Come again soon!

Resources

Pet Poison control hotline: (888) 426-4435

ASPCA Toxic and Non-Toxic Plant Online Database: Can search a plant to find out whether it is toxic or non-toxic to dogs, cats, and horses.
https://www.aspca.org/pet-care/animal-poison-control/toxic-and-non-toxic-plants

Website: https://vetmed.illinois.edu/poisonplants/

Email: poisonplantgarden@vetmed.illinois.edu

Instagram: **@poisonousplantgarden**

University of Illinois

College of Veterinary Medicine

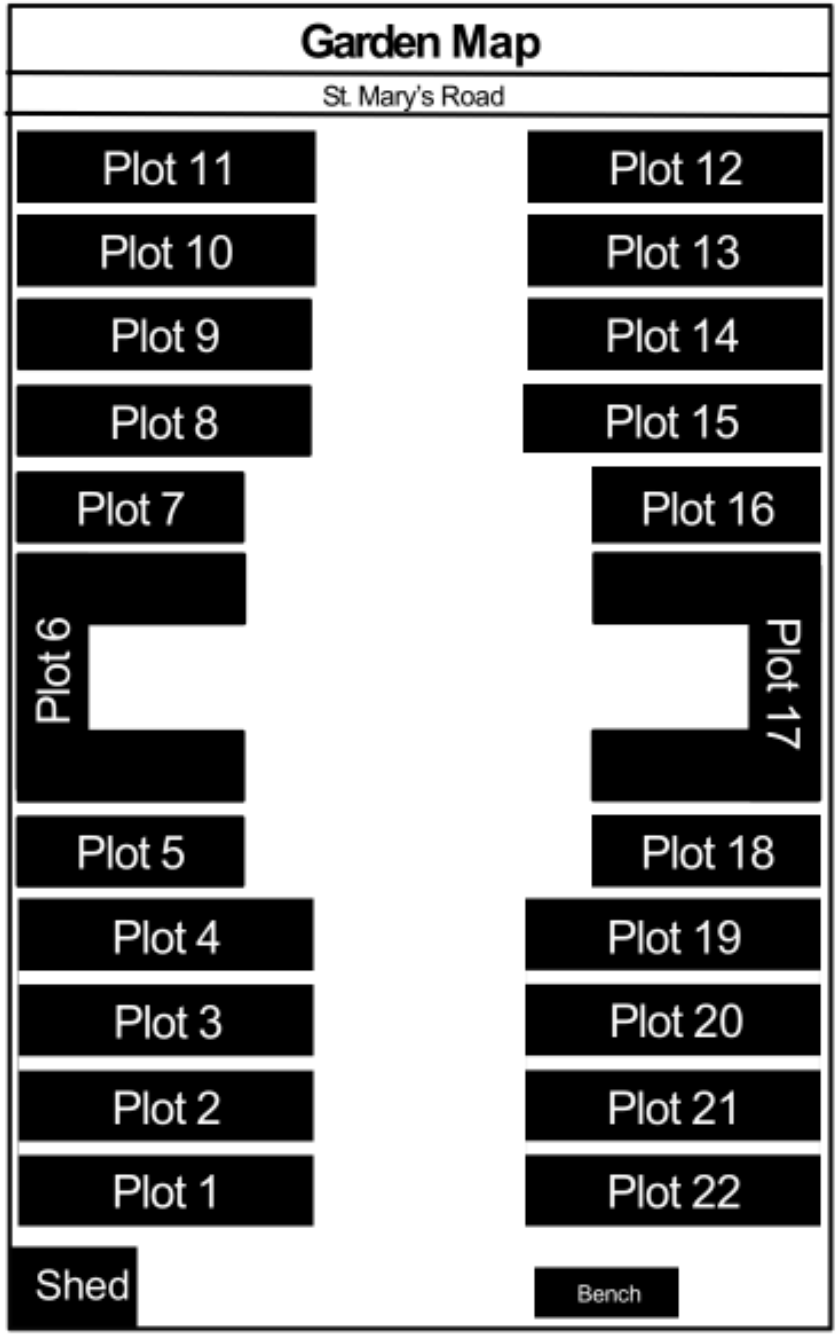
Poisonous Plant Garden

Community Pamphlet

Welcome!

Thank you for exploring the poisonous plant garden. We ask that you do not touch, eat, or remove any of our plants. Please keep a close eye on children and do not allow any pets to enter the premises.

