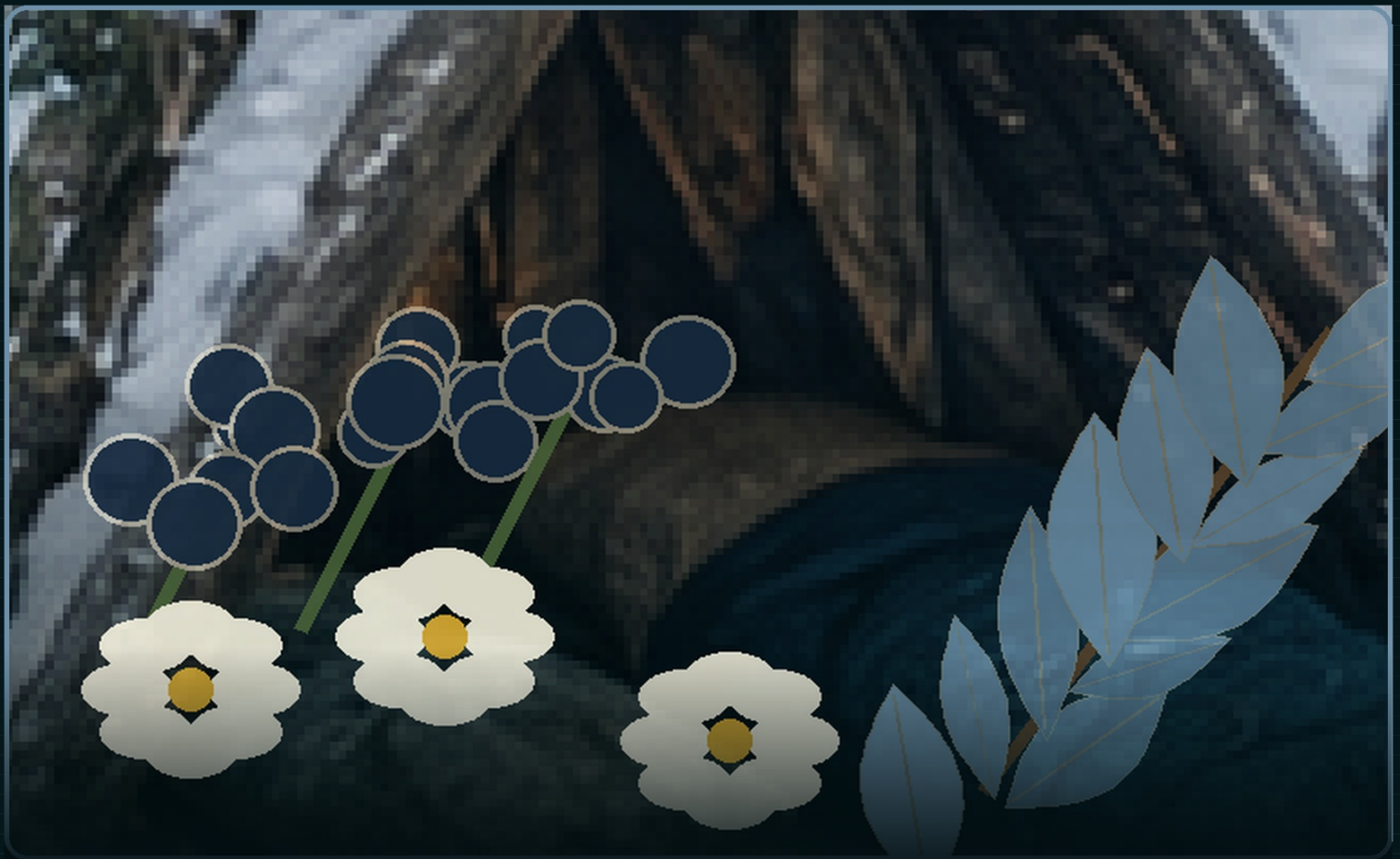


RICHARDSON MOUNTAINS PLANT FIELD GUIDE

Arctic mountain tundra • Season 13



TREES

EDIBLE

TOXIC

TRADITION

KNOWLEDGE • SKILL • DISCIPLINE • SURVIVAL

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

REGION AT A GLANCE

Treeline spruce, Arctic shrubs, persistent berries, alpine greens and high-consequence toxic plants.

