

SAHARA OASES & SAHEL TRANSITION PLANT SURVIVAL GUIDE

Africa • USDA-EQUIVALENT ZONES 10-13 • KÖPPEN BWh / BSh

LAND + WATER

REGIONAL HABITAT ILLUSTRATION — NOT AN ID PHOTO

USEFUL

EDIBLE

MEDICINAL

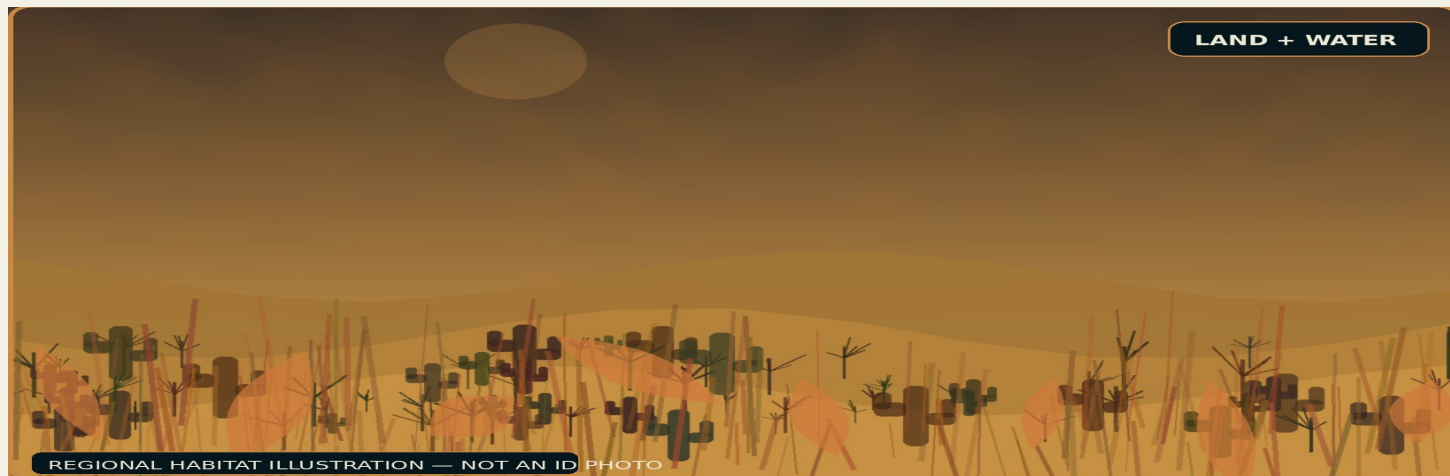
POISONOUS

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: Africa USDA-equivalent hardiness: 10-13 Köppen: BWh / BSh

Regional habitat: Hyper-arid desert, oasis, wadi and Sahel grass-shrub transition

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

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

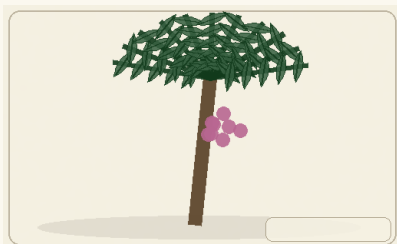
1. Deadfall and shed bark.
 2. Abundant annual greens and fruit.
 3. Pruned shoots and leaves.
 4. Small stems from common thickets.
 5. Roots, bark and whole plants only with permission and no safer substitute.

USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

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

DATE PALM

USEFUL MATERIAL



Stylized form diagram — not an identification photograph

Phoenix dactylifera

IDENTIFY: Feather leaves with spiny basal leaflets; single trunk; large hanging clusters of oblong dates.

HABITAT / SEASON: Oases, irrigated valleys and hot arid settlements. Season: Fruit late summer-fall; fiber year-round.

SURVIVAL USE: Ripe dates are high-energy food; leaflets and midribs provide weaving, thatch, cordage and splints.

CAUTION: Feral palms may be chemically treated or privately owned. Spiny petioles injure.

