

ROCKY MOUNTAIN MONTANE, SUBALPINE & ALPINE PLANT SURVIVAL GUIDE

North America • USDA-EQUIVALENT ZONES 3-7 • KÖPPEN Dfb / Dfc / ET



LAND + WATER

REGIONAL HABITAT ILLUSTRATION — NOT AN ID PHOTO

USEFUL

EDIBLE

MEDICINAL

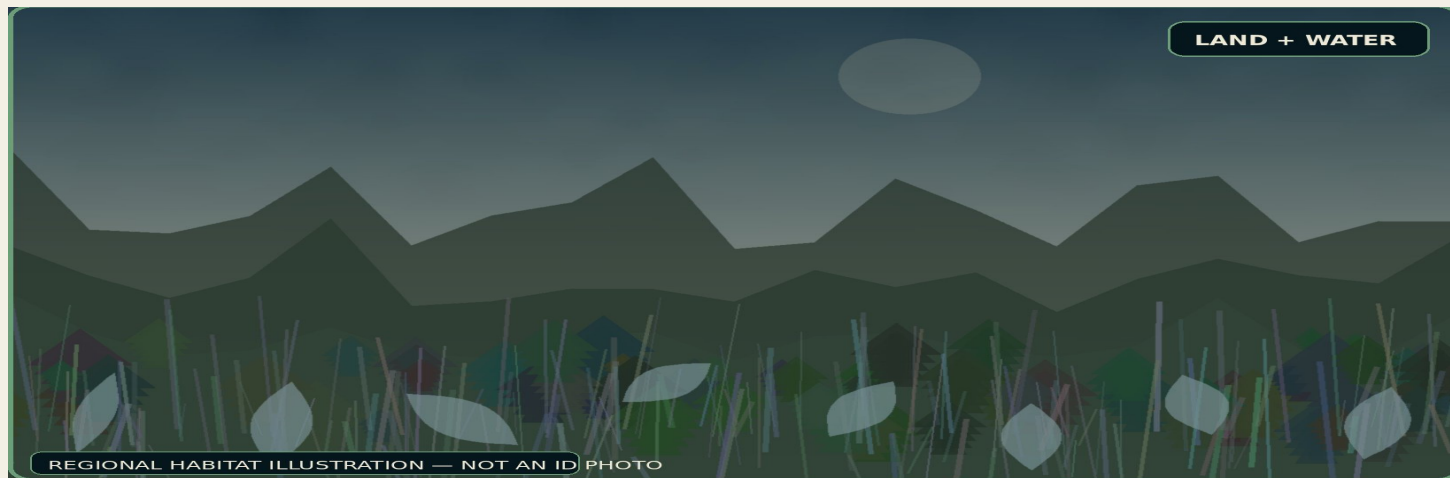
POISONOUS

IDENTIFY • EAT • BUILD • HEAL • AVOID

Illustrations show habitat and form; verify every plant with current regional photographs and expert sources.

REGION AT A GLANCE

A continental bioclimatic region, not a destination or a promise that every listed plant occurs at every site.



Continent: North America USDA-equivalent hardiness: 3-7 Köppen: Dfb / Dfc / ET

Regional habitat: Montane forest, subalpine parkland and alpine tundra

Zone warning: hardiness describes winter minimum temperature only; rainfall, heat, soils, fire, elevation and seasonality still control the flora.

FIELD PRIORITIES

- Use the continent, climate band and habitat as filters — never as proof of identity.
- Match at least three independent traits and rule out every dangerous look-alike before harvest.
- Treat water plants as both botanical and water-quality decisions; parasites, sewage and algal toxins can defeat correct identification.
- Alpine and tundra plants recover slowly; avoid roots and cushion plants and harvest only common, replaceable material.
- Medicinal notes document traditional use only; the guide gives no dosing and does not replace medical care.

SURVIVAL STANDARD

A correct plant name is only the beginning. Also verify plant part, maturity, preparation, dose, contamination, legal access and local cultural protocol. When any one of those is uncertain, do not consume or medicate.

POSITIVE IDENTIFICATION AND PRACTICAL USE

The illustrations are form diagrams. The linked POWO and iNaturalist pages provide current photographs and taxonomic context.

