

GREAT KAROO PLANT FIELD GUIDE

South African semi-arid interior • Season 12



TREES

EDIBLE

TOXIC

TRADITION

KNOWLEDGE • SKILL • DISCIPLINE • SURVIVAL

Independent educational field guide • verify current laws, local conditions, and expert guidance

REGION AT A GLANCE

Drought-adapted trees, edible succulents, livestock-toxic plants and documented Karoo traditional-use species.

Filming region: Great Karoo semi-arid interior, South Africa

Alone season(s): 12

Ecology: Nama-Karoo and adjacent semi-arid shrubland, rocky koppies, dry watercourses, farm disturbance and succulent thicket transition

The Great Karoo is a semi-arid landscape where plant distribution follows water, soil depth, rock type and grazing history. Woody trees cluster along drainage lines and farm water points, while low shrubs, grasses and succulents dominate open ground. Many species survive drought by storing water or producing potent defensive chemicals. Several of the region's most dangerous plants are well known because they poison livestock.

FIELD PRIORITIES

- Do not equate succulent with safe; several Karoo succulents cause serious poisoning.
- Use thorns, leaf arrangement, bark and pods together to identify thorn trees.
- Avoid harvesting protected or slow-growing succulents, bulbs and medicinal roots.
- Treat all milky sap, tobacco-like leaves and iris-like bulbs as hazardous until identified.
- Water stress concentrates salts, oxalates and plant toxins; published edibility does not guarantee safe emergency use.

NON-NEGOTIABLE PLANT SAFETY

Never consume a plant from one photo, one common name or one guide. Positive identification requires multiple traits and a reliable regional source. Do not experiment with medicinal dosing. For suspected poisoning, remove plant material from the mouth, preserve a sample or photo, contact emergency services or a poison centre, and do not induce vomiting unless directed.

POSITIVE IDENTIFICATION PROTOCOL

Use a repeatable process. Confidence is built from independent features, not intuition.

1**1. PLACE**

Record habitat, moisture, slope, elevation and nearby dominant plants.

2**2. FORM**

Decide tree, shrub, vine, herb, grass-like plant, fern or succulent.

3**3. LEAVES**

Check arrangement, shape, edge, veins, hairs, odor and underside.

4**4. STEM & BARK**

Look for thorns, sap, pith, lenticels, buds, twig color and texture.

5**5. FLOWER / FRUIT**

Count petals, inspect clusters, seed structures and fruit attachment.

6**6. CROSS-CHECK**

Match at least three reliable sources and rule out every dangerous look-alike.

AUTOMATIC STOP LIST

- No tasting to identify.
- No wetland roots.
- No unknown white umbels.
- No unknown bulbs.
- No unknown milky sap.
- No medicinal experiments.

DOCUMENTATION KIT

Photograph whole plant, leaf top and bottom, stem, bark, flowers, fruit and habitat. Add a scale object. Record date, location and confidence. Never let an AI label overrule a regional botanist.

TREES AND WOODY PLANTS

Identification, practical material properties and conservation cautions.

SWEET THORN

TREE / WOODY

Vachellia karroo

IDENTIFY

Thorn tree with paired straight white spines, feathery twice-compound leaves, round golden flower heads and dark curved pods; bark becomes rough and dark.

HABITAT & SEASON

Dry riverbeds, drainage lines, old fields and water points. Season: Year-round wood; flowers spring-summer

DOCUMENTED USE

Hard wood for durable stakes, tool handles and excellent fuel. Gum has documented food and traditional uses when correctly sourced.

CAUTION

Thorns cause deep punctures. Do not eat pods or browse without local knowledge; cyanogenic risk and livestock effects vary.

LOOK-ALIKES

Other *Vachellia* species differ in spine form, pod shape and gland placement.

1

KAREE

TREE / WOODY

Searsia lancea

IDENTIFY

Evergreen tree with narrow leathery three-part leaves, gray-brown bark and small yellow-brown fruits in clusters.

HABITAT & SEASON

Dry watercourses, rocky slopes and farm margins. Season: Year-round

DOCUMENTED USE

Tough wood for handles, pegs and fuel; dense foliage can provide shade and wind reduction.

CAUTION

Searsia sap may irritate sensitive skin. Fruit edibility varies among species; this guide does not recommend casual consumption.

LOOK-ALIKES

Pepper trees and other three-leaved shrubs may resemble karee; leaf texture and fruit structure matter.

