

The Uncommon Ecologist's Field Guide



Backyard Wild Plants

Dylan Geiger

Dedicated to Leana,
Layla, and Lilly. You
three have helped me
more appreciate the
magnificence of nature,
and most importantly
gave me the gift of the
love of a family. This
book is for you.

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Introduction

Ever since I was a child I have had a fascination with the natural world. Growing up during the infancy of the internet and before helicopter parenting I often found myself adventuring deep into the woods and fields of my native Wisconsin.

As I grew into adulthood I found myself punching a time clock and getting out into nature less and less. I don't feel like that is an uncommon theme with people today.

We get caught up in the 40 hour work week, family responsibilities, and our free time is consumed by LED screens and marketing based entertainment.

This fast paced exhaustive lifestyle we live affords little time for getting out in the wilds that we originated from.

We can learn a lot from the natural world... Everything in a healthy ecosystem is perfectly balanced and provides everything its various organisms need. A natural ecosystem is a self-policing, self-healing, autonomous machine, with more computing power than humankind could ever achieve.

This journal is a collection of my photography and artwork related to the Kingdom of Plantae with an emphasis on wild-growing plants that can be found in backyards and public spaces.

I have included information about each species including taxonomic names, common names, and some interesting facts about each plant.

My main goal in writing this collection was to show people the beauty and function of the world around us.

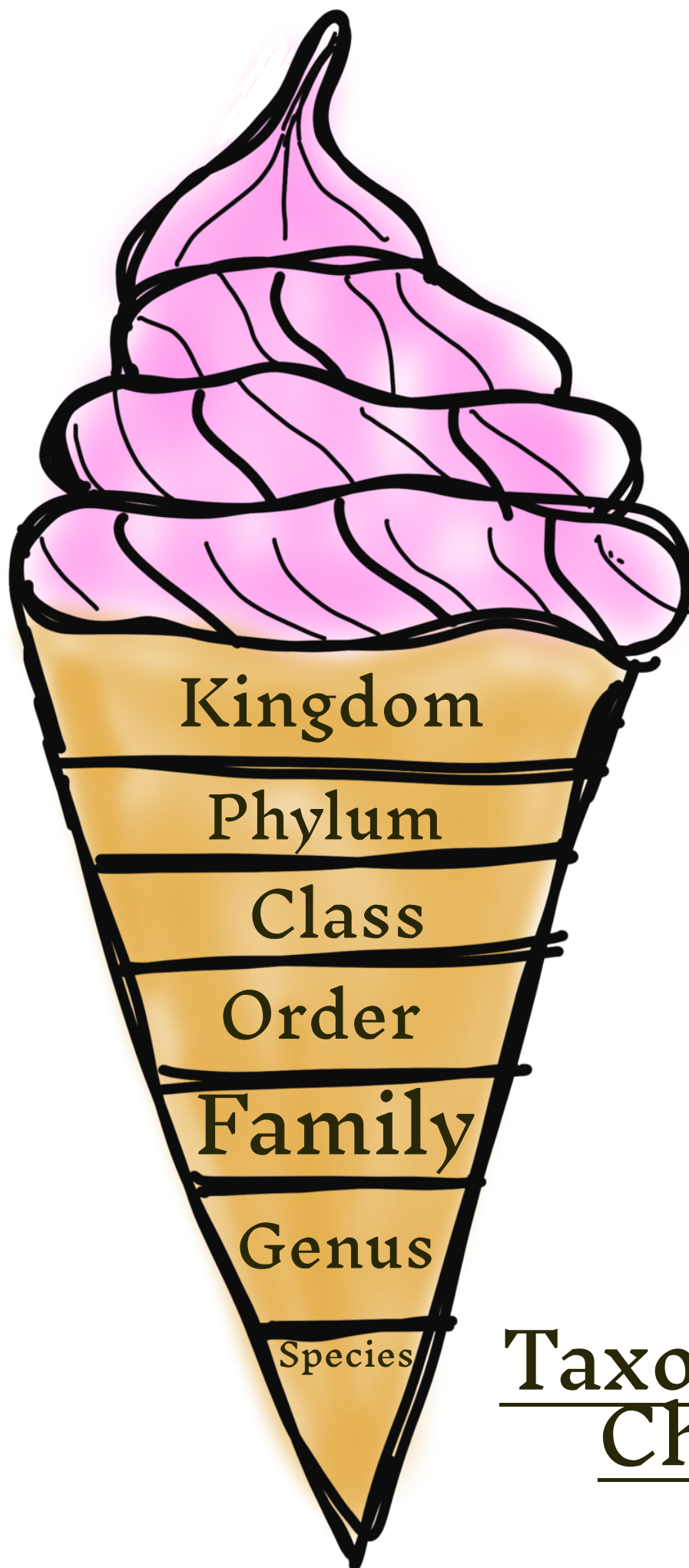
I hope it sparks your curiosity and makes you ask yourself some questions of your own.

A walk in the woods is exactly what most of us need.

