Medica Plantarum

BRING SOME BOTANICAL KNOWLEDGE INTO YOUR GAME

BY Rishi R. Masalia
Plant Biology, PhD

Table of Contents:

Who is this for?

Medica Plantarum was named after two ancient plant texts, Dioscorides' *De materia medica* and Theophrastus' *Historia Plantarum*, and is designed to expand on the role of herbalism in TTRPGs.

It's for players or GMs who think plants and fungi are cool, and are looking for an interesting way to bring some real botany into their games.

On the surface, this is a mechanic to create new potions, fill party downtime, or inspire character agency. At its core, this is an educational guide for players or GMs who want to use real plant biology to inform their potion craft. *Medica Plantarum* presents biology, history, folklore, and mythology to give folks a unique lens in which to discover the wonder of plant diversity.

The ultimate goal of this guide is to inspire players and GMs to create their own potions by learning about the plants around them.

Introduction

As a plant scientist and avid TTRPGer, I am always on the lookout for interesting ways to integrate plants into the campaigns I GM. While there are a few other herbalism expansions and mechanics out there, none focused on the plants themselves. This is a bit disappointing as plants are fascinating and have been a major aspect of human civilization for millenia. Our food, alcohol, medicines, poisons, resins, oils, plastics, building materials are all currently, or were once derived from plants. They are diverse and beautiful, and it's my hope with this guide to inspire others to learn more about plants, how we interact with them, and how we can conserve them.

While the front half of this guide focuses on the expanded herbalism mechanic, it's the back half that I'd like folks to see. Here, the focus is on the ingredients that need to be combined to generate these potions. Appendix I: Biomes is based on real world plant distributions, this appendix serves as a reference for rarity of these ingredients as players travel your world. Appendix II: Damage Ingredients, categorizes plants based on certain properties: religious connotations, a relationship to fire, use as a poison, and so on. Finally, Appendix III: Ingredient Descriptions, is a referenceable list of 100 plant and fungi entries. Each entry is designed to be quick, informative, and fun. They describe pertinent aspects about an entry's biology, history, or folklore that showcase why it contributes to the potion(s) it does. Hopefully, you'll find *Medica Plantarum* useful, fun, and educational. All I want from this is for folks to have fun playing TTRPGs and discover, or rediscover, how amazing plants are.

Cheers and happy rolling!

Rishi

Herbalism Overview

This emphasis on herbalism is designed to enhance an element of TTRPGs. It's important to note that this mechanic is not designed to simulate real herbalism, master herbalists understand a suite of nuances such as ingredient potencies, storage limitations, and preparation types that would be clunky to recreate in game. Rather we wanted to streamline the process, while still instilling that sense of study, curiosity, stewardship, and cultural significance associated with plants and herbalism.

On a macroscale, this mechanic provides characters with primary or secondary goals and incentives, while providing GMs with hooks for plot or NPCs as well as additional rewards beyond magical items or currency. In game, this mechanic provides an alternative goal during short rests, overland travel, or shopping as characters forage for, or purchase ingredients. These ingredients can then be crafted into potions providing an alternative method for acquiring useful potions or performing some spells. Similar to a wizard's spellbook, a character's Herbalist Notebook can grow with the character and player, giving them a deeper sense of progress and character development than simply leveling up.

At its core, this mechanic centers around the Herbalist's Notebook, and has three phases: Foraging, Crafting, and Learning New Recipes. All learned recipes for potions are stored in the Herbalist's Notebook. Foraging is the act of surveying, identifying, and storing raw ingredients gathered during the game. Crafting a potion requires both a recipe and the necessary ingredients. New recipes can be acquired, deformulated, or even discovered, often encouraging players to research real-world plants and fungi for the creation of new recipes beneficial to their character.

Redesigned Herbalism Kit:

This kit contains a variety of essential implements and instruments used by modern herbalists for the crafting of tinctures, salves, and infusions, herein referred to in the collective as, potions. While kits can have some degree of variability based on price, all kits should be made of lightweight canvas or cotton and contain pouches for collected herbs, vials, glass jars both empty and filled with solvents, wax, measuring utensils and sheers. More expensive kits can additionally come with scales and/or a mortar and pestle. Each kit comes with a writing implement as well as a standard Herbalist's Notebook for writing down notes, lessons, and potion recipes. Similar to a Wizard's spellbook, an Herbalist's Notebook is the physical manifestation of their knowledge and skill, and is required for the creation of potions from foraged ingredients. Finally, kits come with a small plant identification guide for all common plants in the 10 major biomes. Advanced books can be acquired allowing characters to identify uncommon, and rare plants.

Based on the Herbalism Kit in Dungeons & Dragons 5th Edition, proficiency with this kit lets you add your proficiency bonus to any ability checks you make regarding foraging or crafting potions based on recipe. Further, you can become proficient with this tool kit at level 1, or after you have successfully crafted 5 potions.

Other Took Kits:

This expansion focuses on the redesign of the Dungeons & Dragons 5th Edition Herbalism Kit, other related kits: Alchemist's Supplies, Poisoner's Kit, Healer's Kit, and Brewer's Supplies remain in their original Dungeons & Dragons 5th Edition form. In future expansions, we hope to tackle redesigns for these kits.

Herbalism Notebook:

Your Herbalist notebook is a physical manifestation of your knowledge and skill. Herbalism notebooks can take a variety of forms, from training books you practiced with as a student, to ornately illustrated volumes hidden away in a tomb or ancient library, or even a loose collection of colorful square-shaped notes that have an order and handwriting only you know.

Regardless of look, Herbalist notebooks come with 5 standard recipes, and serve to document your progress as an herbalist, specifically containing learned potion recipes. Part ingredient list part practiced protocol, recipes are how potions are crafted with accuracy and consistency. Used for religious, spiritual, and medicinal ceremonies, herbalism is an ancient trade spanning cultures, and as such there are established, forgotten, and undiscovered recipes. Any recipe a character possesses can be used to craft the corresponding potion provided the character has the requisite ingredients.

Characters can obtain recipes through numerous mechanisms; beg, borrow, barter, buy, or burgle recipes from other herbalists or apothecaries, as well as deformulation and discovery for those advanced herbalists. A character's herbalist notebook can contain as many potion recipes as they can acquire or discover.

5 standard recipes:

Healing Potion Basic (Common)

One unit each of: Dandelion, Echinacea, Willow Bark, Yarrow

Creature heals 2d4+2 hp.

Potion of Darkvision (Common)

One unit each of: Cannabis, Carrots, Passionflower

When drunk, a creature gains the benefits of darkvision up to 60-ft for 1 hour. If this creature already has darkvision, their range increases by 60-ft.

Potion of Academic Pursuit (Common)

One unit each of: Any Brassica vegetable, Coffee, Cannabis, Maize, Sunflower

When drunk, a creature gains advantage on any intelligence ability check or any ability check involving Tinker's Tools for the next hour.

Potion of Climbing (Common)

One unit each of: Grapevine, Passionflower, can substitute Kudzu for any ingredient

When drunk, a creature gains a climbing speed equivalent to its walking speed for 1 hour and gains advantage on Strength (Athletics) checks.

Potion of Water Breathing (Common)

One unit each of: Rice, Water Lily, Algae or Kelp

When drunk, a creature can breathe underwater for 1 hour.

Deciphering & Copying a Recipe:

When you find an herbal recipe, you can add it to your Herbalist's Notebook if you can spare the time to decipher and copy it. Any common and uncommon potion recipe can be easily understood and copied into the Herbalist's Notebook. Deciphering more complex recipes requires advanced herbalism knowledge gained through your own experiences.

To see if you can decipher a complex recipe, roll a percentage die. Any value lower than 4 multiplied by the number of recipes in your Herbalist Notebook is considered a success. Thus, when a character has 25 recipes they can decipher any new recipe.

Copying that recipe into your Herbalist Notebook involves crafting the potion, and thus requires the ingredient list in addition to the recipe itself. You must practice crafting the potion until you understand the intricacies required, then transcribe it into your Herbalist Notebook using your own shorthand and helpful notes.

For each recipe you copy and practice, the process consumes the list of ingredients and takes a certain period of time (see table below). Once you have completed the copying process, you can craft that potion if you have the ingredients. These times can be changed at the discretion of your GM.

Deciphering & Copying Table:

Potion Type	Time
Common	1 hour
Uncommon	4 hours
Rare	10 hours
Very Rare / Legendary	20 hours

Replacing Your Notebook:

The base Herbalist's Notebook is not a magical item, though it should be safeguarded and/or copied. Losing your notebook is a real fear for traveling herbalists, with many transcribing their notes and recipes into a backup copy. Copying any recipe and margin notes from your notebook into a backup copy takes 1 hour, and requires no ingredients.

If a character loses their notebook or it is destroyed and there is no backup in place, they can attempt to recreate it and the recipes contained in the notebook through one of the following mechanisms:

Recreate Per Recipe:

An intelligence check (suggested DC15) incorporating proficiency bonus and appropriate modifiers can successfully regurgitate the recipe. Each recipe requires a separate check. This is not recommended for more than 10 recipes.

Frequently Used:

The top 20% (rounding down) most frequently used recipes are remembered automatically (minimum. 5 recipes). The remaining recipes are forgotten.

Note, if the character has taken the keen mind feature, they can recreate the entire book from memory.