Notes



Butterfly Garden

About the Garden

The UIUC Veterinary poisonous plant garden is run by two veterinary students and a faculty advisor. This garden is a living library with signs you can read, pamphlets you can hold, and plants you can see. Second-year veterinary students use the garden as an educational tool for their veterinary toxicology course. It is very important for veterinarians to be able to understand the toxic principles of plants that our patients will ingest and, let's be honest, roll all over in. Pet owners– if your pet ever ingests a plant and shows signs of illness, it helps to take a photo or a sample (with proper precautions) of the plant for your visit to the veterinarian or your call to poison control.

About our Poisonous Plants

Some of our plants may be as innocent as tomatoes (red is edible, green is toxic) or as problematic as poison hemlock. One phrase that starts off the veterinary toxicology course is "the dose makes the poison." In some cases, such as with lambs quarters in plot 6, the clinical signs are different for large doses all at once, in

the case of grazing cattle, or small doses over a longer period of time, in the case of a labrador retriever taking little bites out of weeds for a month. In some of our specimens, all parts of the plant are toxic. In others, like Daffodils, all parts are toxic, but the toxin is most concentrated in one place– the bulb. Some of our specimens, such as corn, brome grass, and ryegrass, are used as animal feed, but are on display because of toxic fungus contamination that can occur with these plants.

Thank you to all of our sponsors and kind contributors! We are so grateful for your donations and continued support.
Special thanks to the Illinois SAVMA chapter
at the veterinary college for supplying us with grant money
to make it possible to maintain the garden!

Plot 1

Philodendron (*Philodendron sp.*)
Toxic Compound: Insoluble calcium oxalate crystals
Symptoms: Oral irritation/swelling, drooling, vomiting
Identification: Vine with aerial roots and/or leaves from each node. Leaves are heart-shaped.

Poison Ivy (*Toxicodendron radicans*)
Toxic Compound: Urushiol oil
Symptoms: Fluid filled blisters
Identification: Leaves of 3 with the middle stalk being much longer. New growth is reddish in color.

Kentucky Coffee Tree (*Gymnocladus dioicus*)
Toxic Compound: Gymnocladosapponins
Symptoms: Excessive salivation, colic, diarrhea, seizures, muscle spasms
Identification: Teardrop-shaped leaflets, up to 18 leaflets per stem. Scaly gray bark. Bears thick, leathery brown seed pods that look like large beans.

Plot 2

Caladium (*Caladium bicolor*)
Toxic Compound: Insoluble calcium oxalate crystals
Symptoms: Oral irritation/swelling, drooling, vomiting
Identification: Brightly colored and patterned heart leaves (different color variations common). Leaves emerge alternately from the stem.

Coleus (*Coleus scutellarioides*)
Toxic Compound: Essential oil
Symptoms: Vomiting/diarrhea, trouble breathing, mood changes
Identification: brightly colored, patterned leaves (with color variations) emerge from the square-shaped stem.

Smart Weed (*Polygonum spp.*)

Toxic Compound: Unknown

Symptoms: Watery eyes, light sensitivity, red skin

Identification: Tall stalks, multiple elongated leaves per stem. Brown flower emerges form apex.

Umbrella Tree (*Schefflera arboricola*)

Toxic Compounds: Terpenoids, saponins, and insoluble oxalates

Symptoms: Seizures, mild vomiting/diarrhea

Identification: Oval-shaped leaflets, 8 emanating in a circle around a common stalk. "Umbrella" appearance.

Cornstalk Dracaena (*Dracaena fragrans*)

Toxic Compound: Saponin

Symptoms: Vomiting, depression, salivation, dilated pupils, loss of appetite

Identification: Long green leaves with or without additional green stripes parallel to the other leaves, emerging in a rosette pattern from a trunk. Can grow several feet tall.

Plot 3

Oleander (*Nerium oleander*)

Toxic Compound: Cardiac glycoside

Symptoms: Heartbeat irregularity, lethargy, trouble breathing, vomiting/diarrhea

Identification: Leaves are elliptical with pointed tips. New growth is green and flexible, older stalks are woody and rigid.