- 1 **1. PLACE**
Confirm continent, elevation, water regime, soil and disturbance.
- 2 **2. FORM**
Tree, shrub, vine, herb, grass, sedge, palm, fern, succulent or aquatic.
- 3 **3. LEAF**
Arrangement, veins, edge, hairs, glands, sap, odor and underside.
- 4 **4. STEM / BARK**
Thorns, pith, nodes, buds, lenticels, fibers, latex and branching.
- 5 **5. FLOWER / FRUIT**
Petal count, inflorescence, fruit attachment, seed and maturity.
- 6 **6. EXCLUDE**
Name every dangerous look-alike and explain why it is different.
- 7 **7. VERIFY**
Use current regional flora, qualified local knowledge and several photos.

AUTOMATIC STOP LIST

No tasting to identify.
No unknown roots, bulbs or white umbels.
No unknown milky sap.
No raw wetland foods.
No medicinal dose experiments.
No smoke from unknown toxic wood.

USEFUL-PLANT HIERARCHY

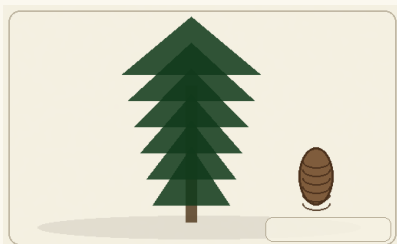
1. Deadfall and shed bark.
2. Abundant annual greens and fruit.
3. Pruned shoots and leaves.
4. Small stems from common thickets.
5. Roots, bark and whole plants only with permission and no safer substitute.

USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

Wood, fiber, tinder, bow-and-arrow components, friction fire, containers and construction.

DOUGLAS-FIR

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Pseudotsuga menziesii

IDENTIFY: Soft single needles; cones with three-pointed bracts; thick furrowed bark on old trees.

HABITAT / SEASON: Western North American dry slopes and temperate forest. Season: Year-round.

SURVIVAL USE: Excellent structural poles, dense fuel and dry resinous twigs for ignition.

CAUTION: True fir cones stand upright and lack protruding bracts. Avoid enclosed smoky fires.

LOOK-ALIKES: Grand or subalpine fir has flat needles and upright cones.

TASKS: poles, fuel, tinder, construction

Verified images: POWO

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LODGEPOLE PINE

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Pinus contorta

IDENTIFY: Two needles per bundle; slender trunk; small prickly cones, often closed for years.

HABITAT / SEASON: Burns, sandy benches and mountain slopes of western North America. Season: Year-round.

SURVIVAL USE: Straight poles, resinous kindling, fuel and pitchwood.

CAUTION: Fire-killed trees can fall suddenly; beetle-killed wood may be structurally weak.

LOOK-ALIKES: Jack pine has more curved irregular cones.

TASKS: poles, fuel, tinder, resin

Verified images: POWO

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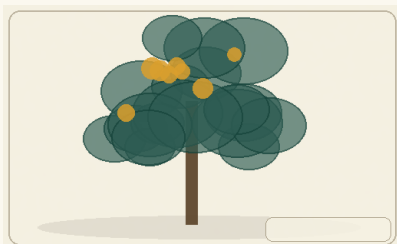
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USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

Wood, fiber, tinder, bow-and-arrow components, friction fire, containers and construction.

TREMBLING ASPEN

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Populus tremuloides / *P. tremula*

IDENTIFY: Round finely toothed leaves on flattened stalks that tremble; smooth pale bark.

HABITAT / SEASON: Burns, clearings, boreal forest and mountain valleys. Season: Leaves spring-fall; wood year-round.

SURVIVAL USE: Light carving wood, quick fuel and one of the best soft hearth-board woods for friction fire when dry.

CAUTION: Standing dead stems often rot internally. Test poles before loading.

LOOK-ALIKES: Birch leaves are more pointed and bark peels.

TASKS: bow drill board, carving, fuel, poles

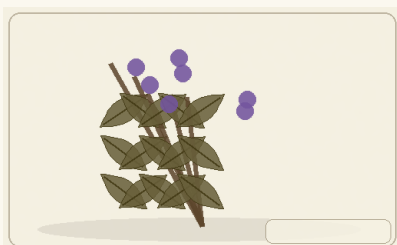
Verified images: POWO

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WILLOWS

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Salix spp.

IDENTIFY: Alternate narrow to oval leaves; flexible twigs; catkins; many species root along wet ground.

HABITAT / SEASON: Riverbanks, lake margins, floodplains, tundra valleys and moist forest. Season: Twigs year-round; leaves and catkins in the growing season.