LOOK-ALIKES: Canary Island date palm has shorter, bulkier fruit and denser crown.

TASKS: food fruit, basketry, thatch, cordage

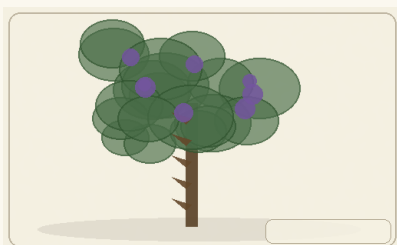
Verified images: POWO

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1

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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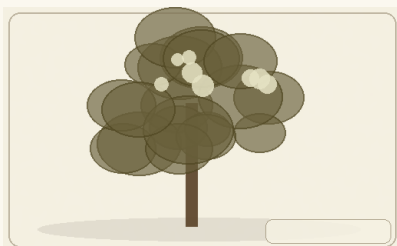
2

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

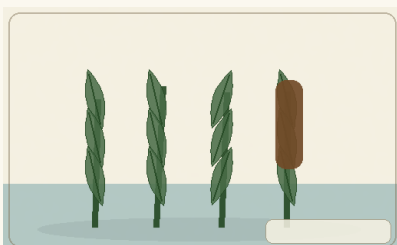
Verified images: POWO

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3

COMMON REED

USEFUL MATERIAL



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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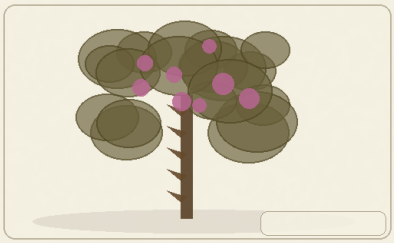
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USEFUL PLANTS FOR TOOLS, FIRE AND SHELTER

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

JUJUBES

USEFUL MATERIAL



Ziziphus spp.

IDENTIFY: Zigzag twigs with paired straight and hooked thorns; three-veined leaves; small drupes.

HABITAT / SEASON: Dry Africa, Asia and Mediterranean-type scrub. Season: Fruit summer-fall; wood year-round.

SURVIVAL USE: Ripe fruits of confirmed species are documented food; hard wood makes tool handles, pegs and small bows.
CAUTION: Unripe fruit can be astringent; thorn injuries are common. Species vary.
LOOK-ALIKES: Christ's-thorn and buffalo-thorn relatives require local confirmation.
TASKS: food fruit, bow wood, handles, pegs

Verified images: POWO

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MATERIAL SELECTION SCREEN

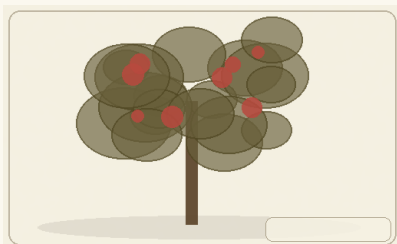
Before cutting, test straightness, grain, dryness, hidden rot, sap or smoke toxicity, and whether the species is protected. Match the material to the load: springy bow wood, straight shaft wood, soft dry hearth board, harder spindle, fibrous cordage, or resin-free cooking fuel.

LAND-BASED EDIBLE PLANTS

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

AFRICAN BAOBAB

LAND FOOD



Stylized form diagram — not an identification photograph

Adansonia digitata

IDENTIFY: Massive bottle-shaped trunk; palmate leaves; large hanging velvety fruits with dry powdery pulp.

HABITAT / SEASON: African savanna, dry woodland and village parkland. Season: Fruit dry season; leaves wet season; fiber year-round.

SURVIVAL USE: Fruit pulp and young leaves are documented food; bark fiber has cordage use; hollow or fallen wood can support containers and tinder.

CAUTION: Do not strip living bark without local authority. Seeds and leaves require normal food preparation.

LOOK-ALIKES: Other baobab species occur in Madagascar and Australia.