Rye Grass (*Lolium perenne*)

Toxic Compound: If contaminated with fungus: tremorgenic and/or trichothecene mycotoxins

Symptoms: Muscle tremors, stiffness or weakness, seizures, dermal or oral irritation/necrosis, vomiting/diarrhea

Identification: Grass with thin blades, light brown/tan spikelets

Azalea (*Rhododendron spp.*)

Toxic Compound: Grayanotoxin

Symptoms: Bloat/abdominal pain, salivation, vomiting, anorexia, depression, head pressing, muscle stiffness or tremors, convulsions

Identification: Shrub with dark green waxy leaves. Flower have 5 white-pink petals, arranged in a star shape.

Plot 4

Brome Grass (*Bromus arizonicus*)

Toxic Compound: Toxic ergot alkaloids, If contaminated with Ergot fungus

Symptoms: Overheating (toxin prevents thermoregulation), rough hair coat, weight loss, lameness, shade/water seeking behaviors

Identification: Thin blade, long panicles with multiple spikelets emerging alternatively.

Oxalis (Shamrock) (*Oxalis stricta*)

Toxic Compound: Soluble oxalate crystals

Symptoms: Lethargy, rumen atony, bloat, muscle stiffness, teeth grinding, seizures, tetany, slow heart rate, hypersalivation, vomiting

Identification: Clover-shaped leaves, grows vertically, small yellow flowers that turn into long seed-pods

Plot 5

Dumbcane (*Dieffenbachia spp.*)

Toxic Compound: Insoluble calcium oxalate crystals

Symptoms: Oral irritation, drooling, vomiting

Identification: Oblong, shiny green and white patterned leaves that can reach about a foot long. Older stems are woody, newer growth is green.

Elderberry (*Sambucus spp.*)

Toxic Compound: Cyanide

Symptoms: Death within an hour of ingestion if untreated

Identification: Oblong leaves with sawtooth edges. Berries are dark purple and grow in bunches.

Hydrangea (*Hydrangea spp.*)

Toxic Compound: Cyanogenic glycoside amygdalin

Symptoms: Vomiting, diarrhea, depression. Rare cyanide intoxication.

Identification: Common landscaping plant with green serrated leaves and both herbaceous (green) and woody stalks. Many white, pink, blue, or purple flowers emerge from the top of the plant in each puff of flower clusters.

Plot 6

Lambs Quarter (*Chenopodium album*)

Toxic Compound: Soluble oxalate crystals
Symptoms: lethargy, rumen atony/bloat, muscle stiffness or spasms, teeth grinding, seizures, slow heart rate, hypersalivation, vomiting
Identification: pale green, fuzzy leaves with an irregular shape that emerge in a rosette pattern.

Sago Palm (*Cycas spp.*)

Toxic Compound: Cycasin, BMAA, and unknown CNS toxin
Symptoms: Vomiting, diarrhea, seizures, drooling, depression, anorexia
Identification: Resembles a palm tree but on a smaller scale. Leaves grow up to 4 ft long, leaflets are stiff and dark green.

Purple Foxglove (*Digitalis purpurea*)

Toxic Compound: Cardiac glycoside
Symptoms: Trouble breathing, weakness, collapse, vomiting/diarrhea, frequent urination, tremors, dilated pupils
Identification: Ovate leaves, growing in a rosette pattern. Flowers are bell-shaped, with a purple exterior and a splotchy interior.
Note: Used to make the cardiac drug Digoxin

Taro (Elephant Ear) (*Alocasia antiquoroum* or *colocasia*)

Toxic Compound: Soluble oxalate crystals
Symptoms: lethargy, rumen atony/bloat, muscle stiffness or spasms, teeth grinding, seizures, slow heart rate, hypersalivation, vomiting
Identification: Tropical pale green elongated, heart-shaped leaves. Multiple stems emerge from one bulb.

Monstera (*Monstera deliciosa*)

Toxic Compound: Insoluble calcium oxalate crystals
Symptoms: Oral irritation, swelling, drooling, vomiting
Identification: Glossy green, heart-shaped leaves that develop fenestrations as it matures. May have aerial roots.

Rubber Plant (*Ficus elastica*)

Toxic Compound: Proteolytic enzyme ficin and psoralen ficusin
Symptoms: Skin irritation, oral irritation, drooling, vomiting, depression
Identification: Stiff, dark, glossy, ovate leaves. Bleeds white latex.

Plot 7

Monkshood (Wolf's Bane) (*Aconitum sp.*)

Toxic Compound: Monobasic diterpenoid alkaloids
Symptoms: Hypersalivation, bloat, muscle weakness, staggering gait, and muscle paralysis
Identification: Palmate leaves with sawtooth edges. Flowers are blue and bell-shaped.

