

Poisons at the Park

NC Museum of Art, Raleigh, NC

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GROUND RULES:

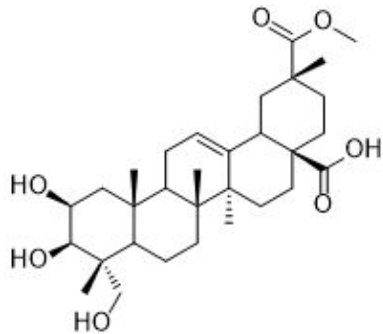
1. **Don't** eat wild plants
2. **Don't** harm the plants
3. **Don't** remove the plants

Not all plants are visible year-round and may be found elsewhere besides where listed.



1

Pokeweed



Phytolaccagenin

Description: *Phytolacca americana*

- Native to eastern United States
- Herbaceous - “non-woody” stems
- Perennial - comes back each year
- Grows up to 8 feet tall with a wide canopy
- Red stems, simple green leaves, dark purple berries
- Also known as - poke, pokeberry, inkberry

Uses:

- Food - very young leaves
 - Traditional Appalachian food - “poke sallat”
 - Could buy cans of it until ~20 years ago
- Folk medicine - just about everything
 - It doesn’t work
- Ink - common during the civil war
 - This does work, but it fades over time

Toxicity:

- All parts are poisonous - roots, leaves, berries
- Affects humans and most animals
- Symptoms
 - nausea, vomiting, diarrhea
 - convulsions and spasms
 - cardiac and respiratory arrest
- You can become very sick or die from ingestion

2

Carolina Horsenettle



Description: *Solanum carolinense*

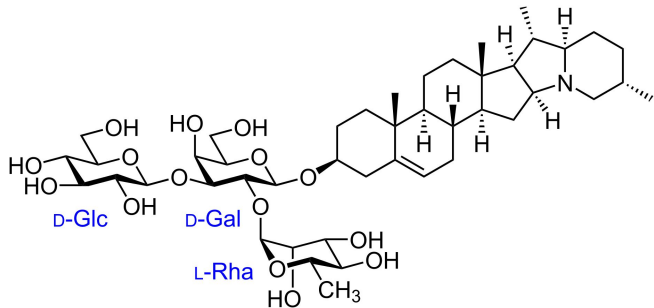
- A member of the nightshade, *Solanaceae*, family
 - Peppers, tomatoes, potatoes
- Native to southeastern United States
- Looks like a small tomato plant with thorns
 - Clusters of small, marble-sized fruits
 - Fruits are **not** edible
- Also known as Devil's tomato, wild tomato, bull nettle

Uses:

- Native Americans made teas for ailments
- Early colonial settlers
 - Apply leaves to skin for poison ivy rashes
 - Roots as a sedative
 - Fruit juices for tetanus
- **Don't do any of this**

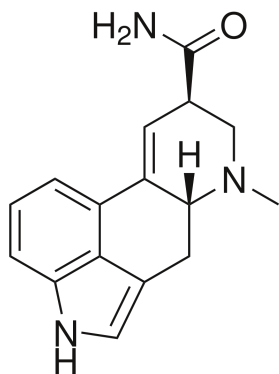
Toxicity:

- All parts of the plant are toxic and contain solanine
- Symptoms
 - Mild - nausea, vomiting, diarrhea
 - Severe - hallucinations, paralysis, death
- We don't eat green potatoes because of solanine



Solanine

3 Morning Glory



LSA, ergine

Description: *Ipomoea indica*

- A member of the “morning glory” plants
- A flowering perennial vine
 - 3-lobed leaves
 - blue/purple trumpet-shaped flowers
 - Ornamental, but will invade and take over
- Also known as cypress vine, morning glory
- Similar plants with white flowers are wild sweet potatoes

Uses:

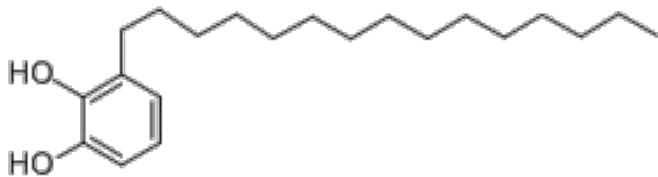
- None, other than as an ornamental plant
- Some species used as good luck charms