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TREES AND WOODY PLANTS

Identification, practical material properties and conservation cautions.

WILD OLIVE

TREE / WOODY

Olea europaea subsp. africana

IDENTIFY

Small evergreen tree with opposite narrow gray-green leaves, silvery scales beneath, tiny white flowers and small purple-black drupes.

HABITAT & SEASON

Rocky slopes, kloofs and sheltered drainage lines. Season: Year-round leaves; fruit variable

DOCUMENTED USE

Dense hard wood for pegs, handles and small durable implements. Foliage is browsed by wildlife.

CAUTION

Fruit is bitter and not equivalent to cultivated table olives without processing. Do not ingest leaves as medicine without guidance.

LOOK-ALIKES

Karee has three leaflets; wild olive leaves are single and opposite.

3

BUFFALO THORN

TREE / WOODY

Ziziphus mucronata

IDENTIFY

Zigzag twigs with paired thorns, one straight and one hooked; glossy three-veined leaves; small yellow-green flowers and reddish-brown fruits.

HABITAT & SEASON

Dry river courses, thickets and rocky slopes. Season: Fruit summer to autumn

DOCUMENTED USE

Hard flexible wood for handles and strong pegs. Ripe fruit has documented food and cultural uses.

CAUTION

Hooked thorns snag eyes, skin and fabric. Seeds are hard; fruit quality varies and must be positively identified.

LOOK-ALIKES

Other *Ziziphus* species differ in fruit size and leaf hairiness.

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TREES AND WOODY PLANTS

Identification, practical material properties and conservation cautions.

SHEPHERD'S TREE

TREE / WOODY

Boscia albitrunca

IDENTIFY

Evergreen tree with pale trunk, small leathery leaves often clustered on short shoots, greenish flowers and yellow-brown fruits.

HABITAT & SEASON

Open plains, dry savanna margins and deep sandy soils in the broader Karoo region. Season: Year-round

DOCUMENTED USE

Dense shade, hard wood and documented traditional food use of roots or fruit in some regions.

CAUTION

Root harvest can kill the tree and may be illegal or culturally inappropriate. Do not dig without local authority and expert preparation knowledge.

LOOK-ALIKES

Young karee and other evergreen shrubs lack the characteristic pale trunk and clustered leaves.

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SPEKBOOM

TREE / WOODY

Portulacaria afra

IDENTIFY

Succulent shrub or small tree with reddish stems and small opposite round fleshy leaves; tiny pink flowers after favorable rain.

HABITAT & SEASON

Rocky slopes and succulent thicket, especially toward the eastern Great Karoo. Season: Year-round

DOCUMENTED USE

Leaves are documented edible with a tart flavor and can add moisture and acidity in small amounts. Flexible branches are useful for light screens.

CAUTION

Do not confuse with jade plants or toxic Tylecodon species. Large quantities may cause stomach upset; habitat and legal status vary.

LOOK-ALIKES

Jade plant has larger thicker leaves; Tylecodon often has alternate leaves and thick peeling stems.

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DOCUMENTED EDIBLE PLANTS

Documented foods only. Positive identification and safe preparation remain essential.

SOUR FIGDOCUMENTED EDIBLE

Carpobrotus edulis

IDENTIFY
Ground-hugging succulent with large triangular cross-section leaves, bright yellow to pink daisy-like flowers and fleshy fig-like fruits.

HABITAT & SEASON
Sandy or rocky disturbed ground, roadsides and some Karoo settlements; more common toward coastal and southern margins. Season: Fruit summer to autumn

DOCUMENTED USE
Ripe fruit and leaf preparations have documented food and traditional uses.

CAUTION
Location matters: several *Carpobrotus* species hybridize. Avoid plants exposed to road salt, herbicide or livestock waste. Leaves are very salty.

LOOK-ALIKES
Mesembryanthemum species are smaller and may have bladder-like leaf cells.

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PRICKLY PEARDOCUMENTED EDIBLE

Opuntia ficus-indica

IDENTIFY
Large flattened pads with clusters of fine glochids and sometimes spines; showy flowers; oval red, orange or yellow fruits.

HABITAT & SEASON
Farm edges, roadsides, abandoned homesteads and dry slopes; invasive in parts of South Africa. Season: Fruit summer to autumn; pads year-round

DOCUMENTED USE
Ripe fruit and properly prepared young pads are documented food. Fruits can provide moisture.