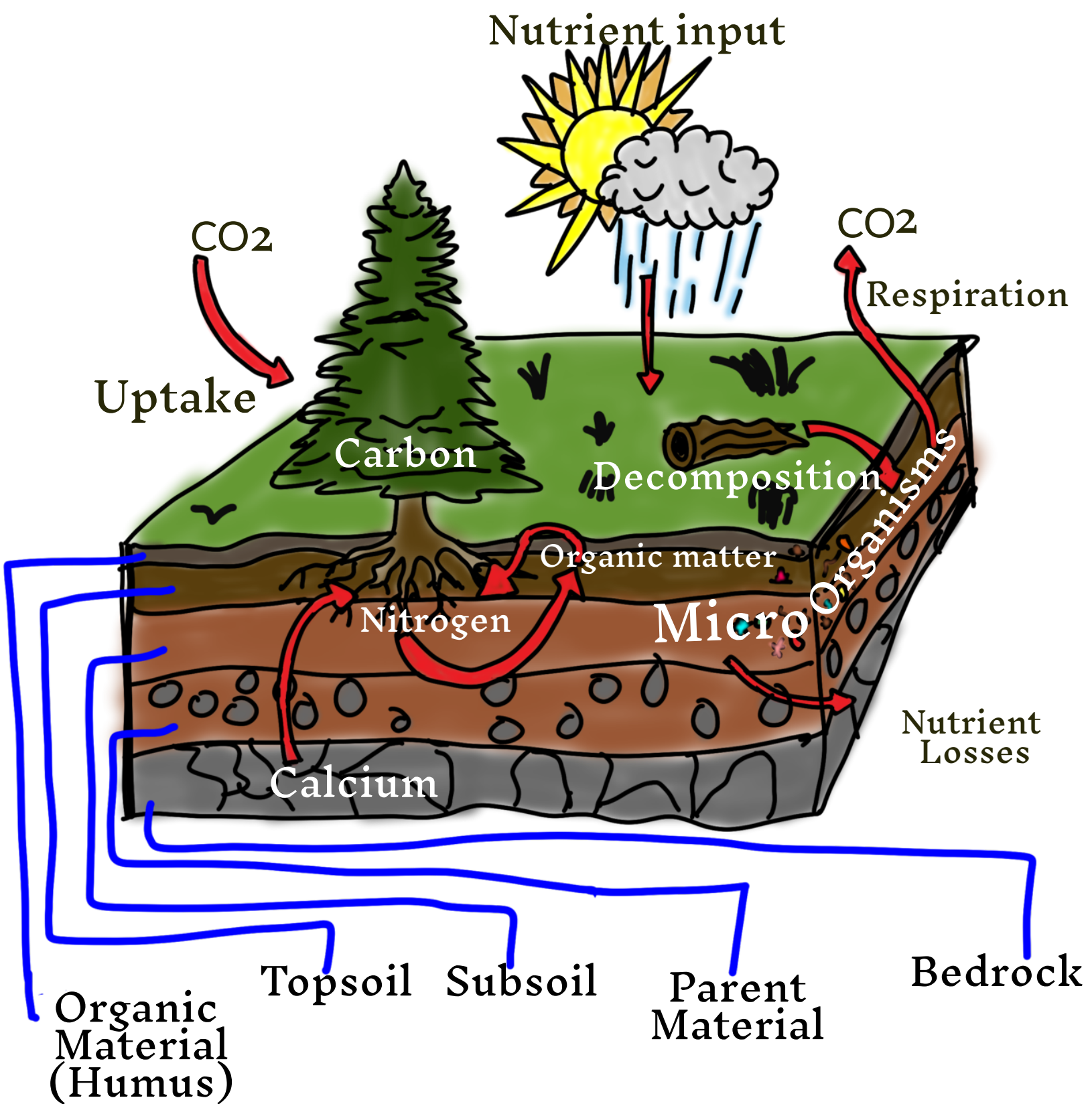
ec-o-sys-tem

**a biological community of
interacting organisms and
their physical environment.**





Taxonomy
Chart



Soil Layers and the Nutrient Cycle

Types of Soil Structure

Single-Grain



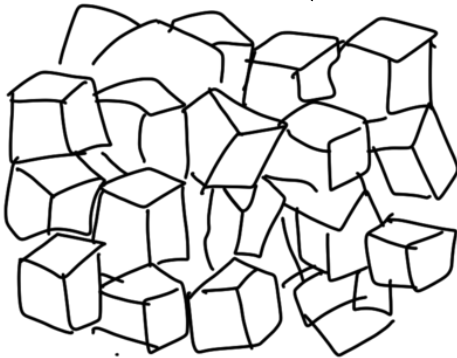
Drains well

Granular



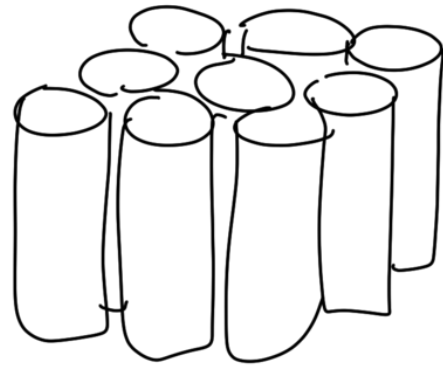
Drains well

Blocky



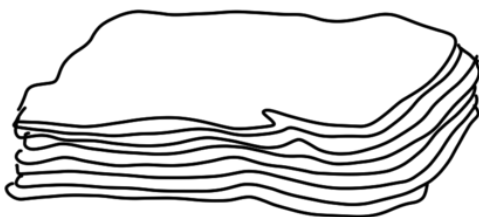
Moderate Drainage

Prismatic



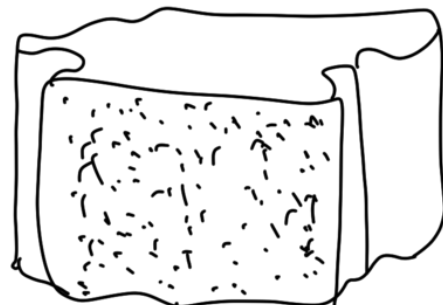
Moderate Drainage

Platy



Slow Drainage

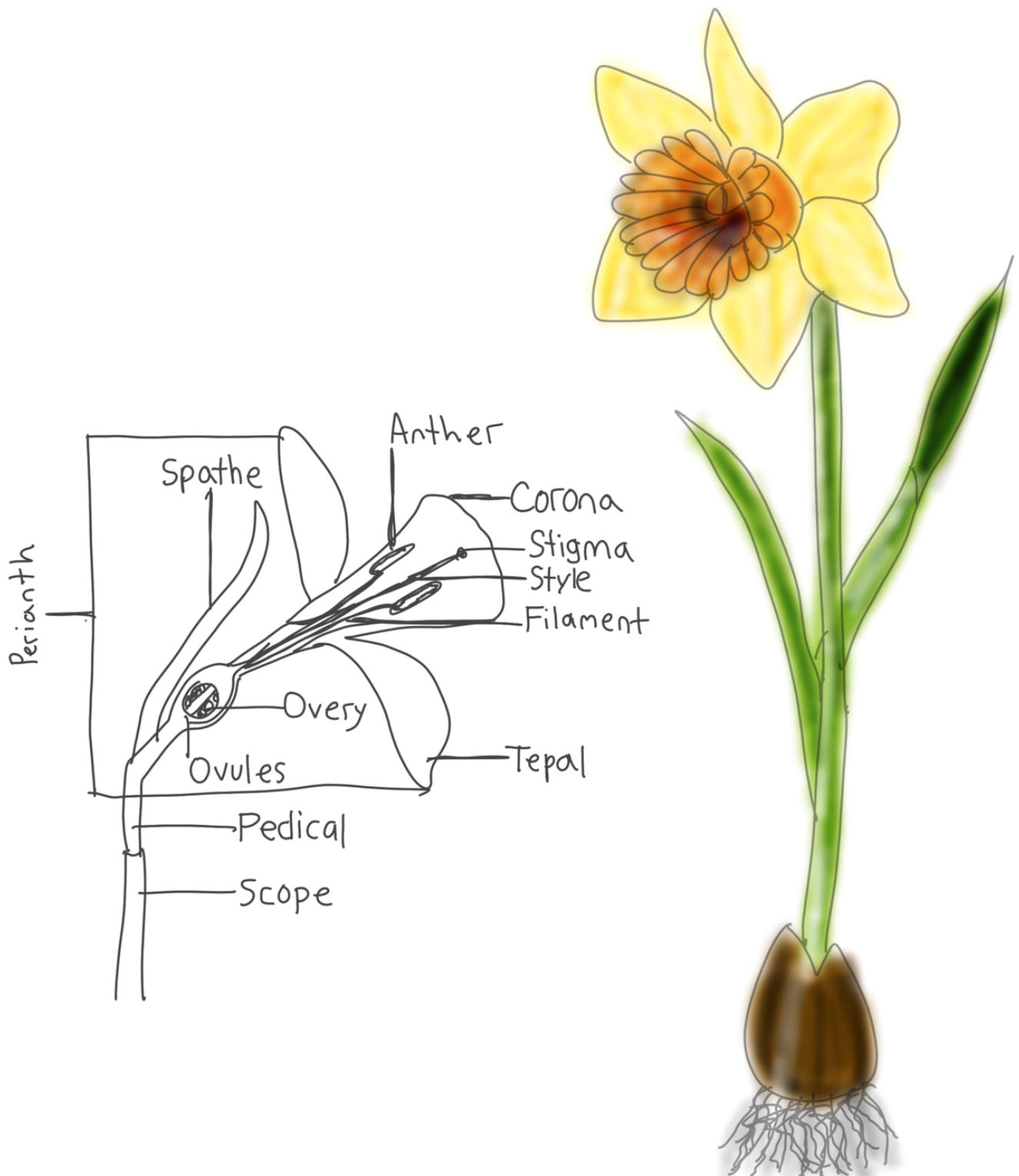
Massive



Slow Drainage

Amaryllis Family

Amaryllidaceae





"Wild Daffodil"

Narcissus pseudonarcissus

Family: Amaryllidaceae

Wild Daffodil is a European native. A germinated plant takes 5-7 years to produce a flower. The plant contains an alkaloid poison and should not be eaten, but Narcissus is mentioned being used topically throughout world history as a treatment for tumors. Wild daffodil is harvested commercially in Europe to produce the Alzheimer's treatment galantamine.

Cashew and Sumac Family

Anacardiaceae



poison ivy

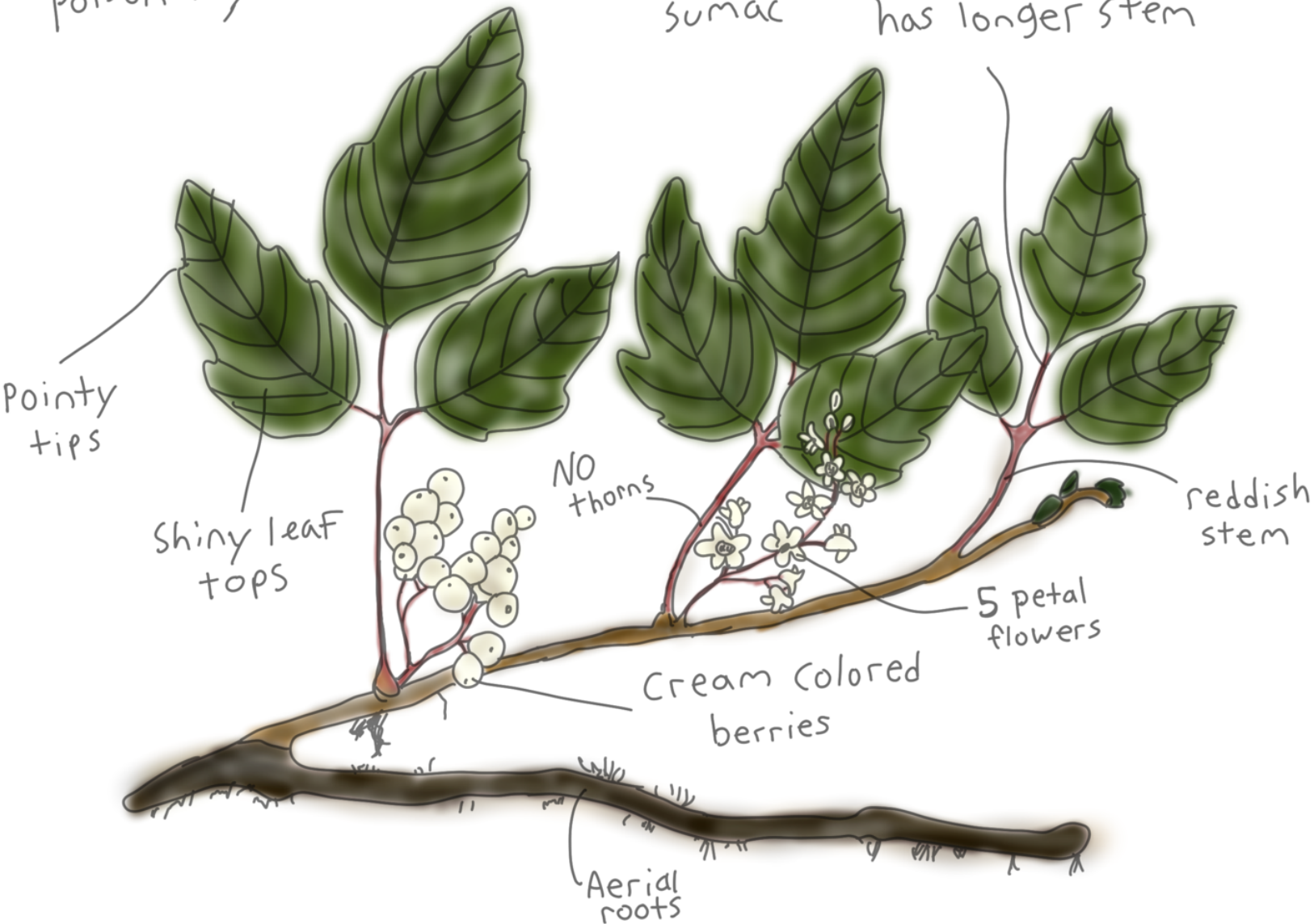


poison oak



poison sumac

Middle leaf has longer stem



POISON



IVY

Toxicodendron radicans

Family: Anacardiaceae

Poison ivy is an opportunistic deciduous plant. A relative of cashew and pistachio plants, poison ivy is a diverse species that can be seen in the form of woody climbing vines, thin creeping vines, and also as a shrub. Poison ivy leaves can also vary wildly in structure and color with either serrated or smooth leaf edges and colors ranging from purple to bright green. The plant generates a compound called "Urushiol" in its sap that is an extreme skin irritant. Washing with cool water or alcohol immediately after exposure to Poison ivy can sometimes avoid the effects of the sap.

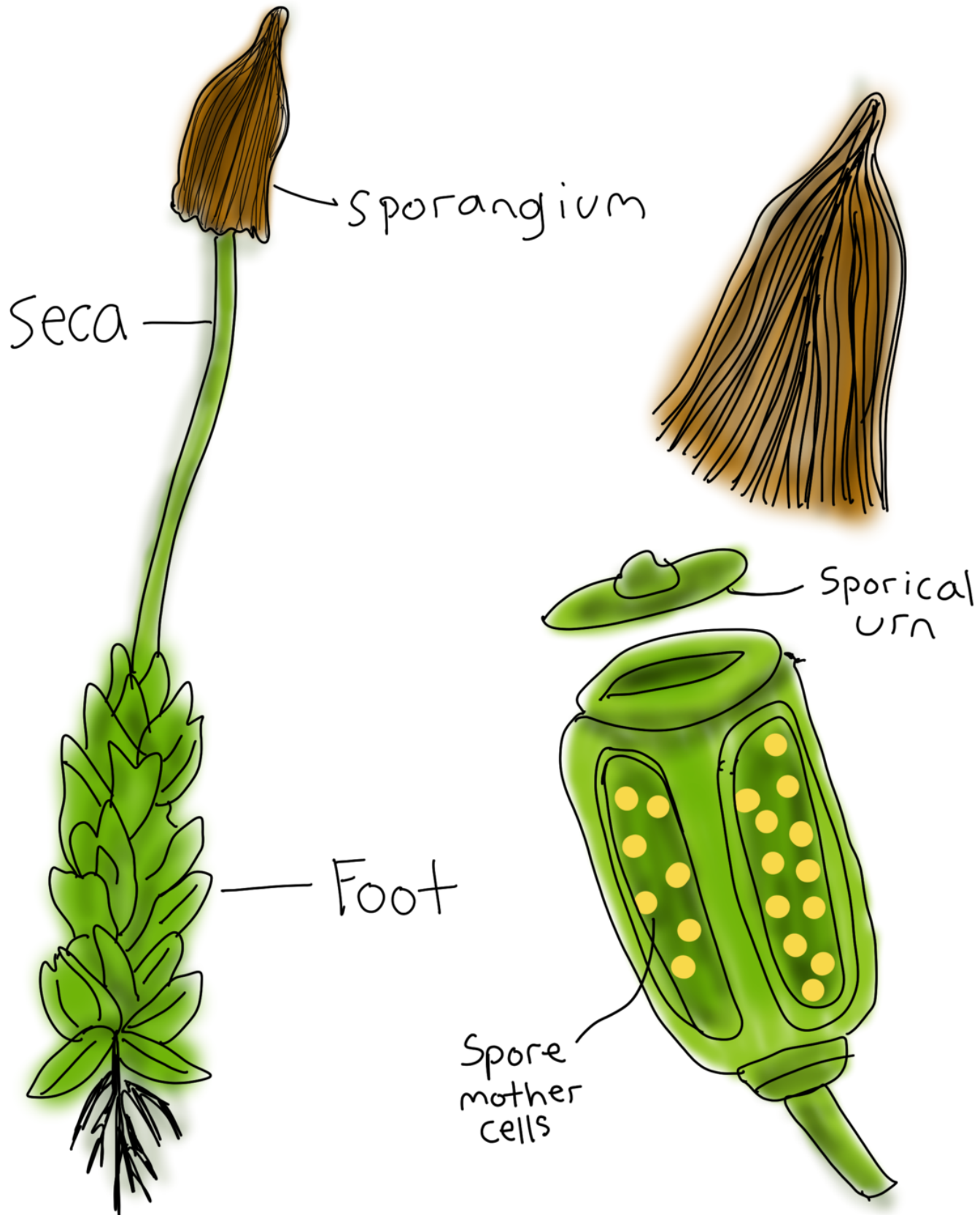
How to identify:

1. Clusters of three leaflets
2. Alternate leaf arrangement
3. Lack of thorns
4. Each set of three leaves grows on its own stem, connecting to the main vine. The middle stem is the longest of the set.



