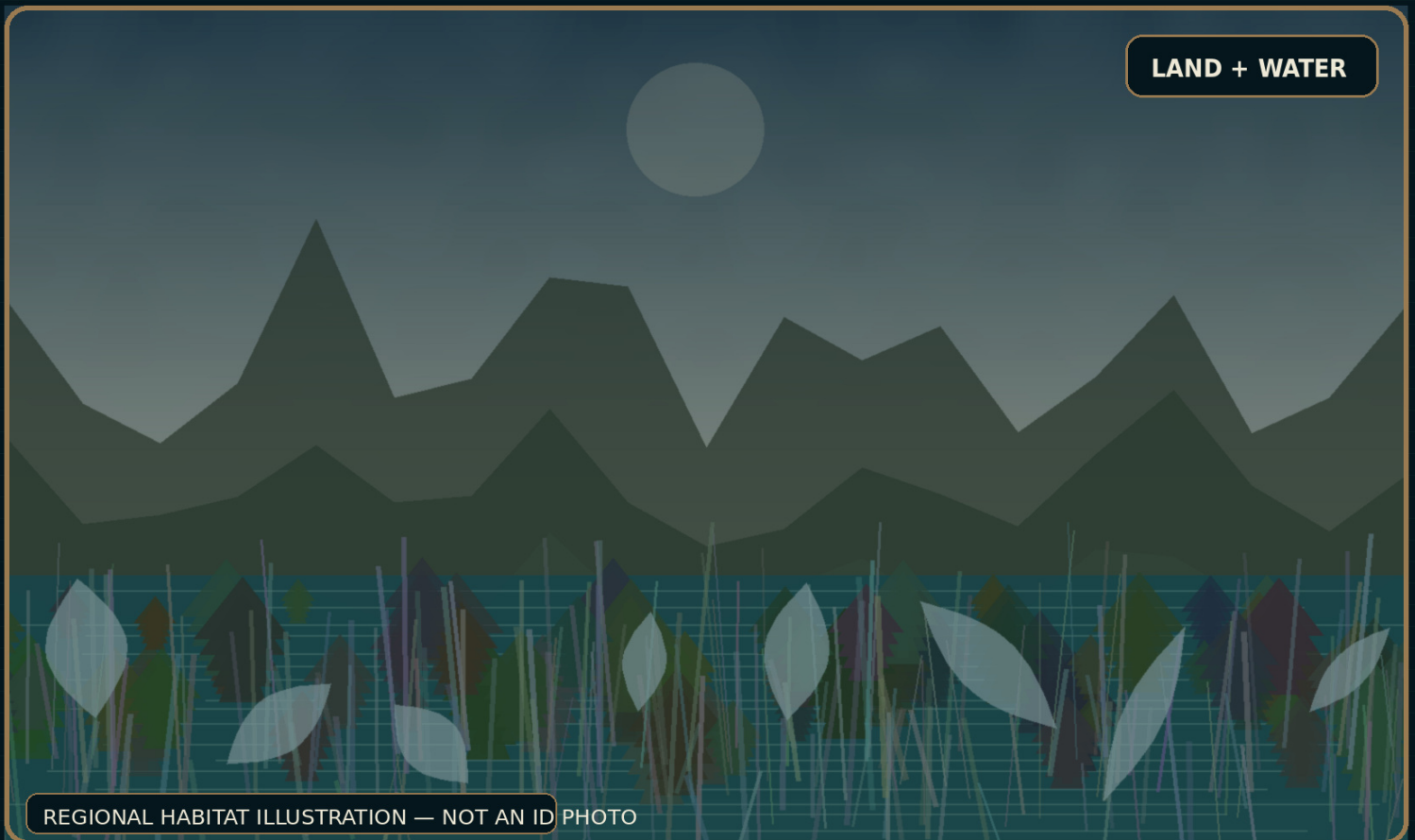


CENTRAL ASIAN STEPPE & SEMI-DESERT PLANT SURVIVAL GUIDE

Asia • USDA-EQUIVALENT ZONES 3-8 • KÖPPEN BSk / BWk



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: Asia USDA-equivalent hardiness: 3-8 Köppen: BSk / BWk