SURVIVAL USE: Flexible rods for baskets, fish traps, wattle, arrow shafts and repair splints. Dry punky willow and softer species can serve bow-drill hearth boards; denser pieces make spindles. Bark has documented salicylate-related traditional use.

CAUTION: Species identification is difficult. Do not self-dose bark with aspirin allergy, bleeding risk, kidney disease, pregnancy, or in children with viral illness.

LOOK-ALIKES: Alders have cone-like female catkins; some dogwoods have opposite leaves.

TASKS: arrow shaft, bow drill board, basketry, cordage, medicine

Verified images: POWO

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USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

Wood, fiber, tinder, bow-and-arrow components, friction fire, containers and construction.

VIBURNUMS

USEFUL MATERIAL



Viburnum spp.

IDENTIFY: Opposite leaves and branching; flat or rounded flower clusters; one-seeded drupes.

HABITAT / SEASON: Temperate forest edge, thicket and wetland margin. Season: Stems year-round; fruit late summer-fall.

SURVIVAL USE: Straight shoots are classic arrow-shaft and spindle material; some species have edible fruit after correct identification.
 CAUTION: Fruit safety varies; raw fruit or seeds of some species can cause illness.
 LOOK-ALIKES: Dogwoods have strongly curved leaf veins.
 TASKS: arrow shaft, bow drill spindle, pegs

Verified images: POWO

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MATERIAL SELECTION SCREEN

Before cutting, test straightness, grain, dryness, hidden rot, sap or smoke toxicity, and whether the species is protected. Match the material to the load: springy bow wood, straight shaft wood, soft dry hearth board, harder spindle, fibrous cordage, or resin-free cooking fuel.

LAND-BASED EDIBLE PLANTS

Documented foods on dry or seasonally dry ground. Preparation and contamination still matter.

BILBERRY / BOG BLUEBERRY GROUP

LAND FOOD



Stylized form diagram — not an identification photograph

Vaccinium myrtillus / *V. uliginosum*

IDENTIFY: Low woody shrub; blue to blue-black berries with a crown; leaves alternate and small.

HABITAT / SEASON: Boreal, montane and tundra heath. Season: Mid- to late summer.

SURVIVAL USE: Ripe berries are documented food and can be dried or cooked.

CAUTION: Color alone is not enough; confirm woody stem and *Vaccinium* fruit crown.

LOOK-ALIKES: Black-berried herbs lack woody stems; crowberry has needle-like leaves.

TASKS: food fruit

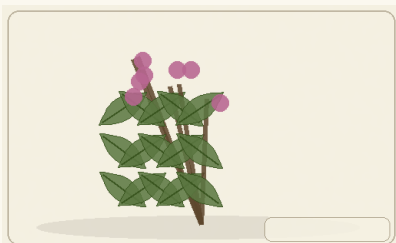
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WILD ROSES

LAND FOOD



Stylized form diagram — not an identification photograph

Rosa spp.

IDENTIFY: Prickly stems; compound toothed leaves; five-petaled flowers; red to orange hips.

HABITAT / SEASON: Open woods, thickets, prairie, dunes and mountain slopes. Season: Hips late summer through winter.

SURVIVAL USE: Fleshy hip walls are documented food after the irritating hairs and seeds are removed; good for simmering or drying.

CAUTION: Internal hairs irritate skin and mouth. Avoid sprayed or moldy fruit.

LOOK-ALIKES: Hawthorn has simple lobed leaves and woody thorns.

TASKS: food fruit, cordage

Verified images: POWO

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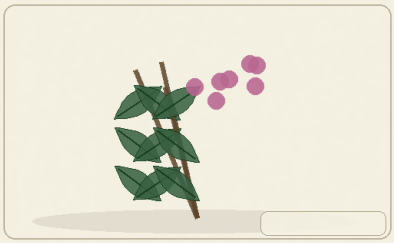
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LAND-BASED EDIBLE PLANTS

Documented foods on dry or seasonally dry ground. Preparation and contamination still matter.

FIREWEED

LAND FOOD



Chamerion angustifolium

IDENTIFY: Tall colonies; narrow alternate leaves; magenta four-petaled flowers; long silky-seeded capsules.

HABITAT / SEASON: Burns, avalanche tracks, river gravel and disturbed northern ground. Season: Young shoots spring; flowers summer.