Rock Mosses

Andreaeaceae





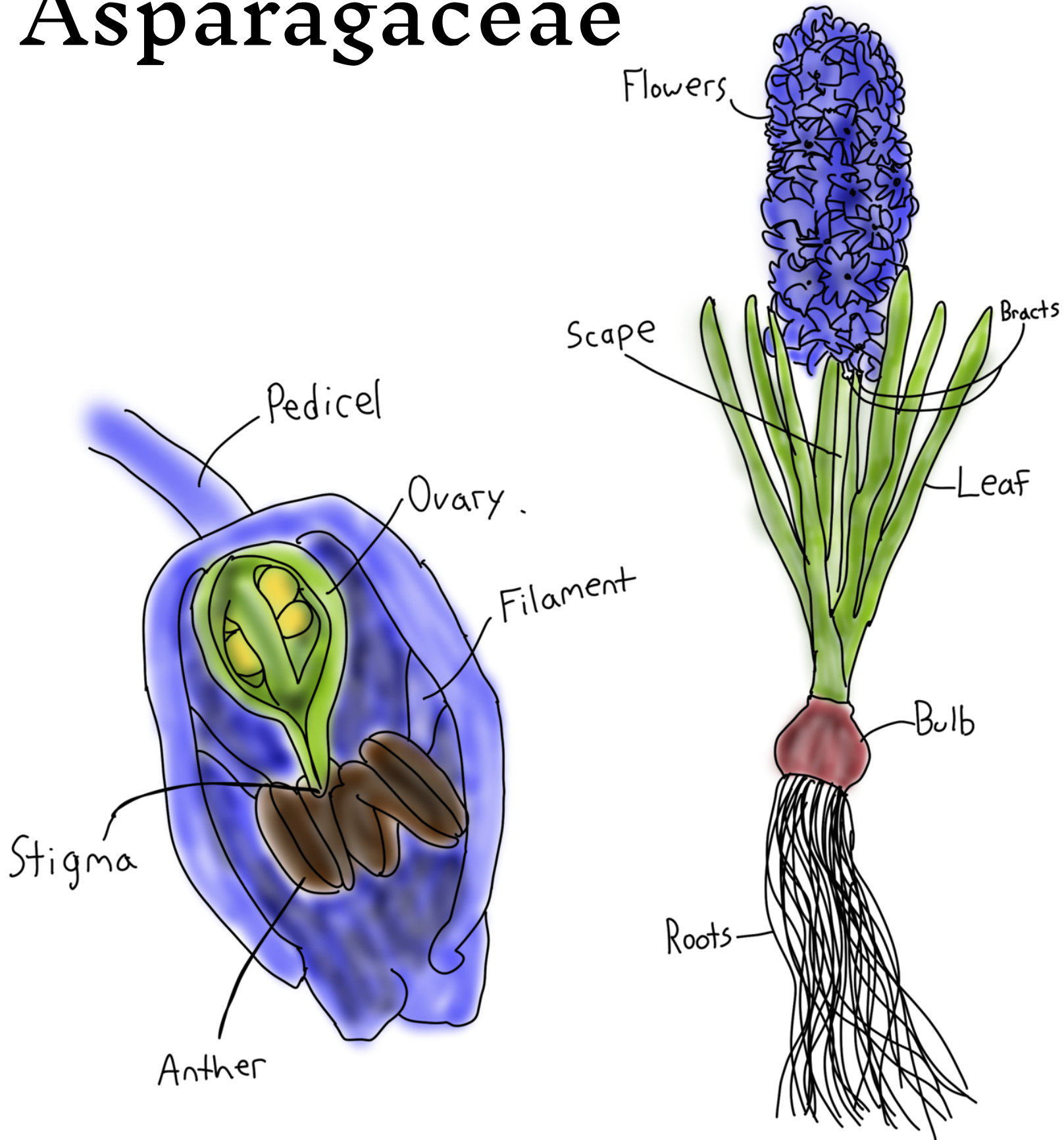
Andreaea rupestris

Family: Andreaeaceae

Rock mosses are considered "pioneer" plants as they are some of the first plants that appear in an ecosystem. They have shallow root systems that only serve to hold the plant to a rock and collect all of their nutrients through their sponge-like leaves. These prehistoric plants provide nutrients to more complex plants and are essential in creating forest habitats. Andreaeaceae don't produce pollen or seeds but reproduce by spreading spores.

Asparagus Family

Asparagaceae



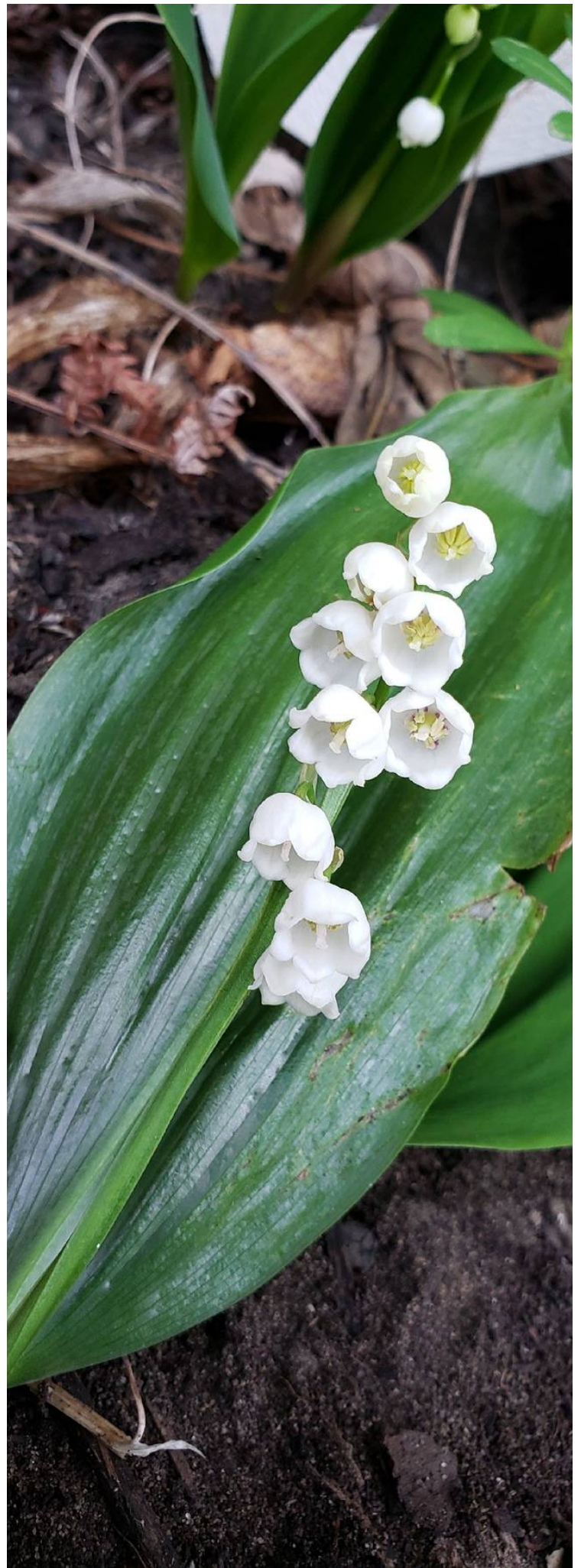
"Lily of the valley"



Convallaria majalis

Family: Asparagaceae

Lily of the valley is a perennial wildflower native to North America. It is not a true Lily, but a member of the asparagus family. Lilly of the valley thrives in silty soils and produces wonderful smelling bell shaped flower clusters. Lilly of the valley has been used as a perfume throughout history. This plant is highly toxic to humans and domestic animals because it contains high amounts of cardiac glycosides.



Muscari

Family:
Asparagaceae

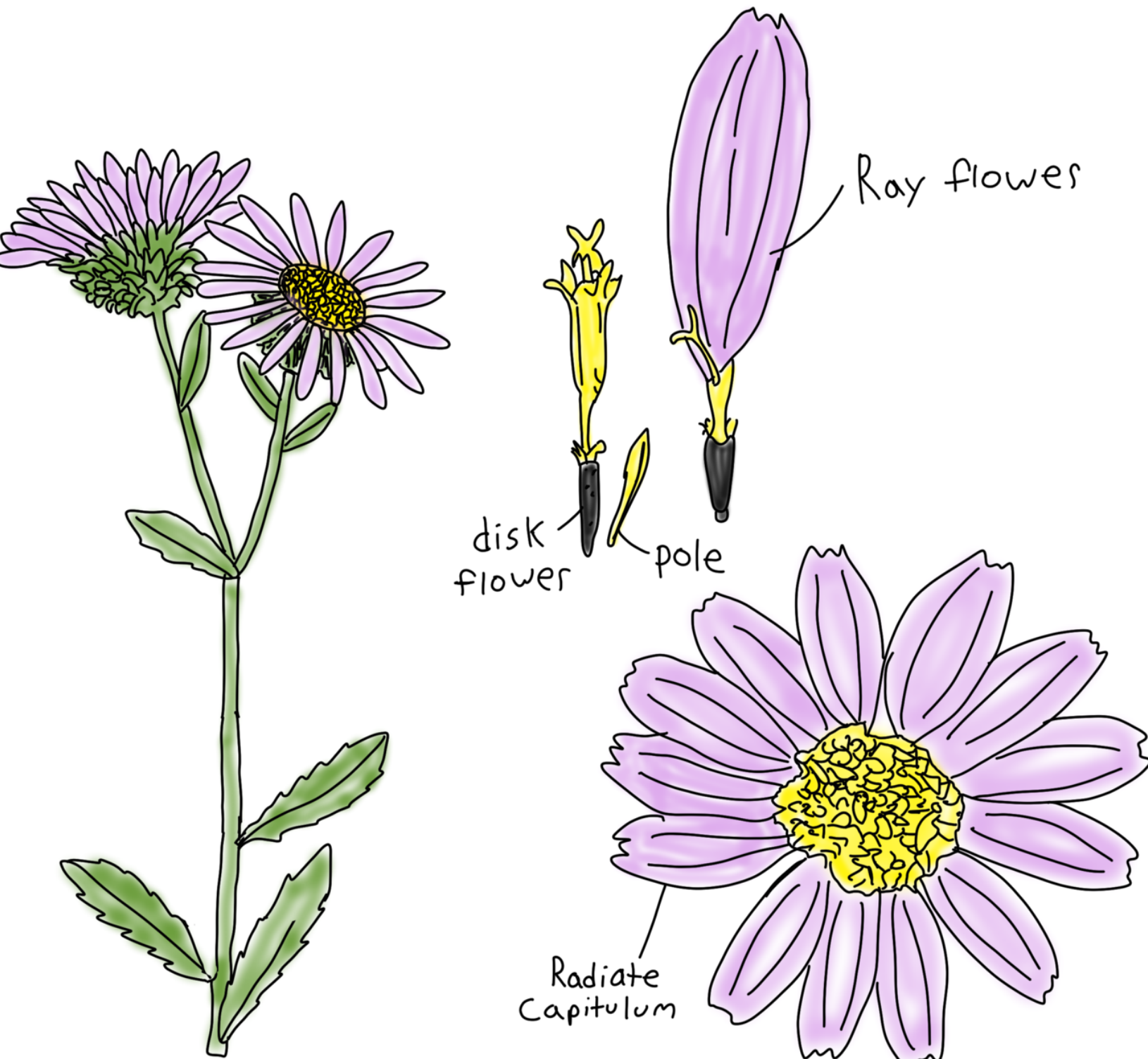
A fast growing, durable perennial. One of the earliest flowers to bloom in spring. The Grape Hyacinth is a key food source for early pollinators.



