the stem. Poison oak and poison ivy are *alternate* on the stem.

Boston ivy, English ivy. *Parthenocissus family:* These plants have good examples of aerial roots. If you spot an ivy vine growing up a tree, take note for future reference: the two ivies have single leaves, not three leaflets per leaf stem.

Wild grape. *Vitis:* Leaves are arranged alternately along the stem like poison oak and poison ivy, but they are *single* leaves instead of three leaflets per leaf stem. Besides, these are weak vines with tendrils.

Wild blackberry. This plant is covered in sharp spines.

Aromatic sumac. *Rhus aromatica:* Very similar in appearance to poison oak and poison ivy. My daughter has this gorgeous plant and was worried, but it is too perfect—a lush bush, neat and tidy. One big tip-off is that the leaves have an aromatic scent when crushed.

Botanical description of *Toxicodendrons*

"Trees, shrubs and vines. Leaves alternate, trifoliolate, multifoliolate (rarely unifoliolate). Inflorescences pendent, axillary panicles. Flowers: male and female flowers on separate individuals (dioecious; perianths pentamerous; disk intrastaminal, five-lobed; stamens five; ovary unilocular, the ovule basal, the style one, the stigma one. Drupe exocarp separates from mesocarp when ripe." [1]

Now you should be able to identify the plants in all their incarnations. Poison oak and poison ivy can be long and lanky, short and squat, limp and laying, upright and stiff, a dull dried-out hue or dressed for Mardi Gras.

HISTORICAL RHYMES

(*leaves* changed to *leaflets* for botanical accuracy)

Leaflets three, let it be; leaflets five, let it thrive.

Berries red, have no dread; berries white, a poisonous sight.

Hairy vine, no friend of mine. (poison ivy vines)

Raggy rope, don't be a dope. (poison ivy vines)

Red leaves in the spring, it's a dangerous thing.

Side leaves like mittens, will itch like the dickens. (Eastern poison oak)

DEVELOPING A POISON OAK & POISON IVY AUTOMATIC SENSOR™

Type of people who venture into poison oak and poison ivy country

1. THE BLISSFULLY IGNORANT

Never having been in poison oak or poison ivy country before, the Blissfully Ignorant haven't a clue. They sometimes wade through thickets of the plants to pick lovely bouquets of its colorful fall leaves. There is nothing to say—most are doomed.

2. THE HOPELESSLY IGNORANT

Their refrain is "What, me worry? I don't get it." That is, until the day they do—head to toe. This is rather embarrassing to someone whose identity is attached to being the only person in the group who never gets the cursed rash. Members of this clique may suddenly decide that big cities have all they will ever need in life, or they develop a newfound interest in plant identification and join group number three, "The Enthusiastic Newcomer."

3. THE ENTHUSIASTIC NEWCOMER

These folks are learning to identify the plants, yet they still have trouble

distinguishing between poison oak and berry vines. They helpfully shout "EGADS—POISON IVY. DON'T GO THERE. GOOD GRAVY—YOU'RE STANDING RIGHT IN IT," and so forth.

4. DEVELOPING A POISON OAK AND POISON IVY AUTOMATIC SENSOR

After a few years of tripping cluelessly over poison oak, I finally made it into this group. We have nudged it, waded through it, fallen in it, pulled it up and dug it up. Once I even sprayed cut stems and leaves (consequently the resin) all over my barelegged and tank-topped body while cutting what looked like harmless brush with my chain saw.

As we finish the first stages in our encounters with poison oak or poison ivy, we head into this last category. When we bushwhack, we instinctively look ahead. We slide our hips to the left, take an extra hop to the right, duck our heads, and don't really notice what we just did, other than walk along and enjoy our hike. As we approach a bare vine needing to be pushed out of the way, we automatically raise our eyes up the vine, searching for what the leaves at the top look like.

I have a piece of a newsletter from the eighties. The author says she has a small computer in her head with an "automatic recognition and avoidance response." Same thing, different words. (In the article, she happens to mention that the booklet on poison oak and poison ivy I wrote in 1979 is, ahem, "…the best presentation I've seen.")

So, take your knocks, read the other chapters, continue to tramp through poison oak or poison ivy for years, and then—one spring, without even noticing, you will have a Poison Oak & Poison Ivy Automatic Sensor. At this point, your "sensor" will notice all forms of poison oak or poison ivy because your brain will have captured the essence of the plant, the little nuances of its personality.

References

1. Mitchell, John D. "The Poisonous Anacardiaceae Genera of the World." Pages 103-129 in the G.T. Prance & M.J. Balick (eds.), *New Directions in the Study of Plants and People*. Quote permission by Advances in Economic Botany, Vol. 8.

MAPS OF POISON OAK, IVY, & SUMAC IN THE UNITED STATES

(Edges of ranges are not as distinct as maps indicate)

Eastern Poison Ivy

Toxicodendron radicans

Specimens were collected from these states: AL, AR, AZ, CT, DC, DE, GL, GA, IA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, NE, NH, NJ, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, WV

Western Poison Ivy

Toxicodendron rydbergii

Specimens were collected from these states: AR, ID, IL, IN, IA KS, ME, MA, MI, NM, MT, NE, NH, NM, NC, ND, OK, OR, PA, SD, TX, UT, VT, WA, WV, WI, WY

Poison Sumac

Toxicodendron vernix

Specimens were collected from these states: AL, CT, DC, DE, FL, GA, IL, IN, KY, LA, MA, MD, ME, MI, MN, MS, NC, NH, NJ, NY, OH, PA, RI, SC, TN, TX, VA

Western Poison Oak

Toxicodendron diversiloba

Specimens were collected from these states: CA, OR, WA

Eastern Poison Oak

Toxicodendron pubescens

Specimens were collected from these states: AL, AR, DC, DE, FL, GA, IL, KS, LA, MD, MO, MS, NC, NJ, OK, SC, TN, TX, VA, WV

Western Poison Oak
Toxicodendron diversilobum

Eastern Poison Ivy
Toxicodendron radicans

Western Poison Ivy
Toxicodendron rydbergii

Eastern Poison Oak
Toxicodendron pubescens

Poison Sumac
Toxicodendron vernix

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