Filming region: Richardson Mountains and adjacent Arctic valleys, Northwest Territories, Canada

Alone season(s): 13

Ecology: Arctic mountain tundra, taiga treeline valleys, dwarf-shrub heath, gravel bars, snowbeds and alpine slopes

The Richardson Mountains rise from the taiga-tundra transition into exposed Arctic alpine terrain. True trees are mostly restricted to sheltered valleys and lower slopes; above them, dwarf birch, willow, heath shrubs and mat-forming plants dominate. Wind, snowbeds, permafrost and slope aspect control plant distribution. The growing season is short, and many edible species produce small, irregular crops.

FIELD PRIORITIES

- Recognize that treeline is patchy: a small spruce may be very old and ecologically important.
- Use leaf undersides and flower structure to separate Labrador tea from bog rosemary.
- Keep wet-valley roots off the menu; water hemlock can occur in northern drainage systems.
- Harvest alpine plants sparingly or not at all; mats and cushions recover extremely slowly.
- Document location, elevation, slope aspect and habitat for every identification.

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.

WHITE SPRUCE

TREE / WOODY

Picea glauca

IDENTIFY

Sharp single needles with a pungent odor when crushed, flexible hanging cones and scaly gray bark; forms treeline stands in sheltered valleys.

HABITAT & SEASON

Lower valleys, river terraces and protected south-facing slopes. Season: Year-round

DOCUMENTED USE

Strong poles, roots, carving wood and fuel. Presence often indicates relatively sheltered, better-drained ground.

CAUTION

Treeline trees grow slowly and are vulnerable to cutting. Banks and permafrost can undermine roots.

LOOK-ALIKES

Black spruce is narrower with shorter needles and smaller persistent cones.

1

BLACK SPRUCE

TREE / WOODY

Picea mariana

IDENTIFY

Narrow spire crown, short four-sided needles and small dark cones that remain on branches.

HABITAT & SEASON

Cold peatland pockets and lower poorly drained valleys near the mountain front. Season: Year-round

DOCUMENTED USE

Small poles, sheltered dead twigs and resinous fuel.

CAUTION

Shallow roots create windthrow hazards; smoky fires require ventilation.

LOOK-ALIKES

White spruce is fuller and favors better-drained terraces.

2

TREES AND WOODY PLANTS

Identification, practical material properties and conservation cautions.

DWARF BIRCH

TREE / WOODY

Betula glandulosa

IDENTIFY

Low many-branched shrub with small round toothed leaves, resin-dotted twigs and tiny catkins.

HABITAT & SEASON

Tundra heaths, moist slopes and snow-catching hollows. Season: Spring through fall leaves; twigs year-round

DOCUMENTED USE

Fine twigs for light brush, bedding and small bundles. Dense patches can trap snow and reduce wind at ground level.

CAUTION

Do not strip broad areas; shrubs grow slowly and stabilize soil.

LOOK-ALIKES

Dwarf willows often have narrower leaves; alder has larger cone-like catkins.

3

FELTLEAF WILLOW

TREE / WOODY

Salix alaxensis

IDENTIFY

Tall shrub with long leaves dark above and densely white-felted beneath, plus flexible yellow-brown twigs.

HABITAT & SEASON

River valleys, gravel bars and moist lower slopes. Season: Spring through fall leaves; twigs year-round

DOCUMENTED USE

Straight rods for stakes, wattle, baskets and repair splints.

CAUTION

Flood edges and avalanche channels are hazardous. Do not self-dose bark.

LOOK-ALIKES

Other willows lack the strongly white-woolly underside.

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TREES AND WOODY PLANTS

Identification, practical material properties and conservation cautions.

GRAYLEAF WILLOW

TREE / WOODY

Salix glauca

IDENTIFY

Low to medium shrub with gray-green oval to lance-shaped leaves, often silky beneath, and catkins on short shoots.

