

Common Trees of Alaska



United States
Department of
Agriculture

Prepared by
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Western hemlock – *Tsuga heterophylla*

Needles

- Light- to medium-green on top, with two whitish parallel lines beneath, needles are unequal in length from 1/4 to 7/8 inch long;
- Blunt-tipped, soft, shiny, and flat, generally growing from two sides of branch parallel to the ground.

Cones

- Brown, oval-shaped, 5/8 to 1 inch long;
- Thin, papery scales.

Bark

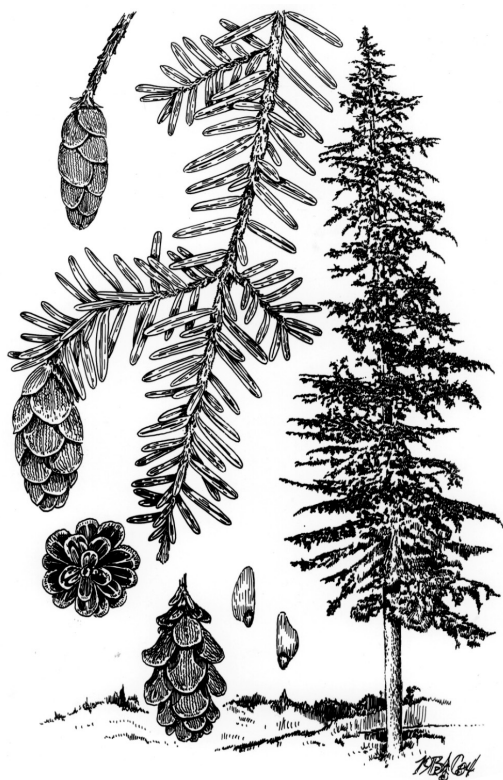
- Reddish-brown when young, turning gray-brown;
- Scaly when young, becoming thick and furrowed with age.

Size at maturity and life span

- 100 to 150 feet in height and 2 to 4 feet in diameter;
- 200 to 500 years.

Habitat and distribution

- Sea level to subalpine areas;
- Along Coast Range in central California to the Kenai Peninsula of Alaska.



Western hemlock – *Tsuga heterophylla*

Mountain hemlock – *Tsuga mertensiana*

Needles

- Dark green, white lines on both surfaces, more-or-less equal in length, 1/2 to 1 inch long;
- Soft and growing from all sides of the branch in a bottle brush pattern.

Cones

- Purplish when young, brown when mature;
- Cylindrical, 1 to 2-1/2 inches long;
- Thin, papery scales.

Bark

- Divided into narrow flattened ridges, becoming thick and deeply furrowed with age;
- Gray when young, turning reddish brown with age.

Size at maturity and life span

- 50 to 100 feet in height and 10 to 30 inches in diameter, can be prostrate in alpine;
- Slow-growing trees, size 18 to 20 inches in diameter at 180 – 260 years;
- 400 to 500 years

Habitat and distribution

- Sea level to 3,500 feet elevation;
- From crest of the Sierra-Nevada in California to the Kenai Peninsula in Alaska.



Mountain hemlock – *Tsuga mertensiana*

Alaska yellow-cedar *Cupressus nootkatensis*

Needles

- Scalelike, overlapping, sharp pointed, 1/16 to 1/8 inch long;
- Yellow-green to deep green;
- Top and bottom of branch sprays similar, without apparent white stomate markings.

Cones

- Spherical about 1/2 inch in diameter;
- Green, maturing to brown in 2 years;
- Made of 4-6 shield-shaped scales, sharp central point on each scale, scales do not overlap.

Bark

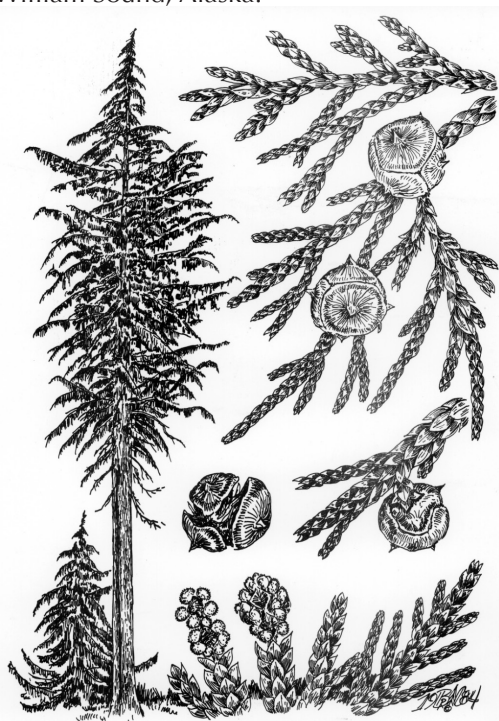
- Shredding, grayish brown.

Size at maturity and life span

- Slow-growing trees;
- 40 to 100 feet tall, and 1 to 2 feet in diameter;
- Shrub-sized and contorted in bogs and at tree line;
- Lives up to 1,500 years.