Larkspur (*Delphinium sp.*)

Toxic Compound: Diterpenoid alkaloids
Symptoms: Constipation, bload, oral irritation, muscle tremors/stiffness, weakness, convulsions, death
Identification: Very similar in appearance to monkshood, but flowers are star-shaped and blue/purple.

Wild Parsnip (*Pastinaca sativa*)

Toxic Compound: Furanocoumarins
Symptoms: Watery eyes, red or irritated skin
Identification: 3-5 pairs of ruffled-edge leaflets that grow parallel to each other on a long stem. Small yellow flowers grow in a 5 inch flat top cluster.
Note: Can cause a skin rash– do not touch.

Plot 8

Castor Bean (Ricinus communis)

Toxic Compound: Ricin (type of lectin)
Symptoms: Oral irritation, vomiting/diarrhea, kidney failure, convulsions, trouble breathing
Identification: Palmate, reddish-purple leaves. Burs are red. Old burs are brown. Beans inside are patterned.

Bouncing Bettany (Soapwort) (*Saponaria officinalis*)

Toxic Compound: Saponins (glycosides)

Symptoms: Oral irritation, nausea, vomiting/diarrhea, heart rate irregularities, convulsions, paralysis, coma, death

Identification: Green, ovate leaves growing in a rosette pattern. Flowers are white and star-shaped.

Plot 9

Horsetail (*Equisetum sp.*)

Toxic Compound: Thiaminase

Symptoms: Drooling, anorexia, weight loss, depression, muscle stiffness/twitching, seizing, and neurological signs

Identification: Thin, yellow-green stalks with brown rings separating segments. Can form small brown cones.

Japanese Privet (*Ligustrum ovalifolium)*

Toxic Compound: Terpenoid glycosides

Symptoms: GI upset, vomiting/diarrhea, loss of appetite, fast heart rate, muscle weakness, incoordination

Identification: Shrub with ovate and glossy yellow-green leaves that deepen in color as they mature.

Plot 10

Bull Nettle (*Cnidoscolus texanus*)

Toxic Compound: Histamine

Symptoms: Contact with skin will cause redness, swelling, and irritation. Ingestion causes salivation, vomiting/diarrhea, trouble breathing, and muscle stiffness/twitching.

Identification: Leaves are divided into 3 lobes, and have a distinct sawtooth edge. Leaf surface appears dull or fuzzy.

Note: Can cause a rash (do not touch).

Jimsonweed (*Datura stramonium*)

Toxic Compound: Tropane alkaloids

Symptoms: Fast heart rate, urinary retention, dry mouth, behavioral changes (delirium, excitation), and seizures.

Identification: Football–shaped leaves with wavy-tooth edges. Leaves emerge alternately along the stem. Produces a long, tubular, white flower.

Bittersweet Nightshade (*Solanum dulcamara*)

Toxic Compound: Solanidine

Symptoms: Severe GI irritation, hemorrhagic salivation, watery eyes, excessive urination, vomiting/diarrhea, trouble breathing

Identification: Ovate leaves with a pointed apex, often has 2 distinct lobes at the base. Star-shaped purple flowers.

Belladonna (*Atropa belladona*)

Toxic Compound: Tropane alkaloids

Symptoms: Fast heart rate, urinary retention, dry mouth, pupil dilation, delirium, excitation, and seizures.

Identification: Similar appearance to bittersweet nightshade, but flowers are bell-shaped.

Pokeweed (*Phytolacca americana*)

Toxic Compound: Triterpenoid saponin and oxalates

Symptoms: GI signs, vomiting/diarrhea, inappetence, salivation, bloat, colic

Identification: Ovate leaves with pointed apex. Berries are dark purple and grow in clusters around a singular stem.

Plot 11

Jack-in-the-Pulpit (*Arisaema triphyllum*)

Toxic Compound: Insoluble calcium oxalate crystals

Symptoms: Oral irritation/swelling, drooling, vomiting

Identification: Distinct leaves separated into 3 lobes– 2 lobes are smaller and emerge from the base of the leaf. Produces a tubular “spathe” that is green with brown or purple stripes and can form a cluster of berries that turn red when ripened.