HABITAT & SEASON

Tundra slopes, stream terraces and alpine shrub belts. Season: Growing season leaves; twigs year-round

DOCUMENTED USE

Flexible twigs for small lashings, brush screens and basketry. Shrub height can indicate snow depth and exposure.

CAUTION

Species-level willow identification is difficult; avoid medicinal use based on a general willow label.

LOOK-ALIKES

Feltleaf willow is taller with distinctly white-felted leaf undersides.

5

GREEN ALDER

TREE / WOODY

Alnus viridis subsp. crispa

IDENTIFY

Multi-stem shrub with oval sharply toothed leaves, sticky young shoots and persistent woody cone-like female catkins.

HABITAT & SEASON

Avalanche tracks, stream valleys, moist slopes and treeline thickets. Season: Spring through fall leaves; stems year-round

DOCUMENTED USE

Straight stems for wattle, racks and light poles; alder thickets mark moist, often snow-loaded terrain.

CAUTION

Dense thickets hide holes and bear trails. Wet wood smokes heavily.

LOOK-ALIKES

Birch lacks persistent woody cone-like catkins and usually has papery bark.

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DOCUMENTED EDIBLE PLANTS

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

LINGONBERRYDOCUMENTED EDIBLE

Vaccinium vitis-idaea

IDENTIFY
Low evergreen shrub with leathery oval leaves, pale dots beneath and bright red berries with a crown.

HABITAT & SEASON
Tundra heath, open treeline woodland and peat hummocks. Season: Late summer through winter

DOCUMENTED USE
Ripe berries are documented food and often persist after frost.

CAUTION
Confirm the evergreen leaves and fruit crown. Avoid animal-contaminated patches.

LOOK-ALIKES
Bearberry fruit is mealier and leaves show netted veins.

7

BOG BLUEBERRYDOCUMENTED EDIBLE

Vaccinium uliginosum

IDENTIFY
Low woody shrub with blue-green oval leaves and blue waxy berries with a crown.

HABITAT & SEASON
Moist tundra heath, snowbed margins and open treeline. Season: Late summer

DOCUMENTED USE
Ripe berries are documented food.

CAUTION
Fruit crops are irregular. Use woody stems, leaf shape and crown together.

LOOK-ALIKES
Bilberry has green angular stems and darker-staining flesh.

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DOCUMENTED EDIBLE PLANTS

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

CROWBERRYDOCUMENTED EDIBLE

Empetrum nigrum

IDENTIFY
Creeping evergreen mat with tiny grooved needle-like leaves and shiny black berries.

HABITAT & SEASON
Windswept ridges, tundra heath, scree margins and peatland. Season: Late summer through winter

DOCUMENTED USE
Ripe berries are documented food, water-rich and persistent.

CAUTION
Low fruit collects grit and animal contamination. Confirm creeping woody stems.

LOOK-ALIKES
Juniper has sharp needles in whorls and blue waxy cones.

9

CLOUDBERRYDOCUMENTED EDIBLE

Rubus chamaemorus

IDENTIFY
Low unarmed herb with rounded lobed leaves and a single amber-orange raspberry-like fruit.

HABITAT & SEASON
Peat pockets, wet tundra and sheltered boggy valleys. Season: Mid- to late summer

DOCUMENTED USE
Fully ripe amber fruit is documented food.

CAUTION
Unripe red fruit is hard and sour. Avoid trampling wet moss.

LOOK-ALIKES
Dwarf raspberry species may have red fruit and more divided leaves.

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DOCUMENTED EDIBLE PLANTS

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

MOUNTAIN SORREL

DOCUMENTED EDIBLE

Oxyria digyna

IDENTIFY
Low herb with kidney-shaped leaves and reddish branching flower and seed stalks.

HABITAT & SEASON
Moist gravel, talus seeps, streambanks and snowbed edges. Season: Summer

DOCUMENTED USE
Young leaves are a documented sour food and flavoring.

CAUTION
High oxalate content means small portions only; avoid with kidney disease.

LOOK-ALIKES
Docks have larger leaves and different seed valves.