Habitat and distribution

- Wetland and subalpine forests;
- Sea level to tree line;
- From Oregon north along coast through Prince William Sound, Alaska.



Alaska yellow-cedar – *Cupressus nootkatensis*

Western redcedar – *Thuja plicata*

Needles

- Scalelike shiny yellow-green. 1/16 to 1/8 inch long;
- Springy, fan-shaped sprays of branches, turning up at ends;
- Branch sprays flat and symmetrical, bottom side with white stomate markings.

Cones

- Brown, oval-shaped, 1/2 inch long;
- Clustered near end of branches;
- Cone scales overlap, woody, and curve outward at maturity.

Bark

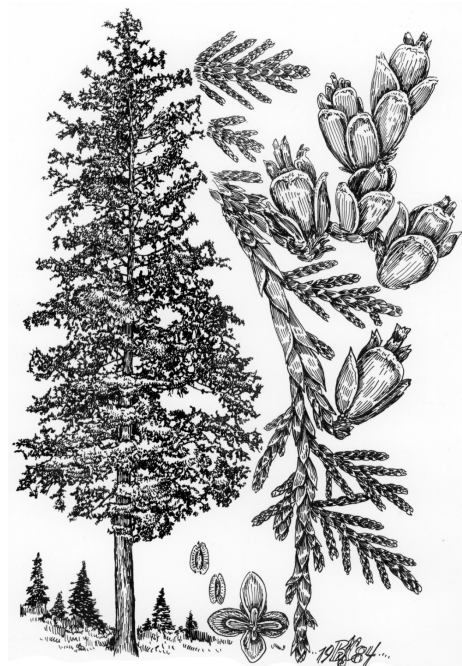
- Fibrous and stringy;
- Cinnamon-red when young, becoming gray with age.

Size at maturity and life span

- 70 to 100 feet in height in Southeast Alaska (growing much taller in southern part of range) and 2 to 4 feet in diameter (occasionally reaching 6 feet);
- 300 to 700 years (occasionally 1,000).

Habitat and distribution

- Coastal forests;
- Sea level to 500 feet in elevation;
- From northwestern California to Southeast Alaska just south of Frederick Sound.



Western redcedar – *Thuja plicata*

Sitka Spruce – *Picea sitchensis*

Alaska's state tree

Needles

- Dark blue-green, squarish, 5/8 to 1 inch long;
- Needles sharp, growing on all sides of branches from woody pegs, a character common to spruce.

Cones

- Light orange-brown, 2 to 3-1/2 inches long;
- Usually found in the top quarter of tree, hanging down from branches;
- Papery scales.

Bark

- Thin and smooth when young, developing scaly plates with age;
- Gray, becoming dark purplish brown with age.

Size at maturity and life span

- 150 to 225 feet in height and 5 to 8 feet in diameter;
- Grows to larger size in southern part of its range;
- 500 to 700 years.

Habitat and distribution

- Well-drained, upland and riparian forests;
- Sea level to tree line;
- From northern California, northwest along the coastline to the Alaska Peninsula.

Sitka Spruce – *Picea sitchensis*



White spruce – *Picea glauca*

Needles

- 3/4 to 1 inch long, blue-green, four-angled with whitish lines on all sides;
- Rigid, pointed, but not sharp to the touch;
- Usually crowded on upper side of the branch.

Cones

- 1-1/2 to 2-1/2 inches long, light brown;
- Narrowly oblong, nearly stalkless, hanging down;
- Scales thin and flexible with smooth margins.

Bark

- Thin, scaly to smooth;
- Gray-brown, with white inner bark.

Size at maturity and life span

- 40 to 70 feet tall, 6 to 18 inches in diameter;
- Reaches 80 to 115 feet tall, 30 inches in diameter;
- Tree crown, narrow or spire-like;
- Can live an age of 250 to 300 years.

Habitat and distribution

- From sea level to tree line on a wide variety of habitats;
- Throughout southcentral and interior Alaska east through Canada to Atlantic Ocean, from the northern tree line south to the Great Lakes.

White spruce hybridizes with Sitka spruce where their ranges overlap, forming Lutz spruce, *Picea x lutzii*. It shows characteristics intermediate between the two parent trees.



White spruce – *Picea glauca*

Black spruce – *Picea mariana*

Needles

- 1/2 inch long, light blue-green, four-angled with whitish lines on all sides;
- Blunt-pointed;
- Current year twigs with short red or brown hairs.

Cones

- 1 inch long, rounded and dark;
- Scales rigid and brittle, margins rounded to toothed;
- Stay on for several years, hang on short stalks.

Bark

- Thin, gray to blackish, becoming flaky with age;
- Inner bark is yellow.

Size at maturity and life span

- 15 to 30 feet tall and 3 to 6 inches in diameter, larger in ideal situations;
- Can reach 250 years in age.

Habitat and distribution

- Wet and cold sites on flats or north-facing slopes, also in bogs;
- Usually at lower elevations;
- Throughout southcentral and interior Alaska east through Canada to Alaska Ocean, from the northern tree line south to the Great Lakes.

