# Identification of Common Ohio Roadside Weeds. Part 2. Poison-Hemlock (*Conium maculatum*)

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Poison-hemlock can be found all over Ohio and is especially prevalent in counties located in the central, south central, and southwestern portions of the state (OARDC, 2017). Poison-hemlock can often be seen along Ohio roadsides, ditches, waste areas, marshy areas, stream banks, and it has begun to appear as a weed in no-tillage fields. The species prefers rich soils and frequently grows in low or poorly drained areas (Fig.1).

**Fig. 1.** Poison-hemlock (*Conium maculatum*) growing along a country road near a culvert outlet (indicated by red arrow) with standing water around the planting. (Picture by: H. Mathers, 2016).

Poison-hemlock is a biennial reproducing from seed and is native to Eurasia. In the second year of life it flowers, and produces up to 38,000 seeds per plant (OARDC, 2017). It was introduced into North America as an ornamental but escaped cultivation and became naturalized (OARDC, 2017). It is a *Prohibited Noxious Weed* in Ohio according to the *Ohio Administrative Code 901:5-37-01*. In Ontario, Canada, its spread was increased, in the early 80's, via an infested seedlot of alfalfa (Cowbrough, 2006). Similar events, probably occurred, in other areas, such as Ohio. In some areas, solid mats of poison-hemlock can be seen along Ohio roadsides. It is a noxious weed in seven US states (including Ohio as indicated above) and two Canadian provinces (Ontario and Quebec) (Cowbrough, 2006). The primary reason

for its being a noxious weed is because all parts of the plant are poisonous. Various poison alerts are listed below:

- *NE Weeds* - Plants parts have a disagreeable odor when crushed. All parts of the plant contain toxic alkaloids, including coniine, that cause respiratory failure in humans and other animals when ingested.
- *Canadian Poison Plant* - Cattle, goats, horses, swine, and sheep as well as rabbits, poultry, deer, and humans have been poisoned after ingesting poison-hemlock. Animal species vary in their susceptibility to acute toxicity (Cowbrough, 2006).
- *Cornell Poison Plant* - All plant parts are poisonous. However, the seeds contain the highest concentration of poison. The conium alkaloids are volatile and can even cause toxic reactions when inhaled.
- *Indiana Toxic Plants* - TOXICITY RATINGS: Moderate to high. ANIMALS AFFECTED: All animals may be affected. Grazing animals, swine and animals that may eat the seeds (especially poultry) are more at risk than pets. DANGEROUS PARTS OF PLANT: All parts, especially young leaves and seeds. CLASS OF SIGNS: Nervousness, trembling, incoordination, depression, coma, death, birth defects.

*(Source for bulleted points above:* Mike Cowbrough - Chief Weed Inspector Ontario Weeds Act/Ontario Ministry of Agriculture Food and Rural Affairs. 2006).

As a member of the carrot family (Umbelliferae) it has typical umbel flowers. Although this is a serious poisonous plant, it is not the most poison plant in North America. This title is reserved for poison water hemlock (*Cicuta* sp.). Poison water-hemlock can be distinguished from poison-hemlock by its swollen base that is surrounded by three or more fleshy, thickened, tuber-like roots which taper into long strands. Poison-hemlock by contrast has a single thick whitish taproot (Fig. 2).

**Fig. 2.** Poison- hemlock (*Conium maculatum*) has a single whitish taproot distinguishing it from the highly toxic poison water-hemlock (*Cicuta* sp.) (Picture by: H. Mathers, July 1, 2016, New Carlisle, OH area).

Poison-hemlock can also be confused with wild carrot (*Daucus carota*) also known as Queen Anne's lace which is a very common Ohio weed; however, poison-hemlock has purple-spotting and mottling on the stems that characterizes it from wild carrot, wild parsnip (*Pastinaca sativa*) and many other members of the carrot family (Fig. 3A and B), the leaves are also compound (Fig. 3C). Leaves are 1 to 16 inches long, alternate (1 leaf per node), finely dissected, and fern-like in appearance (Fig. 3C). Leaflets are minute, lance shaped, glossy green, darker on the upper

side, and have serrated edges (Fig. 3C). Leaves attach to stems by way of leaf stalks (petioles) marked with purplish spots or blotches. Petioles broaden at their base and encircle the stem at each node (Fig. 3D).