Bloodroot (*Sanguinaria canadensis*)

Toxic Compound: Sanguinarine

Symptoms: Nausea, vomiting/diarrhea, dilated pupils, weakness, fainting/collapse

Identification: Palmate-shaped leaf with rounded edges, lobulated into a horseshoe shape. The leaf wraps around the stem when emerging in early spring. Produces small white flowers in early spring. Disappears by early summertime.

Mayapple (*Podophyllum peltatum*)
Toxic Compound: Podophyllotoxin (glycoside)
Symptoms: Vomiting/diarrhea, hypersalivation, skin irritation, lethargy
Identification: Umbrella-shaped, lobulated leaf that arises from a stem. Produces a white flower beneath the leaf, can turn into a small yellow fruit.

Red Maple (*Acer rubrum*)
Toxic Compound: Gallic acid and gallotannins
Symptoms: Depression, anorexia, blue or yellow mucous membranes, brown urine, trouble breathing, fast heart rate, death
Identification: Tree. Leaves have 3 major lobes, separated by v-shaped notches, with sawtooth edges. Leaves turn red in the fall.

Japanese Yew (*Taxus sp.*)
Toxic Compound: Taxines and alkaloids
Symptoms: Dizziness, dry mouth, excitement, difficulty breathing, trembling, vomiting/diarrhea, cardiac failure, death
Identification: Shrub with pine needles.

Plot 12

Morning Glory (*Convolvulacea sp.*)
Toxic Compound: lysergic alkaloids
Symptoms: vomiting/diarrhea, lethargy, liver failure, muscle stiffness/tremors, dilated pupils, loss of appetite
Identification: Thin, vining stems that climb upwards. Heart-shaped leaves. Flowers are trumpet shaped and come in a variety of colors.

Red Oak (*Quercus rubra*)
Toxic Compound: Tannins
Symptoms: Bloody diarrhea, red urine
Identification: Deciduous tree with 5-8 inch lobulated leaves with 7 to 11 pointed lobes that have bristle tips.

Bracken Fern (*Pteridum sp.*)
Toxic Compound: Thiaminase
Symptoms: Depression, muscle stiffness/twitching, seizing, and neurological signs
Identification: Fern with large, highly-divided leaves.

White Snakeroot (*Ageratina altissima*)
Toxic Compound: Tremetol
Symptoms: Muscle stiffness/tremors. In horses: fast heart/respiratory rate, heartbeat irregularities. In cattle: Decreased heart/respiratory rates, lethargy
Identification: Elongated heart-shaped leaves with sawtooth edges. Flowers are small, white, and emerge in clusters.

Lily of the Valley (*Convallaria majalis*)
Toxic Compound: Cardiac glycoside
Symptoms: heartbeat irregularities, vomiting/diarrhea, lethargy, trouble breathing
Identification: Low-lying dark green leaves that are elongated and pointede. Flowers are white and bell-shaped, with several to a stem.

Plot 13

Wild Chives (*Allium spp.*)
Toxic Compound: Propyl disulfide
Symptoms: Inappetance, muscle stiffness, lethargy, recumbency, fast heart/respiratory rate, trouble breathing, pale mucous membranes (anemia)
Identification: Thin, rubbery stalks that grow in clusters. Distinct smell of onions when injured.
Note: other *Allium* species include onions, garlic, leeks, and shallots. Toxic to many animal species.

Plot 14

Curly Dock (*Rumex sp.*)
Toxic Compound: Soluble oxalate crystals
Symptoms: Lethargy, rumen atony, bloat, muscle stiffness/spasms, teeth grinding, seizures, slow heart rate, hypersalivation, vomiting
Identification: thin, pointed leaves, with wavy or cult edges. Flower stalks are tall and brown.

Buttercup (*Ranunculus sp.*)
Toxic Compound: Protoanemonin formed from ranunculin

Symptoms: Blistering, swelling, or redness of skin/mouth, muscle weakness/tremors, vomiting/diarrhea, colic, seizures, paralysis
Identification: Small, palmate leaves with sawtooth edges. Leaves emerge from a common vine. Flowers are star-shaped and yellow.

Holly (*Ilex sp.*)

Toxic Compound: Ilicin (a type of triterpenoid saponin)
Symptoms: GI irritation, vomiting/diarrhea, inappetence, salivation, bloat, colic
Identification: Shrub with waxy leaves with sawtooth edges. Berries are circular, red, and grow in clusters.