TASKS: food fruit, food green, cordage, container

Verified images: POWO

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SALTBUSHES

LAND FOOD



Stylized form diagram — not an identification photograph

Atriplex spp.

IDENTIFY: Gray or mealy alternate leaves; inconspicuous flowers; often salt-tolerant and sprawling.

HABITAT / SEASON: Deserts, salt flats, coasts and disturbed dry ground. Season: Leaves most of year.

SURVIVAL USE: Leaves of selected species are documented cooked greens; stems can fuel small fires and brush shelters.

CAUTION: High salt and oxalate content makes this a small-portion food, especially when dehydrated or kidney-impaired.

LOOK-ALIKES: Many gray desert shrubs resemble saltbush; fruiting bracts help confirm.

TASKS: food green, fuel, brush

Verified images: POWO

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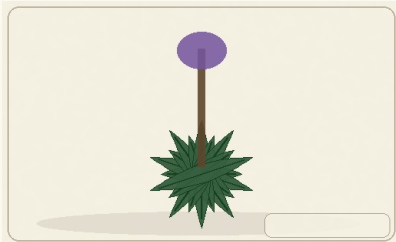
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LAND-BASED EDIBLE PLANTS

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

COMMON PURSLANE

LAND FOOD



Stylized form diagram — not an identification photograph

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

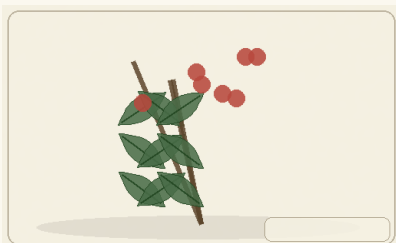
Verified images: POWO

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COMMON MALLOW

LAND FOOD



Stylized form diagram — not an identification photograph

Malva spp.

IDENTIFY: Round palmately veined leaves; five-petaled pink to lavender flowers; wheel-shaped segmented fruits.

HABITAT / SEASON: Disturbed ground, field edges and Mediterranean-type regions. Season: Cool to warm growing season.

SURVIVAL USE: Young leaves and immature fruits are documented cooked foods; mucilage thickens soups.

CAUTION: Avoid roadside contamination and rust-infected leaves.

LOOK-ALIKES: Hollyhock and hibiscus relatives share similar flowers; some are not equally palatable.

TASKS: food green, thickener

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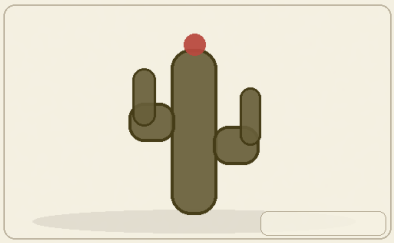
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LAND-BASED EDIBLE PLANTS

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

PRICKLY PEARS

LAND FOOD



Opuntia spp.

IDENTIFY: Flattened pads with clusters of fine glochids and often spines; showy flowers; fleshy fruits.

HABITAT / SEASON: Dry Americas, disturbed warm regions and some Mediterranean/African landscapes. Season: Fruit summer-fall; young pads seasonal.

SURVIVAL USE: Ripe fruit and properly de-spined young pads of confirmed species are documented foods; dry woody joints can support fuel.

CAUTION: Invisible glochids embed in skin, eyes and mouth. Some fruits are insipid or seedy; avoid sprayed invasive stands.

LOOK-ALIKES: Chollas have cylindrical joints.

TASKS: food fruit, food pad, fuel

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FOOD HARVEST SCREEN

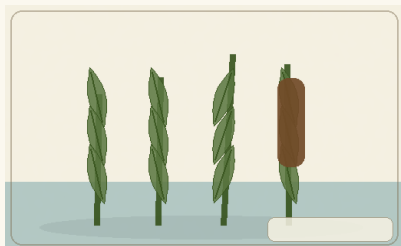
Confirm species, plant part and maturity. Check whether cooking, leaching, peeling, fermenting or repeated water changes are required. Reject mold, animal contamination, roadside plants, chemically treated ground and any food whose safe preparation cannot be completed with current water and fuel.