Foraging

Herbalism ingredients, plants and fungi, are spread across 10 biomes (see Ingredients by Biome section below) and placed into three rarity categories: common, uncommon, and rare. Additionally, certain potion recipes will call for specific plant and fungal tissues (bark, roots, leaves, etc).

A character may spend a minimum of 1 hour during rest, travel, or downtime between adventures foraging for ingredients from which potions may be derived. This time encompasses surveying, foraging, and safely storing the materials. To forage ingredients, a character must make an Intelligence (Nature) ability check to determine what, if any, ingredient materials they are able to source. We recommend the following for difficulty:

Foraging Results Table:

Roll	Foraging Result
1 - 4	Plenty of plants/fungi, but none useful for herbalism
5 - 10	Yields common ingredients by biome
11 - 17	Yields common & uncommon ingredients by biome
18+	Yields any rarity ingredient by biome

See the Reference Charts and Ingredient Appendix for included plants and fungi.

(Optional Rule) I've Seen This Before:

A trained herbalist will keep notes on when and where certain wild plants and fungi are located. Thus, foraging becomes easier for items previously found, reducing the rarity of a certain ingredient by one category.

Crafting

A character can craft a potion if they have the recipe in their Herbalist Notebook, the necessary ingredients, and 1 hour to properly execute the protocol. Trained herbalists value dedicated research, training, and consistency, as such there is no roll associated with crafting potions.

Learning New Recipes

A wide world of potions exist outside the standard 5 given with every Herbalist Notebook. There is no shortage of ways characters can obtain new recipes. The town apothecary or arcane shop may part with trade secrets for the right price or rare ingredient. Other traveling herbalists from the continental outer territories may eagerly swap recipes to enhance their own knowledge. While adventuring, combat herbalists can swipe potion knowledge from the pockets or gilded halls of their enemies. Beyond simple acquisition of previously established recipes, characters can attempt to deformulate a recipe from an existing potion or flex their creative muscles to discover new potions through real-world research using the Ingredient Appendix as a guide. Regardless of the method by which a character gains a recipe, once they have one they can copy it in their Herbalist's Notebook.

Obtaining a Recipe:

Characters can find new recipes throughout the world. Characters are encouraged to beg, borrow, barter, buy, or burgle recipes from other herbalists or apothecaries. If research is more their speed, characters can try to find recipes buried in books, revered in temple folklore, or scrawled on ancient ruins. A character who finds a recipe in such a manner need only copy this recipe into their Herbalist Notebook to craft the potion at a later time.

Deformulation of Existing Potions:

Characters who find new potions can attempt to reverse engineer a recipe through deformulation, provided the character has alchemist's supplies. In deformulation, the character separates, tests, and generally investigates the potion to identify key ingredients and how they were processed. Deformulating consumes the potion and takes time to complete.

In addition to the time to study, we encourage GMs to tack on an Intelligence-based check to this process to ground this ability in character stats. At the GM's discretion, a high roll could reduce the time required to deformulate an existing potion

Deformulation Table:

Potion Type	Time
Common	1 hour
Uncommon	4 hours
Rare	10 hours
Very Rare / Legendary	20 hours

It's up to the GM's discretion if a potion can be deformulated into a recipe that the herbalist understands.

Discovery of Completely New Potions:

Unleash your inner herbalist and research real-world herbal remedies, brews, tinctures, and potions based on plants and fungi. Use this knowledge to create your own potion recipes for your character. Present your GM with a recipe using ingredients from the provided Ingredient Appendix or others not listed. Based on the intended potion effect, you should provide reasoning for including specific ingredients be they based on medicinal or chemical properties, religious or cultural significance, or folklore or mythological tales. Your GM has final say on the recipe, determining if it's too powerful, has other effects, or requires more ingredients not listed.

Bring the Potion into the World

Once a new recipe is approved, your character needs to bring it into the world.

Unlike crafting an established recipe, these recipes require a percentage die roll to see if you can successfully craft your new potion. Similar to deciphering a complex recipe, any value lower than 4 multiplied by the number of recipes in your Herbalist Notebook is considered a success and a potion is created. If you fail the roll the ingredients are consumed, but you gain valuable knowledge on the discovery process. Next time you attempt to craft this potion subtract 35 from your roll.

As science and the process of discovery are built on previous knowledge, if you are creating a recipe that expands or augments an already established recipe subtract 20 from your roll.

Formulas:

We've provided formulas for the 33 Core Dungeons and Dragons 5th Edition potions as noted in the Player's Handbook and Dungeon Master's Guide. Additionally, we have crafted our own potions and brews to expand the utility of this guide and replicate some spell effects. We also encourage GMs and players to investigate the natural world around them and craft their own formulas. More information about each ingredient can be found in the Ingredient Appendix.

Each formula has a name, a rarity, ingredients, and the resulting effect. Per formula, ingredients are listed in alphabetical order, with numbers after each ingredient indicating how many uses of that ingredient are needed. In some marked instances, a specific plant tissue is required to craft the potion. For plants in specific damage (DMG) categories, refer to the Ingredient by Damage Appendix.

Core Potions

Elixir of Health (Rare)

Ingredients: Jewelweed, Artemisia (2), Coca Leaves

When drunk, it cures any disease; removed blinded, deafened, paralyzed, and poisoned conditions.

Giant Strength, Cloud (Very Rare)

Ingredients: California Redwood, Flying Sandwort, Lightning Jewel Orchid

When drunk, a creature's Strength score is increased to 27 for 1 hour.

Giant Strength, Fire (Rare)

Ingredients: California Redwood, Carolina Reaper (2), Turmeric

When drunk, a creature's Strength score is increased to 25 for 1 hour.

Giant Strength, Frost (Rare)

Ingredients: California Redwood, Any Cold DMG (2)

When drunk, a creature's Strength score is increased to 23 for 1 hour.

Giant Strength, Hill (Uncommon)

Ingredients: California Redwood, Any Piercing / Slashing / Bludgeoning DMG (3)

When drunk, a creature's Strength score is increased to 21 for 1 hour.

Giant Strength, Stone (Rare)

Ingredients: California Redwood, Living Stone, Australia Buloke

When drunk, a creature's Strength score is increased to 23 for 1 hour.

Giant Strength, Storm (Legendary)

Ingredients: California Redwood, Flying Sandwort, Lightning Jewel Orchid, Vervain, Any Thunder DMG

When drunk, a creature's Strength score is increased to 29 for 1 hour.

Healing Potion, Basic (Common)

Ingredients: Dandelion, Echinacea, Willow bark, Yarrow

Player heals 2d4+2 hp.

Healing Potion, Greater (Uncommon)

Ingredients: Echinacea, Willow bark, Yarrow, St. John's Wort, Hyssop

Player heals 4d4+4 hp.

Healing Potion, Superior (Rare)

Ingredients: Echinacea, Willow bark, Yarrow, St. John's Wort, Comfrey, Opium

Player heals 8d4+8 hp.

Healing Potion, Supreme (Very Rare)

Ingredients: Echinacea, Willow bark, Yarrow, Comfrey, Opium, Resurrection Moss

Player heals 10d4+ 20 hp.

Oil of Etherealness (Rare)

Ingredients: Ayahuasca, Ergot Fungus, Magic Mushroom, Pennyroyal

The vial has enough oil to cover a medium or smaller creature; 10 minutes to apply. Creature gains the effect of the etherealness spell for 1 hour.

Oil of Slipperiness (Uncommon)

Ingredients: Banana peel, Marsh-mallow root, Slippery Elm

The vial has enough oil to cover a medium or smaller creature; 10 minutes to apply. Creature gains the effect of a freedom of movement spell for 8 hours. The oil can be poured on the ground covering a 10-foot square, creating the grease spell effect for 8 hours.

Philter of Love (Uncommon)

Ingredients: Catnip, Damiana, Horny Goat Weed, Rose petals

The creature that drinks this potion will become charmed by the next creature it sees within 10 minutes for a duration of 1 hour.

Potion of Animal Friendship (Uncommon)

Ingredients: Catnip, Carrots, Oats, can substitute Scotch Broom for any ingredient

When drunk, a creature can perform the animal friendship spell (save DC 13) for 1 hour at will.

Potion of Clairvoyance (Rare)

Ingredients: African Dream Root, Cannabis, Carrot, Nutmeg, Wormwood

When drunk, a creature gains the effect of the clairvoyance spell.

Potion of Climbing (Common)

Ingredients: Grapevine, Passionflower, can substitute Kudzu for any ingredient

When drunk, a creature gains a climbing speed equivalent to its walking speed for 1 hour and gains advantage on Strength (Athletics) checks made to climb.

Potion of Diminution (Rare)

Ingredients: California Redwood seeds, Duckweed, Moss Sunray

When drunk, a creature gains the "reduce" effect of the enlarge/reduce spell for 1d4 hours (no concentration required).

Potion of Fire Breath (Uncommon)

Ingredients: Carolina Reaper, Cayenne (2), Turmeric

When drunk, a creature can use its bonus action to exhale fire at a target within 30 feet. The target must take 4d6 fire damage or succeed on a DC 13 Dexterity saving throw to halve the damage. The effect ends after exhaling fire 3 times, or after 1 hour.

Potion of Flying (Very Rare)

Ingredients: Burmese Lacquer, Dandelion, Maize, Opium OR Magic Mushroom, Any Alpine biome plant

When drunk, a creature gains a flying speed equal to its walking speed for 1 hour.