Plot 15

Lantana (*Lantana sp.*)

Toxic Compound: Lantadene A, B, and C
Symptoms: Acute: Depression, GI signs, weakness, yellow or blue mucous membranes, difficulty breathing, dilated pupils, muscle stiffness, coma.
Chronic: Cracking of skin, light sensitivity, clouding of cornea
Identification: Leaves have a pointed apex and sawtooth edges, with distinct grooved veining. Flowers are red or orange, and emerge in a dome-shaped cluster.

Red Root Pigweed (*Amaranthus retroflexus*)

Toxic Compound: Soluble oxalates and nitrates
Symptoms: Decreased rumen activity, abdominal distension, muscle weakness/tremors/stiffness, recumbency.
Identification: Ovate leaves with a pointed apex and prominent veining. Flowers are yellow-green and emerge in clusters to form a conical-shape.

Prairie Dogbane (*Apocynum cannabinum*)

Toxic Compound: Cardiac glycosides (Cyanin, Apocynein)
Symptoms: Abdominal pain, bloody diarrhea, vomiting
Identification: Red stems. Broad, elliptical leaves with white veining. Leaves can emerge directly from the stem or on a branching stem. This is a type of milkweed.

St. John's Wort (*Hypericum perforatum*)

Toxic Compound: Hypericin
Symptoms: Watery eyes, light sensitivity, red or irritated skin
Identification: Small, oblong leaves that emerge from the stem alternately. Flowers are star-shaped, yellow, and have black speckles on the petals.
Fun fact: St. John's Wort was used for antidepressant medication, but the side effects (see symptoms) were too strong.

Prairie Groundsel/Ragwort (*Packera plattensis*)

Toxic Compound: Pyrrolizidine alkaloid
Symptoms: Watery eyes, light sensitivity, red or irritated skin
Identification: Jagged edged leaves grow in flat clusters. Flowers are small, appearing similar to daisies with yellow leaves and an orange center.

Plot 16

Rhubarb (*Rrheum rhabarbarum*)

Toxic Compound: Soluble oxalate crystals
Symptoms: Lethargy, rumen atony, bloat muscle stiffness/spasms, teeth grinding, seizures, slow heart rate, hypersalivation, vomiting
Identification: Heart-shaped leaves. Mature stems are red, while younger stems are green.

Plot 17

Hyacinth (*Hyacinth orientalis*)

Toxic Compound: Allergenic lactones and calcium oxalate crystals
Symptoms: Vomiting/diarrhea (bloody), oral irritation, depression, tremors, hypersalivation
Identification: Bell-shaped flowers densely packed to form a conical shpae. Variety of colors. They grow from bulbs underground. The leaves and flowers are only present in the springtime.

Daffodil (*Narcissus sp.*)

Toxic Compound: Lycorine (alkaloid) and Calcium oxalate crystals
Symptoms: Vomiting/diarrhea (blood), oral irritation, depression, tremors, hypersalivation, and seizures
Identification: Flowers have 6 white or yellow petals, surrounding a center yellow cup-like structure. They grow from round bulbs that are underground. The leaves and flowers are only present in the spring.

Chokecherry & Wild Black Cherry (*Prunus virginiana & Prunus serotina*)

Toxic Compound: Cyanogenic glycosides (prunasin and amydalin)
Symptoms: Bright red mucous membranes, trouble breathing
Identification: Tree with dark chippy bark. Chokecherry has rounder, more ovate leaves. Wild Black Cherry has elongated, tapered leaves.

Day Lily (*Hemerocallis sp.*)

Toxic Compound: Unknown water soluble toxin
Symptoms: Kidney failure, vomiting, depression, anorexia, dehydration
Identification: Strap-like leaves clustered around a stem. Flowers are orange, have 6 petals, and a yellow center.
Note: Easter, tiger, rubrum, and Japenese show lilies, peace lillies, and calla lilies are also toxic. To be extra careful, avoid lilies altogether if you have pets around.

Peace Lily (*Spathiphyllum sp.*)

Toxic Compound: Insoluble calcium oxalate crystals
Symptoms: Kidney failure, oral irritation, drooling, vomiting, difficulty swallowing, difficulty breathing
Identification: Glossy, dark green oval leaves that narrow to a point. Each leaf arises directly from the roots. Has white flowers that resemble calla lilies with a single white to green spathe that curves around the white spadix.