Regional habitat: Cold steppe, saxaul desert, mountain foothill and saline lake

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.
- Do not treat succulent tissue as safe drinking water; many desert plants concentrate irritants, salts or toxins.
- Take material from deadfall or abundant growth first. Roots, bark and whole plants are the most destructive harvests.
- 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. PLACE**
Confirm continent, elevation, water regime, soil and disturbance.
- 2. FORM**
Tree, shrub, vine, herb, grass, sedge, palm, fern, succulent or aquatic.
- 3. LEAF**
Arrangement, veins, edge, hairs, glands, sap, odor and underside.
- 4. STEM / BARK**
Thorns, pith, nodes, buds, lenticels, fibers, latex and branching.
- 5. FLOWER / FRUIT**
Petal count, inflorescence, fruit attachment, seed and maturity.
- 6. EXCLUDE**
Name every dangerous look-alike and explain why it is different.
- 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

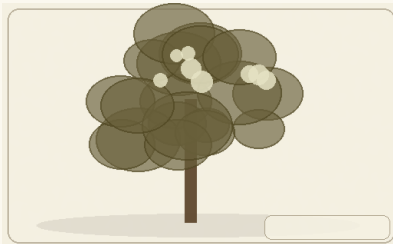
1. Deadfall and shed bark.
2. Abundant annual greens and fruit.
3. Pruned shoots and leaves.
4. Small stems from common thickets.
5. Roots, bark and whole plants only with permission and no safer substitute.

USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

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

TAMARISKS

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Tamarix spp.

IDENTIFY: Fine scale-like leaves on feathery twigs; pink flower sprays; salt often crystallizes on foliage.

HABITAT / SEASON: Desert rivers, salt flats, oases and coasts. Season: Wood year-round; flowers seasonal.

SURVIVAL USE: Flexible twigs for wattle, brush shelters and small fuel; dry stems tolerate saline sites.

CAUTION: Not a food. Invasive in many regions; salty smoke and treated control sites are concerns.

LOOK-ALIKES: Casuarina has jointed needle-like branchlets and cone-like fruits.

TASKS: wattle, fuel, brush

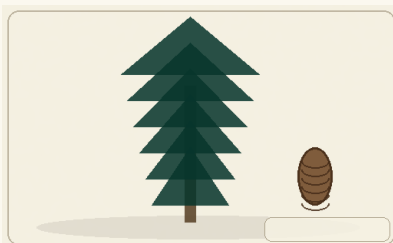
Verified images: POWO

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1

COMMON JUNIPER

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Juniperus communis

IDENTIFY: Stiff sharp needles in whorls of three with one pale band; blue-black berry-like cones.

HABITAT / SEASON: Rocky heaths, boreal openings, mountains and steppe. Season: Cones late summer through winter; wood year-round.

SURVIVAL USE: Dense aromatic wood for pegs and small tools; mature cones have limited documented culinary use.

CAUTION: Avoid medicinal use in pregnancy or kidney disease. Oils are concentrated and irritating.

LOOK-ALIKES: Crowberry has softer tiny leaves and glossy black fruit.

TASKS: pegs, tinder, seasoning

Verified images: POWO

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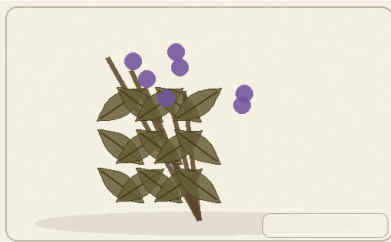
2

USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

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

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

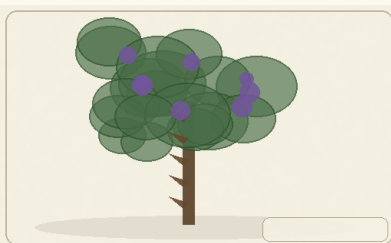
Verified images: POWO

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3

ARID ACACIAS

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Vachellia / Senegalia spp.

IDENTIFY: Feathery compound leaves; paired or hooked thorns; yellow or white puffball flowers; pods.

HABITAT / SEASON: African, Arabian and Australian savannas, dry rivers and deserts. Season: Wood year-round; gum and pods seasonal.