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ALPINE BISTORT

DOCUMENTED EDIBLE

Bistorta vivipara

IDENTIFY
Slender spike with white or pink flowers above and dark bulbils below; narrow basal leaves and a small thick root.

HABITAT & SEASON
Moist tundra, snowbeds, alpine meadows and stream terraces. Season: Summer

DOCUMENTED USE
Bulbils and roots have documented northern food use after skilled identification and preparation.

CAUTION
Plants are small and slow-growing; harvest is usually not justified. Do not confuse with other bistorts or dig in protected areas.

LOOK-ALIKES
Other Bistorta species may lack bulbils or have broader leaves.

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TOXIC PLANTS - AVOID

High-consequence species to recognize before any gathering begins.

NORTHERN MONKSHOOD

TOXIC - AVOID

Aconitum delphiniifolium

IDENTIFY

Deeply divided palmate leaves and blue-purple hood-shaped flowers.

HABITAT & SEASON

Moist mountain meadows, streambanks and rich tundra. Season: Summer

DOCUMENTED USE

No food or medicinal use.

CAUTION

All parts contain potent aconitine alkaloids and can cause fatal heart and nerve effects.

LOOK-ALIKES

Larkspurs have a distinct rear spur but are also toxic.

13

BOG ROSEMARY

TOXIC - AVOID

Andromeda polifolia

IDENTIFY

Low evergreen shrub with narrow rolled-edge leaves pale beneath and small pink urn-shaped flowers.

HABITAT & SEASON

Peat pockets, bogs and wet tundra hollows. Season: Year-round leaves

DOCUMENTED USE

No food or tea use.

CAUTION

Contains grayanotoxin-type compounds and may cause vomiting, dizziness and heart effects.

LOOK-ALIKES

Labrador tea leaves are broader and rusty-woolly beneath.

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TOXIC PLANTS - AVOID

High-consequence species to recognize before any gathering begins.

NORTHERN WATER HEMLOCK

TOXIC - AVOID

Cicuta virosa

IDENTIFY

Wetland perennial with divided leaves, white umbrella flower clusters and thick chambered roots.

HABITAT & SEASON

Slow streams, marshy valley bottoms and lake margins in the broader region. Season: Spring through fall

DOCUMENTED USE

No use. Never dig wetland roots.

CAUTION

Extremely poisonous and may cause seizures and death.

LOOK-ALIKES

Angelica and other Apiaceae can resemble it. Never taste.

15

RED BANEERRY

TOXIC - AVOID

Actaea rubra

IDENTIFY

Woodland herb with divided leaves, white flower clusters and glossy red berries on stout stalks.

HABITAT & SEASON

Moist lower valleys and treeline woodland. Season: Fruit late summer

DOCUMENTED USE

No food use.

CAUTION

Berries and roots are poisonous and can cause serious gastrointestinal and cardiovascular effects.

LOOK-ALIKES

Red fruits on woody shrubs have simple leaves, not divided herb leaves.

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TRADITIONAL-USE PLANTS

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

LABRADOR TEA

TRADITIONAL-USE

Rhododendron groenlandicum

IDENTIFY

Evergreen shrub with rolled-edge leaves densely rusty-woolly beneath and white flower clusters.

HABITAT & SEASON

Peatland margins and wet treeline spruce. Season: Year-round leaves

DOCUMENTED USE

A culturally important documented beverage and traditional-use plant.

CAUTION

Strong or repeated infusions can cause illness. Bog rosemary must be excluded.

LOOK-ALIKES

Bog rosemary is narrow and pale beneath, not rusty-woolly.

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ALASKA WORMWOOD

TRADITIONAL-USE

Artemisia tilesii

IDENTIFY

Tall aromatic perennial with gray-green divided leaves and many small greenish flower heads.

HABITAT & SEASON

River terraces, disturbed ground and moist lower slopes. Season: Summer through fall

DOCUMENTED USE

Documented northern Indigenous uses include aromatic washes, steam and external preparations.

CAUTION

Concentrated internal use is not recommended; Artemisia may affect pregnancy, seizures and medications.

