

Work Safely Around Wild Parsnip

Wild parsnip sap contains toxins and humans can be poisoned through actions such as removing plants by hand pulling, weed whipping or working under a mower deck. These activities may result in wild parsnip sap contacting bare skin and can cause problems, if in addition, there is continued exposure to sun light.

The resulting reaction ranges from a sunburn like rash to a potentially serious blistering rash which can result in loss of time at work. Wild parsnip sap contains a chemical which upon exposure to sunlight can cause chemical burns on skin. Simple precautions can be taken to prevent wild parsnip injuries. First and foremost people working outdoors are at risk and should be able to identify wild parsnip in all of its life stages.



Identification

Plant: Herbaceous, biennial (monocarpic perennial), first year as a cluster of leaves growing directly from the ground and second year wild parsnip is a branched, 2-5 feet tall, robust plant. Stems typically lack hairs, are hollow, grooved and are light green.

Leaves: Alternate, pinnately compound with 5-15 leaflets. Three inch long by two inch wide leaflets are often cleft with coarse teeth on the margin. Basal leaves tend to be larger with longer stalks and more leaflets than upper stem leaves. Petiole to stem attachments are covered by a sheath.

Flower: Numerous small yellow flowers arranged in compound umbels (umbrella shaped clusters). Each flower is small and has 5 petals. Petals remain tightly curled.

Typically, floral bracts at the base of umbels aid identification of carrot family members to species. However, wild parsnip does not have floral bracts under umbels and umbellets.

Bloom time varies from June through July (typically 1-2 months late spring to mid-summer), then plant parts wither.



Leaves of first year rosette and green grooved stem.



Flowers are yellow and petals remain tightly curled.

Working safely around wild parsnip

- Unlike Poison ivy (an allergic reaction), everyone is susceptible to wild parsnip sap reactions.
- You can touch and/or brush past wild parsnip without causing sap flow; thus, no exposure to sap.
- Wild parsnip sap is not an oil like poison ivy sap (urushiol). Soap and water or plain water can effectively remove or dilute the sap and prevent skin damage if done in a timely manner.
- Skin that is protected from sun exposure (UV rays) should be effectively protected from skin damage even if sap were to get under clothing.

Proper clothing: Boots, long sleeves, long pants and good gloves. Cover the gap between glove and sleeve!

Laundering clothing: Unlike poison ivy, mixing contaminated clothing into the family wash is not an issue.

Avoid wiping sap onto your bare skin: Mosquitos, flies and other biting insects may have you swatting and or itching your bare face. If there is sap on your hand or glove, it will be effectively transferred to sun-exposed skin on your face and neck. Hot, sweaty skin means open pores - sap can then penetrate deeper and result in more severe damage.

Removing plants: Effective removal can be accomplished with a shovel or similar cutting tool. Cut the plants approximately 2 inches below ground. Leave plants in place to dry.

Mowing or cutting: Effectively knocks height down, but does not kill plants. Use caution around green, still moist plant material and cut stems that may ooze sap from cut surfaces. Leave plants in place to dry.

Herbicide: Given time, herbicide applications will kill plants. However, while plant material is green and not dry the sap still presents a hazard.

Wild parsnip and native cow parsnip

Wild parsnip is not native to Minnesota. It is related to other members of the carrot family such as native cow parsnip, which can also cause skin reactions.

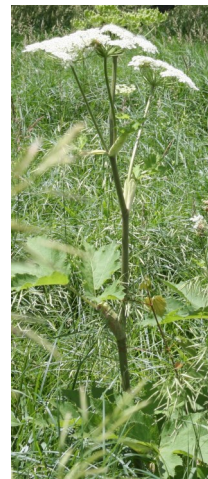
Wild Parsnip (non-native)



Key Difference:
Flowers are yellow
Leaves are compound with 5-15 leaflets
Stems are green with definite ridges (grooves).



Cow Parsnip (native)



Key Difference:
Flowers are white
Leaves are 3-parted and can be 18 inches across and long
Stems are hairy, green to purple in color.



For more information

Visit MnDOT's [Roadside Vegetation Management](#) website or contact Dave Hanson, MnDOT Office of Environmental Stewardship, 651-366-3632

[MnDOT's Minnesota Noxious Weeds Booklet](#)

WILD PARSNIP

Pastinaca sativa L.

Prohibited - Control

Check out MnDOT's [Carrot Comparison Guide](#) for identification and key differences.

Common Names

Parsnip

Life Cycle

Herbaceous monocarpic perennial

Native Range

Eurasia

Look-a-Likes

[Golden Alexanders](#) (pg 84)

Habitat

Disturbed sites such as roadsides and abandoned fields or lots. Can occur in wet meadows but dry to mesic soils are more typical. Full to partial sun is a must for this species.