Toxicity:

- Species contain lysergic acid amide (LSA, ergine)
 - Precursor to LSD (“acid”)
- Psychedelic
 - Hallucinations, euphoria
 - Nausea, sedation
 - Paranoia, anxiety
- Same chemical made by ergot fungus in wheat
 - Ergotism - burning sensation in limbs
 - “St. Anthony’s Fire”

4

Poison Ivy



Urushiol (pentadecylcatechol)

Description: *Toxicodendron radicans*

- Climbing vine on trees - HUGE vines, inches wide!
- Small bushes by itself
- Deciduous - seasonal leaves change color and drop
 - Leaves - trifoliate (cluster of 2 leaves)
 - Vines - roots to latch onto trees
- Grows throughout the forests in North America

Uses:

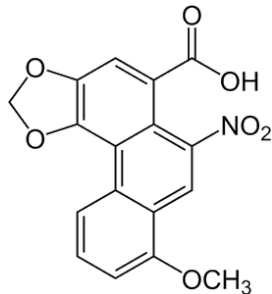
- NONE - Leave it alone!

Toxicity:

- ALL parts are toxic
 - Contact dermatitis if touched
 - Irritates lungs if inhaled when burned
 - Forest fires and firefighters
- Toxic component is uroshiol
 - Like a fatty-acid or a soap
 - Stimulates an immune response

Leaves of three, let it be

5 Wild Ginger



Aristocholic acid

Description: *Asarum arifolium*

- Native to southeastern United States
- **Not** an edible ginger
- Perennial
 - Prefers shaded areas
 - Heart-shaped leaves
 - Grows from a rhizome (underground stem)
- Also known as arrowleaf ginger, little brown jug

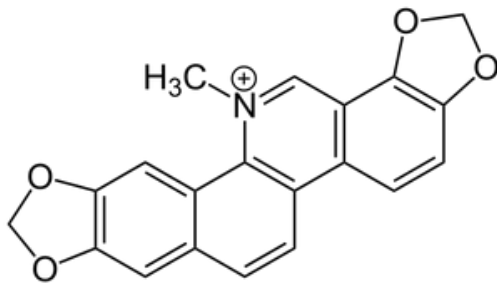
Uses:

- It's pretty and can be used ornamentally
- Traditional Asian and Native American medicine

Toxicity:

- All parts are toxic, especially the roots
- Contains aristocholic acid
 - Causes severe kidney damage and failure (nephrotoxic)
 - Linked to cancers of the urinary tract
- Roots are often confused with others
 - Poisonings are common enough that it's called "Chinese Herb Nephropathy"

6 Bloodroot



Sanguinarine

Description: *Sanguinaria canadensis*

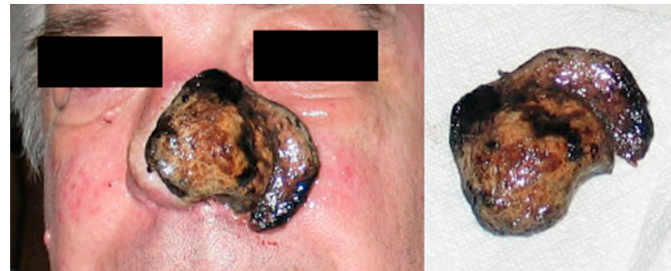
- Perennial, herbaceous flowering plant
- Native to eastern United States and Canada
- Small, ~6" plant - prefers damp, shady areas
 - Heavily lobed leaf
 - Very delicate, white flowers
 - Blooms very early in the spring
- Also called bloodwort, red puccoon, Canada puccoon

Uses:

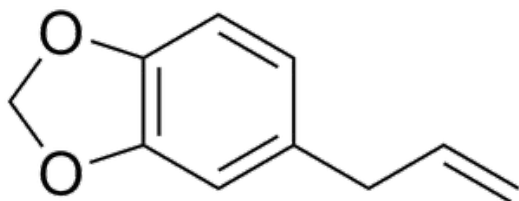
- Native Americans used it as a red dye and emetic
- Alternative "medicine" as a cancer "cure"
 - Black Salve (**Don't ever use, please**)