SURVIVAL USE: Young shoots and leaves are documented food after correct identification and cooking; dry stalks yield light fiber and tinder.

CAUTION: Older plants become tough. Very young shoots can be confused with other herbs.

LOOK-ALIKES: Purple loosestrife has opposite leaves and dense flower spikes.

TASKS: food green, fiber, tinder

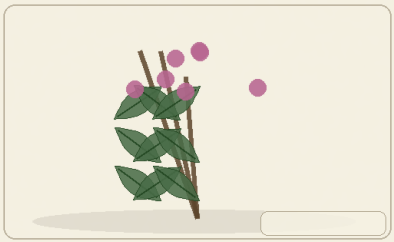
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WILD ONIONS AND GARLIC

LAND FOOD



Allium spp.

IDENTIFY: Narrow leaves or hollow stems; spherical flower heads; clear onion or garlic odor in leaf and bulb.

HABITAT / SEASON: Meadows, rocky slopes, open woodland and stream terraces. Season: Spring through fall.

SURVIVAL USE: Leaves, flowers and bulbs of positively identified Allium are documented food and seasoning.

CAUTION: Every sampled part must smell of onion, but odor is not the only test. Avoid unknown bulbs.

LOOK-ALIKES: Death camas lacks onion odor and can be fatal.

TASKS: food green, food bulb

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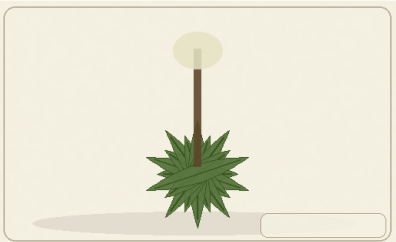
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LAND-BASED EDIBLE PLANTS

Documented foods on dry or seasonally dry ground. Preparation and contamination still matter.

BROADLEAF AND RIBWORT PLANTAINS

LAND FOOD



Stylized form diagram — not an identification photograph

Plantago major / *P. lanceolata*

IDENTIFY: Basal rosette with strong parallel ribs; leafless spikes of tiny flowers and seeds.

HABITAT / SEASON: Trails, camps, meadows and disturbed soil. Season: Spring through fall.

SURVIVAL USE: Young leaves and seeds are documented food; clean leaves have traditional external use on minor irritation.

CAUTION: Do not put dirty leaves on open wounds. Seeds swell with water and can obstruct if taken dry in quantity.

LOOK-ALIKES: Docks have netted veins; plantain ribs run from the base.

TASKS: food green, medicine

Verified images: POWO

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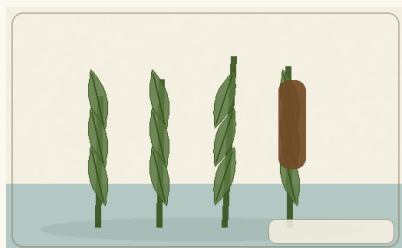
FOOD HARVEST SCREEN

Confirm species, plant part and maturity. Check whether cooking, leaching, peeling, fermenting or repeated water changes are required. Reject mold, animal contamination, roadside plants, chemically treated ground and any food whose safe preparation cannot be completed with current water and fuel.

WATER AND WETLAND EDIBLE PLANTS

Freshwater, marsh, tidal and marine foods. Correct ID does not make dirty water safe.

CATTAILS

AQUATIC FOOD

Stylized form diagram — not an identification photograph

Typha spp.

IDENTIFY: Tall flat strap leaves; dense brown cylindrical female flower spike below a narrower male section.

HABITAT / SEASON: Marshes, pond edges, slow channels and wet ditches. Season: Shoots spring; pollen early summer; rhizomes year-round where lawful.

SURVIVAL USE: Documented food parts include young inner shoots, pollen and processed rhizome starch. Leaves make mats, baskets and thatch; seed down can bulk tinder.

CAUTION: Water can concentrate sewage, metals and parasites. Raw rhizome requires correct processing; avoid contaminated marshes.

LOOK-ALIKES: Yellow flag iris has sword leaves and showy flowers but no brown cattail head.

