

Hemlock or Not?

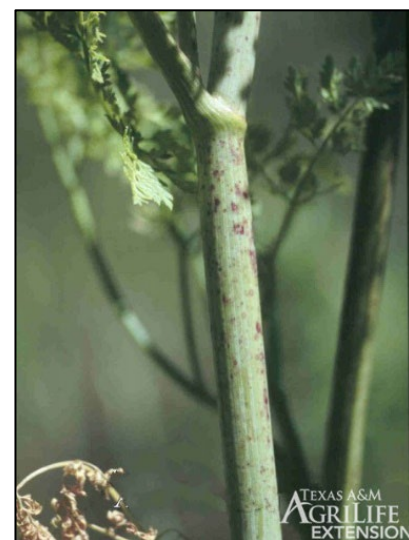
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Compendium of Common Carrots and Parsley (Family Apiaceae) 5 June 2023

Recent Facebook Post Highlights the Carrot Plant Family Quandary

A recent post on Facebook discussed the toxic plant poison hemlock (*Conium maculatum*: Apiaceae). It pointed out that a young person had a run in with the plant that resulted in the development of rashes and swelling on her face and arms. This is a very real plant and a very real result to interactions with poison hemlock. Two species of hemlock can be found in the state and our region, poison hemlock and spotted water hemlock. But there are many other carrot and parsley species that present minimal threat to humans or livestock and supply a significant nectar source for pollinators in the early spring. Here we discuss the various species of carrots and parsley and provide keys to identifying the friend or foe. In addition, we included a brief discussion of the toxic agents and symptoms for specific species.



Poison Hemlock (*Conium maculatum*: Apiaceae) **Poisonous**

Description



Poison hemlock is a biennial of the carrot and parsley family. It has stout, erect, hollow stems that may be purple streaked or splotched and may grow to up to 10 feet tall. Leaves can be 6 inches wide and 12 inches long, with many oval to broadly oval leaflets opposite each other. The leaf stems clasp the main stem at their junction. White flowers are arranged in umbrella-shaped clusters.

Toxic Agent

Poison hemlock contains pyridine alkaloids. The stems and leaves are the most toxic parts of the plant. Cattle and swine are the species affected most often. This plant is hazardous to humans and was used in political executions in ancient Greece (Socrates). Cattle seldom graze the plant but may be poisoned by it in hay or green chop. The roots or young leaves may poison swine. Hay containing poison hemlock is considered hazardous.



Signs of Ingestion

Signs of acute poisoning occur within a few hours of consumption; these include initial stimulation followed by progressive central nervous system depression.

Stimulation: Nervousness; Muscle tremors; Incoordination; Salivation; Gastrointestinal distress.

Depression: Partial paralysis; Slow heart rate; Low body temperature; Slow respiration rate; Coma; Death.

Spotted Water Hemlock (*Cicuta maculata*: Apiaceae) **Poisonous**

Description



Spotted water hemlock is a stout perennial herb, 2 to 6 feet tall, arising from a tuberous base bearing fleshy or fleshy-tuberous roots. Its short rootstocks have air cavities or chambers separated by cross-partitions containing a yellowish liquid that turns reddish brown when exposed to air. The stems are hollow except at the nodes and may be purple striped or mottled. The two to three

palm-shaped leaves are alternate, with stems wrapping round the main stem; they grow up to 15 inches long and 10 inches wide. The lance shaped leaflets are 1 to 5 inches long and have saw-like margins. Small white or greenish flowers are arranged at the ends of the stems in umbrella-shaped clusters.

Habitat

Spotted water hemlock is found in east, central and north Texas. Because it requires ample water, it is found only near streams, marshes, wet meadows and permanent springs.

Toxic Agent

The lower stalk and chambered rootstock of this plant contain most of its toxic alcohol, but hazardous concentrations can also occur in very young leaves. Mature and dried leaves are not toxic. This fast-acting toxin can cause death between 1 and 8 hours after consumption in all animals, including humans.

Signs of Ingestion and in Some Individuals Through Contact

The toxic alcohol is a convulsant, and the clinical signs are the result of its action on the central nervous system. They include: Muscle tremors; Salivation; Grinding of the teeth; Convulsions; Death.