Means of Spread

Spreads primarily by seeds. Seeds are moved off infested sites by animal and human activity or wind and water movement. Seed is reported to be viable in soil for up to 4 years.

Toxicity

Contact with the sap and exposure to sunlight can produce painful, burning blisters (phytophotodermatitis).



Identification

Plant - Herbaceous, often stated to be biennial but is classed as a monocarpic perennial. First year as basal rosette with mature stems developing a hollow, grooved flowering stalk potentially reaching 5 feet.

Leaves - Basal rosette leaves can be 6 inches in height and are pinnately compound with 5 to 15 leaflets. Flowering stalk leaves are alternate, 2 to 5 leaflets that become smaller near the top of the stem. Leaflets are coarsely toothed, sinuses cut to varying depths creating lobes of various sizes. The base of the leaf stalks wrap or clasp the grooved stem.

Flower - 12 to 35, 5-petaled, small yellow flowers on wide, flat umbels of 15 to 25 umbellets approximately 2 to 6 inches across.

Bloom Time - June to July

Seed and Fruit - Seeds are small, broad, oval, slightly ribbed, and are produced in the umbels several weeks after flowering.

Root - Long thick taproot that is similar in appearance and smell to cultivated parsnips.

Management

See MnDOT Factsheet:

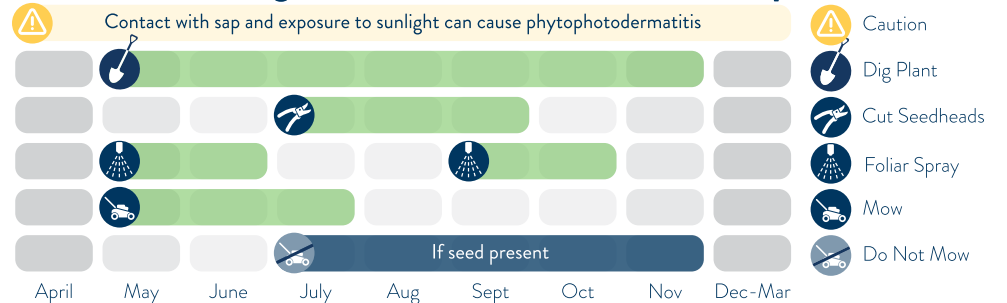
[Work Safely Around Wild Parsnip](#)

Appropriate protective clothing including gloves, goggles and long sleeve shirts should be worn and contact with the stems should be avoided.

Mechanical - When possible plan early mowing at first inflorescence, then monitor and repeat as plants will likely resprout, bolt and flower. Mowing during the secondary inflorescence may prevent seed production that season. If cutting or mowing after seed set, clean equipment to leave seeds on the infested site.



Treatment Timing



Chemical - Foliar applications in the spring and fall targeting rosettes can greatly reduce seed production.

Fire - Prescribed burns can kill germinating seedlings and strengthen native plant communities.

Effective herbicide formulations: 2,4-D, dicamba + 2,4-D, aminocyclopyrachlor + chlorsulfuron, chlorsulfuron, glyphosate, metsulfuron.

Work Safely Around Poison Ivy

Western poison ivy (*Toxicodendron rydbergii*) and common poison ivy (*T. radicans*) are native woody, perennial plants. Sap from this group of plants contains urushiol (oil) and a large segment of the human population has been exposed and has developed or may develop sensitivity (allergic reactions) to urushiol. All parts of the poison ivy plant contain urushiol and humans are typically poisoned through direct contact with broken plant parts. The resulting allergic reaction typically results in redness and blistering accompanied by itching sensations. Upon contact with sap precautions must be taken quickly, within ten minutes, to prevent poison ivy injuries. People working outdoors are at risk and should be able to identify poison ivy during all seasons.



June, flowering and new early season growth of western poison ivy.

Identification

Plant: Western poison ivy is a woody, low growing shrub, 1 to 4 feet tall. In southeastern Minnesota, common poison ivy can be a vine up to 60 feet or shrub to 10 feet. Stems are light colored tan with light brown buds. Often cream-colored fruit may be present.

Leaves: Alternate, compound leaves. Three leaflets, often shiny, edges coarsely toothed, notched, or almost smooth. Central leaflet is on a longer stalk than those on the side.

Fall foliage can be brilliant orange to red.

Flower: Flowers are often hidden from view by foliage. A dioecious species with male and female flowers on separate plants. Clusters of small 5-parted, greenish flowers are produced from leaf axils. Female plants produce ¼ inch, creamy white, berry-like fruit that persists into winter.

Fruit is present in September and is a good winter identification characteristic. It may persist into the next growing season.

Bloom time varies from June through July (typically 1-2 months late spring to mid-summer).



"Leaves of three, leave them be."



Fruit (seeds) in February and early May leaf out.

