TENNESSEE STATE UNIVERSITY

College of Agriculture, Human & Natural Sciences
Cooperative Extension Program

An Outreach Education Program Serving Limited Resource Individuals, Families and Communities

Poison Ivy Identification and Control

Prepared by
Fitzroy Bullock, *Extension Professor, Small Farms and Integrated Pest Management*

Poison ivy is the most commonly found member of the Rhus brood in Tennessee. Any wooded lot is a candidate for its unwanted presence. Most plants are wimps. They meekly turn the other leaf whether you hack off their limbs or dig up their roots and evict them. But poison ivy has a black belt. Its "don't mess with me" attitude makes this botanical Rambo an unwelcome guest around any civilized yard. If you tangle with this virulent vine, you'd best be armed. You never really know how sensitive you are to it until you get into it. And you really don't want to get into it!

Poison ivy (Toxicodendron radicans) and its cousins poison oak, (Toxicodendron toxicarium) and poison sumac (Toxicodendron vernix) all grow in Tennessee. Each contains a toxic compound called urushiol (yoo-roo-she-ul), a skin and mucous membrane irritant that is found in all parts of the plant. Urushiol hardly fazes animals, but it gives humans a fit, causing intensely inflamed itching and often blisters wherever it touches the skin. Some people are highly sensitive to urushiol; the slightest brushes with the plant can acquaint them with misery and medical bills.

Others may brush against it without apparent harm, only to break out with red revenge after close-quarters combat on weeding expedition. Left unchecked, poison ivy can reach a towering size, climbing to the tops of the tallest tree with stems reaching several inches in diameter.

Poison ivy leaves are compound-its leaflets are always in groups of three. That characteristic is the only trait that can reliably distinguish it from a number of similar native vines. It's hard to describe poison ivy leaflets, because their shape and size vary from smooth, rounded edges to serrated edges to shallowly lobed edges. But Poisin ivy leaves are compound — its leaflets are always in groups of three.

That characteristic is the only trait that can reliably distinguish it from a number of similar native vines. It's hard to describe poison ivy leaflets, because their shape and size vary from smooth, rounded edges to serrated edges to shallowly lobed edges. But their leaflet will always be grouped in threes. Poison ivy leaves are shiny, bright green and turn an attractive red or reddish yellow in the fall. Figure 1-a and 1-b, (1-a is Fall color and 1 -b is Spring/Summer color).

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The stems are smooth, light brown to grayish, and older vines may look hairy from the countless aerial roots by which they climb up the sides of trees, Figure 2. Mature poison ivy has clusters of small, yellowish green flowers and round, smooth, whitish berries. The berries and flowers have the highest concentrations of the toxin. The toxin levels would be next highest in the leaves and the lowest in the stems.

Poison oak looks very much like poison ivy, but the leaflets are usually more lobed or more coarsely serrated, are duller green and are hairy on both surfaces. But poison oak isn't a vine; it's a small shrub, 1 to 6 feet tall. It is likely to grow on drier, sunnier sites than poison ivy.

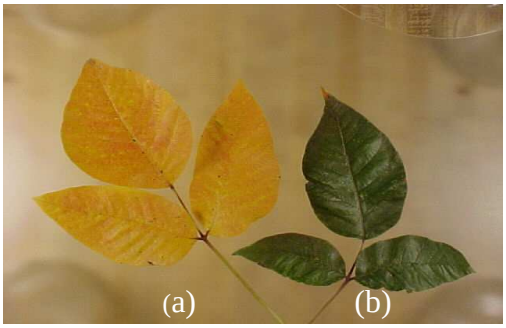

Fig. 1

Poison sumac isn't a vine, either, but is a large shrub or a small tree, growing as tall as 15 feet. It has seven to 13 elliptical to oblong leaflets to its compound leaves and is limited to moist sites such as bogs and stream borders.

A vine which is commonly confused with poison ivy is Virginia Creeper (Parthenocissus quinquefolia). Virginia Creeper has 5 to 7 leaflets, Figure 3. And comparison Figure 4-a and 4-b. (4-a is Virginia Creeper and 4-b is Poison Ivy).

Fig. 2

Fig. 3

Fig.4

If you find poison ivy in your yard or wooded lot, how do you get rid of it? Very carefully. If you have a small seedling, you can dig it out, but be careful. Protect yourself. Wear gloves and long sleeves. You may want to wear disposable gloves.