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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BULRUSHES

AQUATIC FOOD



Stylized form diagram — not an identification photograph

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

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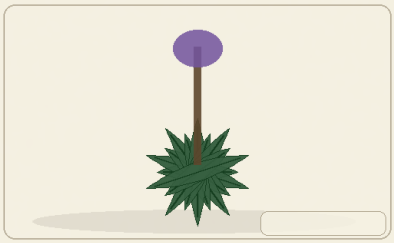
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WATER AND WETLAND EDIBLE PLANTS

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

GLASSWORTS
AQUATIC FOOD



Salicornia spp.

IDENTIFY: Leafless-looking jointed succulent stems; green turning red; tiny flowers embedded in segments.

HABITAT / SEASON: Salt marshes, saline lake margins and tidal flats worldwide. Season: Young shoots spring-summer.

SURVIVAL USE: Tender tips are documented cooked greens and salt seasoning.
 CAUTION: Very salty; use small portions and avoid sewage-contaminated marshes.
 LOOK-ALIKES: Other succulent chenopods differ in branching and fruit; none should be eaten from polluted sites.
 TASKS: food green

Verified images: POWO
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AQUATIC HARVEST SCREEN

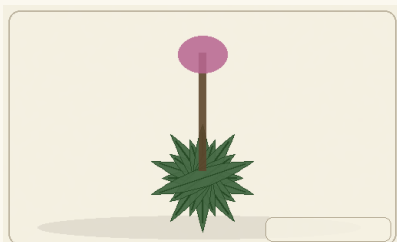
Check five separate questions: Is the species correct? Is the plant part edible? Is the water free of sewage, mining or farm runoff? Are parasites or harmful algal blooms plausible? Is entry and exit from the water safe? A “yes” to the plant and a “no” to the water still means do not eat.

MEDICINAL AND TRADITIONAL-USE PLANTS

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

AFRICAN ALOES

TRADITIONAL-USE



Stylized form diagram — not an identification photograph

Aloe spp.

IDENTIFY: Fleshy rosette leaves with toothed margins and spikes of tubular red, orange or yellow flowers.

HABITAT / SEASON: African drylands, rocky slopes and fynbos. Season: Leaves year-round; flowers seasonal.

SURVIVAL USE: Clear inner gel of a few correctly identified species has documented external soothing use; dry stalks are tinder.

CAUTION: Yellow latex under the rind is a strong laxative and can be dangerous. Species vary; do not eat aloe in the field.

LOOK-ALIKES: Agaves are New World plants with fibrous leaves and different flowers.

TASKS: medicine, tinder

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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.

EPHEDRA / JOINTFIR

TRADITIONAL-USE



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

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MEDICINAL RESTRAINT

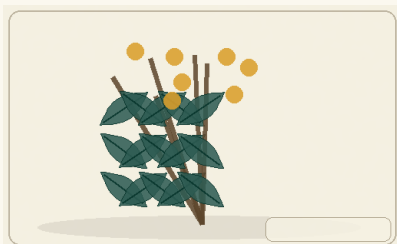
A plant can be culturally important and pharmacologically active yet still be the wrong survival choice. Unknown concentration, dehydration, pregnancy, allergies, chronic illness and medicine interactions can turn a traditional remedy into a second emergency.

POISONOUS PLANTS AND DANGEROUS LOOK-ALIKES

High-consequence species to learn before gathering starts.

OLEANDER

POISON — AVOID



Stylized form diagram — not an identification photograph

Nerium oleander

IDENTIFY: Evergreen shrub with narrow leathery leaves in pairs or whorls and pink, white or red five-petaled flowers.

HABITAT / SEASON: Mediterranean and arid-region waterways, wadis and planted settlements. Season: Year-round foliage.

SURVIVAL USE: No use.

CAUTION: All parts contain potent cardiac glycosides; smoke, skewers and contaminated water can be dangerous.