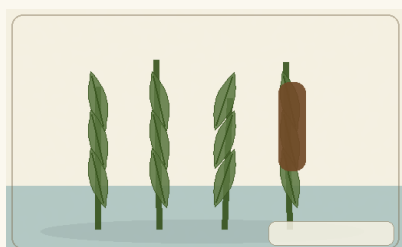
TASKS: food shoot, food starch, basketry, thatch, tinder

Verified images: POWO

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ARROWHEAD / WAPATO

AQUATIC FOOD

Stylized form diagram — not an identification photograph

Sagittaria spp.

IDENTIFY: Arrow-shaped or lance leaves rising from shallow water; three-petaled white flowers in whorls; underground tubers in some species.

HABITAT / SEASON: Shallow ponds, sloughs, marshes and slow streams. Season: Tubers late summer through winter.

SURVIVAL USE: Tubers of confirmed edible species are documented food after cooking; leaves and flower stalks help locate the bed.

CAUTION: Never eat raw. Species and tuber production vary. Wetland pathogens and water hemlock are nearby hazards.

LOOK-ALIKES: Arrow arum has one large hooded flower and toxic tissues.

TASKS: food tuber

Verified images: POWO

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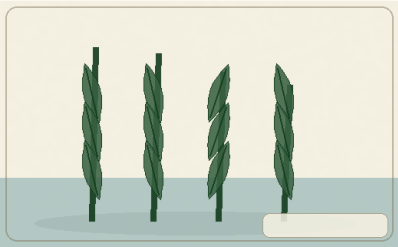
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WATER AND WETLAND EDIBLE PLANTS

Freshwater, marsh, tidal and marine foods. Correct ID does not make dirty water safe.

WATERCRESS

AQUATIC FOOD



Nasturtium officinale

IDENTIFY: Creeping hollow stems; pinnate leaves with a larger rounded terminal leaflet; small white four-petaled flowers.

HABITAT / SEASON: Cold flowing springs and streams, often where nutrient-rich. Season: Cool seasons.

SURVIVAL USE: Tender tops are documented food and are usually cooked in survival settings.

CAUTION: Raw watercress can carry liver flukes and sewage pathogens. Avoid downstream of livestock, roads or settlements.

LOOK-ALIKES: Water hemlock has divided leaves and umbrella flowers; never rely on habitat alone.

TASKS: food green

Verified images: POWO

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AQUATIC HARVEST SCREEN

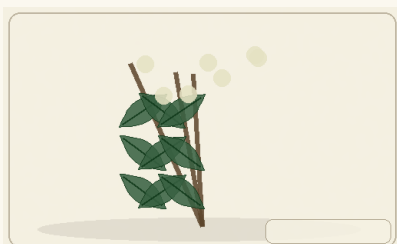
Check five separate questions: Is the species correct? Is the plant part edible? Is the water free of sewage, mining or farm runoff? Are parasites or harmful algal blooms plausible? Is entry and exit from the water safe? A “yes” to the plant and a “no” to the water still means do not eat.

MEDICINAL AND TRADITIONAL-USE PLANTS

Traditional and historical uses only — no dosing, diagnosis or treatment claims.

YARROW

TRADITIONAL-USE



Achillea millefolium

IDENTIFY: Aromatic finely divided leaves; flat clusters of small white to pink flower heads.

Stylized form diagram — not an identification photograph

HABITAT / SEASON: Dry openings, trails, grassland, shore gravel and disturbed soil. Season: Summer through fall.

SURVIVAL USE: Documented traditional external uses include washes and aromatic preparations; dry flower heads make light tinder.

CAUTION: Possible allergy, pregnancy and anticoagulant concerns. Not a substitute for wound cleaning or medical care.

LOOK-ALIKES: Poison hemlock is much taller with hollow purple-spotted stems and true umbels.

TASKS: medicine, tinder

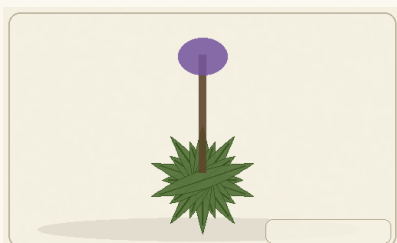
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GOLDEN ROOT

TRADITIONAL-USE



Rhodiola rosea and related spp.

IDENTIFY: Fleshy blue-green leaves on upright stems, yellow flower clusters and thick aromatic rhizome.

Stylized form diagram — not an identification photograph

HABITAT / SEASON: Cold Eurasian alpine cliffs, streambanks and tundra. Season: Summer.

SURVIVAL USE: Widely documented traditional-use plant.