"Grape Hyacinth"

Sunflower and Aster Family

Asteraceae





"Dandelion"



Taraxacum

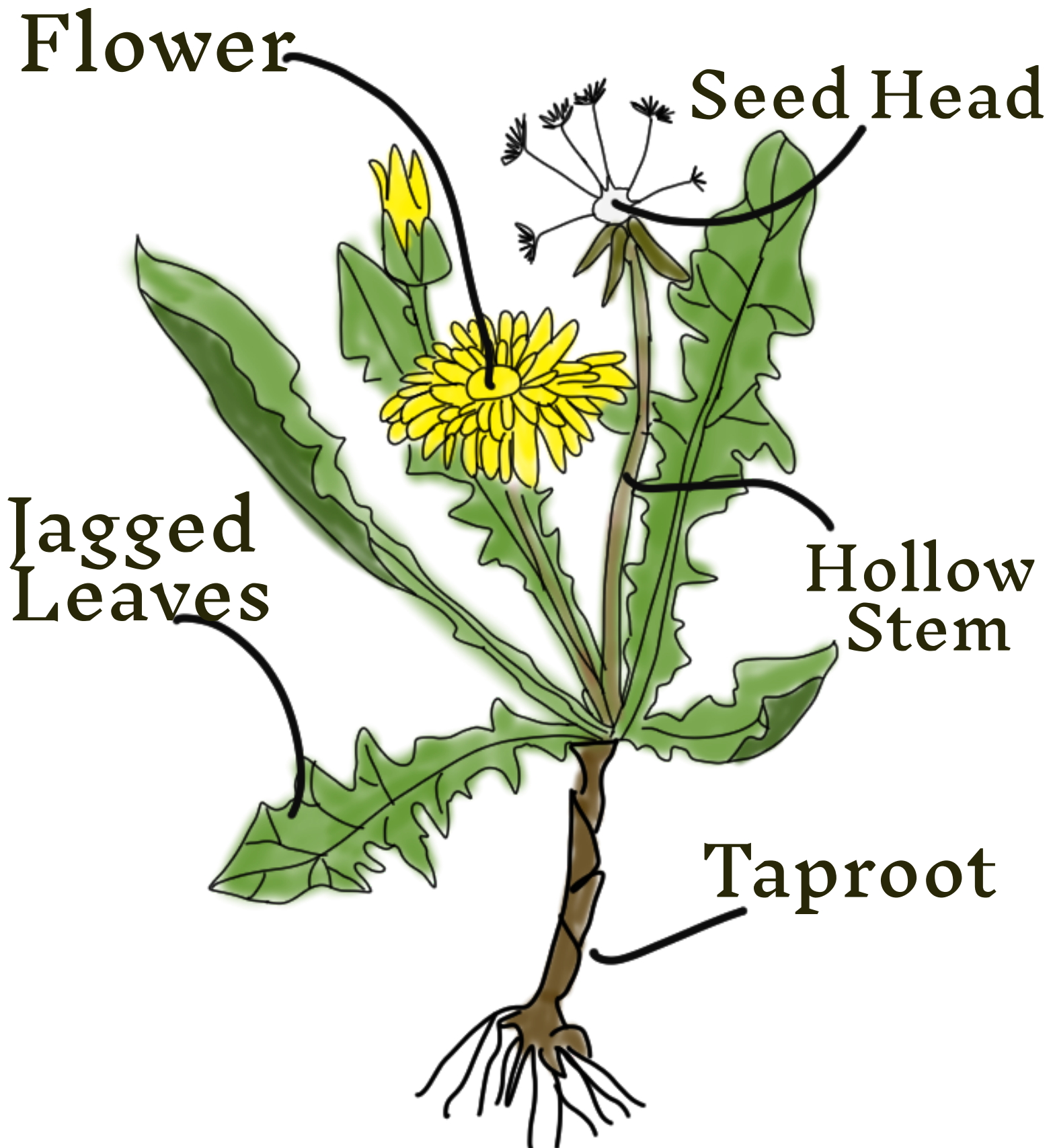
Family: Asteraceae

Dandelion is a native plant that thrives nearly anywhere. It is a self-reproducing plant, meaning it can fertilize its own seed.

Dandelions use wind dispersion to spread a clone of themselves with every seed.

Dandelions are completely edible and contain beneficial nutrients. Their deep root systems allow them to pull nutrients up closer to the surface to be used by shallow root plants. Dandelions are important for soil health and a major food source for pollinators.

Dandelion Anatomy



"Tickseed"



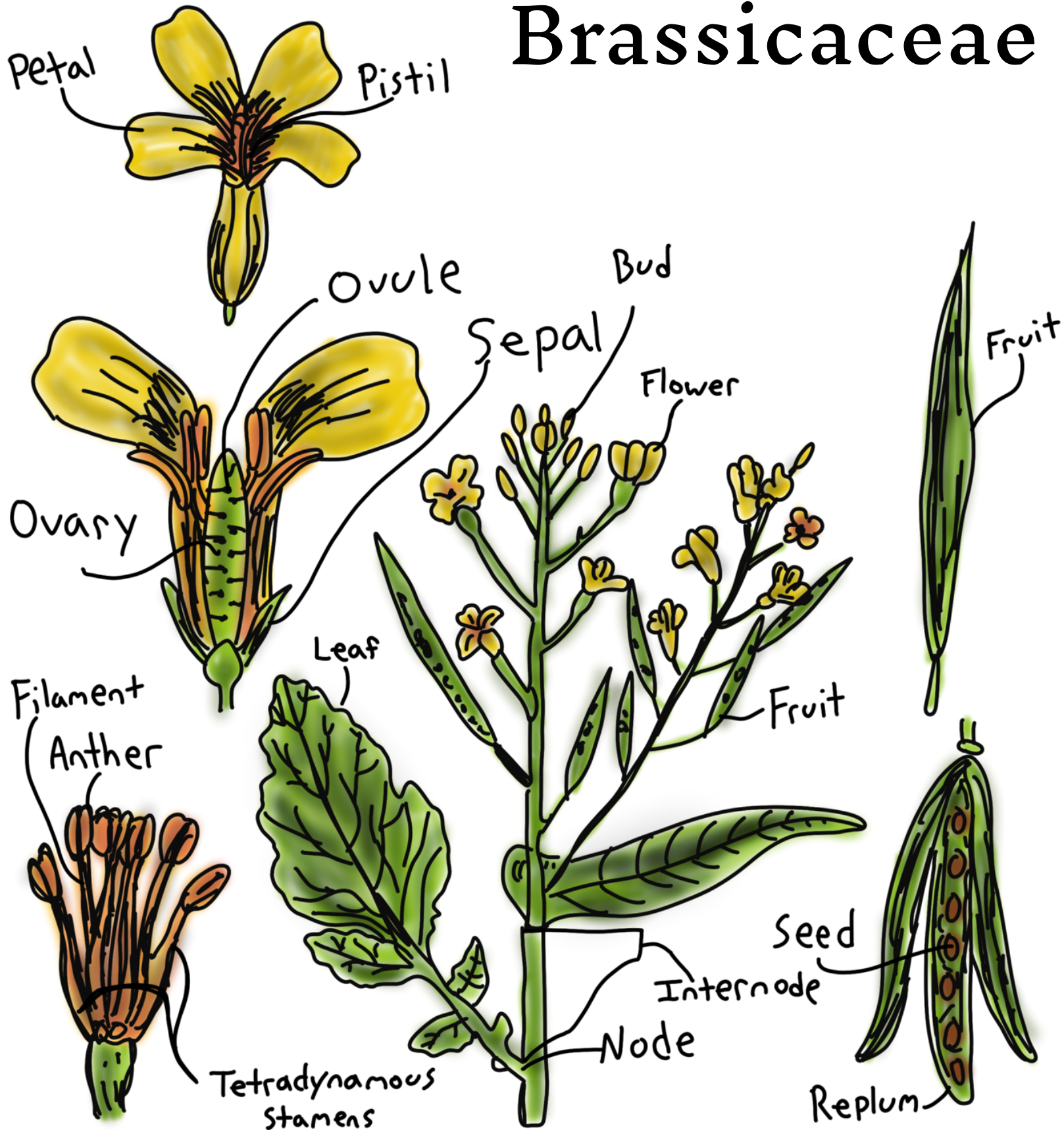
Coreopsis lanceolata

Family: *Asteraceae*

Coreopsis spans a variety of 70+ species of perennial native wildflowers. Summer blooming yellow flowers are a food source for bees and migrating butterflies. Coreopsis are self seeding and prefer loose, well-drained soils. The name tickseed originates from the seeds resembling a tick when the plant goes to fruit.

Mustard and Broccoli Family

Brassicaceae



"Garlic Mustard"



Alliaria petiolata

Family: Brassicaceae

Garlic Mustard is a biennial herb brought to North America by European settlers in the 1800s. It is a highly invasive species that has no natural predators. Garlic mustard is very successful at spreading through woodland areas and can do major damage to natural biodiversity. Garlic Mustard is one of the earliest recorded food seasonings used in Europe and was brought to America because of its Garlic and Mustard flavor. Although safe to eat, Garlic Mustard contains trace amounts of Cyanide.



"Bittercress"

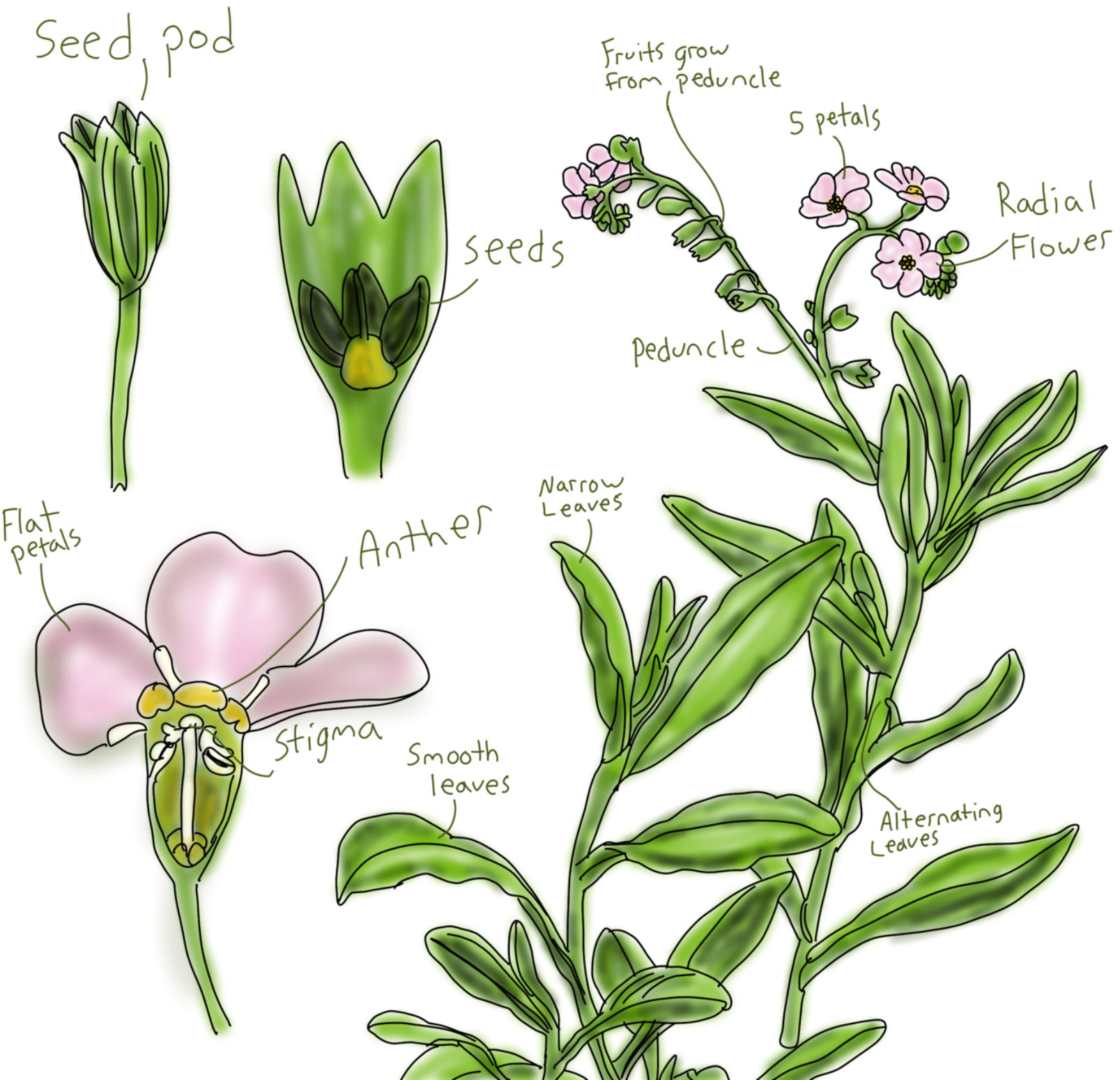
Barbarea vulgaris

Family: Brassicaceae

A biannual herb, Bittercress is a native of Eurasia and North Africa that is considered naturalized in North America. Bittercress has a natural ability to resist pests that feed on similar species and are used as a natural pesticide called "Dead end trap cropping" in cabbage farming. The bittercress attracts pests that would normally eat cabbage plants. Bittercress contains a chemical that is toxic and undetectable to these insects. The flowers and young leaves are edible and can be cooked or eaten raw.