Potion of Gaseous Form (Rare)

Ingredients: Any three uncooked Brassica vegetables, Dandelion

When drunk, a creature gains the effect of the gaseous form spell for 1 hour (no concentration required).

Potion of Growth (Uncommon)

Ingredients: Algae, Bamboo, Kudzu

When drunk, a creature gains the "enlarge" effect of the enlarge/reduce spell for 1d4 hours (no concentration required).

Potion of Haste (Very Rare)

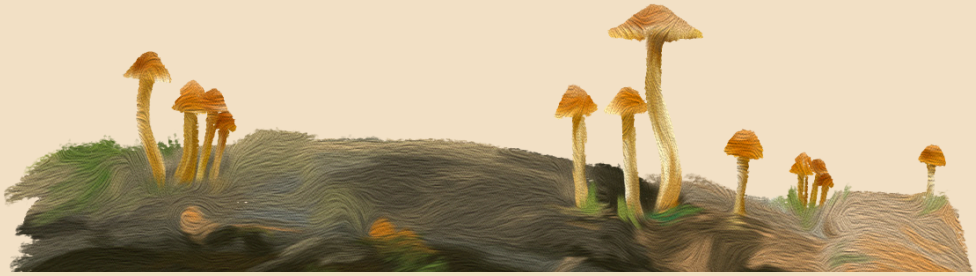
Ingredients: Coca leaves, Coffee beans, Lotus leaf, milky Oats

When drunk, a creature gains the effect of the haste spell for 1 minute (no concentration required).

Potion of Heroism (Rare)

Ingredients: dried Borage flowers, Hawthorn bark (2), Vervain

When drunk, a creature gains 10 temporary HP that last for 1 hour as well as the effects of the bless spell (no concentration required) for the same duration.



Potion of Invisibility (Very Rare)

Ingredients: Ghost Pipe, Haworthia, Spotted Water Hemlock, can substitute Living Stone for any ingredient

When drunk, a creature becomes invisible for 1 hour along with anything it's carrying or wearing. The effect ends early if the creature makes an attack or casts a spell.

Potion of Invulnerability (Rare)

Ingredients: Ashwagandha, Borage, White Sage, Pick any four: Agave sap, Elderberry, Grapevine, Maize, Rice, or Wormwood

When drunk, a creature gains resistance to all damage for 1 minute.

Potion of Longevity (Very Rare)

Ingredients: Ginkgo, Reishi Mushroom, Yew bark

When drunk, a creature's physical age is reduced by 1d6 + 6 years, to a minimum of 13 years. Each subsequent time a creature drinks this potion, there is 10% cumulative chance that it will instead age 1d6 +6 years.

Potion of Mind Reading (Rare)

Ingredients: Ayahuasca (2), Magic Mushroom, Peyote

When drunk, a creature gains the effect of the detect thoughts spell (save DC 13).

Potion of Poison (Uncommon)

Ingredients: Castor Bean, Deadly Nightshade or Spotted Water Hemlock

An identify spell will reveal its true nature. When drunk, a creature takes 3d6 poison damage and must succeed on a DC 13 Constitution saving throw or be poisoned. If poisoned, the creature takes 3d6 poison damage at the start of each of its turns until the effect is ended. The creature can repeat the saving throw at the end of each of its turns. On a successful save, the damage on each subsequent turn is decreased by 1d6 until it hits 0.

Potion of Resistance (Uncommon)

Ingredients: Banana leaf, Herb-of-Grace, Waxy Milkweed, plant from desired resistance DMG type

A potion that when drunk, grants a creature resistance to one type of damage for 1 hour.

Potion of Vitality (Very Rare)

Ingredients: Reishi Mushroom, Sunflower oil, Turmeric

Crimson liquid that pulses like a heartbeat with dull light. When drunk, a creature's exhaustion is removed and any diseases or poison effects are cured. For the next 24 hours, the creature regains the maximum number of HP for any Hit Die spent.

Potion of Water Breathing (Uncommon)

Ingredients: Rice, Water Lily, Algae or Kelp

When drunk, a creature can breathe underwater for 1 hour.

Homebrew Potions

Potion of Resurrection (Legendary)

Ingredients: Baobab bark, Corpse Flower, Resurrection Moss, Water Lily, Any Necrotic DMG, Any Radiant DMG

When drunk, a creature that has died within the last minute gains the effect of the revivify spell.

Potion of Commune (Rare)

Ingredients: Any Radiant DMG (3)

When drunk, a creature can contact a deity or divine proxy and gains the benefits of the commune spell.

Lucky Cat (Very Rare)

Ingredients: four-leafed Clover, Jade Plant, Sunflower

When drunk, a creature is imbued with incredible good fortune. Add +3 to all attacks, ability checks, and saving throws for 1 hour. After the effect wears off, roll a d6, on a 3 or lower you are considered poisoned for 1 hour.

Potion of Darkvision (Common)

Ingredients: Cannabis, Carrots, Passionflower

When drunk, a creature gains the benefits of darkvision up to 60-ft for 1 hour. If this creature already has darkvision, their range increases by 60-ft.

Potion of Restfulness (Rare)

Ingredients: Ashwagandha, Coffee beans (3), Passionflower, milky Oats

When drunk, it can replace the benefits of a long-rest.

Potion Curse Removal (Very Rare)

Ingredients: Baobab bark, Herb-of-Grace, Motherwort, White Sage

When drunk, a creature benefits from the remove curse spell.

Potion of Glowstick (Common)

Ingredients: Fairy Fire, Ghost Fungi

When vigorously shaken, the pulpy liquid begins to glow a bright bluish-green, that sheds light in a 20-ft radius and dim light for an additional 20-ft. This glow stick lasts for 1 hour.

Potion of Tracker (Uncommon)

Ingredients: Pitcher Plant, Sunflower head

When drunk, a creature has a heightened ability to track and perceive enemies, and gains the benefits of Hunter's Mark for 1 hour.

Potion of Academic Pursuit (Rare)

Ingredients: Any Brassica vegetable, Coffee, Cannabis, Maize, Sunflower

When drunk, a creature gains advantage on any intelligence ability check or any check involving Tinker's Tools for the next 10 minutes.

Biomes

Appendix

Below is our list of plants distributed across the major biomes designations of Earth. The designation of a plant in a particular biome is based on a natural distribution (broadly speaking) of these plants.

While this guide is designed to communicate real plant science, we also realize that this is intended for implementation in a TTRPG where game mechanics also need to be considered. To aid in the game mechanics, rarity has been assigned to each plant, in each biome. Plants used in more common formulas will be easier to find in a given biome, thus providing GMs with both guidance and flexibility when rewarding players pursuing an herbal path.

Alpine

Rarity	Ingredient
Common	Maize
Uncommon	Ashwagandha
Uncommon	Bearberry
Rare	Cannabis
Rare	Damiana
Legendary	Flycatcher Sandwort

Coastal

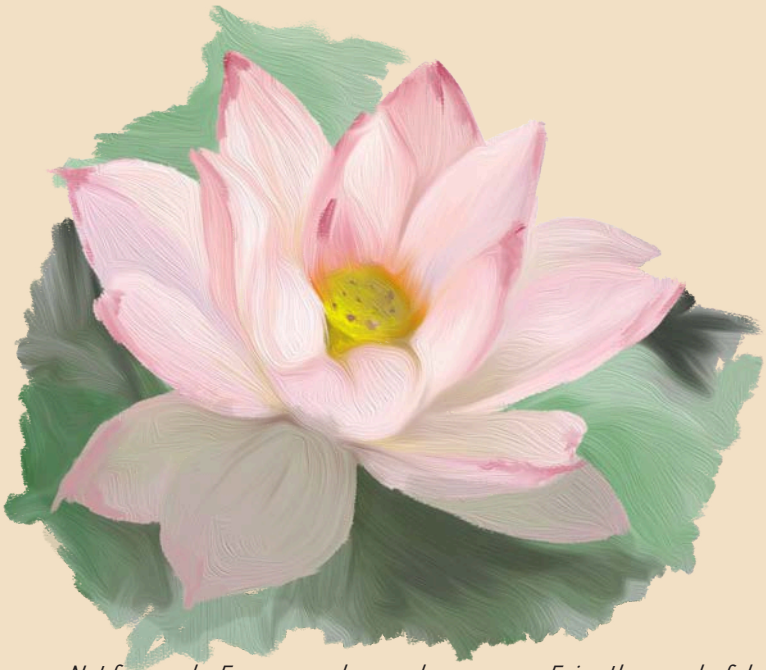
Rarity	Ingredient
Common	Agave
Common	Algae
Common	Dagger Plant
Common	Yarrow
Uncommon	African Dream Root
Uncommon	Burnet Rose
Uncommon	Carrot
Uncommon	Citron
Uncommon	Hawthorn
Uncommon	Marsh-mallow
Uncommon	Sunflower
Uncommon	White Sage
Rare	Baobab
Rare	Haworthia
Rare	Herb-of-Grace
Rare	Jade Plant

Desert

Rarity	Ingredient
Common	Agave
Common	Prickly Pear
Uncommon	Dagger Plant
Uncommon	Hawthorn
Uncommon	Peyote
Uncommon	Saguaro
Uncommon	Wax Milkweed
Uncommon	White Sage
Rare	Fantsiolotse
Rare	Living Stone
Legendary	Resurrection Moss