Working safely around poison ivy.

- People have different levels of sensitivity (allergic reaction). An individual may become more sensitive.
- You can touch and/or brush past poison ivy without causing sap flow; thus, no exposure to sap.
- Poison ivy sap contains an oil (urushiol). Many soaps with water or plain water **do not** effectively remove the oil; thus, **do not** prevent injury. Degreasers or products designed to remove urushiol are a better choice.
- Research has shown that in order to prevent injury poison ivy oils should be removed within ten minutes of exposure.
- Keep in mind, oils can persist for days (years on some surfaces) resulting in latent exposures and latent reactions. Therefore, besides good hygiene, cleaning tools and other gear is also important.

Urushiol, an oil, can also adhere to pet fur and can be present in soil, float on water or be carried on particulate matter in smoke from fires.

Proper clothing: Boots, long sleeves, long pants and good gloves. Cover the gap between glove and sleeve!

Laundering clothing: Recommendations are mixed on washing contaminated clothing. If sensitive people are in the household, err on the side of caution and wash contaminated items separately.

Avoid wiping sap onto your bare skin: Mosquitos, flies and other biting insects may have you swatting and or itching your bare face. If there is sap on your hand or glove - it will be effectively transferred to exposed skin.

Removing plants: Effective removal can be accomplished with a shovel or similar cutting tool.

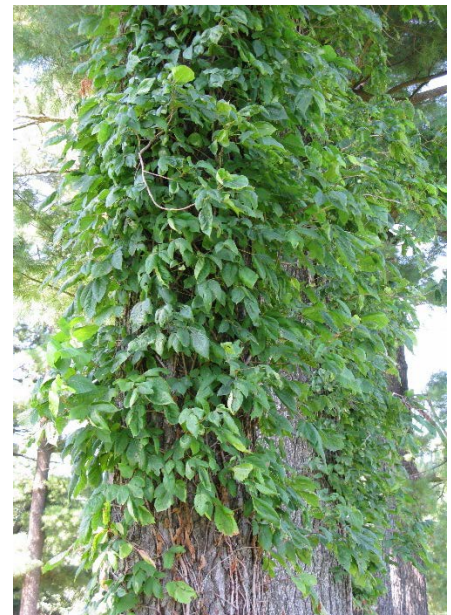
Mowing or cutting: Effectively knocks height down, but does not kill plants. Use caution around green, still moist plant material. Use caution around cut stems that may still ooze sap from cut surfaces.

Do not pile and burn! Urushiol can be carried on smoke particulate with the potential to be inhaled causing injury to airways.

In southeastern Minnesota common poison ivy vines may climb into trees - use caution when vines are present in felled tree parts.

Soils: Urushiol is likely present in soils beneath poison ivy infestations. Once the above ground plant parts (leaves berries, and stems) are removed, keep workers out of soil (roots and contaminated soil) with plywood sheeting, mats, temporary decking, mulch layer or any surface to allow workers to preform duties safely.

Herbicide: Consider treatments one year in advance of work. Given time herbicide applications will kill plants. However, remaining plant material, soil, and roots below ground should be considered contaminated with urushiol and potentially injurious.



Common poison ivy (T. radicans) vines clinging to a tree trunk in Central Iowa

For more information

Visit: www.dot.state.mn.us/roadsides/vegetation

Or contact Dave Hanson, Email: David.L.Hanson@state.mn.us Phone: 651/366-3632

POISON IVY

Toxicodendron spp.

Specially Regulated

Western poison ivy

Toxicodendron rydbergii (Small) Green

Eastern poison ivy

T. radicans (L.) Kuntze subsp. *negundo* (Greene) Gillis

Life Cycle

Woody perennial

Native Range

North America

Although irritating to humans, poison ivy is a native plant that benefits wildlife by providing a food source to birds, and mammals.

Look-a-Likes

Box Elder

Raspberry

[Woodbines \(pg 99\)](#)

Habitat

Thrives in disturbed areas such as roadsides, trail sides, fence rows, parks and can also be found in prairie and forested settings.

Means of Spread

Spreads primarily by shoots arising from an extensive shallow, horizontal root system and aboveground vining. New populations are started by transportation of seeds primarily by wind, water, or animals.

Toxicity

Contact with oily sap (urushiol) from broken plant parts can cause blistering, even in winter. May persist in compost. Oil can stay on and transfer from pets, tools, toys and other objects for long periods. **Do not burn**, can adhere to smoke particles from burning poison ivy and be taken into airways and lungs.

Identification

Plant - A 1 to 2 foot native shrub (western poison ivy), or climbing vine (eastern poison ivy) with grey to tan bark and little if any branching. Eastern poison ivy has small aerial roots that attach to structures.