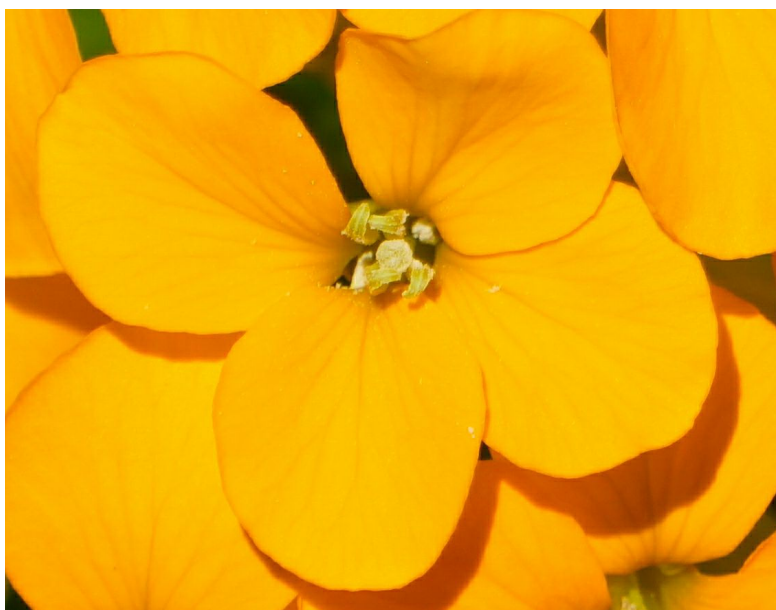


Forget-Me-Not Family Boraginaceae





"Hoary Puccoon"



Lithospermum canescens

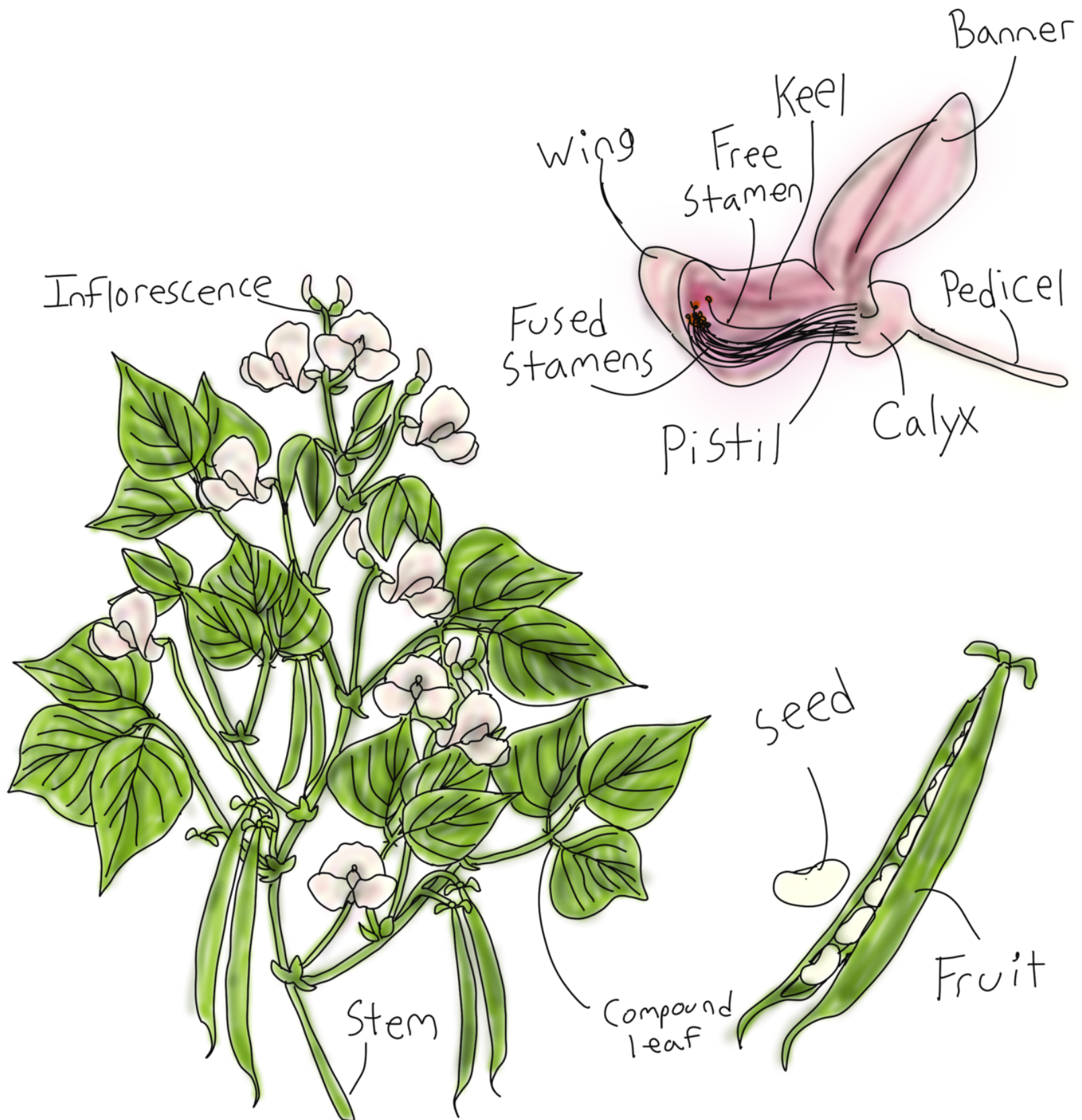
Family: Boraginaceae

Hoary Puccoon is a perennial herb native to North America. It thrives in dry loose soil and does not do well in sandy areas. Hoary puccoon has a grey/green plant covered with small white hairs and produces a yellow/orange flower in the spring.

Hoary Puccoon has a red pigment in its taproot and was harvested by many Native Americans for use in dyes. Native people also crafted beads from the plants stone-like red seeds.