Freshwater

Rarity	Ingredient
Common	Algae
Common	Common Reed
Common	Duckweed
Common	Marsh-mallow
Common	Water Lily
Common	Willow
Uncommon	Passionflower
Common	Pitcher Plant
Common	Rice
Common	Slippery Elm
Common	Vervain
Rare	Arctic Moss
Rare	Lotus
Rare	Spotted Water Hemlock



Grassland

Rarity	Ingredient
Common	Clover
Common	Dandelion
Common	Echinacea
Common	Fig
Common	Hawthorn
Common	Maize
Common	Oats
Common	St. John's Wort
Common	Sunflower
Common	Wormwood
Common	Yarrow
Uncommon	African Dream Root
Uncommon	Baobab
Uncommon	Brassica
Uncommon	Burnet Rose
Uncommon	Cannabis
Uncommon	Carrot
Uncommon	Comfrey
Uncommon	Herb-of-Grace
Uncommon	Hyssop
Uncommon	Jade Plant
Uncommon	Mediterrean Cypress
Uncommon	Motherwort
Uncommon	Pennyroyal
Uncommon	Vervain
Rare	Citron
Rare	Damiana
Rare	Ergot Fungus
Rare	Fantsiolotse
Rare	Moss Sunray
Rare	Opium
Rare	Small Poranthera

Marine

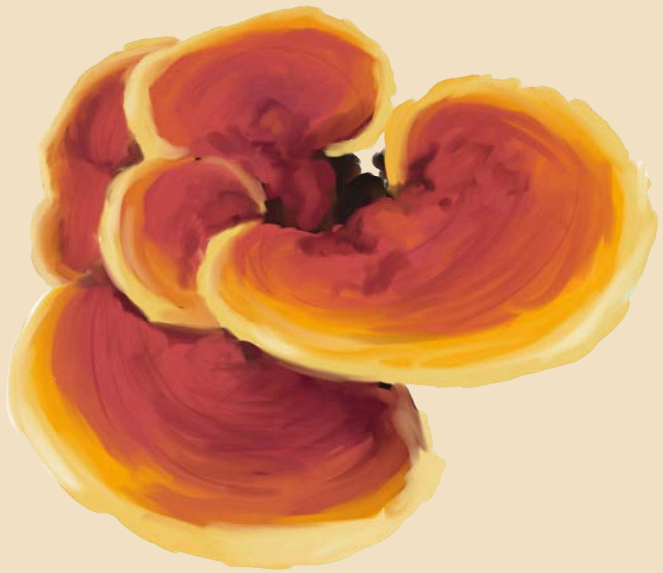
Rarity	Ingredient
Common	Algae
Common	Kelp

Temperate Forest

Rarity	Ingredient
Common	Burnet Rose
Common	Cannabis
Common	Catnip
Common	Clover
Common	Elderberry

Enjoy the wonderful world of plants & fungi!

Rarity	Ingredient
Common	Fairy Fire
Common	Fig
Common	Ghost Fungi
Common	Herb-of-Grace
Common	Jewelweed
Common	Kudzu
Common	Magic Mushroom
Common	Mediterrean Cypress
Common	Passionflower
Common	Scotch Broom
Common	St. John's Wort
Common	Willow
Uncommon	Artemisia
Uncommon	Australian Buloke
Uncommon	Deadly Nightshade
Uncommon	Eucalyptus
Uncommon	Furze
Uncommon	Ghost Pipe
Uncommon	Ginkgo
Uncommon	Grapevine
Uncommon	Horny Goat Weed
Uncommon	Mistletoe
Uncommon	Pennyroyal
Uncommon	Saw Palmetto
Uncommon	Slippery Elm
Uncommon	Wormwood
Uncommon	Yew Tree
Rare	California Redwood
Rare	Moss Sunray
Rare	Reishi Mushroom



Tropical Forest

Rarity	Ingredient
Common	Ayahuasca
Common	Banana
Common	Carolina Reaper
Common	Castor Bean
Common	Cayenne
Common	Coffee
Common	Tulsi
Uncommon	Bamboo
Uncommon	Burmese Lacquer
Uncommon	Cannabis
Uncommon	Coca
Uncommon	Dynamite Tree
Uncommon	Nutmeg
Uncommon	Passionflower
Uncommon	Pineapple
Uncommon	Turmeric
Rare	Lightning Jewel Orchid
Rare	Magic Mushroom
Legendary	Corpse Flower

Urban

Rarity	Ingredient
Common	Banana Fruit
Common	Brassica
Common	Carrot
Common	Dandelion
Common	Fig Fruit
Common	Grapevine
Common	Maize
Common	Oats
Common	Pineapple Fruit
Common	Rice
Common	Yarrow
Uncommon	Bamboo
Uncommon	Borage
Uncommon	Burnet Rose
Uncommon	Cannabis
Uncommon	Catnip
Uncommon	Cayenne Powder
Uncommon	Clover
Uncommon	Jade Plant
Uncommon	Kudzu
Uncommon	Magic Mushroom
Uncommon	Mediterrean Cypress
Uncommon	Nutmeg
Uncommon	Sunflower
Uncommon	Turmeric Powder
Uncommon	Wormwood
Uncommon	Yew Tree
Rare	Damiana
Rare	Ergot Fungus
Rare	Motherwort
Rare	Pennyroyal

Tundra

Rarity	Ingredient
Common	Arctic Moss
Common	Bog Labrador Tea
Uncommon	Bearberry

Damage Ingredients

Appendix

Damage Type	Ingredients
Acid	Common Reed, Pineapple, Pitcher Plant
Bludgeoning	Australian Buloke, Bamboo
Cold	Arctic Moss, Bearberry, Bog Labrador Tea
Fire	Carolina Reaper, Eucalyptus
Force	Bamboo, Dynamite Tree
Lightning	Hawthorn, Lightning Jewel Orchid
Necrotic	Mediterrean Cypress, Yew Tree
Piercing	Burnet Rose, Fantsiolotse, Prickly Pear, Saguaro
Poison	Castor Bean, Elderberry, Mistletoe, Yew Tree
Psychic	Ayahuasca, Cannabis
Radiant	Citron, Fig, Lotus, Tulsi, WIllow
Slashing	Agave, Dagger Plant, Saw Palmetto
Thunder	Furze, Scotch Broom

Enjoy the wonderful world of plants & fungi!

Ingredient Descriptions

Appendix

African Dream Root (Root)

Silene undulata

Grown for its roots, this fragrant and short-lived plant is native to the Eastern cape of Africa. Regarded as a sacred plant by the Xhosa people in present day South Africa this root is used by shamans to induce lucid dreams.

Agave

Agave

Agave is a genus of plants primarily known for its succulent and arid-loving (xerophytic) species. The rosette shaped, succulent leaves of most Agave species have sharp teeth that can cut the skin. The sap of Agave plants can produce the alcoholic beverages of mezcal and pulque, while Agave tequilana or Blue Agave is used to produce tequila

Algae

Chlorophyta

Algae is not a plant, but rather a group of photosynthetic organisms with complex and diverse biological processes. One of these processes are algal blooms, or the rapid increase in localized unicellular algae populations, which have become a common occurrence in freshwater and/or marine water systems. Blooms can result from the introduction of nutrients, such as fertilizer runoff, into an aquatic system. Eutrophication, or rampant algal blooms can block sunlight from other organisms and deplete aquatic oxygen levels. However it's not all bad, algae are a potential biofuel source and could be used for carbon sequestration.

Arctic Moss

Calliergon giganteum

An aquatic plant found on lake beds in the frozen tundra, this plant has no wood, stems, flowers, or proper roots. Instead, arctic moss stores nutrients for the formation of new leaves in the spring, and is a favorite snack of migrating animals.

Artemisia

Artemisia

Named after the Greek goddess Artemis, plants in this genus have varied medicinal benefits. Artemisinin, derived from Artemisia annua leaves, is a standard agent used to treat malaria. Artemisia cina is a source of santonin, a drug that expels parasitic worms, while Artemisia absinthium is used to make the spirit absinthe (see wormwood). In rats, Artemisia austriaca has been shown to reduce morphine.

Ashwagandha (Root)

Withania somnifera

Ashwagandha or the winter cherry is a medicinal plant with an orange-red fruit surrounded by a paper husk derived from the calyx. Powderized ashwagandha root has been used as a traditional Indian medicine for centuries as a method for calming nerves, lowering blood pressure, and boosting the immune system, though more clinical research is needed.

Australian Buloke (Bark)

Allocasuarina luehmannii

This Australian native, evergreen ironwood tree is ranked by the Janka Hardness test as having the hardest wood in the world. For comparison, the Buloke hardness value is roughly double the hardness rating of common hardwood options such as oak or maple.

Ayahuasca (Vine)

Banisteriopsis caapi

Ayahuasca is a psychoactive brew commonly made from Banisteriopsis caapi vines or stems. Those drinking the beverage seek a spiritual awakening and deeper understanding of themselves. This journey typically takes a whole evening and is accompanied with vomiting to purge negative energy from the body. This brew is commonly used ceremoniously and medicinally among Amazonian indegnous cultures.

