

MOTHER NATURE'S CHEMICAL WEAPONS POISON IVY

Firefighters, EMTs, Paramedics, law enforcement, and other first responders are often called upon to work an emergency or other incident in a woodland setting. Fire and rescue forces are called for grass and brush fires, lost campers and hikers, ATV accidents, or many other events requiring entering into a woodland setting. When called to respond into the woods, fields, and forests of New York State, an alert responder will usually be on the lookout for dangerous animals such as skunks or venomous snakes, but might not give any thought to the possibility of encountering a dangerous plant. Plants cannot "attack" a person, but some plants can cause harm if they are touched. One plant that should definitely be avoided is Poison Ivy, and that can be a challenge because it grows in different forms, does not have a consistent leaf shape and there are some plants in the same habitat that mimic the look of Poison Ivy.



Poison Ivy is a woody vine or sub-shrub that has a very wide distribution. It is found coast to coast from southern Canada to Mexico. It is a member of the Anacardiaceae, or Cashew, family. In North America, it is represented by the Sumacs (*Rhus* sp.), Poison Ivy, Poison Oak, Poison Sumac and the Florida Poison Tree (*Metopium toxiferum*).

Poison Ivy is a nuisance because it contains a chemical that can cause the skin to develop a red, itchy rash and even erupt in blisters. Urushiol is the active ingredient in Poison Ivy that causes the rash and irritation. It is present in all parts of the plant, but particularly in the sap. People vary in their sensitivity to Urushiol. Some have no problem with it and others experience severe allergic reactions. This can also vary over the life of a person. You might be unaffected as a child and become sensitized with repeated exposures. Even if you are not allergic now, it is a good idea to learn how to recognize Poison Ivy in case your body changes as you age.

The clinical name for the skin irritation caused by Poison Ivy is Rhus Dermatitis. It usually starts as itching and small blisters within a few hours after exposure. Depending on how strong the exposure was

and/or how sensitive the person is, that may be all there is to it. However, it may develop into an inflamed, swollen rash with open, weeping sores that persists for up to two weeks. Severe cases may require a visit to the doctor. Urushiol is absorbed into the skin within three minutes of exposure. If it is washed off quickly with dishwashing soap and water, the consequences will be less, but you are seldom close to a lavatory when exposed, so learning to recognize and avoid Poison Ivy is the best strategy. An important fact to remember is that the Urushiol can travel on your clothes or the fur of your pets, so remember to wash them too if you suspect they were in contact with Poison Ivy.

Poison Ivy grows in a number of different ways:

- As ground cover – It can creep across the ground surface and make a knee-high thicket of foliage. This is depicted in figure 1.
- A skinny free-standing "shrub" – It can grow in the open with one stem and only a few side branches. It may be up to 10 feet tall. In this form, it is usually called Poison Oak. According to authorities, Poison Oak is a distinct species and does not occur in New York State. However, they look the same and should be avoided.
- As a vine – Using thin, brown, aerial roots, Poison Ivy can attach itself to a tree or other object and climb high. This is the form where it reaches its greatest size. It is not uncommon to find vines as thick as a person's arm growing up a large tree.

Poison Ivy may be confused with another woody vine, Virginia Creeper (*Parthenocissus Quinquefolia*). The tendrils of the Virginia Creeper tend to be much larger and lighter colored than the vines of Poison Ivy. The vines in figure 1 and figure 2 are about the diameter of a person's thumb and are growing on the same tree.



Figure 1 Poison Ivy



Figure 2 Virginia Creeper

The fruits of Poison Ivy are grape-like clusters of tiny, white, pumpkin-shaped seeds with an off-white or pale-yellow rind. Figure 3 was taken mid-November and shows that the rind dries and flakes off. The fruits also contain Urushiol. Birds consume the seeds with no effect. The rind is digested and seeds are eliminated in the feces. This is the primary method by which the seeds are spread.



Figure 3

Poison Ivy has variable leaves:

Poison Ivy has compound leaves. That is, each leaf is made up of distinct parts, called leaflets. In figure 4, there is one leaflet at the end of the leaf stalk (or petiole) and two leaflets opposite each other below the first. This is called a trifoliate pattern. The two lower leaflets have very short stalks and are often shaped like mittens, with a lobe on one side.



Figure 4

The shape, color and texture of the leaflets is highly variable. These shown in figure 4 have fairly smooth margins, but others may have rounded teeth or lobes.

Several other plants look like Poison Ivy:

All of the following woody plants have trifoliate leaves and are widespread.

Aromatic Sumac (*Rhus Aromatica*) – Also known as Skunkbush, Aromatic Sumac forms dense thickets up to 7 feet tall. It is native to the Eastern half of the U.S. and is often used in landscaping and stabilizing eroding slopes. Aromatic Sumac is typically found on rocky outcroppings and fencerows. Its berries are red and densely hairy and form dense clusters. While in the same family as Poison Ivy, Sumac does not contain Urushiol.

Box Elder (*Acer Negundo*) – A member of the Maple family, Box Elder has leaves that strongly resemble Poison Ivy in Spring, but later in the year has leaves with 5 to 7 leaflets. In addition, the Box elder leaves are directly opposite each other on the twigs, while those of Poison Ivy alternate. Box Elder becomes a medium sized tree and has the typical paired, winged seeds that are common to Maples. It does not contain Urushiol.

Eastern Poison Oak (*Toxicodendron Toxicarium*) – The range of Eastern Poison Oak does not include New York State. Poison Oak leaflets are smaller and have more lobes than those of Poison Ivy, and always grow in a shrubby form. Its fruits are similar to Poison Ivy, but are hairier and larger. Poison Oak does contain Urushiol and should be avoided.

Poison Ivy leaves turn a vivid red color in the fall. It is usually one of the first plants to change. This touch of beauty on the landscape is, perhaps, a small repayment for all the misery it causes. Figure 5.



Figure 5



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