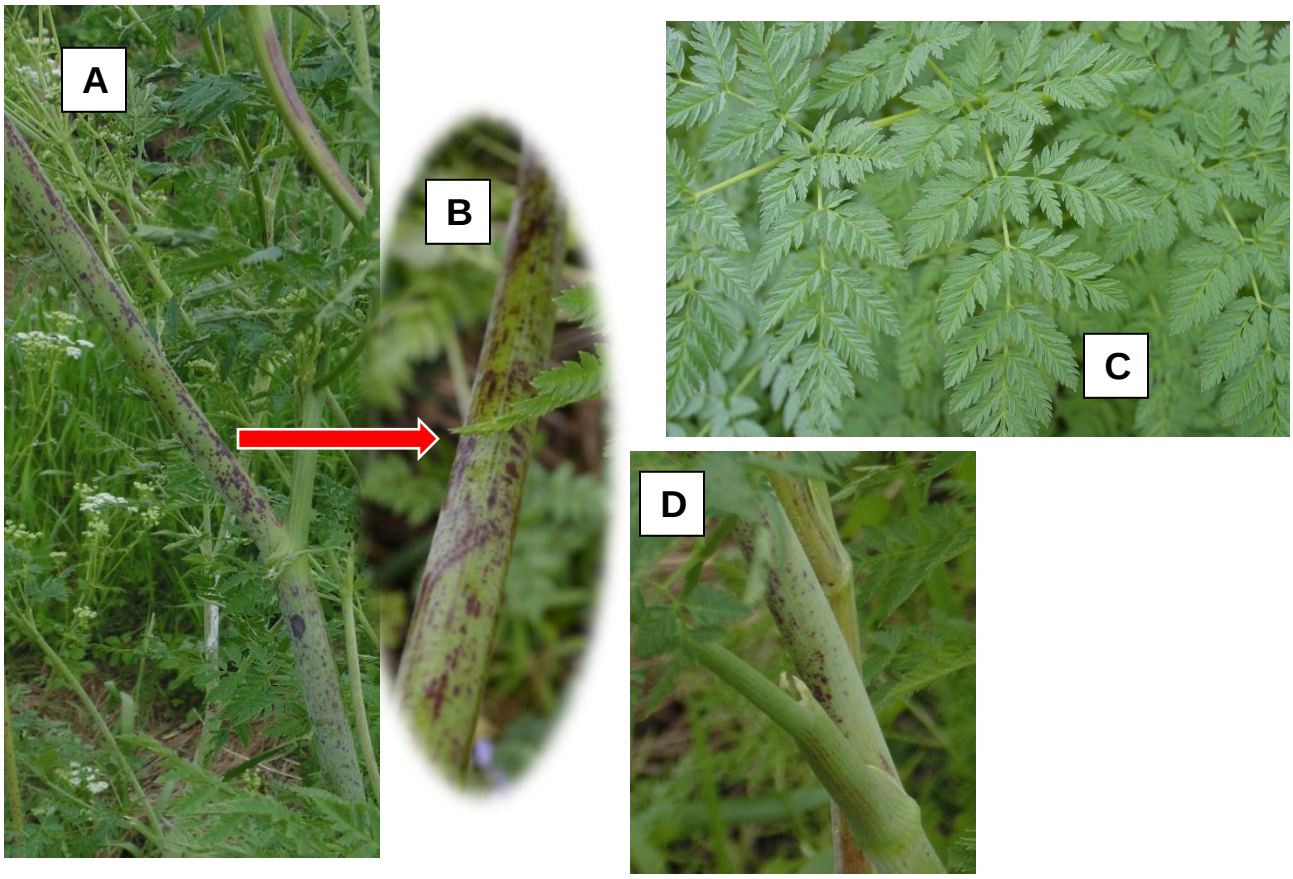


**Fig. 3 A, B, C, D. (A)** Poison-hemlock (*Conium maculatum*) has purple spotting on the stems unlike wild carrot also known as Queen-Anne's lace. However, water hemlock (*Cicuta maculata*) shares many characteristics with poison-hemlock including, **(B)** [an enlarged view of **(A)**] hairless stems that have purple mottling and **(C)** compound leaves with **(D)** broadened petioles at their base that encircle the stem at each node (OARDC, 2017). Unlike water hemlock which has the cluster of fleshy taproots described above in Fig. 2, poison-hemlock has a single taproot (Fig. 2). (Pictures by: H. Mathers, July 1, 2016, New Carlisle, OH area).

**References**

Cowbrough, M. 2006. Ontario Ministry of Agriculture, Food and Rural Affairs. Noxious weed profile. http://www.omafra.gov.on.ca/english/crops/facts/info_poisonhemlock.htm.

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