Bamboo (Shoot)

Bambusoideae

Native to Southeast Asia and parts of Northern Australia, bamboos are some of the fastest growing plants in the world, with records reporting a growth rate of 91 cm per day. Once started this growth is hard to contain and bamboo will forcefully break through containers to expand. Bamboo has large cultural and economic importance in many cultures and can be used as a building material, weapon, and food source.

Banana (Peel, Leaves)

Mus acuminata

As a ubiquitous food staple the banana has become a cultural icon. Bananas have been the subject of art and song, with a person slipping on a banana peel being a mainstay of American physical comedy. In Thai and Malay cultures banana trees are associated with ghosts and spirits, while in numerous Southeast Asian cultures banana trees are used in wedding ceremonies. Unfortunately, bananas have additionally become icons of racism, particularly over the last decade. The plant itself has numerous uses aside from culinary, banana leaves are waterproof and make for good packaging and plateware, while some cultures harvest banana fiber for textiles and paper. Interestingly, bananas are clonal making their production simpler but susceptible to disease. This played out in the 1950s when the Gros Michel, the world's primary banana variety, became commercially inviable due to disease, and has since been replaced with the Cavendish variety, resistant to that disease.

Baobab (Bark)

Adansonia digitata

Considered a bewitched plant in African folklore, Baobab trees are often long-lived, grotesque plants, with an "up-side down" look to them. A few indegenioius African cultures share a similar origin myth where an Elephant frightened the maternal ancestor of the baobab, which is why the tree grows up-side down. Other West African myths, potentially influenced by the spread of Islam after the 7th century, say that a divine entity planted the tree up-side down to keep in from walking away or complaining. These stories have led to the idea that Baobab trees result from overnight magic or possession by ancestral spirits as they move from location to location.

Bearberry (Berry)

Arctostaphylos

Bearberries are dwarf shrubs adapted to arctic and subarctic climates often growing on gravel or sandy surfaces. Bearberries produce a bright red berry that can be consumed, though large doses can cause vomiting and tinnitus. Combined with other plants, bearberry has been used by indigenous cultures for spiritual and religious ceremonies. Some species in this genus also grow in high altitudes.

Bog Labrador Tea (Leaves)

Rhododendron groenlandicum

Labrador tea is a cold climate plant with hairy, fuzzy leaves and tiny, fragrant white flowers, often growing in bogs, muskegs, and open tundra. The leaves are regularly used by Indegenious peoples for medicinal herbal tea, alleviating coughs and colds.

Borage (Dried Flower)

Borago officinalis

Borage has a distinctive red and blue star-shaped flower with a sweet almost honey-esque taste. As an herbal medicine, borage has been used to alleviate gastrointestinal as well as respiratory issues. Culturally, borage is said to bring courage and strength of character, and was consumed by Celtic warriors prior to battle.

Brassicas

Brassica oleracea

Touted as the 'Dog of the Plant World' by researchers, Brassica oleracea is a clear example of plant domestication. Over time, selective breeding for various traits has created strong morphotypes such as broccoli, kale, cabbage, cauliflower, brussels sprouts, and kohlrabi.

Brassica oleracea has become an important, and diverse culinary plant. Additionally, Brassicas are all cruciferous vegetables and when eaten raw can cause bloating and gas.

Burmese Lacquer

Gluta usitata

An endangered species in Southeast Asia, this tree has a wide variety of uses, most notably as a lacquer and glue. Some species in the Gluta genus have accrescent, winged-like petals attached to the fruit functioning almost like a glider or whirlybird, catching the wind for further dispersal.

Burnet Rose (Petals / Prickles)

Rosa pimpinelifolia

This particular species of rose has a coastal distribution found among sand dunes or limestone pavements. Like many species of Rosa, the burnet rose has bristles and prickles, however these are numerous, stiff, and straight. As the plant matures, these prickles transition from bright scarlet to a deep maroon, and often resemble blood. The burnet rose flower petals are typically creamy white, though on rare occasions they are pale pink.

California Redwood (Bark)

Sequoia sempervirens

This long-lived evergreen includes the tallest living tree on Earth (Hyperion in Redwood National Park). With individuals reaching around 380 ft in height and 30 feet in diameter, the California redwood is simply massive. As with all trees, gravity limits tree height as transporting water from the roots to the top becomes increasingly difficult.

However, given the frequency of fog in the California redwood coastal range water can be absorbed at the top of the tree through the leaves and bark, which enables redwoods to grow tall. Sequoia bark is thick, soft, and fibrous with a dark red-brown color. Given its thickness, redwood bark can protect mature trees from fire.

Cannabis (Buds)

Cannabis sativa

Cannabis has a long history of cultivation and human use ranging from fiber for rope, to medicinal and psychedelic properties. Culturally, Cannabis is present in religious and spiritual ceremonies across the globe and has a rich nomenclature, with cultural names such as hashish, weed, bhang, ganja, pakalolo, reefer and so on. Today, Cannabis strains (cultivars) are typically grown for two cannabinoids: tetrahydrocannabinol (THC), which has a psychoactive, euphoric sensation and cannabidiol (CBD), which is used more medicinally than THC . However, these are not the only compounds found in cannabis buds. Commonly referred to as the entourage effect, smoking the bud can unlock a whole suite of cannabinoids, terpenes, flavonoids, and other compounds which will vary in presence and concentration from strain to strain.

Carolina Reaper

Ghost pepper (Capsicum chinense x Capsicum frutescens) x Habanero (Capsicum chinense var. habanero)

Rated more than 1.6 million scoville heat units on average (highest individual coming in at 2.2 million SHU), the carolina reaper is considered the hottest pepper in the world. For reference, common tabasco ranks at around 3,750 SHU. It has been described as having a fruity, almost sweet initial bite that quickly morphs into intense “molten lava” heat. Consuming one causes an immediate, sometimes violent physical reaction including salivating, redness, sweating, burning, coughing, headaches and general discomfort. Similar to other hot peppers, Carolina Reapers have the active ingredient capsaicin (see Cayenne), which can be found in high concentration (around 2 million SHU) in some military-grade pepper sprays.

Carrot (Taproot)

Daucus carota

Selectively bred from wild carrot to increase the taproot, cultivated carrots come in a variety of colors and contain high quantities of alpha- and beta-carotene. While both carotenoids are metabolized into Vitamin A, a necessary vitamin for sight, Vitamin A does not improve sight. This adage was popularized by the British during World War II, purporting that Royal Air Force pilots could see better at night based on a high carrot diet. Some suspect this myth was created (or perpetuated) to disguise the invention of radar.

Castor Bean (Seed, Oil)

Ricinus communis

Castor seed is the source of castor oil, and a high concentration of ricin, a toxin. The plant has light pollen and triggers a strong asthma and allergic response. Due to the presence of ricin in the seeds, many consider the Castor bean to be the world's most poisonous, common plant.

Catnip

Nepeta cataria

Related to the mint family, Catnip plants (Nepeta cataria and other Nepeta species) contain volatile oils, sterols, acids, and tannins. In cats these volatile oils trigger a behavior similar to females in heat. This is nonaddictive or harmful to cats.

Cayenne (Fruit)

Capsicum annuum var Cayenne

A moderately hot chili pepper found in tropical regions of the world contains the active component capsaicin, which makes chili peppers hot. In low concentrations, capsaicin can be used as an analgesic in topical ointments to relieve pain. Additionally, capsaicinoids are common active ingredients in personal defense agents such as pepper spray.

Citron (Intact Pitam)

Citrus medica

A slow-growing shrub that produces a fragrant, yellow citrus fruit with a bumpy rind. Citron has been used to combat sickness and scurvy. Known as etrog in Hebrew, citron is used in the Jewish harvest holiday of Sukkot. Citron's with an intact pitam (a stigma and style) are particularly valuable, while citrons without an intact style are no longer considered kosher.

Clover (Four-Leafed)

Trifolium repens

Trifolium repens can fix nitrogen and out-compete weeds, making it a good cover crop for field and lawn management. Additionally, clover makes an excellent forage crop for livestock. Clover leaves naturally group in threes (trifoliolate), however they will rarely have an extra fourth leaf. In folklore, four-leaf clovers are considered rare, and lucky. An actual survey measured the frequency of regular to four-leafed clovers at roughly 5,000 to 1.

Coca (Leaves)

Erythroxylaceae coca

Native to tropical jungles and higher altitudes, coca plants produce thin, oval-shaped leaves with red berries. Coca is known for its psychoactive component, cocaine. Coca leaves have relatively low amounts of cocaine, and the leaves are used as a stimulant to overcome fatigue, hunger, and thirst. Further, coca leaves have been used as an anesthetic, and vasoconstrictor. Raw coca leaves, chewed or consumed in tea, are rich in essential minerals such as calcium, potassium, and numerous vitamins.

Coffee (Seeds)

Coffea arabica

Native to tropical jungles, the seeds (often called beans) of Coffea arabica are a widely traded commodity accounting for roughly 60-80% of the world's coffee production. Coffee trees produce edible red fruits, known as coffee cherries, which contain two seeds. Both the fruits and seeds contain large amounts of caffeine, a psychoactive stimulant.

Comfrey (Leaves, Roots)

Symphytum officinale

Common comfrey requires wet soil to grow, and is typically found along river banks and damp, grassy places. Traditionally, poultices of comfrey leaves and roots were used topically to treat joint pain, sprains, or bone fractures though their medicinal effects require more clinical study.