LOOK-ALIKES: Yellow oleander has different fruit but similar cardiac toxicity.

TASKS: poison

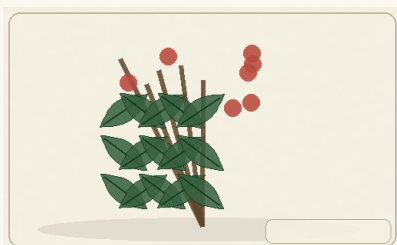
Verified images: POWO

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CASTOR BEAN

POISON — AVOID



Stylized form diagram — not an identification photograph

Ricinus communis

IDENTIFY: Large star-shaped palmately lobed leaves; spiny capsules; glossy mottled seeds.

HABITAT / SEASON: Warm disturbed ground, riverbanks and tropical/subtropical waste areas. Season: Growing season; seeds seasonal.

SURVIVAL USE: No survival food or medicine use. Oil extraction is industrial, not a field process.

CAUTION: Chewed seeds can release ricin and cause severe or fatal poisoning.

LOOK-ALIKES: Jatropha has similar lobed leaves but different fruit; it is also toxic.

TASKS: poison

Verified images: POWO

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POISONOUS PLANTS AND DANGEROUS LOOK-ALIKES

High-consequence species to learn before gathering starts.

DATURAS / THORN APPLES

POISON — AVOID



Datura spp.

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

Stylized form diagram — not an identification photograph

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

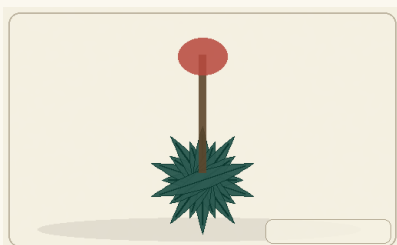
Verified images: POWO

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DESERT ROSE

POISON — AVOID



Adenium obesum

IDENTIFY: Swollen succulent trunk, leathery leaves near branch tips and large pink-red trumpet flowers; milky sap.

Stylized form diagram — not an identification photograph

HABITAT / SEASON: East African and Arabian dry bushland and rocky slopes. Season: Year-round stems; flowers seasonal.

SURVIVAL USE: No food use.

CAUTION: Milky sap contains cardiac glycosides and has been used as arrow poison. Avoid skin, eye and wound contact.

LOOK-ALIKES: Plumeria has milky sap and flowers but lacks the swollen caudex.

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, Jujubes	Use dead, shed or pruned material first.
Arrow or dart shaft	Common reed	Use dead, shed or pruned material first.
Bow-drill hearth	No reliable candidate among the priority profiles.	Use a different technology or carried tool; do not force unsuitable plant material.
Bow-drill spindle	Common reed	Use dead, shed or pruned material first.
Tinder	Cattails, African aloes, Mugworts, Ephedra / jointfir	Use dead, shed or pruned material first.
Fuel / coals	Arid acacias, Tamarisks, Saltbushes, Prickly pears	Use dead, shed or pruned material first.
Cordage / fiber	Date palm, African baobab, Bulrushes	Use dead, shed or pruned material first.
Basket / mat	Date palm, Common reed, Cattails, Bulrushes	Use dead, shed or pruned material first.
Container / wrap	Common reed, African baobab	Use dead, shed or pruned material first.
Fruit food	Date palm, Jujubes, African baobab, Prickly pears	Verify part, maturity and preparation.
Green food	African baobab, Saltbushes, Common purslane, Common mallows	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, Bulrushes	Verify part, maturity and preparation.
Traditional-use	African aloes, Mugworts, Ephedra / jointfir	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. African Plant Database

Conservatoire et Jardin botaniques de Geneve and SANBI — African taxonomy and distribution

<https://africanplantdatabase.ch/>

9. PlantZAfrica

South African National Biodiversity Institute — African species profiles and uses

<https://pza.sanbi.org/>

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.