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If the plant is big enough to have a well-established root system and you cut it off, it is likely to grow back. Before you cut it off, buy a garden herbicide that contains the active ingredient glyphosate. A commonly known herbicide containing glyphosate is Roundup; other mixtures containing glyphosate are available. Don't try to spray the vine, though. Glyphosate will kill any vegetation, and since poison ivy vines can be very high, spraying the herbicide would inevitably cover, and kill, plants other than the targeted poison ivy. Instead, snip off the vine close to the ground and quickly treat the stem with the herbicide, being careful not to spray onto surrounding plants or grasses.

If the vine is large enough, you may need to saw the stem. Whether you snip it or saw it, be sure to cut out and remove a small section to prevent the vine from sealing over the wound. If regrowth occurs from the stump, you may have to make a second application of the herbicide. If that happens, wait until the new leaves have fully opened. The poison ivy plant takes up the chemical through the stomates, or small openings, in the leaves. For the same reason, don't spray poison ivy during a time of drought stress, since the stomates would have closed up to reduce water loss

If the poison ivy grows back in the turfgrass surrounding the original vine with too many new seedlings to dig out, spray them with a turfgrass herbicide containing active ingredients of 2, 4-D, dicamba, or triclopyr, *Do not use products containing triclopyr on Bermuda turfgrass*. These chemicals will kill poison ivy without harming turfgrasses. To get rid of small poison ivy from flower beds or shrubs, wear rubber gloves and apply any of the herbicides with a sponge or a wick applicator. *Read the label before using any weed killing compound.*

Large vines can present problems even after you've killed them. First the toxic leaves dry up and rain down on your yard; and after a year or two, when the little aerial roots have deteriorated, the weight of larger vines will bring them crashing down. Be careful in disposing of the leaves and stems of poison ivy vines. It's best not to burn them, since the toxin can be carried in the smoke and can irritate mucous membranes if you breathe it. Instead stems and leaves can be composted and the urushiol will break down over time.

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CONVERSION TABLE FOR HERBICIDES ON SMALL AREAS

Rate per Acre	Rate per 1000 Sq. Ft.	Rate per 100 Sq. Ft.
	Liquid Materials	
1 pt.	3/4 Tbs.	1/4 tsp.
1 qt.	1 1/2 Tbs.	1/2 tsp.
1 ga.	6 Tbs.	2 tsp.
25 gal.	4 1/2 pts.	1 cup
50 gal.	4 1/2 qts.	1 pt.
75 gal.	6 1/2 qts.	1 1/2 pts.
100 gal.	9 qts.	1 qt.
	Dry Materials	
1 lb.	2 1/2 tsp.	1/4 tsp.
3 lbs.	2 1/4 Tbs.	3/4 tsp.
4 lbs.	3 Tbs.	1 tsp.
5 lbs.	4 Tbs.	1 1/4 tsp.
6 lbs.	4 1/2 Tbs.	1 1/2 tsp.
8 lbs.	2/5 cup	1 3/4 tsp.
10 lbs.	1/2 cup	2 tsp.
100 lbs.	2 1/4 lbs.	1/4 lb.

MEASURING TABLES FOR HERBICIDES

Herbicides are often bought in large packages or containers which do not have specific instructions for mixing smaller amounts to treat small areas. The following table compares various measurements that are needed to make smaller amounts of spray:

3 teaspoons (tsp.) = 1 tablespoon (Tbs.)
2 tablespoons = 6 teaspoons = 1 fluid ounce
4 tablespoons = 1/4 cup = 2 fluid ounces
1 cup = 16 tablespoons = 8 fluid ounces
2 cups = 1 pint = 16 fluid ounces
2 pints = 1 quart = 4 cups
4 quarts = 1 gallon = 16 cups
16 ounces = 1 pound

Precautionary Statement

In order to protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label. Persons who do not obey the law will be subject to penalties.

Disclaimer Statement

Pesticides recommended in this publication were registered for the prescribed uses when printed. Pesticides registrations are continuously reviewed. Should registration of a recommended pesticide be canceled, it would no longer be recommended by Tennessee State University. Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others which may be of similar suitable composition, nor does it guarantee or warrant the standard of the product.

This *Agriculture & Natural Resources* Fact Sheet is part of a series prepared by the Small Farms Program of the Cooperative Extension Program at Tennessee State University.

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Photos by:
David L. Cook
Senior Laboratory Technician
University of Tennessee

Printed by:
DocuTech Printing Service
Tennessee State University
Cooperative Extension Program
3500 John A. Merritt Blvd.,
Box 9635
Nashville, TN 37209-1561
615-963-1842

Dr. Chandra Reddy, Dean and Extension Administrator

Dr. Latif Lighari, Associate Dean for Extension