Toxicity:

- Roots contain sanguinarine
 - Enters the cell and causes damage to DNA
 - Promotes cell death - every cell it touches



7 Sassafras



Safrole

Description: *Sassafras albidum*

- Deciduous tree, can be tall, but usually small in NC
- Native to eastern United States and Canada
- Leaves are lobed, like mittens
 - Right-handed
 - Left-handed
 - People with two thumbs on a hand

Uses:

- Roots
 - The old-fashioned flavoring of Root beer!
- Leaves
 - Dried and ground is filé powder, the thickening agent for gumbo

Toxicity:

- Toxicity of safrole is exaggerated a bit
 - But is carcinogenic in huge amounts in rats, which is why it is no longer allowed in root beer
- Safrole is a precursor for the production of MDMA ("Ecstasy")

8 Water Hemlock



Image via US Forest Service

Description: *Cicuta maculata*

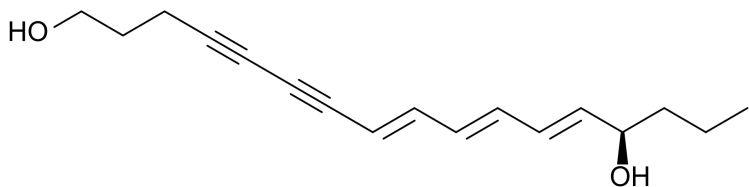
- Native to most of North America
- Can grow tall, 5+ feet
 - Frilly, lacy green leaves. Fern-like.
 - Large array of flowers, like an umbrella
- Likes wet areas, along ditches, streams, and lakes
 - Blooms in the spring
- Often confused for wild carrots and wild parsnips
 - They look similar, so DON'T EAT them.

Uses:

- None, really
- Native Americans used it as an arrow poison

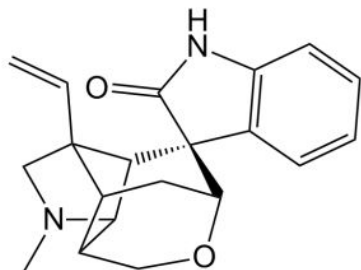
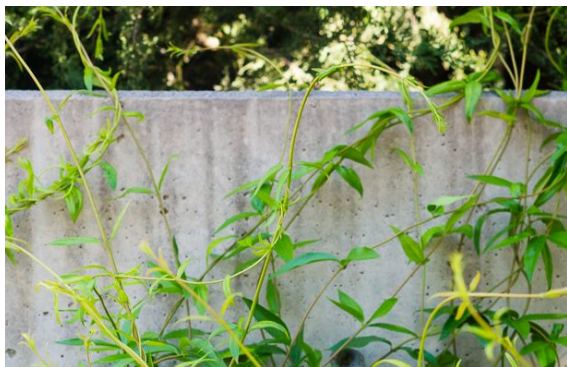
Toxicity:

- *Extremely toxic*
 - A relative of 'poison hemlock' that killed Socrates
 - Small portion of roots can be lethal
 - Small handful of leaves can be lethal
- Toxic chemical is cicutoxin
 - Nausea & vomiting
 - Muscle paralysis & seizures
 - Death from respiratory failure (stop breathing)



Cicutoxin

9 Carolina Jessamine



Gelsemine

Description: *Gelsemium sempervirens*

- Native to tropical Americas
- Grows throughout the Carolinas
- A twining, vine
 - Slender green leaves
 - Small trumpet-shaped yellow flowers
- Also called Yellow Jessamine

Uses:

- In the 1800s, used for nerve pain (neuralgia)

Toxicity:

- Contains gelsemine
- Muscle relaxer, leading to paralysis
- Symptoms:
 - Nausea, vomiting, diarrhea
 - Paralysis, vision impairment
- Sir Arthur Conan Doyle famously poisoned himself as a medical student with gelsemine



"I feel convinced that I could have taken as much as half an ounce of the tincture, had it not been for the extreme diarrhoea it brought on."