CAUTION
Invisible glochids embed in skin, eyes and mouth. Remove them with proper tools and never handle bare-handed. Check local invasive-species rules.

LOOK-ALIKES
Other *Opuntia* species vary in spine density and fruit quality.

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DOCUMENTED EDIBLE PLANTS

Documented foods only. Positive identification and safe preparation remain essential.

COMMON PURSLANE

DOCUMENTED EDIBLE

Portulaca oleracea

IDENTIFY

Low spreading herb with smooth reddish stems, small opposite or clustered succulent leaves and tiny yellow flowers.

HABITAT & SEASON

Disturbed soil, gardens, livestock areas and seasonally moist flats. Season: Warm season after rain

DOCUMENTED USE

Young leaves and stems are widely documented food, usually cooked or eaten in modest amounts.

CAUTION

High oxalate content; avoid large quantities with kidney disease. Do not collect from contaminated kraals, roads or chemical-treated ground.

LOOK-ALIKES

Spurges may be low and succulent but exude milky sap; purslane sap is clear.

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OLD MAN SALTBUSH

DOCUMENTED EDIBLE

Atriplex nummularia

IDENTIFY

Gray-green shrub with broad triangular to oval mealy leaves, inconspicuous flowers and salt-tolerant growth.

HABITAT & SEASON

Farm plantings, saline flats and disturbed dry ground; introduced in South Africa. Season: Year-round leaves

DOCUMENTED USE

Leaves are documented forage and have limited food use after correct identification and preparation.

CAUTION

High salt and oxalate levels make this a small-portion food only. Avoid if dehydrated, kidney-impaired or collecting from saline wastewater areas.

LOOK-ALIKES

Native Atriplex and other gray shrubs require flowers/fruits for confident species identification.

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DOCUMENTED EDIBLE PLANTS

Documented foods only. Positive identification and safe preparation remain essential.

KAROO CROSSBERRY

DOCUMENTED EDIBLE

Grewia robusta

IDENTIFY
Shrub with rough toothed leaves, pink to mauve star-like flowers and small lobed reddish-brown fruits.

HABITAT & SEASON
Rocky slopes, dry thicket and Karoo scrub. Season: Fruit summer to autumn after rain

DOCUMENTED USE
Ripe fruits are documented edible in southern African ethnobotanical sources.

CAUTION
Positive species identification is essential; fruit yield is irregular and wildlife depends on it.

LOOK-ALIKES
Other *Grewia* species differ in leaf hair and fruit lobing.

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BLUEBUSH

DOCUMENTED EDIBLE

Diospyros lycioides

IDENTIFY
Many-stemmed shrub or small tree with narrow blue-green leaves, small cream bell-shaped flowers and rounded reddish to dark fruits.

HABITAT & SEASON
Dry watercourses, rocky scrub and open woodland in the broader Karoo. Season: Fruit late summer to autumn

DOCUMENTED USE
Fully ripe fruit is documented food in parts of southern Africa; hard wood can serve small implements.

CAUTION
Unripe fruits are strongly astringent. Several *Diospyros* species are similar; confirm leaf, flower and fruit traits.

LOOK-ALIKES
Lycium shrubs often have spines and tubular purple flowers; bluebush lacks paired acacia thorns.

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TOXIC PLANTS - AVOID

High-consequence species to recognize before any gathering begins.

YELLOW TULP

TOXIC - AVOID

Moraea pallida

IDENTIFY

Iris-like plant with narrow sword leaves, underground corm and yellow to cream three-part flowers with patterned inner segments.

HABITAT & SEASON

Open veld, overgrazed ground and seasonally moist flats. Season: Flowers spring after rain

DOCUMENTED USE

No food use. Learn before digging any corm or collecting onion-like leaves.

CAUTION

Highly poisonous to livestock and people; cooking does not make corms safe. Symptoms can include severe digestive and cardiovascular effects.

LOOK-ALIKES

Edible bulbs and wild onions differ in flower structure and odor; expert identification is mandatory.

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KRIMPSIEKTE PLANT

TOXIC - AVOID

Tylecodon wallichii

IDENTIFY

Succulent shrub with thick knobby stems, peeling bark, seasonal fleshy leaves and tall flower stalks.

HABITAT & SEASON

Rocky Karoo slopes and dry shrubland. Season: Leaves mainly cool/wet season

DOCUMENTED USE

No food or medicinal use.