Corpse Flower

Amorphophallus titanum

Gaining large-scale notoriety over the last two decades, the corpse flower is an oddity in the flowering plant world. It has the largest unbranched flowering structure (inflorescence) in the world, coupled with the deep burgundy spathe it's a sight to behold. As the spathe gradually opens, the spike inflorescence releases powerful odors that mimic carrion or rotting meat, to attract insect pollinators. This odor gives the plant its name and increases in fragrance to time potency with increased pollinator activity. If that wasn't enough, it takes 7-10 years for the corpse flower to bloom for the first time, turning the natural process into an event people line up to see.

Dagger Plant (Leaves)

Yucca aloifolia

Yucca aloifolia is typically found on sandy dunes along the coast in hot and arid environments. The trunk is armed with sharp, dagger-like leaves that can slash those not careful.

Damiana (Leaves)

Turnera diffusa

This fragrant subtropical low growing plant with yellow flowers, has been used by indigenous cultures as an aphrodisiac. Consuming the leaves has a purported increase to sexual arousal and stamina in both women and men.

Dandelion (Root, Leaves, Pappus)

Taraxcum officinale

A member of the largest family of flowering plants, the Asteraceae, dandelion is a common weed found across temperate grasslands. As the dandelion head dries during maturity, pappus (parachutes) open into a full sphere. When development is complete, the parachutes detach and disperse mature seeds along the wind. As a commonplace plant, dandelions have many uses including: textile dyes, culinary beverages, and rubber (latex) production. Further, dandelion has served as a long-standing medicinal plant in Chinese and indegenious cultures. With a dose of potent antioxidants and nutrients, herbalists find that it can treat numerous ailments.

Deadly Nightshade (Berry)

Atropa belladonna

A perennial bushy herb, with dull purple flowers in the same family as potatoes and tomatoes. The shiny, ink-like berries are considered poisonous to humans creating hallucinogenic and even lethal effects the more berries consumed. Given its distribution around Central and Eastern Europe, North Africa, and the Middle East, deadly nightshade has a long history of poison, with the genus Atropa being named after Atropos, a Greek Fate responsible for ending life.

Duckweed

Wolffia

Found in freshwater and marshes, the flower of the duckweed genus is the smallest known, measuring about 0.3 mm long. Duckweed is a high source of protein, and is good at absorbing excess nutrients (bioremediation), particularly nitrogen in aquatic systems. Similar to algae, duckweed is being studied as a biofuel due to its rapid growth and carbon sequestration potential.

Dynamite Tree (Capsules)

Hura crepitans

The pumpkin-shaped capsules (fruiting bodies) of the dynamite tree can explode when ripe, forcefully ejecting seeds at 70 meters per second (160 mph). This violent dispersal method, known as explosive dehiscence, can propel seeds 30 meters (roughly 100 ft) on average.

Echinacea

Echinacea purpurea

Native to North American woods and prairies, Echinacea is a genus of flowering plants with beautiful purple petals and a distinctive, spiky red seed head or cone. has served as an herbal medicine for centuries. Echinacea has been used by indegenous cultures and herbalists to treat insect bites, toothaches, cramps, coughs, and some inflammatory conditions. Research into these medicinal properties shows that Echinacea stimulates the immune response by mobilizing leukocytes (white blood cells) and activating phagocytosis, the major mechanism for removing pathogens.

Elderberry

Sambucus nigra

A common plant found in sunny locations in temperate climates across Europe, Elderberry is known for its dark colored berries. In their raw form, these berries are mildly poisonous, however when cooked they make for good jam, syrups, and chutneys. The flowerheads are used in infusions and liquors. Elder has a long history of household medicinal use, with herbalists using Elderberry for fevers and coughs. In English and Scandinavian folklore Elder is associated with witchcraft, specifically the Elder Mother, a villainous spirit.

Ergot Fungus

Claviceps purpurea

Ergot fungal infections typically target rye or other related grains and contain high concentrations of ergotamine and lysergic acid, a precursor to LSD. Ergot alkaloids can lead to hallucinations and irrational behavior. The Greek poet Homer wrote of the drink kykeon, a psychoactive brew made of barley, ergot fungus, and pennyroyal.

Eucalyptus (Leaves , Oil)

Eucalyptus globulus

Fire plays an important role in shaping the landscape of flora creating a natural cycle of growing and burning, clearing out older plants for newer plant growth and enriching the soil. Many Eucalypts, a name of several closely related genera including Eucalyptus, have fire-adaptive traits particularly epicormic buds. Protected by thick layers of bark, epicormic buds sprout after a trigger, such as sustaining damage from a fire. This epicormic sprouting can lead to rapid regenerative growth. In addition to quick regrowth after a fire, secreted Eucalyptus oil is highly flammable when heated. Combined these traits give Eucalypts a competitive advantage for resources compared to other neighboring plants.

Fairy Fire

Panelluses stipticus

A bioluminescent fungi present on decaying wood similar to the ghost fungi. In folklore, some ascribe the mysterious will-o'-wisp sightings to the bioluminescence of the fairy fire fungi.

Fantsiolotse (Thorns)

Alluaudia ascendens

Endemic to Madagascar, this succulent tree is an oddity even among the plant world. Interspersed around the reddish-green heart-shaped leaves are a series of 1-inch thorns which serve to protect the plant from herbivory.

Fig (Fruit)

Ficus carica

Native to the Mediterranean and Western Asia, figs are a well known fruit and important commercial crop, while fig trees feature prominently in religions and mythologies. Figs are mentioned in the Quran, the books of the Tanakh, and New Testament Bible, with the Sahih al-Bukhari hadith recording figs as paradisiacal fruits.

Flycatcher Sandwort

Arenaria bryophylla

Arenaria bryophylla is a densely tufted plant with white, stalkless flowers and rigid shiny leaves. Found in the Himalayas, this plant grows in altitudes ranging from 4300 - 6180 meters.

Furze (Pods)

Ulex europaeus

Native to the British Isles and Western Europe, Furze is legume that smells like coconut. The pods are dark purplish-brown and contain 2 or 3 small hard seeds. In hot weather, the pods split open with an audible popping sound ejecting the seeds.

Ghost Fungi

Omphalotus nidiformis

The ghost fungi is known for its bioluminescent properties, and can be seen at night as a pale whitish glow at the base of trees. This fungus is both saprotrophic, gaining nourishment from decaying matter, and parasitic as it's fruiting bodies are generally found growing on dead or dying trees.

Ghost Pipe

Monotropa uniflora

Found in scattered temperate zones in Asia, and the Americas this perennial plant has distinctive thin,

white, translucent bracts. Unlike most plants, ghost pipe contains no chlorophyll, gaining its nutrients from its parasitic relationship to some fungi and trees. As it does not require sunlight for energy, ghost pipe is often found in the dark understory of forests.

Ginkgo

Ginkgo biloba

Ginkgo is a very old plant genus, with fossils dating back 200 million years. Native to China this tree has distinctive leaves and are popular choices for cultivation. Ginkgo trees are incredibly long-lived and some research suggests that they do not experience senescence, or deterioration with aging, effectively making them unlikely to die of old age. Further, Ginkgo has a long history of traditional medicine often citing its benefits on cognitive function and memory retention, though studies report this with mixed effects.

Grapevine (Tendrils)

Vitis vinifera

Grapevines are a common cultivated plant predominantly used for the direct consumption and fermentation of the fruit. Grapevine tendrils are specialized stems that support the climbing plant by twining onto surrounding structures. These tendrils are sensitive to touch and accelerate growth in that direction (thigmotropic).

Haworthia

Haworthia cooperi

Endemic to South Africa, this coastal rosette plant grows just under the sand with only its leaf tips sticking in the open. Interestingly, in some species of Haworthia these leaf tips are transparent, allowing sunlight to pass through to the chlorophyll waiting in the leaves below the sand.

Hawthorn

Crataegus monogyna

A small tree with dull brown bark and bright red fruits. Common across Europe and the parts of the Mediterranean coast, this plant has been regarded as an emblem of hope across numerous cultures and folklore. In the Christian faith, some suppose that hawthorn was the source of Jesus' crown of thorns. The Celts believed that the hawthorn plant was affiliated with the Fae and said to heal a broken heart, while Balkan cultures believe hawthorn is essential for killing vampires. Numerous cultures believed that hawthorns, particularly lone hawthorns, originate from lightning strikes.

Herb-of-grace

Ruta graveolens

Native to the Balkan Peninsula, Ruta graveolens can be found in gardens worldwide. Grown for its bluish, bitter, fragrant leaves this plant can serve as a mild natural insecticide and is steeped in folklore. During the Middle Ages, herb-of-grace was a sign of purity, used to ward off witches and protect against epidemics and plagues. Bathing with herb-of-grace became a practice to remove purported curses from the body. In Germanic mythology basilisks petrification had no effect on this plant, and in parts of India it still carries the association as a snake repellent.

Horny Goat Weed

Epimedium alpinum

With a distinctive spider-like flower, Epimedium alpinum has been used in traditional medicine as an aphrodisiac. In lab studies, Icariin, a flavonoid compound found in Epimedium species, has shown inhibition of PDE5 in a similar (though weaker) fashion to other erectile dysfunction medication. Horny goat weed is purported to act as a vasodilator, increasing penile blood pressure.