SURVIVAL USE: Dense wood for bows, handles, stakes and hot coals; gums of selected species have documented food or adhesive use.

CAUTION: Species vary in cyanogenic chemistry and pod edibility. Thorns cause deep punctures.

LOOK-ALIKES: Prosopis/mesquite and other mimosoid legumes require pod and thorn comparison.

TASKS: bow wood, handles, fuel, adhesive

Verified images: POWO

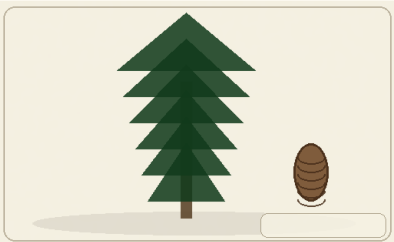
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USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

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

SCOTS PINE
USEFUL MATERIAL



Pinus sylvestris

IDENTIFY: Two blue-green twisted needles per bundle; orange-red upper bark; small cones.

HABITAT / SEASON: Dry sandy forest, continental slopes and Eurasian taiga. Season: Year-round.

SURVIVAL USE: Straight poles, resin-rich kindling, durable fuel and pitchwood shavings.
CAUTION: Resinous wood sparks and smokes in enclosed shelters.
LOOK-ALIKES: Siberian pine has five needles per bundle.
TASKS: poles, fuel, tinder, resin

Verified images: POWO

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5

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.

CHINESE JUJUBE

LAND FOOD



Stylized form diagram — not an identification photograph

Ziziphus jujuba

IDENTIFY: Zigzag twigs with paired thorns; glossy three-veined leaves; small red-brown drupes.

HABITAT / SEASON: Warm temperate and dry Asian valleys, orchards and scrub. Season: Fruit late summer-fall.

SURVIVAL USE: Ripe fruit is documented food fresh or dried; hard wood makes handles and pegs.

CAUTION: Unripe fruit is astringent; ownership and pesticide exposure matter.

LOOK-ALIKES: Other *Ziziphus* species vary in fruit size and thorn form.

TASKS: food fruit, handles, pegs

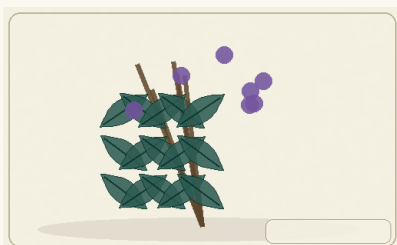
Verified images: POWO

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SEA BUCKTHORN

LAND FOOD



Stylized form diagram — not an identification photograph

Hippophae rhamnoides

IDENTIFY: Narrow silvery leaves; thorny branches; dense orange berries along stems.

HABITAT / SEASON: Eurasian river gravel, coastal dunes, steppe and Himalayan valleys. Season: Fruit late summer-fall.

SURVIVAL USE: Ripe berries are documented food, usually diluted or cooked; straight thorny branches make pegs and barriers.

CAUTION: Very acidic fruit can irritate stomach; thorns are severe.

LOOK-ALIKES: Russian olive has larger silvery leaves and oval mealy fruit.

TASKS: food fruit, pegs, brush

Verified images: POWO

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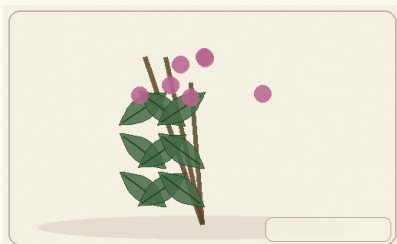
7

LAND-BASED EDIBLE PLANTS

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

WILD ONIONS AND GARLIC

LAND FOOD



Stylized form diagram — not an identification photograph

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

Verified images: POWO

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LAMBSQUARTERS / GOOSEFOOT

LAND FOOD



Stylized form diagram — not an identification photograph

Chenopodium album

IDENTIFY: Mealy blue-green triangular to diamond leaves; green clustered flowers; ridged stems.

HABITAT / SEASON: Disturbed soil, river deposits, fields and camp edges. Season: Spring through fall.

SURVIVAL USE: Young leaves and seeds are documented food after correct identification and cooking.