Bean Family

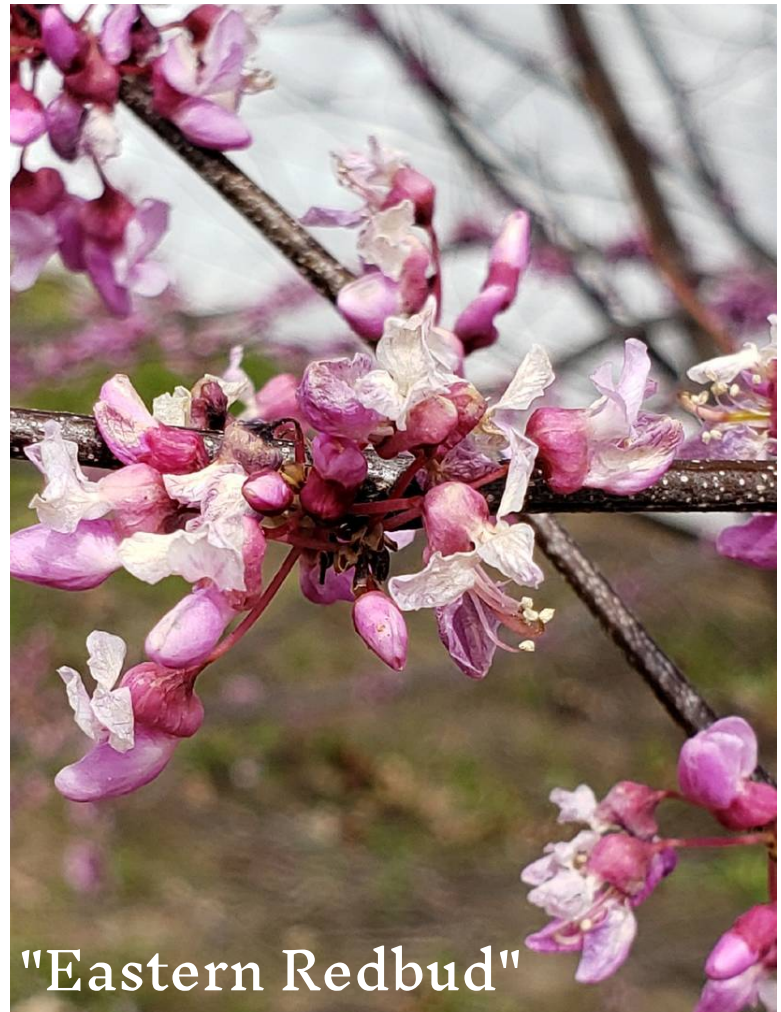
Fabaceae



Cercis canadensis

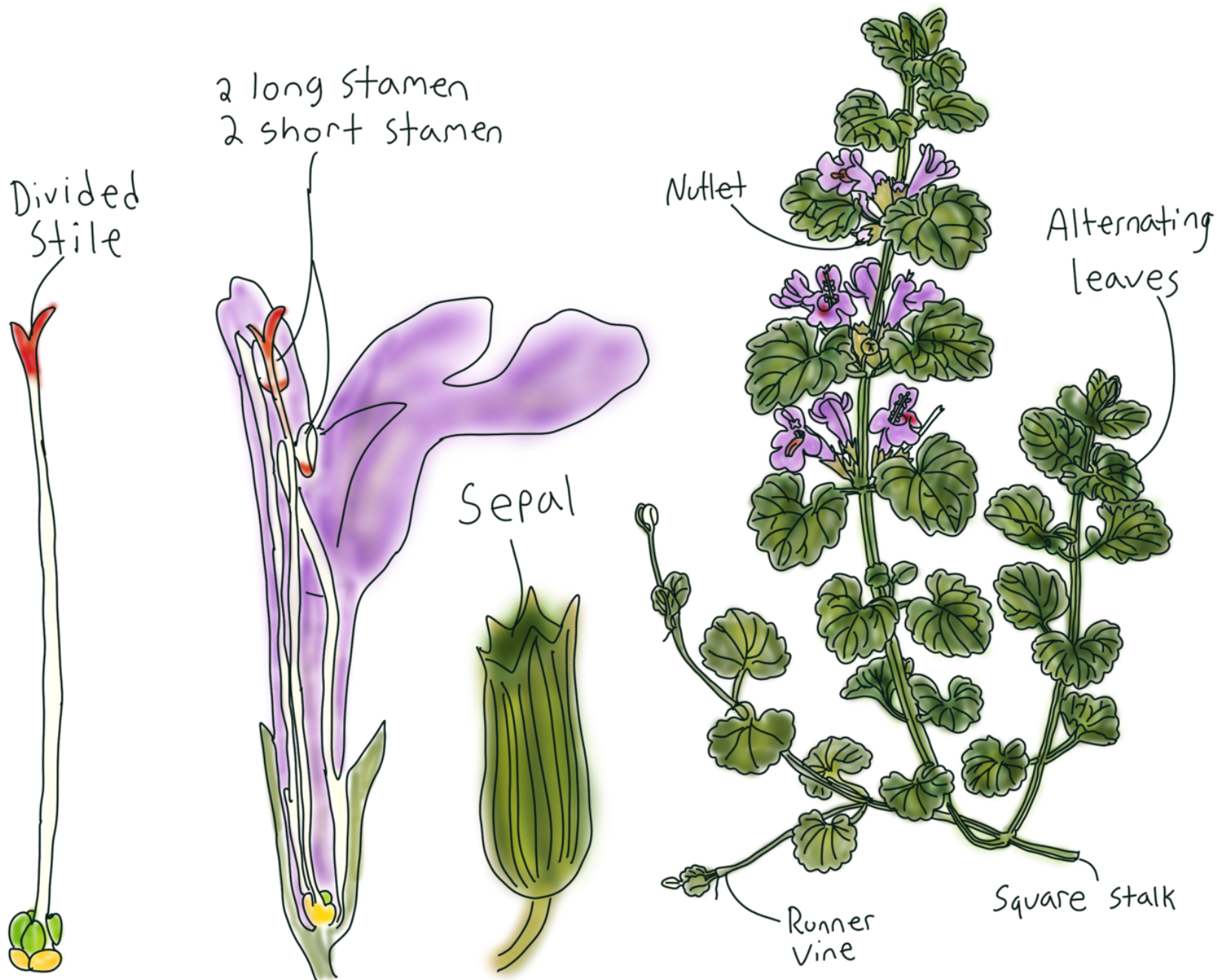
Family: Fabaceae


The Redbud is a native species of understory tree that blooms in spring. The magenta flowers are a food source for long-tongued pollinators such as carpenter bees. The Redbud has edible flowers and the green twigs were traditionally used as a seasoning for wild game.



Mint Family

Lamiaceae





Glechoma hederacea

Family: Lamiaceae

Invasive to North America, the fast spreading Ground Ivy is successful in creating a monoculture that starves out native plants.

The small purple flowers of Ground Ivy blossom in early spring providing a food source for early pollinating insects.

Ground ivy was used as a beer flavoring in the 1500s

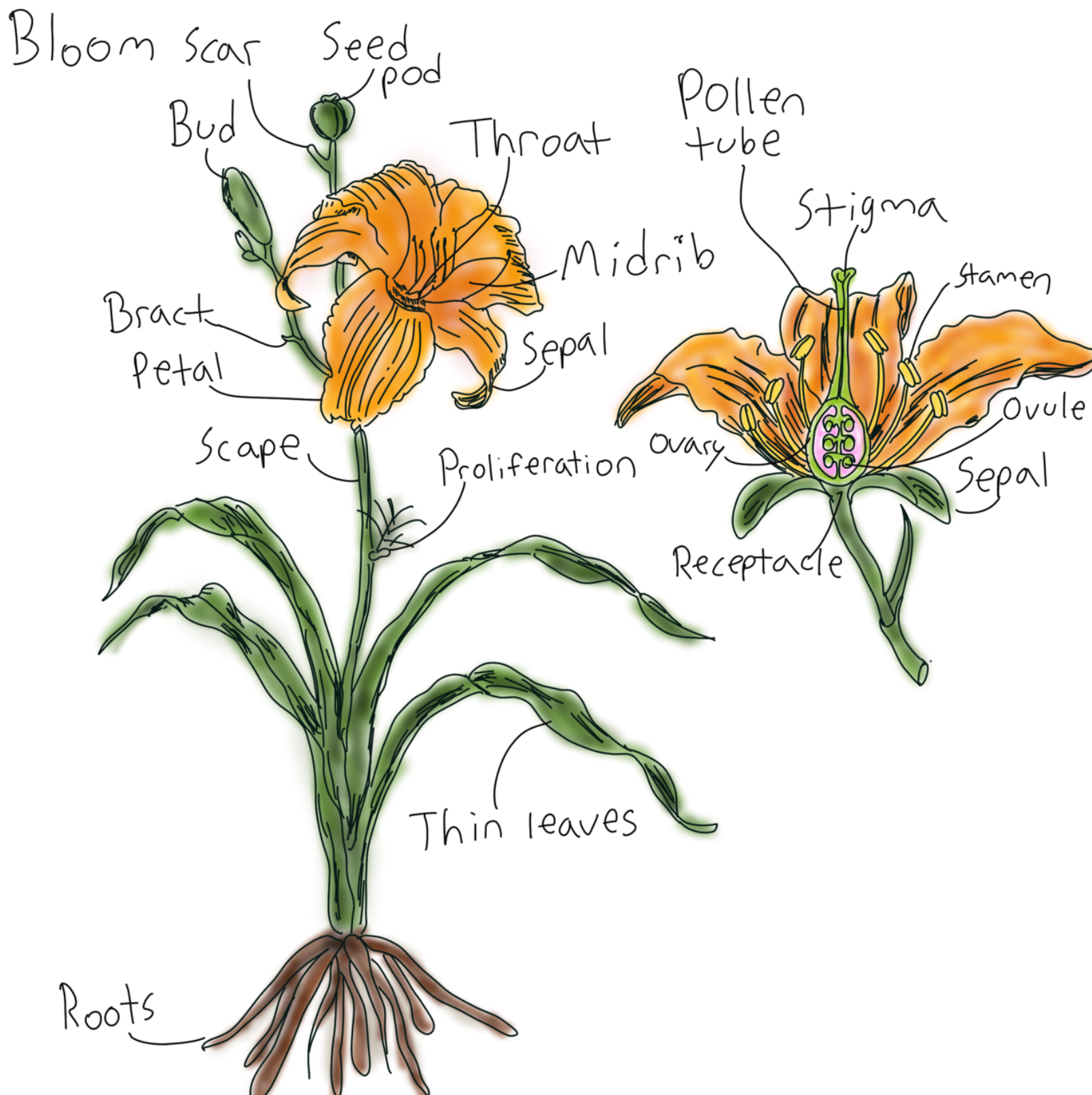
Edible for humans.

Toxic to cattle and horses.

"Ground Ivy"

Lily Family

Liliaceae





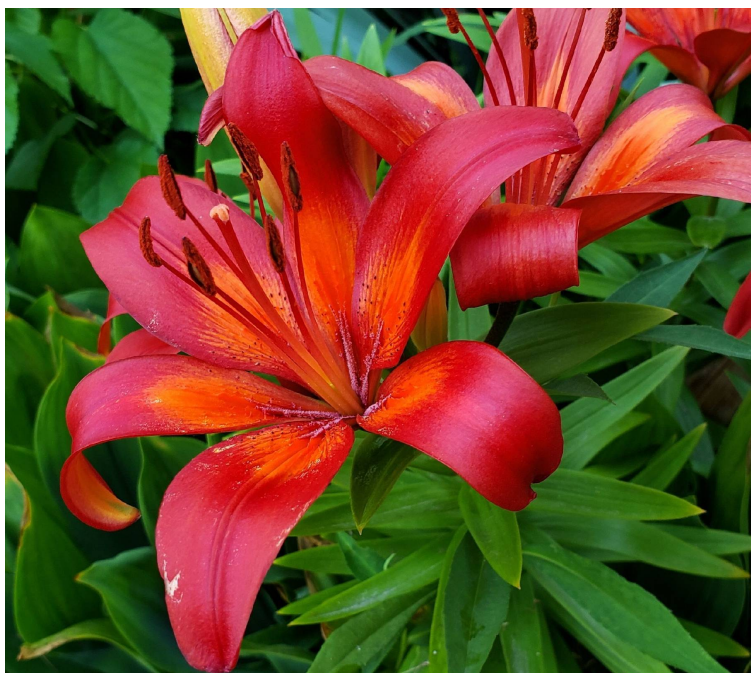
"Trout Lily"



Erythronium americanum

Family: Liliaceae

Trout Lily is a common wildflower in North America. It gets its name from its spotted leaves resembling the markings of a brook trout. Tiger Lilies share a symbiotic relationship with ants. Providing a beneficial structure for ants and in return the ants disperse the plants seeds. Tiger Lilies grow in large colonies in wooded areas and bloom before the leaves are on the trees above.



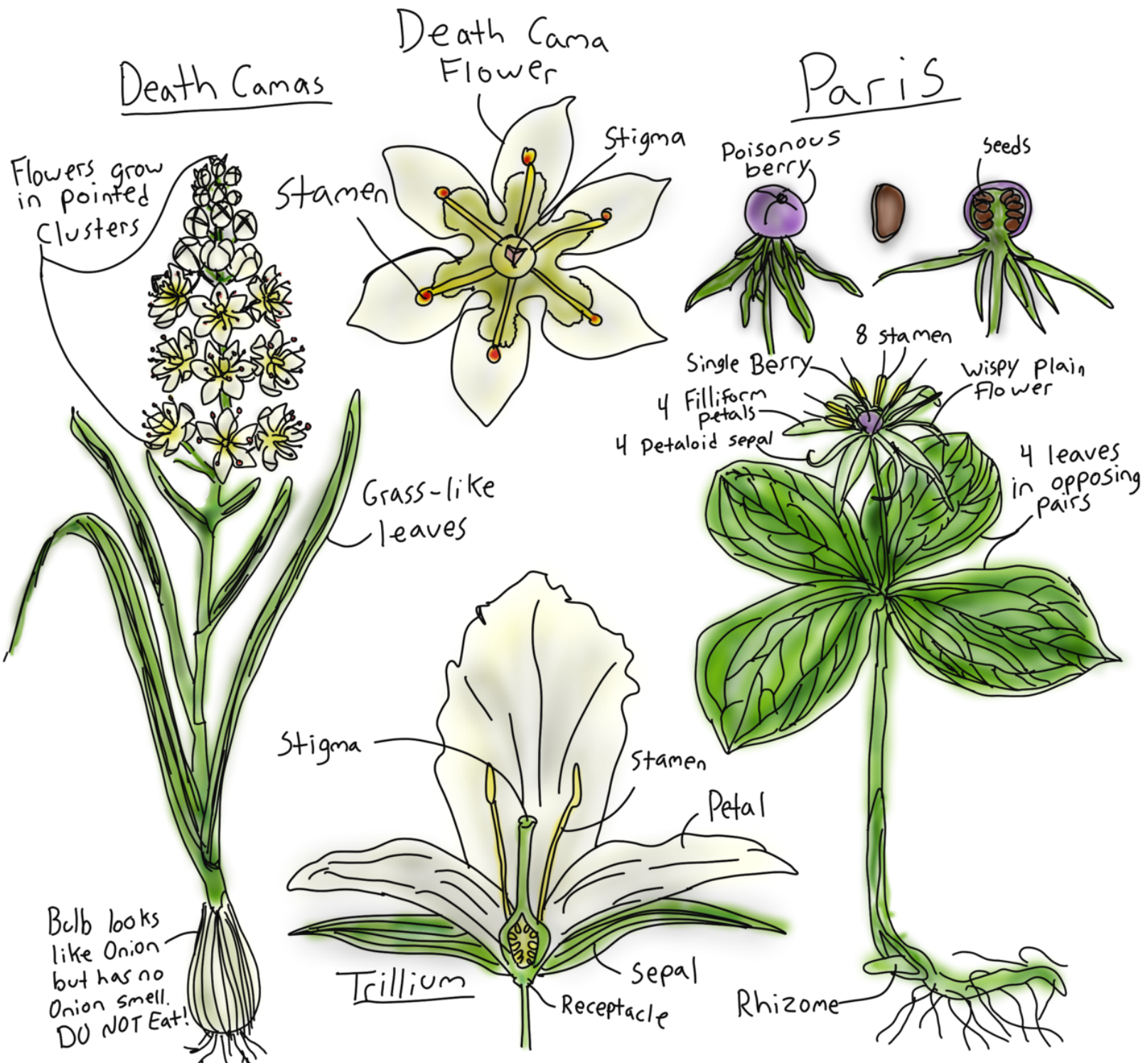
Lilium philadelphicum
Family: Liliaceae

Wood Lily is a perennial wildflower that is Native to the Great Lakes region. The plant produces a red/orange flower in early summer. Wood Lily is a threatened species due to habitat loss of white tail deer who devour lily varieties at an unsustainable rate.