Hyssop

Hyssopus officinalis

A brightly colored shrub that produces fragrant pink, blue, or white flowers. Hyssop is tolerant of sandy soils and warm climates, giving it some drought-resistance capabilities. Hyssop has been used for centuries in traditional medicine, specifically to treat coughing and sore throats. Essential oils generated from this plant contain thujone and phenol which have antiseptic properties.

Jade Plant

Crassula ovata

An ornamental succulent that has become a common house or desk plant. In the tradition of Feng Shui, jade plants are renowned for good luck.

Jewelweed

Impatiens capensis

Jewelweed is a widely distributed and common plant across North America, often found in forested edges of creeks, marshes, and bogs. Indegenious cultures have been using leaf and stem sap as a remedy for poison ivy.

Kelp

Laminariales

Kelp is a heterokont. Heterokonts are groups of multicellular organisms such as brown algae. Growing in shallow oceans, kelp forests can host a diversity of animals. Kelp and the marine diversity kelp forests have sustained coastal settlements for thousands of years. Commercially, kelp ash is a good source of iodine and alkali, while alginate is used as a thickener in ice cream, jelly, and toothpaste. Kombu, a species of kelp, is a key ingredient in Chinese, Japanese, and Korean cooking imparting an umami taste. Kelp is also being researched by environmentalists and geneticists as a carbon sink to help course correct the negative effects of climate change.

Kudzu

Pueraria montana

Kudzu is a rapidly growing vine native to Southeast Asia. Considered invasive in North America, this climbing, often smothering noxious weed can be found blanketing landscapes in the Southeastern United States. Due to its rapid growth it can outcompete native species, often blocking vital resources such as sunlight and crushing neighbors with its weight.

Lightning Jewel Orchid (Leaves)

Meacodes petola

A species of jeweled orchid endemic to tropical forests of Southeast Asia. Often prized for its unique foliage, this plant has a distinctive yellow venation that pierces the leaves, resembling a frozen lightning strike. Due to increased interest by botanical collectors, this plant is currently listed as vulnerable with restricted trade due to risk of over collection.

Living Stone

Lithops fulviceps

Endemic to Southern Africa, Living stones are found in rocky areas and cold deserts. The leaves of living stones are mostly buried beneath the soil, with a translucent top surface known as a leaf window, which allows light to enter the interior of the leaves for photosynthesis. Interestingly, these leaf windows are patterned in various shades of grey and brown, which give the leaves a striking resemblance to stone.

Lotus (Flower)

Nelumbo nucifera

Adapted to flood plains, deltas, and slow moving rivers these plants have a large native distribution that includes most of Asia. A powerful icon, lotus is considered a sacred species to Hindus, Buddhists, and Jains, with the flower acting as a seat or holy item for divine figures. To Hindus the lotus symbolizes inner potential and the flow of energy through the chakras. To Buddhists, the lotus represents purity of the body, speech, and mind. Other parts of the plant, namely the seeds, leaves, and rhizomes have been used as traditional medicines, lowering blood sugar levels, fever, and inflammation. While Nelumbo nucifera has some psychoactive properties, it should not be confused with Blue Lotus, originally found along the Nile river, which has strong psychoactive properties.

Magic Mushrooms

Psilocybe cubensis

This reddish-brown species of psychedelic mushroom contains the active compound psilocybin. When ingested, psilocybin with its dephosphorylated counterpart psilocin produces a mind-altering effect similar to LSD (see ergot fungus) and mescaline (see peyote). Additionally, effects can include euphoria, hallucinations, and panic attacks.

Maize

Zea mays

Maize, or corn, is one of the most recognizable staple food crops in the world, with total production surpassing both wheat and rice. In addition to its culinary versatility, maize is used for ethanol and other biofuels, animal feed, and bourbon whiskey. A favorite organism of study for plant scientists, maize has served as a model for plant domestication, breeding, cytogenetics, genomics and more for almost a century.

Marsh-mallow (Root)

Althaea officinalis

In herbal medicine, marsh-mallow is used to help loosen mucus within the body. As such, herbalists use it to relieve irritation of mucous membranes, with root syrup being sold to treat minor respiratory ailments. While modern marshmallow treats do not contain any marsh-mallow root, the original confection was created from this plant.

Mediterrean Cypress

Cupressus sempervirens

Native to the mediterranean region, this tree has been widely cultivated as an ornamental. Classically, this plant is reflective of mourning and even today, is a common fixture in cemeteries.

Mistletoe (Berries)

Viscum album

Mistletoe is a common name for numerous species of hemiparasitic plants that extract water and nutrients from a variety of host trees. There are many species of mistletoe with almost all exhibiting some levels of toxicity, particularly in the leaves and berries. While mistletoe is closely associated with the Christian winter holiday of Christmas it has much wider, and older cultural origins. The Ancient Greeks and Celts associated the white berries with male fertility. In Norse mythology mistletoe plays a central role in the death of Baldr and the punishment of Loki. As Christianity swept through the Western world, mistletoe was first associated with protection from witches and demons, eventually morphing into a kissing tradition in the 18th century.

Moss Sunray

Hyalosperma demissum

Typically found on rocky outcrops in dry forests or grasslands, this tiny daisy is easily invaded by competing weeds, or trampled by curious animals. This plant is currently listed as endangered by the Tasmanian government to where this plant is endemic.

Motherwort

Leonurus cardiaca

With a global distribution and often found near roadsides, motherwort is a plant associated with soothing, maternal energy. It is often used to remove melancholy, calm the nerves, and ward off evil spirits.

Nutmeg (Seed)

Myristica fragrans

Two spices can be derived from Myristica fragrans: Nutmeg, from the seed and mace from the seed coat. Powderized, Nutmeg can cause allergic reactions and when ingested in larger quantities, induce a lucid-dream state resulting in psychoactive and even amnesic effects. Some believe that nutmeg promotes a heightened spiritual state, opening the mind for spiritual/astral journeys and clairvoyance.

Oats (Milky Stage)

Avena sativa

Milky oats are simply oatgrass harvested during the 'milky' stage of development, during which oat tops release a white, milky sap when squeezed. Milky oats are an excellent source of vitamins and minerals, particularly calcium and magnesium. As an herbal remedy, milky oats can ease the effects of stress, exhaustion, or sleeplessness. Unfortunately, this milky stage only lasts for about a week, right when the plant begins flowering and before the seeds (oat grains) harden.

Passionflower

Passiflora incarnata

Identified by their intricate flowers with blueish-purple and white petals and prominent styles and stamens, passion flowers are a fast-growing perennial vine that can quickly blanket vegetative floors. Medicinally, passion flowers have purported sedative effects and the potential to relieve stress and exhaustion, as well as curb eye strain.

Pennyroyal (Leaves)

Mentha pulegium

Crushed pennyroyal leaves smell strongly of spearmint and historically have been used to flavor herbal teas and foods. Pennyroyal has been used as an emmenagogue, stimulating blood flow to the uterus. In larger doses it can cause the uterine lining to contract and shed potentially resulting in a miscarriage in pregnant women. The Greek poet Homer wrote of the drink kykeon, a psychoactive brew made of barley, ergot fungus, and pennyroyal.

Peyote (Buttons)

Lophophora williamsii

A small, slow growing, desert cactus native to Mexico and Southwestern Texas. The above-ground portion contains buttons, rich in the psychoactive alkaloid mescaline, which can be chewed or boiled in water to produce a hallucinogenic effect. For centuries peyote has been used ceremoniously and medicinally by indigenous cultures.

Pineapple

Ananas comosus

A culinary staple, pineapple is a tropical edible fruit often considered a luxury and cultural icon. Present in all parts of pineapple is the enzyme bromelain, which can be used as a meat marinade and tenderizer. It is this enzyme that makes your tongue feel a bit raw when consuming fresh pineapple.

Pitcher Plants

Sarracenia purpurea

Pitcher plants grow in locations where the soil is too poor in minerals and/or too acidic for most plants to survive, instead supplementing their nutrients through their trapped insect prey. Pitcher plants have evolved numerous ways to trap prey, from snap traps using rapid leaf movements, pitfall traps with slippery walls or hairs to prevent insects from climbing out, or even flypaper traps with sticky mucilage. Inside these pitchers is an acidic digestive environment to break down prey for absorption.

Poppy (Seed Pods)

Papaver somniferum

Poppy is a well known plant with a long history of human cultivation and was the central subject of two wars between the 1830s and 1860s. Today, poppy seeds are a popular accompaniment to milled and baked goods, while poppyseed oil has been used by painters for binding and thinning pigments. Popularly, poppies are known for the dried milky latex produced by the seed pods, or opium, though this varies from variety to variety. Opium contains naturally occurring opiates such as codeine, morphine, which can be processed into diacetylmorphine (heroin), as well as thebaine and oripavine, which can be processed into hydrocodone and oxycodone. The principal action of opiates are to relieve or suppress pain, though they also induce sedation and may impart a state of euphoria.

Prickly Pear (Glochids)

Opuntia basilaris

A segmented cactus found in the desert Southwest of the United States. A single plant may consist of hundreds of fleshy, flat, rounded cladodes, or large pads. Like most Opuntia species these are spineless, but have small, barbed bristles called glochids.