CAUTION: Wild populations are vulnerable to root harvest. No field dosing; may affect mood, sleep and medications.

LOOK-ALIKES: Other Rhodiola and Sedum species are similar.

TASKS: medicine

Verified images: POWO

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MEDICINAL AND TRADITIONAL-USE PLANTS

Traditional and historical uses only — no dosing, diagnosis or treatment claims.

MUGWORTS

TRADITIONAL-USE



Stylized form diagram — not an identification photograph

Artemisia vulgaris complex

IDENTIFY: Aromatic deeply lobed leaves, commonly silvery beneath; small inconspicuous flower heads.

HABITAT / SEASON: Disturbed ground, steppe, forest edges and riverbanks. Season: Summer through fall.

SURVIVAL USE: Documented traditional uses include aromatic smoke and digestive preparations; dry stalks can be tinder.

CAUTION: Avoid internal use during pregnancy or with seizure disorders. Species identification is difficult.

LOOK-ALIKES: Ragweeds lack the silvery underside and have different flowers.

TASKS: medicine, tinder

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MEDICINAL RESTRAINT

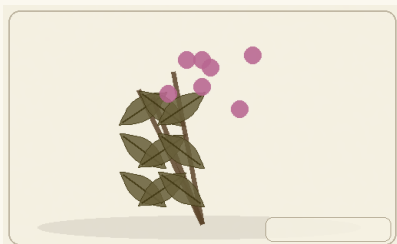
A plant can be culturally important and pharmacologically active yet still be the wrong survival choice. Unknown concentration, dehydration, pregnancy, allergies, chronic illness and medicine interactions can turn a traditional remedy into a second emergency.

POISONOUS PLANTS AND DANGEROUS LOOK-ALIKES

High-consequence species to learn before gathering starts.

MONKSHOODS

POISON — AVOID



Stylized form diagram — not an identification photograph

Aconitum spp.

IDENTIFY: Deeply divided palmate leaves; blue, purple, yellow or white hood-shaped flowers.

HABITAT / SEASON: Moist mountain meadows, streambanks and cool forest. Season: Summer.

SURVIVAL USE: No food or field medicinal use.

CAUTION: All parts contain potent aconitine-type alkaloids; ingestion can cause fatal heart and nerve effects.

LOOK-ALIKES: Larkspurs have a rear spur and are also toxic.

TASKS: poison

Verified images: POWO

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FALSE HELLEBORES

POISON — AVOID



Stylized form diagram — not an identification photograph

Veratrum spp.

IDENTIFY: Tall herb with broad strongly pleated leaves around a stout stem and branched greenish flower clusters.

HABITAT / SEASON: Wet meadows, seeps and stream margins in temperate and montane regions. Season: Spring through summer.

SURVIVAL USE: No food use.

CAUTION: All parts are poisonous and may cause vomiting, slow heart rate, low blood pressure and collapse.

LOOK-ALIKES: Young shoots can resemble wild leek but lack onion odor and have broad pleated leaves.

TASKS: poison

Verified images: POWO

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POISONOUS PLANTS AND DANGEROUS LOOK-ALIKES

High-consequence species to learn before gathering starts.

WATER HEMLOCKS

POISON — AVOID



Stylized form diagram — not an identification photograph

Cicuta spp.

IDENTIFY: Wetland perennial with divided leaves, white umbrella flower clusters and thick chambered rootstocks.

HABITAT / SEASON: Marshes, wet meadows, stream edges and ditches across the northern hemisphere. Season: Spring through fall.

SURVIVAL USE: No survival use. Make wetland root gathering a prohibited activity unless a qualified botanist is present.

CAUTION: Extremely poisonous; small amounts, especially roots, can cause violent seizures and death.

LOOK-ALIKES: Angelica, cow parsnip and other Apiaceae can look similar. Never taste to decide.

TASKS: poison

Verified images: POWO

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BANEBSERIES

POISON — AVOID



Stylized form diagram — not an identification photograph

Actaea spp.

IDENTIFY: Woodland herb with divided leaves, white flower clusters and red, white or black berries on stout stalks.

HABITAT / SEASON: Moist temperate and boreal forest. Season: Fruit late summer.

SURVIVAL USE: No food use.

CAUTION: Berries and roots are poisonous and can affect the gastrointestinal and cardiovascular systems.

LOOK-ALIKES: Edible *Vaccinium* berries grow on woody shrubs with simple leaves.