CAUTION

Contains cumulative bufadienolide toxins that cause krimpsiekte in livestock and serious heart effects. Dried plant material remains dangerous.

LOOK-ALIKES

Some Cotyledon and Crassula species are similar; all unknown thick-leaved succulents should be treated as unsafe.

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TOXIC PLANTS - AVOID

High-consequence species to recognize before any gathering begins.

PIG'S EAR / PLAKKIE

TOXIC - AVOID

Cotyledon orbiculata

IDENTIFY

Succulent shrub with opposite thick rounded gray-green leaves often edged red and hanging orange-red tubular flowers.

HABITAT & SEASON

Rocky slopes and dry thicket, including parts of the Karoo. Season: Year-round leaves

DOCUMENTED USE

No food use. Although it has published traditional external uses, this guide treats it as toxic.

CAUTION

Contains bufadienolides and can poison livestock and people. Do not ingest or use as improvised medicine.

LOOK-ALIKES

Spekboom leaves are much smaller and stems red; *Cotyledon* leaves are large, thick and opposite.

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TREE TOBACCO

TOXIC - AVOID

Nicotiana glauca

IDENTIFY

Tall shrub or small tree with smooth blue-green leaves and clusters of long yellow tubular flowers.

HABITAT & SEASON

Roadsides, dry riverbeds, disturbed farms and waste ground; invasive. Season: Most of year in warm sites

DOCUMENTED USE

No use. Removal should follow invasive-species guidance and use gloves.

CAUTION

All parts contain toxic anabasine-type alkaloids. Leaves have caused fatal poisonings when mistaken for edible greens.

LOOK-ALIKES

Wild tobacco relatives may have sticky hairy leaves and different flowers; none should be eaten.

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TRADITIONAL-USE PLANTS

Published cultural or historical uses - not prescriptions or dosing advice.

BITTER ALOE

TRADITIONAL-USE

Aloe ferox

IDENTIFY

Large single rosette of thick spiny-edged leaves on a trunk, with tall branched spikes of red-orange flowers.

HABITAT & SEASON

Rocky slopes and dry hills, especially southern and eastern Karoo margins. Season: Flowers winter

DOCUMENTED USE

A documented South African medicinal and commercial species; leaf gel and bitter latex have very different properties.

CAUTION

Do not self-administer latex as a laxative; it can cause severe cramping, dehydration and drug interactions. Harvest may be regulated.

LOOK-ALIKES

Other aloes differ in leaf arrangement, spotting and flower branching.

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CANCER BUSH

TRADITIONAL-USE

Lessertia frutescens

IDENTIFY

Soft gray-green shrub with compound leaves, bright red-orange pea flowers and inflated papery pods.

HABITAT & SEASON

Dry Karoo scrub, roadsides and disturbed veld. Season: Flowers mainly spring to summer

DOCUMENTED USE

Widely documented in Khoi, San and South African herbal traditions and sold commercially.

CAUTION

It is not a proven cure for cancer. Internal use may interact with medicines and chronic disease; no dosing is provided.

LOOK-ALIKES

Other pea-family shrubs share red flowers; the inflated pods and silky gray leaves are key.

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TRADITIONAL-USE PLANTS

Published cultural or historical uses - not prescriptions or dosing advice.

KATTEKRUIE

TRADITIONAL-USE

Ballota africana

IDENTIFY

Aromatic gray woolly shrub with opposite scalloped leaves and small pink-purple flowers in rings around the stems.

HABITAT & SEASON

Rocky slopes, disturbed ground and dry shrubland. Season: Spring through autumn

DOCUMENTED USE

Documented South African traditional uses include cough, cold and external preparations.

CAUTION

Avoid internal use during pregnancy or with medications. Strong aromatic herbs can irritate stomach and skin.

LOOK-ALIKES

Other mint-family shrubs have square stems and opposite leaves; flower rings and woolly texture help separate this species.

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WILD ROSEMARY

TRADITIONAL-USE

Eriocephalus africanus

IDENTIFY

Rounded aromatic shrub with narrow gray leaves, small white daisy-like flowers and cottony seed heads.

HABITAT & SEASON

Dry rocky slopes and open Karoo shrubland. Season: Flowers winter to spring

DOCUMENTED USE

Published traditional uses include aromatic cooking, bedding, washes and cold remedies.

CAUTION

Essential oils and concentrated teas can cause irritation or interact with medicines. Do not confuse with true culinary rosemary.