LOOK-ALIKES

Other wormwoods occur; smell alone is insufficient.

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TRADITIONAL-USE PLANTS

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

YARROW

TRADITIONAL-USE

Achillea millefolium

IDENTIFY
Aromatic finely divided leaves and flat white to pink flower clusters.

HABITAT & SEASON
Dry gravel bars, trails and lower disturbed slopes. Season: Summer through fall

DOCUMENTED USE
Published traditional uses include external washes and aromatic preparations; dry tops can be light tinder.

CAUTION
Possible allergy and anticoagulant concerns. Do not put dirty leaves on wounds.

LOOK-ALIKES
Poison hemlock is taller with hollow spotted stems and umbrella flowers.

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MOUNTAIN AVENS

TRADITIONAL-USE

Dryas integrifolia

IDENTIFY
Low evergreen mat with small leathery leaves, white usually eight-petaled flowers and feathery seed heads.

HABITAT & SEASON
Calcareous gravel, exposed slopes and alpine tundra. Season: Summer flowers; leaves year-round

DOCUMENTED USE
Leaves have documented traditional beverage and medicinal uses; mats stabilize gravel and indicate exposed, well-drained ground.

CAUTION
Do not uproot mats. Internal use is not recommended without local knowledge and medical guidance.

LOOK-ALIKES
Other Dryas species and hybrids differ in leaf teeth and hairiness.

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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 / THAW	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 & FROST	Most berries, hips, cones and seed structures mature.	Confirm entire plant; leave food for wildlife and regeneration.
WINTER / PERSISTENT	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	White spruce, Black spruce, Dwarf birch	Windthrow, fire, protected slow-growing plants
Moist forest / sheltered valley	Feltleaf willow, Grayleaf willow, Green alder	Look-alikes, falling timber, poor visibility
Wetland / peat / stream edge	Northern monkshood, Bog rosemary	Water hemlock or toxic bog shrubs; unstable ground
Open disturbance / camp edge	Lingonberry, Bog blueberry, Crowberry, Cloudberry	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
Northern monkshood	Deeply divided palmate leaves and blue-purple hood-shaped flowers.	All parts contain potent aconitine alkaloids and can cause fatal heart and nerve effects.
Bog rosemary	Low evergreen shrub with narrow rolled-edge leaves pale beneath and small pink urn-shaped flowers.	Contains grayanotoxin-type compounds and may cause vomiting, dizziness and heart effects.
Northern water hemlock	Wetland perennial with divided leaves, white umbrella flower clusters and thick chambered roots.	Extremely poisonous and may cause seizures and death.
Red baneberry	Woodland herb with divided leaves, white flower clusters and glossy red berries on stout stalks.	Berries and roots are poisonous and can cause serious gastrointestinal and cardiovascular effects.

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. Plants and biodiversity resources of the Northwest Territories
Government of the Northwest Territories - regional flora and ecology

<https://www.gov.nt.ca/ecc/en/services/biodiversity>

2. Flora of the Canadian Arctic Archipelago
Canadian Museum of Nature - scientific Arctic flora

<https://nature.ca/aaflora/data/index.htm>

3. Flora of North America North of Mexico
Flora of North America Association - scientific flora

http://floranorthamerica.org/Main_Page

4. Aboriginal Plant Use in Canada's Northwest Boreal Forest
Marles, Clavelle, Monteleone, Tays and Burns; Canadian Forest Service - ethnobotany

<https://publications.gc.ca/site/eng/9.611374/publication.html>

5. Canadian Poisonous Plants Information System and poison-safety resources
Agriculture and Agri-Food Canada / Canadian poison centres - poison safety

<https://infopoison.ca/>

6. Plants of the World Online
Royal Botanic Gardens, Kew - taxonomy and distribution

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

INDEPENDENT PUBLICATION NOTICE

This guide is an independent educational reference and is not affiliated with HISTORY, the Alone television series, local Indigenous governments or protected-area authorities. Traditional-use notes summarize published sources and do not transfer cultural authority. Local knowledge holders, current regulations and qualified medical or botanical professionals take precedence.