Creeping Charlie (*Glechoma hederacea*)

Toxic Compound: Unknown
Symptoms: Colic, sweating, excess salivation, death
Identification: Vining plant with heart-shaped leaves that have wavy edges.
Note: Invasive species

Plot 18

Buckthorn (*Rhamnus cathartica*)

Toxic Compound: Anthraquinone and emodin
Symptoms: Neurological symptoms, abdominal cramping/discomfort, laxative effect.
Identification: Tree with eliptical leaflets that branch oppositely off a common stem.

Cocklebur (*Xanthium strumarium*)

Toxic Compound: Carboxyatractyloside
Symptoms: Acute liver failure, anorexia, depression, weakness, muscle stiffness/spasms, death
Identification: Triangular leaves with sawtooth edges. New burs are green and soft, old burs are brown and woody.

Plot 19

White/Yellow Sweet Clover (*Melilotus officinalis & Melilotus alba*)

Toxic Compound: Coumarins
Symptoms: Dull, stiff, reluctant to move, swellings full of blood, hemorrhage/bleeding extensively in minor procedures, pale mucous membranes
Identification: Oblong leaflet in sets of 3 branch off a common stem. White or yellow flower emerge in a conical shape.

Alsike Clover (*Trifolium hybridum*)

Toxic Compound: Unknown
Symptoms: Watery eyes, light sensitivity, red or irritated skin, skin sloughing
Identification: Leaflets are football-shaped with sawtooth edges. Flowers are spherical, with white-pink petals.

Red Clover (*Trifolium pratense*)

Toxic Compound: (In associated fungus) Rhizoctonia leguminicola fungus that contains slaframine
Symptoms: Severe salivation (gallons)
Identification: Leaflets are oblong, and have a white v-shaped marking. Flowers are spherical with pink petals.

Field Pennycress (*Thlaspi arvense*)

Toxic Compound: Isothiocyanates
Symptoms: Colic, diarrhea, skin irritation
Identification: Leaves are small and oblong. Seed pods are circular and emerge directly off the top of the stem.

Crown Vetch (*Securigera varia*)

Toxic Compound: Beta-nitropropionic acid (3-NPA)
Symptoms: Dogs and cats: Vomiting, lethargy, tremors, seizures
Equine: weight loss, depression, lack of coordination, hindlimb paralysis, death

Identification: Short fern-like leaves that cover the ground in dense patches. Has small pink and white flowers that may appear clover-like.
Note: Invasive species

Plot 20

Catnip (*Nepeta cataria*)
Toxic Compound: Nepetalactone
Symptoms: Vomiting/diarrhea, GI upset, lethargy. Safe doses act as a stimulant in cats.
Identification: Grayish-green, heart-shaped leaves with sawtooth edges. Fuzzy square-shaped stem.

Poison Hemlock (*Conium maculatum*)
Toxic Compound: Nicotinic alkaloids
Symptoms: Muscular weakness/tremors/stiffness, drooling, fast heart rate, dilated pupils, frequent urination/defecation, abnormal joint growth in fetus, death
Identification: Fern-like, jagged leaves. Stems emerge from underground tubers. Small purple spots at base of stem. Small white flowers cluster at top. Can reach 2 to 10 feet tall.
Note: Invasive species in Illinois. Can cause rash when touched.

Plot 21

Kale (*Brassica olearacea var. sabellica*)
Toxic Compound: Tryptophan
Symptoms: Trouble breathing, fast breathing
Identification: Pale green, heart-shaped leaves with ruffled or jagged edges.

Cabbage (*Brassica oleracea var. capitata*)
Toxic Compound: High nitrate content
Symptoms: Weakness, exercise intolerance, trouble breathing, fast heart rate, grey mucous membranes, convulsions, death
Identification: Round leaves emerging in a rosette pattern, often with a ball-like clump of leaves in the center.

Broccoli (*Brassica oleracae*)
Toxic Compound: Alucosinates and breakdown products
Symptoms: Vomiting/diarrhea, jaundice, slowed growth
Identification: Elongated leaves with ruffled or wavy edges. Edible portion emerges at the top of the stem.

Tomatoes *(Solanum lycopersicum*)
Toxic Compound: Solanidine
Symptoms: Severe GI/oral irritation, salivation, watery eyes, urination, trouble breathing
Identification: Pointed leaves with serrated edges. Fruit emerge at any length of the stem.
Note: Ripe red tomatoes are safe, but green tomatoes and other parts of the plant are poisonous.