Bishop's Weed (*Ammi majus*; Apiaceae) Poisonous

Description

Bishop's-weed is a showy, cool season annual up to 3 feet tall. The oblong leaves may be up to 8 inches long and 5.5 inches wide.

The many white flowers are arrayed in an umbrella shape up to 3 inches across located at branch tips. Each flower gives rise to a small, oblong, rough fruit.

Habitat

This plant was introduced from the Mediterranean region and has been widely disseminated in the Western Hemisphere. It is found in east and south Texas, usually along roadsides, as it has apparently been included in some wildflower seed mixes. In the past 15 years, bishop's weed has become more widespread, and is now established in some roadside pastures. It is likely to spread further in coming years, posing a greater threat to livestock.

Toxic Agent

Bishop's-weed contains a furocoumarin in all parts of the plant, but it is especially concentrated in the seed. The compound is photoactive, causing primary photosensitization in cattle, sheep and birds. All animals consuming the seed should be considered at risk.

Signs of Ingestion

Signs in affected humans and animals: increased body temperature; Photophobia (the animals shy away from light); Edema of the muzzle, ears, udder, scrotum and vulva; Sunburn of light-colored skin; Inflammation of skin.

Thin-skinned areas and those having thin, or no hair are often those most affected. Inflammation is followed by swelling, blisters, fluid seepage and sometimes sloughing of the skin.



In dark animals, the skin is not blistered or sloughed, but may become painful and thickened, with crusted hair.

Other Species in the Apiaceae Family in Texas

Texas prairie parsley (*Polytaenia nuttallii*: Apiaceae)

Description

Cool-season, herbaceous, biennial or perennial in the carrot family which grows up to 3 ft tall. Leaves are bipinnately or ternate-pinnately compound. Leaflets are large, crenate to incised or lobed, ovate to oblong. Flowers are yellow. Fruits are 2 to 4.5 inches long and have obvious wings.

Habitat

Common and conspicuous in prairies and roadsides, open woods, able to grow in many soil types.

Other Considerations

Non-poisonous to humans or livestock. In some communities this plant can be used for foraging.



Hedge parsley (*Torilis arvensis*; Carrot/Parsley family)

Description

Herbaceous biennial in the carrot family. Flowering plants have erect, ridged, branched stems and grow 2-6' tall. This species is common in working pins, under trees, fence lines, or in roadsides.



One key identification is the Velcro-like seed capsules that love dog and cat fur. Additionally, it will not have the purple splotchy stem that is common in the hemlock (hedge parsley is usually all green or all purple as below). Last, it is less than ½ the size of poison hemlock – which can get up to 10 ft tall this time of year.

This species is generally non-poisonous to humans or livestock.

Wild carrot (Queen Anne's Lace; *Daucus pusillus*) **Potentially Poisonous**

Description

Wild carrot is an introduced, cool-season annual that is also commonly named southwestern carrot or rattlesnakeweed. It grows as an erect, single-stemmed plant reaching 1 to 3 feet tall. When crushed, the taproot has the characteristic odor of a carrot.



The leaves and stems are covered with stiff hairs, making the plant rough to the touch. The leaves are divided pinnately, having leaflets arranged on each side of the stalk, and can be from 1 to 7 inches long.

The flowering stem is a flat-topped cluster of white flowers in which each flower stalk arises from about the same point. When the fruit ripen, they may cling to passing animals or the clothing of people for seed dispersal.

Wild carrot may be mildly poisonous to humans or livestock.



In Summary

As with any good news story, there is some truth to the need for awareness with poison hemlock and spotted water hemlock. Both species pose real threats to humans and livestock and it's best to control the species early in the spring to prevent rosettes and later bolted plants from causing health issues. Due to the toxic nature of the plants, digging or pulling the weeds up is not advised. Chemical weed control options are available and should be applied to target the rosette growth stage in late winter or early spring. Contact your local county extension service for details on herbicide weed control options.

Compiled and formatted by D. Chad Cummings, chad.cummings@ag.tamu.edu

Sources of Information and Photos

- [Plants of Texas Rangelands \(tamu.edu\)](http://tamuplant.com/)
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- Illustrated Flora of North Central Texas by Shinnars and Mahler. 1999.