

A KEY TO THE TREES OF BRYCE CANYON NATIONAL PARK

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Nineteen species of trees inhabit the canyon country of Bryce. Some are restricted to one of the three major forest communities in the park, i.e.; Pinyon-Juniper Forest, Ponderosa Pine Forest and Spruce-Fir Forest. Other species have a broader range of tolerance, thus enabling them to thrive in varied environments.

This Taxonomic Key will be helpful at Bryce Canyon during your visit in the park. To use a "Binomial Key" you must first examine the tree characteristics that are presented in the key and follow one of the two choices given. For example:

1. Tree has needle-like or scale-like leaves go to 2
1. Tree has broad leaves, not needle-like or scale-like go to 11

After determining which statement best applies, go to the next couplet in the key as directed. As you progress through the key you will arrive at the name of your specimen.

A glossary of terms follow. It is advised that the glossary be looked at prior to identifying a specimen since definitions tend to differ considerably from one publication to the other.

Glossary of Terms used in the key

1. Alternate- leaves borne singly, one at a node and not opposite.
2. Apex- Tip of the leaf.
3. Bract- A more or less leaf-shaped structure.
4. Branchlet- A most distant portion of a branch.
5. Bristle- A stiff hair-like structure.
6. Bud- An unexpanded leaf or flower.
7. Bundle- A group of needles growing from a common origin on a branchlet.
8. Entire- Leaf margins without teeth or nearly so.
9. Elliptical- A leaf shape where it is widest in the middle and the two ends tend to be equal.
10. Errect- Standing straight up or nearly so.
11. Grouped- Many leaf bundles originating in one defined area.
12. Lobe- A rounded leaf segment.
13. Margin- The outside edge of a leaf, the perimeter.
14. Needle-like- Long, slender, rather rigid and more or less sharp leaf.
15. Node- The place on a branch or stem where leaves normally originate.
16. Opposite- Leaves 2 at a node and situated across the stem from each other.

17. Oval- Broadly elliptical, usually the width is over $\frac{1}{2}$ the length.
18. Petiole- The stalk or stem of a leaf.
19. Scale-like- A modified leaf that resembles a scale such as that found on a fish or reptile.
20. Spray- A group of fine branches that spread out in many directions as a water spray would.
21. Toothed- the appearance of teeth along the margin of a leaf; they may be large or small.

Key to the Trees

1. Leaves needle-like or scale-like (Conifers) go to 2
1. Leaves broad; not needle-like or scale-like (Broadleaves) go to 11
2. Leaves scale-like (Juniperus "Junipers") go to 3
2. Leaves needle-like (Pinaceae "Pine Family") go to 4
3. Branchlets in fine feathery sprays Rocky Mountain Juniper
3. Branchlets in rough rope-like bunches Utah Juniper
4. Leaves in bundles (Pinus "Pines") go to 5
4. Leaves single; not in bundles go to 8
5. Leaves in bundles of two or three go to 6
5. Leaves in bundles of four or five go to 7
6. Leaves less than 2 inches long, bundles of two Pinyon Pine
6. Leaves longer than 2 inches, bundles of three or two Ponderosa Pine
7. Branches with bottlebrush appearance, bristles on cones .. Bristlecone Pine
7. Branches with needles grouped at end, no bristles on cones Limber Pine
8. Needles flat or nearly so go to 9
8. Needles square or roundish (Picea "Spruces") go to 10

9. Cones hang down with 3-toothed bract and fall to the ground whole,
needles are pointed at the tip Douglas-fir
9. Cones stand erect, without bract, and fall to ground in parts,
needles are round at tip and turn upward on branches ... White Fir
10. Needles flexible, not very prickly Englemann Spruce
10. Needles stiff, pointed and sharp Blue Spruce
11. Leaves opposite on the stem go to 12
11. Leaves alternate on the stem go to 13
12. Leaves less than three inches in diameter, mostly divided into three
lobes with no teeth along margin; shrub Rocky Mountain Maple
12. Leaves greater than three inches in diameter, divided into three to
five lobes, few large teeth along margin, tree ... Bigtooth Maple
13. Leaves without teeth along margin go to 14
13. Leaves with teeth along margin go to 15
14. Leaves lobed, 4 to 6 inches long and half as wide Gamble Oak
14. Leaves entire and elliptical, approximately one inch long and turned
at edges Curl-leaf Mt. Mahogany
15. Base of leaf entire with apex toothed Utah Serviceberry
15. Leaves with margin completely toothed go to 16
16. Leaves at least twice as long as wide go to 17
16. Leaves oval and nearly as wide as they are long go to 18
17. One scale covers bud at base of petiole; shrub Willow
17. More than one scale covers bud at base of petiole; tree
..... Narrow-leaf Cottonwood
18. Leaves with coarse teeth and rounded petiole Water Birch
18. Leaves with fine teeth and a flattened petiole Quaking Aspen

List of trees in key

1. Rocky Mountain Juniper - Juniperus scopulorum Sarg.
2. Utah Juniper - Juniperus osteosperma Little
3. Pinyon Pine - Pinus edulis Englem.
4. Ponderosa Pine - Pinus ponderosa Laws.
5. Limber Pine - Pinus flexilis James
6. Bristlecone Pine - Pinus aristata Englem.
7. Douglas-fir - Pseudotsuga menziesii Franco
8. White Fir - Abies concolor Lindl.
9. Englemann Spruce - Picea englemannii Parry
10. Blue Spruce - Picea pungens Englem.
11. Rocky Mountain Maple - Acer glabrum Torr.
12. Gamble Oak - Quercus gambelii Nutt.
13. Bigtooth Maple - Acer grandidentatum Nutt.
14. Curl-leaf Mountain Mahogany - Cercocarpus ledifolius Nutt.
15. Utah Serviceberry - Amelanchier utahensis Koehne
16. Willow - Salix sp. (many species and varieties)
17. Narrow-leaf Cottonwood - Populus angustifolia James
18. Water Birch - Betula occidentalis Hook.
19. Quaking Aspen - Populus tremuloides Michx.

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