**Lilium philadelphicum
pollen is deadly to cats.**

Bunchflower Family

Melanthiaceae



"Stinking Benjamin"



Trillium grandiflorum

Family: Melanthiaceae

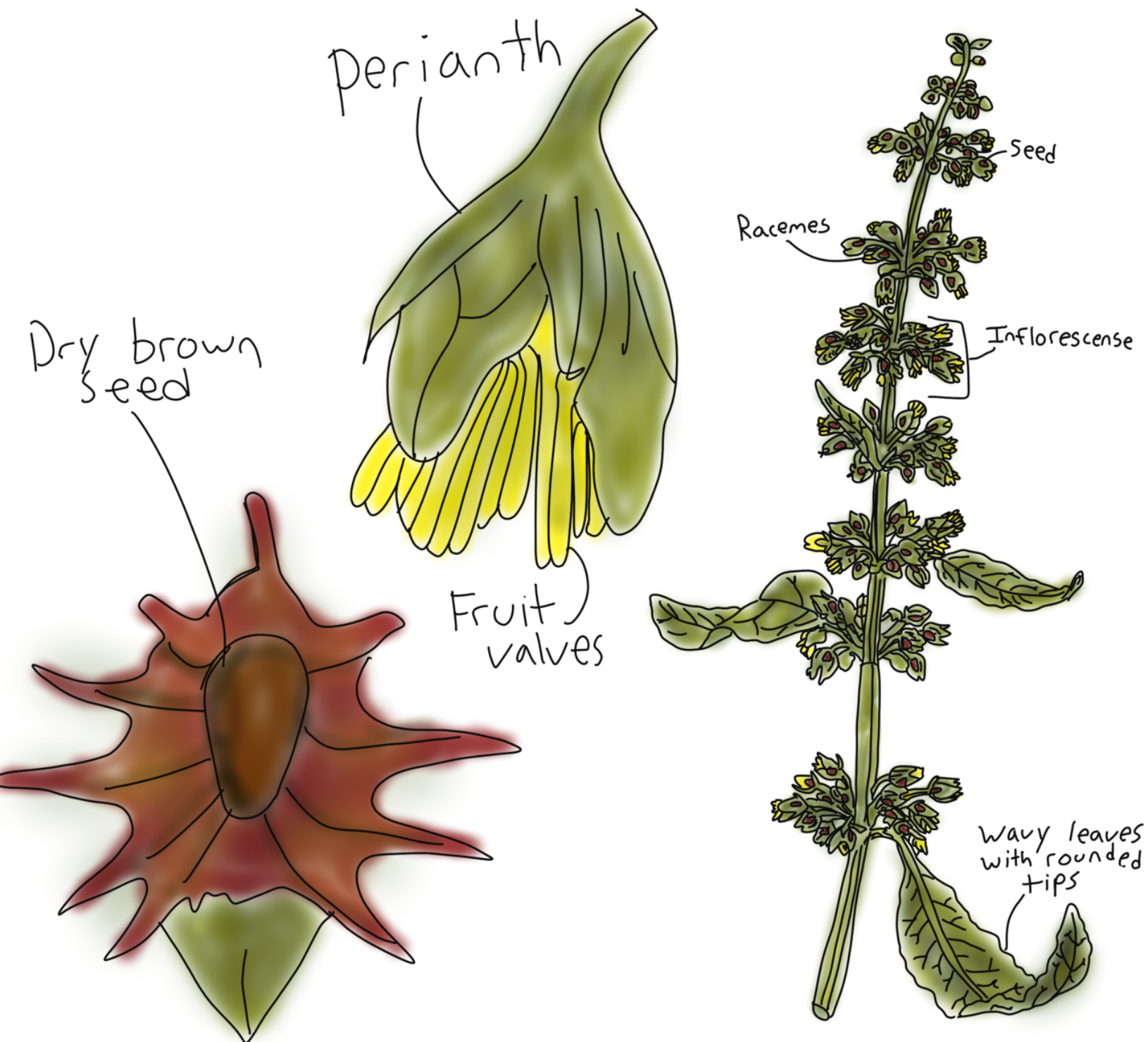
Trillium grandiflorum is an early spring perennial.

This plant is native to North America and has a symbiotic relationship with ants. In order to transport its seeds the plant produces an oily, lipid filled substance that ants mistake as a food source.

This species is considered threatened due to habitat loss and commercial cultivation.

Knotweed Family

Polygonaceae





"Broad-Leaved Dock"

Rumex obtusifolius

Family: Polygonaceae

Broad Leaved Dock is a highly aggressive invasive that was transported from Europe to the Great Lakes Region in the 1840's.

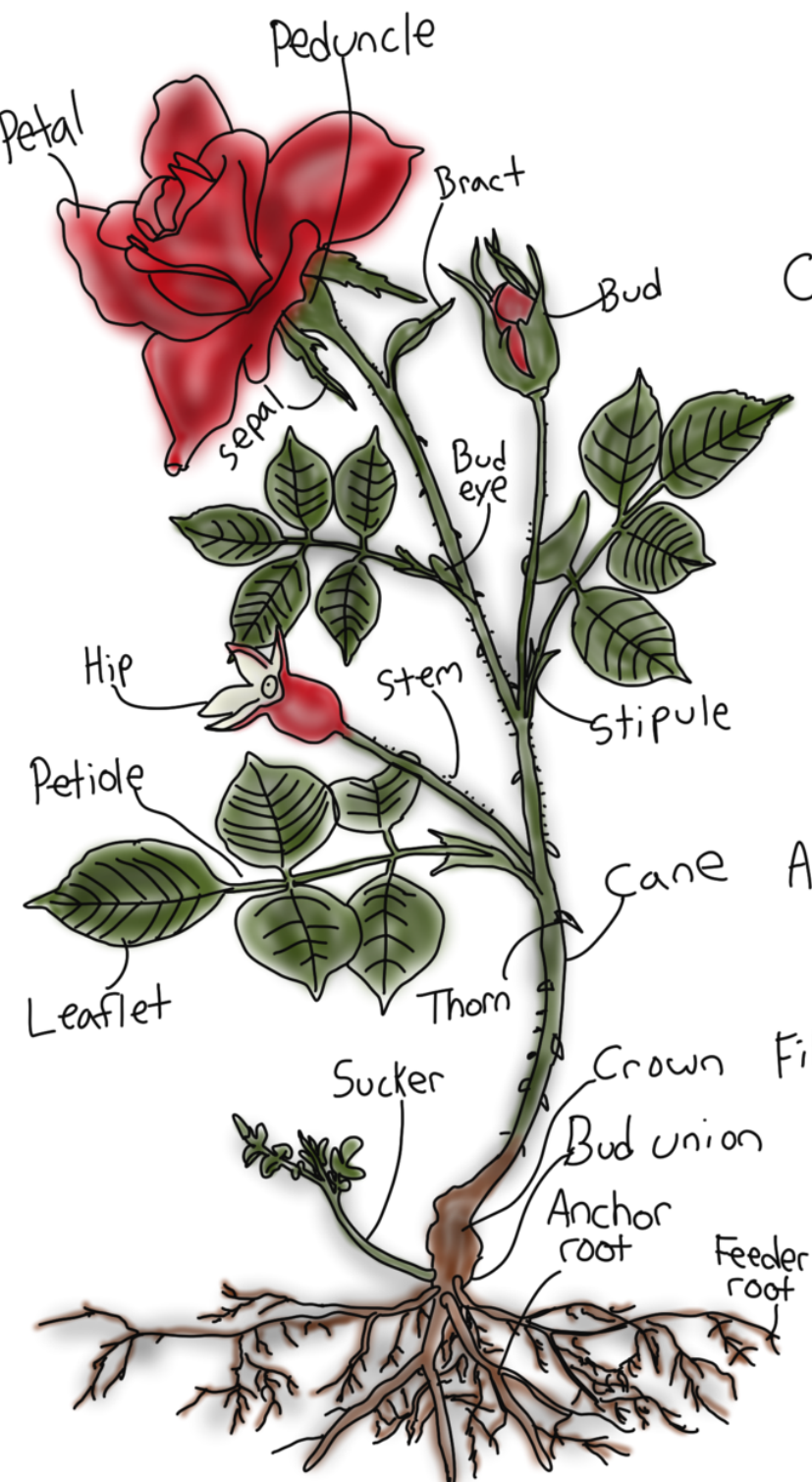
A hardy perennial with a taproot that can be up to 4 feet long.

A single Rumex obtusifolius can produce sixty-thousand seeds.

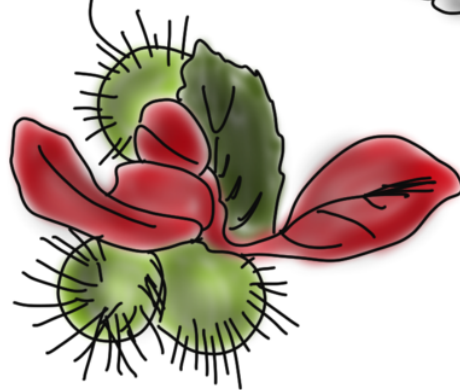
Rumex obtusifolius seeds have been used as a spice and the leaves have been used as a laxative in folk medicine.

Rose Family

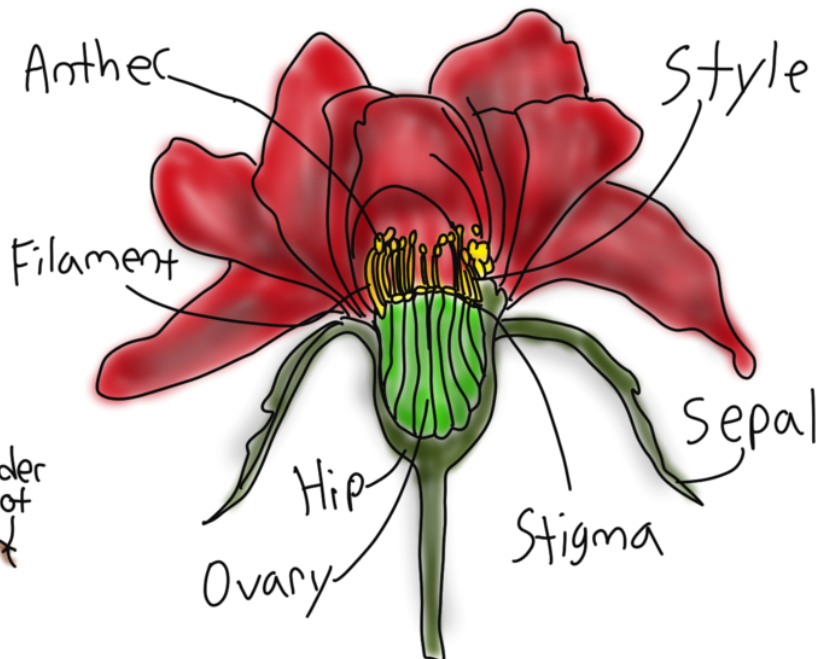
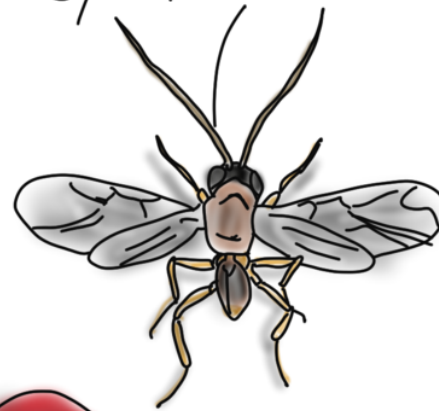
Rosaceae



