POISON IVY

Toxicodendron radicans
[toks-ee-ko-DEN-dron] (RAD-ee-kans)
syn Rhus radicans

Family: Anacardiaceae

Names: Poison vine, poison creeper, three-leaved ivy, Mercury, Picry, markweed, Atlantic Poison Oak, Eastern Poison Ivy, Gifsumak, Zehirli Sumak Agaci

Description: Grows 2-10 feet and more when climbing or trailing, hairy-stemmed vine, or smooth-stemmed shrub. Tiny, greenish flowers in small loose clusters in June, tiny, firm white berries, August to Novembers. Three leaflets to each leaf, glossy or dull, slightly hairy or hairless, variously lobed edges, on long leaf stem. Root is trailing, covered with brown fibers, short rootlets. There is controversy as to whether the vine and shrub are really varieties of one species or two separate and distinct species. In its vinelike form, poison ivy is called Rhus radicans or Toxicodendron radicans. Its leaves tend to be shiny, with unbroken edges. A perennial, it reproduces easily from seeds, and underground rootstocks which run horizontally for several feet and are capable of producing a viable new plant at every node. Birds like to eat the berries, and this helps to further spread the plant’s growth. In the spring it is an inconspicuous and easily overlooked plant, when it puts forth small shiny green leaves. In the summer it mingles with and is often camouflaged by other shrubs and vines. It especially likes blackberry bushes. In the fall the leaves turn beautiful, striking shades of crimson and orange. In pulling up poison ivy, never burn it. Breathing the fumes may damage your lungs. It is hardy to zone 5 and is frost tender.

Cultivation: Succeeds in a well-drained fertile soil in full sun. The young growth in spring can be damaged by late frosts. A fast-growing but short-lived species in the wild. It has brittle branches and these can be broken off in strong winds. Plants are also susceptible to coral spot fungus. Plants in this genus are notably resistant to honey fungus. The plant has a semi-climbing habit and produces aerial roots, and occasionally reaches the size of a small tree. Dioecious. Male and female plants must be grown if seed is required. Seed is best sown in a cold frame as soon as it is ripe. Pre-soak the seed for 24 hours in hot water (starting at a temperature of 180 – 200F and allowing it to cool) prior to sowing in order to leach out any germination inhibitors. The stored seed also needs hot water treatment and can be sown in early spring in a cold frame. When they are large enough to handle, prick the seedlings out into individual pots and grow them on in the
greenhouse for their first winter. Plant them out into their permanent positions in late spring or early summer, after the last expected frosts. Cuttings of half-ripe wood, 10cm with a heel, July/August in a frame. Root cuttings 4cm long taken in December and potted up vertically in a greenhouse. Good percentage. Suckers in late autumn to winter.

**History:** Formerly known by the specific name, *Rhus toxicodendron*, from the Greek words for “poisonous” and “plant” or “tree,” although poison ivy was and still is unknown in Greece. There is considerable folklore about poison ivy, the best known and most dangerous being the myth that swallowing a fresh leaf will confer immunity. Poison Ivy rash cannot be caught from someone who has it, nor will the blisters, should they ooze or break, transmit the affliction. To ease the discomfort of the rash, the juice of jewelweed is used. The crushed leaves of plantain also soothe and help heal the rash. It has been established that toxic substances in the sap of poison ivy plants combine immediately upon contact with proteins in the skin to produce the familiar reaction.

**Constituents:** Phenolic compounds (as catechol derivatives) collectively designated urushiols (including urushiol), which are contained in the milky juice. It also contains tannins (including gallic acid), flavonoids (flavonols), gum and resin, among others. Urushiols are very strong contact allergenic compounds. Even 1 thousandths of a milligram may cause severe inflammations to persons hypersensitive to them.

**Medicinal Uses:** Poison ivy was once employed medicinally. Native American people were aware of and had remedies for its irritant properties, but they realized its therapeutic potential as well. Indians of southwestern California made poultices of the crushed fresh leaves and applied them to the skin to get rid of ringworm. The Mohegans of Connecticut roasted and crushed it to make a poultice for skin diseases. Poison ivy was introduced into Europe in 1640 in England where it kept a low profile. In 1798 a physician living in Valenciennes, France, examined a young man who had had a herpes infection on his wrist for many years. After an episode of poison ivy inflammation, the herpes disappeared. This seemed to indicate the possible therapeutic value of poison ivy as a counterirritant, and the plant was used to treat a variety of chronic and stubborn skin infections for many years, with reportedly excellent results. In the US as recently as 1917, some authorities strongly recommended it for curing erysipelas, eczema, and herpes zoster (shingles). But because its use often resulted in serious side effects, its use was abandoned.

**Homeopathy:** In homeopathy it is used to treat rheumatism, ringworm, and other skin disorders as well as for treating incontinence.

**Other Uses:** When the stems of poison ivy are broken or cut, the sap, milky or pale tan at first, becomes black and sticky upon exposure to the air. At one time this sap was a source of black dye. A brown-black ink made from poison ivy sap is so indelible on fabric, that it cannot be removed; it actually gets darker the more it is washed. An oil is extracted from the seeds. It attains a tallow-like consistency on standing and is used to make candles. These burn brilliantly, though they emit a pungent smoke.

**Toxicity:** Approximately one out of every two persons is allergic in some degree to poison ivy, and every year in the US, almost 2 million people develop a reaction from direct or indirect contact. This reaction varies widely, from a mild rash to large, painful blisters that take weeks to heal. In severe cases, the entire system may be affected. The body becomes swollen, the rash spreads all over and may be accompanied by fever, vomiting, and other alarming symptoms. No fatalities have ever been recorded, however, and the illness eventually subsides.

The toxic principles in the sap are present throughout the year but are strongest in the spring and summer. The sap is released
when Poison ivy is picked or bruised by being rubbed against. An individual can develop a rash simply by stroking a pet that walked or rolled in the plants or from handling clothing or sports and garden equipment that came in contact with it. Reinfection from these articles, if they are not carefully decontaminated, is common. If this were not enough, tiny droplets of sap can be carried in the smoke of burning plants, the pollen from the flowers is airborne, and both are capable of producing severe reactions in highly sensitive persons. There are a number of herbs recommended as a poultice prepared with the fresh plant material or as a wet compress to alleviate or cure it. Among them, jewelweed seems to be one of the most efficacious.

References:
Plants for a Future Database