CAUTION: High oxalate and nitrate levels can accumulate; avoid large amounts and contaminated ground.

LOOK-ALIKES: Black nightshade has star-shaped flowers and berries; goosefoot flowers stay green and clustered.

TASKS: food green, food seed

Verified images: POWO

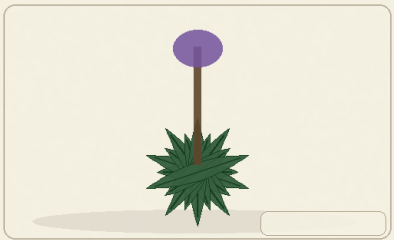
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LAND-BASED EDIBLE PLANTS

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

COMMON PURSLANE
LAND FOOD



Portulaca oleracea

IDENTIFY: Low reddish succulent stems; smooth fleshy leaves; tiny yellow flowers; clear sap.

HABITAT / SEASON: Disturbed warm ground, gardens, river deposits and camp edges worldwide. Season: Warm growing season.

SURVIVAL USE: Young leaves and stems are documented food and water-rich greens.
 CAUTION: High oxalate content; avoid large amounts with kidney disease and avoid contaminated ground.
 LOOK-ALIKES: Spurge often exude milky sap and are unsafe.
 TASKS: food green

Verified images: POWO
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FOOD HARVEST SCREEN

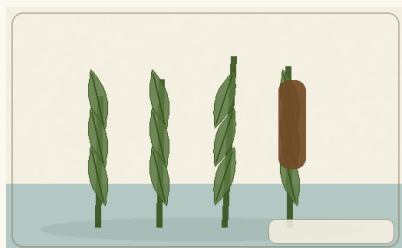
Confirm species, plant part and maturity. Check whether cooking, leaching, peeling, fermenting or repeated water changes are required. Reject mold, animal contamination, roadside plants, chemically treated ground and any food whose safe preparation cannot be completed with current water and fuel.

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

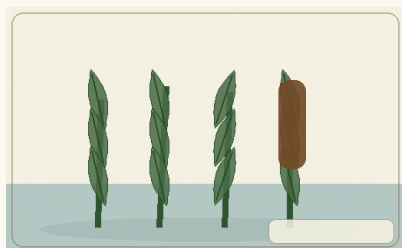
Verified images: POWO

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COMMON REED

AQUATIC FOOD



Stylized form diagram — not an identification photograph

Phragmites australis

IDENTIFY: Tall jointed canes; broad leaves with rough margins; large feathery purple-tan panicles.

HABITAT / SEASON: Marshes, riverbanks, lake edges and brackish wetlands worldwide. Season: Canes year-round; young shoots spring.

SURVIVAL USE: Dry canes make arrow shafts, fish spears, mats, thatch, containers and friction-fire spindles; young shoots have limited documented food use.

CAUTION: Invasive populations may be chemically treated. Cut cane edges are sharp; food use is excluded where water quality is uncertain.

LOOK-ALIKES: Giant reed is stouter; reed canary grass has a smaller seed head.

TASKS: arrow shaft, bow drill spindle, thatch, basketry, container

Verified images: POWO

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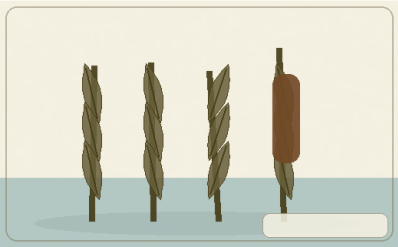
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WATER AND WETLAND EDIBLE PLANTS

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

BULRUSHES

AQUATIC FOOD



Schoenoplectus spp.

IDENTIFY: Round or triangular mostly leafless stems; small brown flower clusters near stem tips.

HABITAT / SEASON: Freshwater and brackish marshes, pond edges and slow rivers. Season: Young shoots spring; rhizomes and stems longer.

SURVIVAL USE: Rhizomes and young shoots have documented food use after correct species identification; stems make mats, cordage and basket frames.

CAUTION: Wetland contamination is a major risk. Several sedges are difficult to separate.

LOOK-ALIKES: Cattails have broad flat leaves and a brown cylinder.

TASKS: food shoot, food starch, basketry, cordage

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.