Reishi Mushroom

Ganoderma lingzhi

Complete with a red, almost leathery, cap, fan shape, and lack of gills, Reishi mushrooms are an odd looking fungus. Found in Asia as a parasite or saprotroph (nutrients from decaying matter), Reishi mushrooms grow at the base of deciduous trees, especially that of the maple tree. These mushrooms have a long history in Chinese literature and art, with ancient scholars noting that these fungi were eaten as drugs of immortality. Other scholars equate Reishi mushrooms as a boost to qi, specifically the heart. Artistically, 'picking lingzhi' is a recurring inspiration and the fungi itself often symbolizes great health and longevity.

Resurrection Moss

Selaginella lepidophylla

Native to the Chihuahuan desert, this resurrection moss can survive almost complete desiccation, curling into a tight ball, uncurling only when exposed to moisture. Studies show that resurrection moss can survive several years in this condition, and lose up to 95% of its moisture content without suffering damage. Resurrection moss is sold as a novelty item across the desert Southwestern United States, allowing anyone to witness this miraculous resurrection.

Enjoy the wonderful world of plants & fungi!

Rice

Oryza sativa

Rice is a commonly grown staple crop with worldwide cultivation. With the exception of upland rice, most rice is cultivated on submerged land (paddy), with water levels ranging from 5-10 cm. While rice can tolerate periods of flooding, good irrigation practices are necessary to encourage rice but prevent weed growth.

Saguaro (Spines)

Carnegiea gigantea

Native to the Sonoran desert in Southwest North America, saguaro cacti have a distinctive silhouette with their first side arm growing around 50-100 years of age. Adapted for long periods of drought, saguaros can visibly swell to store water, with their ribs acting as funnels channeling water directly to the base of the cactus. Saguaro spines are incredibly sharp, growing up to 3 inches long. As with most spines they serve as protection, puncturing deeply and often breaking off causing deep tissue splinters that are difficult to remove.

Saw Palmetto (Leaves)

Serenoa repens

Saw Palmettos are a subtropical palm endemic to the coastal plains of the Southeastern United States. This plant is a fan palm with 15-20 leaflets per petiole. These leaflets and petioles are armed with sharp, saw-like teeth that can easily cut skin.

Scotch broom (Pods)

Cytisus scoparius

Adapted to the Mediterranean and coastal climates, this legume is sensitive to frost. In hotter weather, the mature black pods audibly crack open dispersing the seeds. In folklore broom was said to tame wild horses and dogs, with others believing burning broom could stop witches.

Slippery Elm

Ulmus rubra

Thriving in moist upland environments, slippery elm is widely used in dietary-supplements and traditional medicine. The inner bark is mucilaginous and has long been used as a soothing coating (demulcent) helping with sore throats, constipation, burns, and cold sores.

Small poranthera

Poranthera microphylla

A small and slender annual with narrow, delicate leaves and clusters of small white flowers. This plant has a typical mature height of 10 cm.

Spotted Water Hemlock (Seeds, Roots, Leaves)

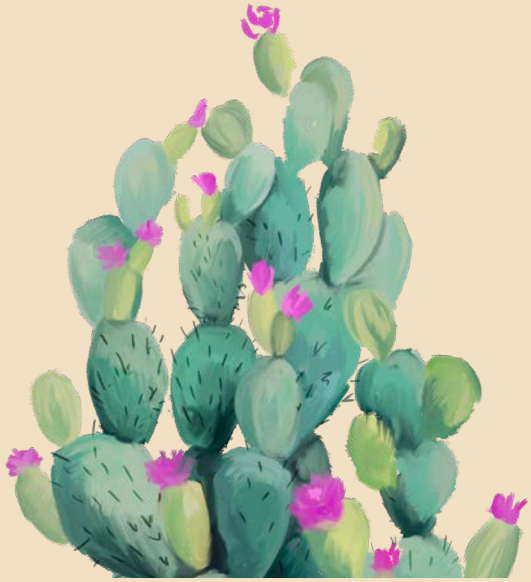
Cicuta maculata

Deceptively, Cicuta species are often mistaken for edible plants such as wild celery, wild parsnip, and wild carrot. A hardy plant capable of living in a variety of environments, they are typically found near the shoreline of lakes, rivers, swamps, or marshes. Water hemlocks produce cicutoxin at all stages of development and in all tissues, with the highest concentration in the roots. Depending on the amount consumed, cicutoxin poisoning can result in nausea, confusion, and seizures as soon as 15 minutes after ingestion. Fatalities have occured within a few hours of ingestion. Water hemlock is considered one of North American's most toxic plants.

St. John's Wort

Hypericum perforatum

St. John's wort has been used as a traditional medicine for centuries and remains commercially cultivated. The red, oily extract has been used to treat wounds and was heavily favored during the crusades by the Order of St. John or more commonly known, the Knights Hospitaller. In folklore, a blooming St. John's wort was hung on a door to ward off evil spirits.



Sunflower (Heads, Seeds, Oil)

Helianthus annuus

Composed of both annuals and perennials, the genus Helianthus has a wide distribution originating in the Americas. Cultivated sunflower (Helianthus annuus) is an instantly recognizable plant with global ornamental, confectionary, and oil uses. During growth, sunflowers exhibit heliotropism, tilting their heads to face the sun, tracking its progression over the course of the day. Given its vibrant colors and diverse utility, sunflowers can be found in numerous religions, myths, and folklore. Deemed the 'oil without sin,' sunflower was widespread across Eastern Europe by the 1800s for its use as a cooking oil during the religious observance of Lent, when the luxuries of butter and lard were temporarily given up by the Russian Orthodox Church. Moreover, the phenomenon of solar tracking was reflected in the Greek myth of Clytie and her adoration of Helios the sun god. While in Chinese symbolism sunflowers are very auspicious representing luck and long life.

Tulsi

Ocimum tenuiflorum

Tulsi or holy basil is cultivated for religious and herbal medicine purposes. Originating in Northern India, this plant is now cultivated and naturalized to a global distribution. In Hinduism, tulsi is considered the holiest of all plants and a threshold point between heaven and Earth. As a sacred plant, tulsi is regarded as an Earthly manifestation of the goddess Lakshmi, a consort of the god Vishnu. As an extension of this relationship, tulsi leaves are used to worship Vishnu and his avatars in a large denomination of Hinduism known as Vaishnavism.

Turmeric (Rhizome)

Curcuma longa

A staple of Asian, particularly Indian, cuisine and culture, turmeric is a popular global spice. Turmeric rhizomes are dried and powdered to create a bright, orange-yellow spice originally used as a dye. In herbal medicine, turmeric powder is purported to relieve mild digestive problems and be a general wellness plant.

Vervain

Verbena hastata

Vervain is a plant in and out of Mediterrean and European folklore. Believed to sprout up whenever the goddess Isis was crying, Egyptians revered this as an altar plant associating it with love. While others used vervain to protect from lightning and bad weather, opting to include vervain in offerings to Thor and Zeus/Jupiter. Medicinally, herbalists have used vervain to increase mental, emotional, and spiritual well-being.

Wax Milkweed

Asclepias albicans

Native to the Mojave and Sonoran deserts, this shrub's sticklike branches are coated in a waxy residue.

White Sage

Salvia apiana

This silvered colored desert shrub has been used by indegenous cultures for centuries. Spiritually, white sage leaves are rolled into smudge sticks and burned to purify the body and home, while other cultures found inhaling the sage smoke would remedy illness. Many are concerned with the overharvesting of wild white sage populations, and while it is not listed on the Endangered Species List, there are concerns about its distribution and future survival.

Willow (Bark)

Salix alba

Willow bark and leaves are commonly referenced by ancient as well as indegenious cultures as herbal remedies for aches and fever. Willow bark produces salicin, which is metabolized in the body to salicylic acid, a precursor of aspirin. Similar to citron, willow is associated with the Jewish festival of Sukkot. In East Asian cultures willow helps ward off evil spirits or communicate with spirits of the dead.

Wormwood

Artemisia absinthium

Wormwood is an ornamental plant typically grown for the bitter compound Absinthin. It is a key ingredient in the spirit absinthe and responsible for its distinctive taste. Over the years, absinthe, or the Green Fairy as it's sometimes called, has been associated with psychedelic, hallucinogenic effects though there is no evidence to support this scientifically.

Yarrow

Achillea millefolium

Yarrow is a white flowered plant known for delicate bipinnate leaves that can be found next to roadsides, in meadows and along coastlines. Yarrow is often planted as a companion plant to attract beneficial pollinators, and many folktales and myths speak to its purported medicinal properties. In Greek mythology the great teacher Chiron instructs Achilles to use yarrow on the battlefields of Troy to treat wounds and staunch blood.

Yew Tree

Taxus baccata

An evergreen tree native to parts of Europe and Eurasia the yew tree has become symbolic of death. Due to a toxic compound called taxine, yews are poisonous both by touch and ingestion, with high enough quantities causing cardiac arrest. Yews are also incredibly long-lived trees further enhancing their association with death, either as a direct cause or overcoming it through immortality. For these folk reasons the yew tree, similar to the Mediterrean Cypress, is a common fixture in cemeteries.

Water lily

Nymphaea odorata

Water lilies are aquatic plants that can be found in ponds, shallow lakes, or slow moving rivers across the Americas. Both the leaves and flowers float, with the leaves having a waterproof, waxy coating, while the fragrant flowers open each day and close at night. Once pollinated the developing fruit is submerged underwater for maturation. In some religions water lilies are associated with rebirth or resurrection.

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