TASKS: poison

Verified images: POWO

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SURVIVAL TASK MATRIX

Choose the least destructive plant that meets the job. A material that works poorly but is abundant may beat the perfect rare species.

TASK	BEST REGIONAL CANDIDATES IN THIS GUIDE	FIELD DECISION
Bow / spring wood	No reliable candidate among the priority profiles.	Use a different technology or carried tool; do not force unsuitable plant material.
Arrow or dart shaft	Willows, Viburnums	Use dead, shed or pruned material first.
Bow-drill hearth	Trembling aspen, Willows	Use dead, shed or pruned material first.
Bow-drill spindle	Viburnums	Use dead, shed or pruned material first.
Tinder	Douglas-fir, Lodgepole pine, Fireweed, Cattails	Use dead, shed or pruned material first.
Fuel / coals	Douglas-fir, Lodgepole pine, Trembling aspen	Use dead, shed or pruned material first.
Cordage / fiber	Willows, Wild roses	Use dead, shed or pruned material first.
Basket / mat	Willows, Cattails	Use dead, shed or pruned material first.
Container / wrap	No reliable candidate among the priority profiles.	Use a different technology or carried tool; do not force unsuitable plant material.
Fruit food	Bilberry / bog blueberry group, Wild roses	Verify part, maturity and preparation.
Green food	Fireweed, Wild onions and garlic, Broadleaf and ribwort plantains, Watercress	Verify part, maturity and preparation.
Seed / nut	No reliable candidate among the priority profiles.	Use a different technology or carried tool; do not force unsuitable plant material.
Root / starch	Cattails	Verify part, maturity and preparation.
Traditional-use	Willows, Broadleaf and ribwort plantains, Yarrow, Golden root	Documented use only; no field dosing.

SEASONAL OPERATING RHYTHM

PHASE	PRIMARY OPPORTUNITY	PRIMARY RISK
Early growth	Shoots, greens, flowers, sap and easy bark identification.	Toxic shoots and bulbs are hardest to separate before flowering.
Peak growth	Maximum leaf and flower information; fiber plants mature.	Heat, insects, sap and water contamination.
Fruit / seed	Highest food density; nuts, berries, pods, grains and tubers.	Mold, wildlife encounters and unripe or toxic fruit.
Dormant / dry	Wood, bark, evergreen leaves, persistent fruit and roots.	Fewer diagnostic traits; overharvest of stored underground parts.

SOURCES, IMAGE VERIFICATION AND EMERGENCY

Every profile links to current taxonomic and photograph searches. Treat community photographs as evidence to compare, not as a final authority.

1. 2023 USDA Plant Hardiness Zone Map

USDA Agricultural Research Service — hardiness-zone reference

<https://planthardiness.ars.usda.gov/>

2. Plants of the World Online

Royal Botanic Gardens, Kew — taxonomy, distribution and images

<https://powo.science.kew.org/>

3. World Flora Online

World Flora Online Consortium — global plant taxonomy

<https://www.worldfloraonline.org/>

4. Global Biodiversity Information Facility

GBIF Secretariat — occurrence records and licensed media

<https://www.gbif.org/>

5. World Checklist of Useful Plant Species

Royal Botanic Gardens, Kew — documented plant uses

<https://kew.iro.bl.uk/concern/datasets/7243d727-e28d-419d-a8f7-9ebef5b9e03e>

6. Poison Control

National Capital Poison Center — poisoning first-response guidance

<https://www.poison.org/>

7. WHO Monographs on Selected Medicinal Plants

World Health Organization — medicinal-plant safety and monographs

<https://www.who.int/publications/i/item/9241545178>

8. Flora of North America North of Mexico

Flora of North America Association — regional scientific flora

http://floranorthamerica.org/Main_Page

9. USDA PLANTS Database

USDA Natural Resources Conservation Service — North American distribution and traits

<https://plants.usda.gov/>

SUSPECTED POISONING

Stop exposure. Remove material from the mouth and rinse. Do not induce vomiting unless directed. Save a sample or clear photographs. Contact local emergency services or a poison center. Monitor airway, breathing and consciousness.

PUBLICATION LIMITS

Regional lists are representative, not exhaustive. Species ranges, names, laws and preparation practices change. Local floras, land managers, Indigenous knowledge holders, poison centers and clinicians take precedence.