Corn (*Zea mays*)
Toxic Compound: Only toxic if contaminated with *Aspergillus* fungus– Aflatoxins
Symptoms: Reduced weight gain, rough hair coat, jaundice, anorexia, depression, fluid-filled abdomen
Identification: Strap-like leaves. Edible portion emerges at any length of the stem, and is covered by a green husk.

Plot 22

English Ivy (*Hedera helix*)
Toxic Compound: Hederagenin (a type of triterpenoid saponin)
Symptoms: Severe GI upset, vomiting/diarrhea, inappetence, salivation, bloat, colic
Identification: Vines with star-shaped leaves with white veining. Vines are often woody and can climb or cover the ground.

Horse Chestnut Tree (*Aesculus hippocastanum*)
Toxic Compound: Aesculin (glycosidic saponin)
Symptoms: Vomiting/diarrhea, nausea, muscle tremors ,respiratory paralysis, bloat, death
Identification: Leaves have 7 leaflets that form a palmate shape. Seeds are surrounded by a spiky green covering.

Buckeye Tree (*Aesculua glabra*)
Toxic Compound: Aesculin (glycosidic saponin)
Symptoms: Inflamed mucous membranes, nervousness, twitching, weakness, vomiting/diarrhea
Identification: 5-7 leaflets arranged in a semi-circle. Seeds are surrounded by a yellow-green covering.

Butterfly Garden

2024 Senior Curator Project by Kelly Giles

The butterfly garden was created to highlight the mysterious relationship between poisonous plants and poisonous insects. Many butterflies visit the garden in hopes of collecting toxic compounds to protect the eggs of their offspring. By consuming a toxic plant, a caterpillar can become toxic in its current larval form and keep this toxicity as a butterfly to deter predators. Toxic butterflies often have bright orange coloration– something that has been copied by non-toxic butterflies that also prefer not to be eaten!

The endangered **Monarch caterpillar** consumes **milkweed** plants to acquire toxic cardiac glycosides that will be harmful to predators. The monarch is safe from this toxin because of evolutionary adaptations that have made them less sensitive to cardenolides. If a bird ingests a monarch butterfly, they will become sick (vomit) and avoid eating bright orange butterflies again. Some animals may be able to consume small or large amounts of monarch butterflies– hinting that the evolutionary arms race between host plant, caterpillar/butterfly, and predator is ongoing.

Thank you to all who have contributed to this project! I hope it attracts many butterfly and moth friends for years to come.

-Kelly

Toxic Butterfly Host Plants

Common Milkweed (*Asclepias syrica*)

Toxic Compound: Cardiac glycosides (cardenolides)

Symptoms: Nausea, vomiting, weakness, lethargy, confusion, seizures, heart rhythm changes, death

Identification: Large, slightly upright leaves which often have a pink central vein. Clusters of pink flowers which turn into long green pods. White latex bleeds from the green parts of the plant.

Fun fact: The monarch caterpillar

Lupine *(Lupinus sp.)*

Toxic compound: quinolizidine alkaloids and anagyrine (teratogenic alkaloid)

Symptoms: fetal skeletal deformities,acute respiratory failure, lupinosis (liver disease caused by fungus that grows on the pods or seeds)

Identification: leaves are segmented into oblong lobes that emerge radially from the petiole. Flowers are light blue to purple, and emerge from a common stem into a conical shape.

Fun fact: Wild blue lupine is the host plant for the endangered Karner Blue Butterfly

Other Butterfly Host Plants

Hairy Beardtongue *(Penstemon hirsutus)*: Host plant for checkerspot butterflies.

Royal Catchfly *(Silene regia)*: Attracts Black Swallowtail Butterflies.

Lead Plant *(Amorpha canescens)*: Host plant for Lead-plant Flower Moth, Southern Dogface Butterfly, Dog Face Sulphur, Silver Spotted Skipper, Gray Hairstreak, and the Hoary EdgeButterfly.

Wild Geranium *(Geranium maculatum)*: Host plant for 25 SPECIES of moths and butterflies!

Pale Purple Coneflower *(Echinacea pallida)*: Host plant for silvery checkerspot butterfly. Echinaceas are common medicinal plants.

Wild Columbine *(Aquilegia canadensis):* Host plant for Columbine Duskywing Buttefly

New England Aster *(Symphyotrichum novae-angliae)*: Host plant for Pearl Crescent butterfly, Northern Crescent Butterfly, and the Canadian Conia Moth.