LOOK-ALIKES

Several *Eriocephalus* species occur; flower heads and leaf hair require close inspection.

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SEASONAL AND HABITAT PLANNING

Availability is local and variable. Use these patterns to plan observation, not to assume harvest.

PHASE	WHAT TO EXPECT	FIELD EMPHASIS
SPRING / EARLY RAINS	New shoots, flowers, catkins and wetland hazards become visible.	Learn leaves and flowers before fruit; avoid roots and bulbs.
SUMMER / PEAK GROWTH	Maximum foliage; most edible greens and traditional-use herbs are identifiable.	Photograph multiple traits; note habitat and abundance.
AUTUMN / FRUIT	Most berries, hips, cones and seed structures mature.	Confirm entire plant; leave food for wildlife and regeneration.
WINTER / DORMANT	Evergreen shrubs, bark, twigs, cones and persistent fruit remain.	Rely on woody traits; snow and frost obscure herb identification.

HABITAT FORECAST

HABITAT	LIKELY PLANTS	PRIMARY RISK
Dry ridge / exposed slope	Sweet thorn, Karee, Wild olive	Windthrow, fire, protected slow-growing plants
Moist forest / sheltered valley	Buffalo thorn, Shepherd's tree, Spekboom	Look-alikes, falling timber, poor visibility
Wetland / peat / stream edge	Yellow tulip, Krimpsiekte plant	Water hemlock or toxic bog shrubs; unstable ground
Open disturbance / camp edge	Sour fig, Prickly pear, Common purslane, Old man saltbush	Contamination, invasive species, human chemicals

SEASONAL REALITY

A late frost, drought, fire, flood, browsing pressure or poor flowering year can remove an expected food source. Build plans around several independent resources and assume that every crop may fail.

LOOK-ALIKE AND HAZARD MATRIX

The most important plant knowledge is often knowing what not to touch, taste or dig.

HAZARD	FIELD CUE	RULE
Yellow tulip	Iris-like plant with narrow sword leaves, underground corm and yellow to cream three-part flowers with patterned inner segments.	Highly poisonous to livestock and people; cooking does not make corms safe. Symptoms can include severe digestive and cardiovascular effects.
Krimpsiekte plant	Succulent shrub with thick knobbly stems, peeling bark, seasonal fleshy leaves and tall flower stalks.	Contains cumulative bufadienolide toxins that cause krimpsiekte in livestock and serious heart effects. Dried plant material remains dangerous.
Pig's ear / plakkie	Succulent shrub with opposite thick rounded gray-green leaves often edged red and hanging orange-red tubular flowers.	Contains bufadienolides and can poison livestock and people. Do not ingest or use as improvised medicine.
Tree tobacco	Tall shrub or small tree with smooth blue-green leaves and clusters of long yellow tubular flowers.	All parts contain toxic anabasine-type alkaloids. Leaves have caused fatal poisonings when mistaken for edible greens.

SUSPECTED POISONING

1. Stop exposure.

2. Remove material from mouth; rinse.

3. Do not induce vomiting.

4. Save a sample/photo.

5. Call emergency services or poison control.

6. Monitor breathing and consciousness.

HARVEST ETHICS

Take the common, leave the rare.

Never girdle a tree.

Avoid roots and whole plants.

Leave wildlife food.

Follow Indigenous and protected-area rules.

Restore disturbed ground.

SOURCES, SCOPE AND LIMITATIONS

Taxonomy and regional occurrence change. Verify the current name, distribution and legal status before publication or field use.

1. PlantZAfrica

South African National Biodiversity Institute - regional species profiles

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

2. Red List of South African Plants

South African National Biodiversity Institute - distribution and conservation

<http://redlist.sanbi.org/>

3. Plants of the World Online

Royal Botanic Gardens, Kew - taxonomy and distribution

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

4. People's Plants: A Guide to Useful Plants of Southern Africa

Ben-Erik van Wyk and Nigel Gericke; Briza Publications - ethnobotany

5. Plant Poisonings and Mycotoxinoses of Livestock in Southern Africa

Kellerman, Coetzer, Naude and Botha; agricultural toxicology literature - toxicology

<https://www.arc.agric.za/>

6. South African invasive species resources

Department of Forestry, Fisheries and the Environment - invasive species

<https://www.dffe.gov.za/>

7. Agricultural Research Council plant and forage resources

Agricultural Research Council, South Africa - agriculture and forage

<https://www.arc.agric.za/>

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