Leaves - Alternate, compound leaves, 3 shiny or dull surfaced leaflets. Leaflet edges are variable from smooth to very coarsely toothed. Lower leaf surfaces are pale and often hairy.

Flower - Small, greenish flowers on erect spikes (panicles). Flower spikes are borne in leaf axils on new or current years growth with male and female flowers on separate plants (dioecious).

Bloom Time - June to July

Seed and Fruit - Creamy white to tannish berry-like drupes, approximately ¼ inch diameter. Drupes mature in late summer and persist through the winter.

Root - Fibrous rhizome with root crown.

Management

See MnDOT Factsheet:

[Work Safely Around Poison Ivy](#)

Appropriate protective clothing including gloves, and long sleeve shirts should be worn and contact with the stems should be avoided. Wash all equipment/clothing after exposure.

Mechanical - Cutting or mowing can inhibit flowering but must be continued in order to deplete energy reserves and to deplete seed banks.

Chemical - Herbicide applied to foliage or to cut stems are effective. Repeat applications will be required to exhaust seed banks.

Special Regulation

Must be eradicated or controlled for public safety along rights-of-ways, trails, public accesses, business properties open to the public or on parts of lands where public access for business or commerce is granted. Must also be eradicated or controlled along property borders when requested by adjoining landowners.



Treatment Timing



Poison Ivy

- Caution
- Grazing
- Prescribed Fire
- Foliar Spray
- Cut and Treat
- Mow

Cultural - Goats and sheep that have been acclimated to feed on poison ivy may be used to reduce large populations.

Fire - Prescribed fire generates potentially harmful smoke. While prescribed fire can provide control, this tool should not be the first choice.

Effective herbicide formulations: 2,4-D, aminocyclopyrachlor, glyphosate, imazapyr, triclopyr.

Poison Hemlock in Minnesota

Poison hemlock is a member of the carrot family and is related to wild parsnip. Poison hemlock is non-native and contains harmful toxins. Livestock can get into trouble if eating too much of the vegetation. Humans can be poisoned by handling the plant (pulling for removal), sap from broken plant parts (i.e. working under a mower deck) and ingestion of plant parts.

The danger is not a rash like one can get from wild parsnip. Eating plant parts or potentially absorption of toxins from the sap through the skin can cause severe illness – and in extreme cases death! Children and livestock are likely at highest risk. Adults have been poisoned after mistaking the root for edible wild parsnip roots or foliage is mistaken for parsley.

Identification

Plant: Herbaceous, biennial, first year as a cluster of leaves growing directly from the ground and second year poison hemlock is a branched, 3-7 feet tall, robust plant. Stems are smooth (no hairs), hollow, appear ridged due to veins and are light green, mottled (spotted) with purplish spots.

Crushed plant parts reportedly exude a foul odor.

Leaves: Alternate, generally triangular in form. Doubly or triply pinnately compound up to 18 inches long by 12 inches wide. Leaflets are fern-like, deeply divided and typically twice as long (2 inches) as wide (1 inch). Basal leaves tend to be larger and have longer petiole stalks than upper stem leaves. Petiole to stem attachments are covered by a sheath.

Flower: Numerous small white flowers arranged in clusters that are shaped like an umbrella. Each individual flower is small with 5 petals. There are leaf-like structures called bracts under each cluster.

Bloom time varies from June to August, then plant parts wither.



Flowers during second year









Leaves of first year rosette



Stems are hollow and often purple spotted.

Poison Hemlock Look-a-Likes

Wild Carrot (Queen Anne's Lace)	Wild Parsnip	Water Hemlock (native)
 <p>Nonnative <u>Key difference:</u> showy, branched leaf-like structures beneath flower clusters. Stems are hairy, green.</p>	 <p>Nonnative <u>Key difference:</u> flowers are yellow and leaves are not lacy in appearance Stems are green with definite ridges</p> <p><i>First year rosette</i></p>	 <p><u>Key difference:</u> leaves are deeply veined and not lacy. No leaf-like structures at bases of flower heads. Stems often purplish, maybe green</p>
Cow Parsnip (native)	Great angelica (native)	Yarrow (native)
 <p><u>Key difference:</u> Cow parsnip leaf is 3-parted and can be 18 inches across and long. Flower clusters are tighter. Stems are hairy, green to purple in color.</p>	 <p><u>Key difference:</u> Leaves are 3-parted and not lacy. Flowers are bunched in ball-like clusters Stems are purple, smooth.</p>	 <p><u>Key difference:</u> Yarrow, a member of the aster family. Typically 12-24 inches in height. Leaves are very finely divided giving a feather-like appearance. Stems are fuzzy, green.</p>

For more information

Visit MnDOT's Roadside Vegetation Management website or contact Dave Hanson, MnDOT Office of Environmental Stewardship, 651-366-3632