Cynipid Wasp Galls



Cynipid Wasp





"Multiflora Rose"

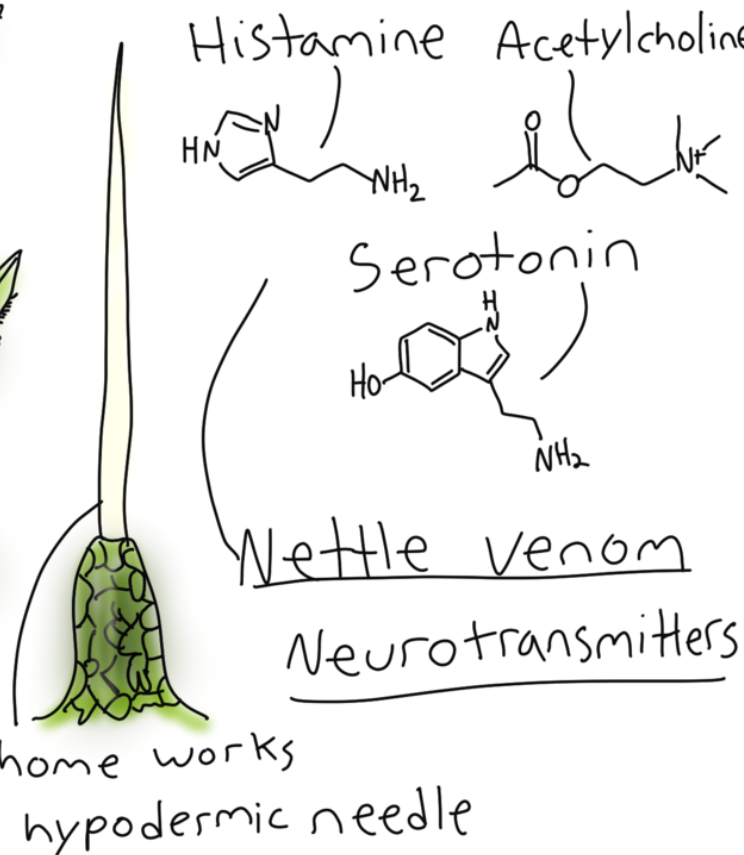
Rosa multiflora

Family: Rosaceae

Multiflora rose is an invasive introduced from Asia as a method of soil conservation. It is a creeping shrub that produces clusters of white or pink flowers in early summer. Multiflora Rose is considered a serious pest to grazing animals but is a beneficial fodder for goats. The red, berry-like hips of the Multiflora rose are edible.

Nettle Family

Urticaceae





"Stinging Nettle"



Urtica dioica

Family: Urticaceae

Stinging Nettle is a European native found all over the world. Nettles have sharp, hypodermic needle- like hairs that inject a mixture of irritants into skin. Nettles are edible if washed or cooked as it neutralizes the chemicals and is an excellent source of Protein and Omega-3 fatty acids. Nettle was also used as a textile in place of cotton for thousands of years. It is believed that the German army during the first World War wore uniforms made from nettle due to shortages of cotton.

Violet Family

Violaceae

Marsh
violet

5 petaled
flower

Short
stem

Shallow-toothed
leaves

Peduncle

Nectariferous
appendage

Anther

Sepal

Proximal
petiole

Spur

Stipule
petiole

Ovary

Style

Lateral
hairs

Lateral
petal

Anterior
petal

Giant Leopard
moth



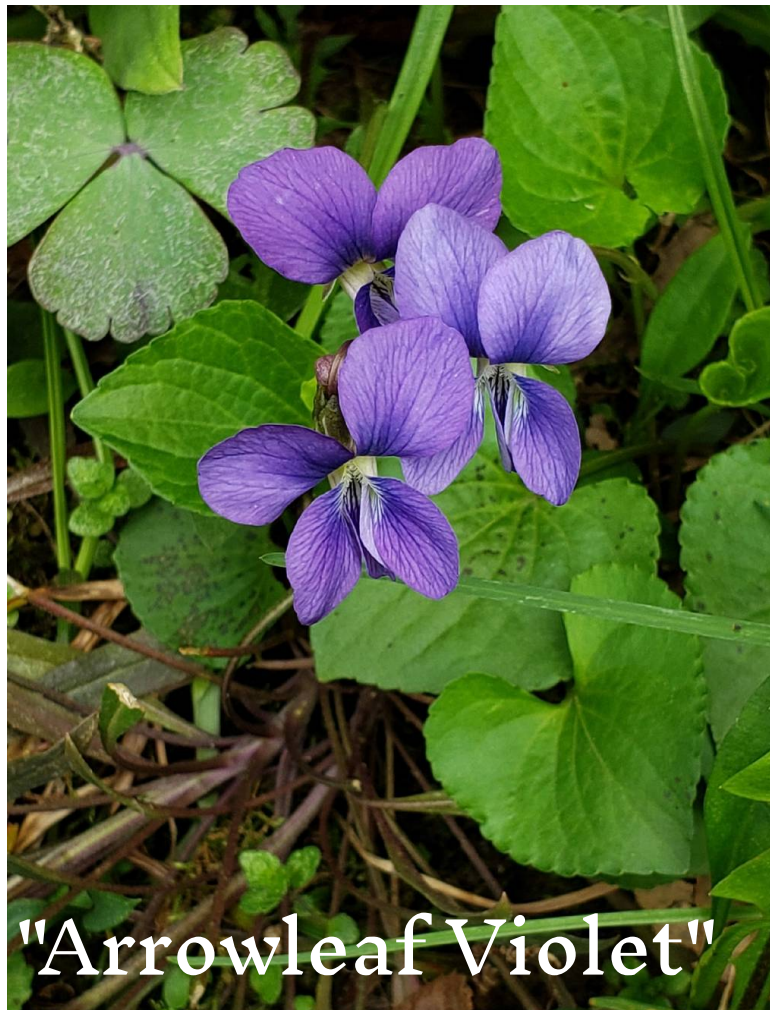


VIOLETS

Viola sagittata

Family: Violaceae

Arrowleaf Violet is a native species to the Great Lakes region. In spring it blooms a vibrant purple flower and can be identified by its spade shaped leaves.



"Arrowleaf Violet"





"Small White Violet"

Viola macloskeyi

Family: **Violaceae**

Small White Violet is a perennial wildflower native to North America. The sweet smelling flowers bloom early in the spring and attract various pollinators. The plant is packed with antioxidants and the young leaves are edible. In French cuisine the whole plant is extracted to make a flavoring called violet syrup.

Conclusion

I hope you enjoyed this journal as much as I enjoyed researching these magnificent plants myself. I think we should all step away from the day-to-day chaos that is modern life and get outdoors and observe the world around us from time to time.

Not everyone needs to be a college educated botanist to know about the world around us. I started this book with a handful of photos of plants and a few drawings and managed to create this collection through curiosity and research into what I was seeing in front of me. We carry the sum of human knowledge in our back pockets and with that we can learn about anything. If you are curious about anything in life you can quickly find the answers you seek and become an expert. There is no barrier to entry on learning about what interests you.

I intend to continue researching and archiving the plants and animals that interest me and I hope that you will continue to support my efforts to inform and spark curiosity in nature. If you have found value in this reading, feel free to visit the links on the final page of this journal. There you can find links to my artwork and a donation link if you would like to buy me a cup of coffee. Thank you for reading my little journal of botanical observations and research.

I hope it helps you find the beauty beneath your feet.

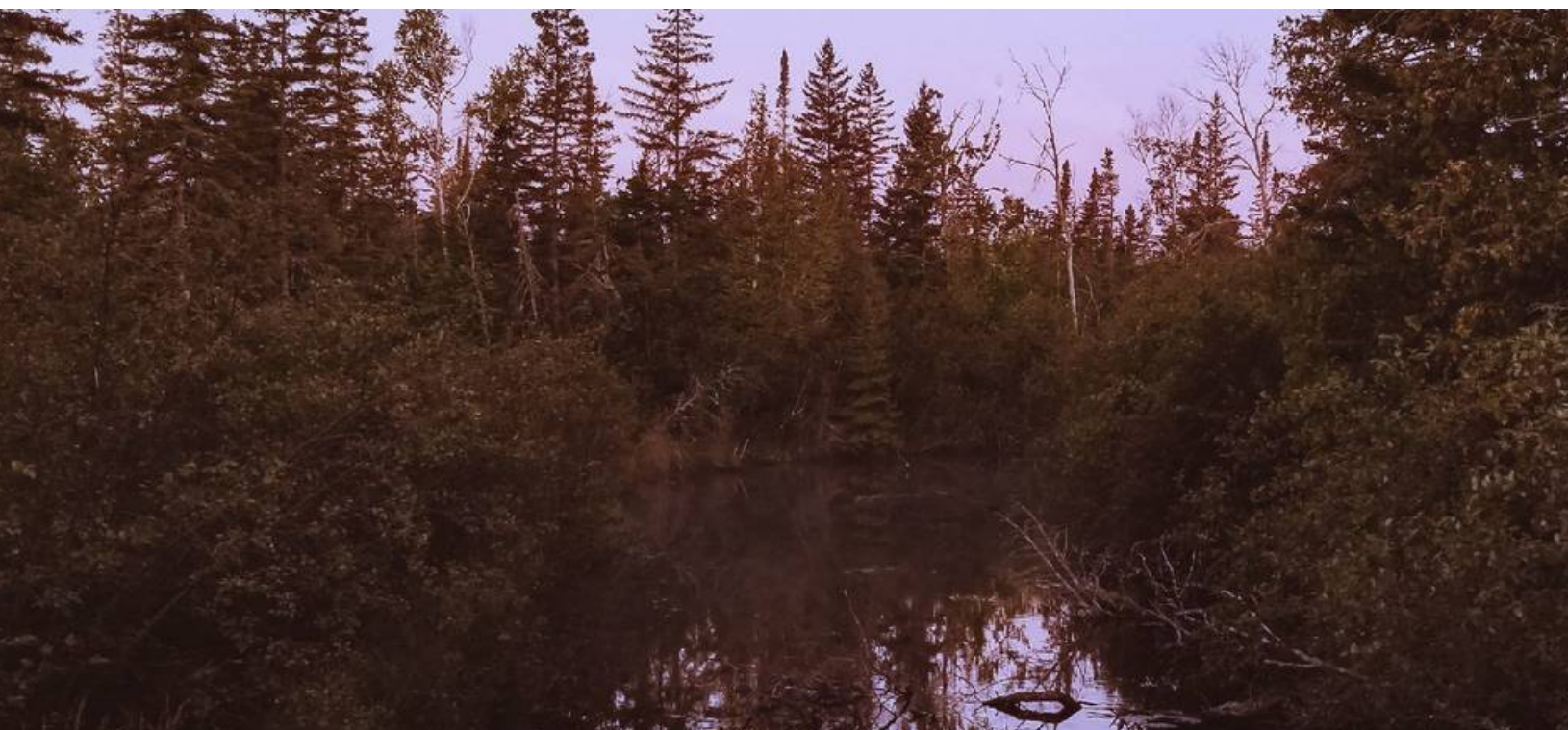
Dylan Geiger



Common Flax

"I'm sorry, but I don't want to be an emperor. That's not my business. I don't want to rule or conquer anyone. I should like to help everyone - if possible - Jew, Gentile - black man - white. We all want to help one another. Human beings are like that. We want to live by each other's happiness - not by each other's misery. We don't want to hate and despise one another. In this world there is room for everyone. And the good earth is rich and can provide for everyone. The way of life can be free and beautiful, but we have lost the way."

-Charlie Chaplain
"The Dictator"



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a dad...**

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