EPHEDRA / JOINTFIR

TRADITIONAL-USE



Stylized form diagram — not an identification photograph

Ephedra spp.

IDENTIFY: Green jointed nearly leafless stems; small cone-like reproductive structures; woody base.

HABITAT / SEASON: Asian, American and Mediterranean deserts and steppe. Season: Stems year-round.

SURVIVAL USE: Straight jointed stems make light tinder and have documented traditional medicinal history.

CAUTION: Ephedrine-type alkaloids can cause dangerous heart, blood pressure and drug effects. No self-dosing.

LOOK-ALIKES: Casuarina is a tree with many fine drooping branchlets and woody cones.

TASKS: tinder, medicine

Verified images: POWO

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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

Verified images: POWO

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MEDICINAL AND TRADITIONAL-USE PLANTS

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

GOLDEN ROOT

TRADITIONAL-USE

Rhodiola rosea and related spp.

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

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

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MEDICINAL RESTRAINT

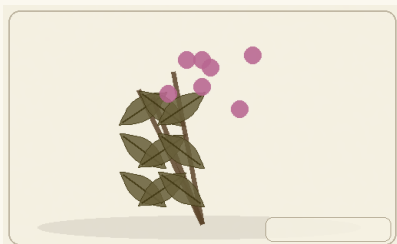
A plant can be culturally important and pharmacologically active yet still be the wrong survival choice. Unknown concentration, dehydration, pregnancy, allergies, chronic illness and medicine interactions can turn a traditional remedy into a second emergency.

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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DATURAS / THORN APPLES

POISON — AVOID



Stylized form diagram — not an identification photograph

Datura spp.

IDENTIFY: Large foul-smelling leaves; upright trumpet flowers; spiny egg-shaped capsules.

HABITAT / SEASON: Disturbed warm ground, dry riverbeds and fields worldwide. Season: Summer-fall.

SURVIVAL USE: No use.

CAUTION: All parts contain dangerous tropane alkaloids causing delirium, overheating, seizures and death.

LOOK-ALIKES: Brugmansia has hanging trumpets on woody shrubs and is also toxic.

TASKS: poison

Verified images: POWO

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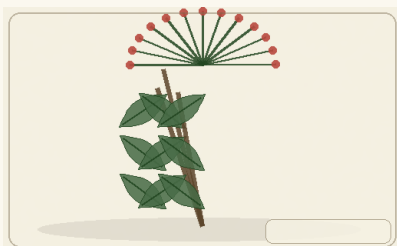
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POISONOUS PLANTS AND DANGEROUS LOOK-ALIKES

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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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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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	Arid acacias	Use dead, shed or pruned material first.
Arrow or dart shaft	Willows, Common reed	Use dead, shed or pruned material first.
Bow-drill hearth	Willows	Use dead, shed or pruned material first.
Bow-drill spindle	Common reed	Use dead, shed or pruned material first.
Tinder	Common juniper, Scots pine, Cattails, Ephedra / jointfir	Use dead, shed or pruned material first.
Fuel / coals	Tamarisks, Arid acacias, Scots pine	Use dead, shed or pruned material first.
Cordage / fiber	Willows, Bulrushes	Use dead, shed or pruned material first.
Basket / mat	Willows, Cattails, Common reed, Bulrushes	Use dead, shed or pruned material first.
Container / wrap	Common reed	Use dead, shed or pruned material first.
Fruit food	Chinese jujube, Sea buckthorn	Verify part, maturity and preparation.
Green food	Wild onions and garlic, Lambsquarters / goosefoot, Common purslane	Verify part, maturity and preparation.
Seed / nut	Lambsquarters / goosefoot	Verify part, maturity and preparation.
Root / starch	Cattails, Bulrushes	Verify part, maturity and preparation.
Traditional-use	Willows, Ephedra / jointfir, Mugworts, 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 China
 Missouri Botanical Garden and Harvard University Herbaria — East and Central Asian scientific flora
http://www.efloras.org/flora_page.aspx?flora_id=2

9. Flora of Pakistan
 University of Karachi / eFloras — Himalayan and South Asian flora
http://www.efloras.org/flora_page.aspx?flora_id=5

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.