Black spruce – *Picea mariana*



Shore pine – *Pinus contorta* var. *contorta*

Needles

- 1 to 2-1/4 inches long;
- Two half-round needles in a bundle together making a cylinder when pressed together.

Cones

- Light brown, egg-shaped, 1-1/4 to 2 inches long;
- Woody, stiff prickles at the tip of each cone scale;
- Pointed backwards on branches.

Bark

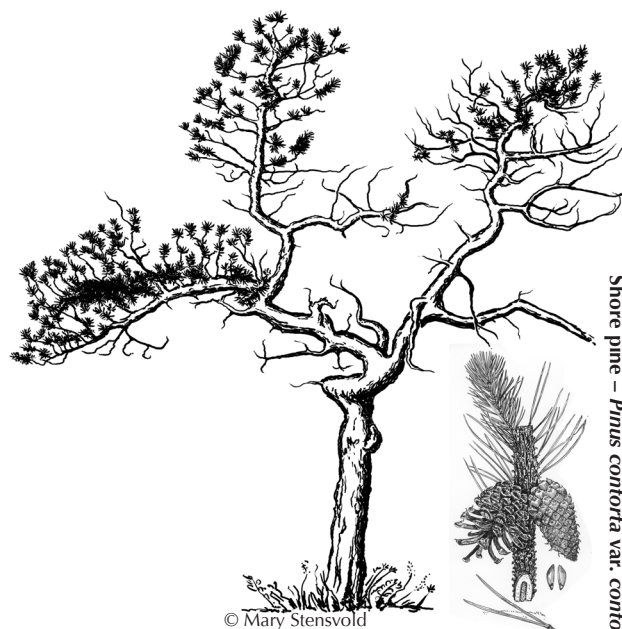
- Dark brown to blackish;
- Resinous and scaly, becoming furrowed with age.

Size at maturity and life span

- Shrub-sized and contorted in bogs;
- Often a scrubby tree, 20 to 40 feet tall and 8 to 12 inches in diameter;
- To 75 feet tall and 18 to 32 inches in diameter on well-drained, sunny sites;
- Lives 200 to 600 years.

Habitat and distribution

- Abundant in and adjacent to bogs;
- Sea level to subalpine;
- From northern California to Yakutat, Alaska.



Shore pine – *Pinus contorta* var. *contorta*

Tamarack – *Larix laricina*

Needles

- Deciduous, soft, flexible, 1 inch long;
- In clusters of 10 to 20 on short spur branches;
- Blue-green needles turn golden yellow and are shed in the fall.

Cones

- 1/2 inch long, dark brown;
- With about 20 rounded, finely toothed scales;
- Held upright on short stalks from horizontal twigs.

Bark

- Young trees with dark gray, smooth, thin;
- With age becomes reddish brown, scaly, exposing darker inner layer.

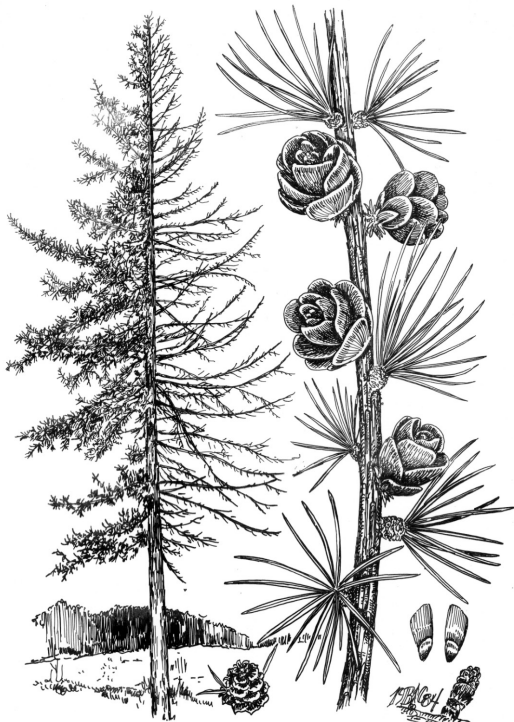
Size at maturity and life span

- 30 to 60 feet tall, 4 to 16 inches in diameter;
- 100 to 200 years.

Habitat and distribution

- Bogs, moist places, and along river drainages;
- From the northern slopes of the Alaska Range to the southern slopes of the Brooks Range, east across Canada to Atlantic Ocean, from the northern tree line south to the Great Lakes.

Tamarack – *Larix laricina*



Paper birch – *Betula neoalaskana* (formerly *B. papyrifera* var. *humilis*)

Leaves

- 1-1/2 to 3 inches long, 1 to 2 inches wide;
- Broadly oval with long-pointed tip;
- Margins coarsely double-toothed;
- Yellow-green, paler yellowish-green underneath;
- Twigs with dense covering of resin dots.

Fruit

- Nutlets borne in short, greenish-brown, dry, 1 to 1-1/4 inch-long catkins;
- Nutlets tiny, with wings broader than the body.

Bark

- Red-brown on young trunks;
- Lightens with age;
- Smooth, thin, paper-like and peeling.

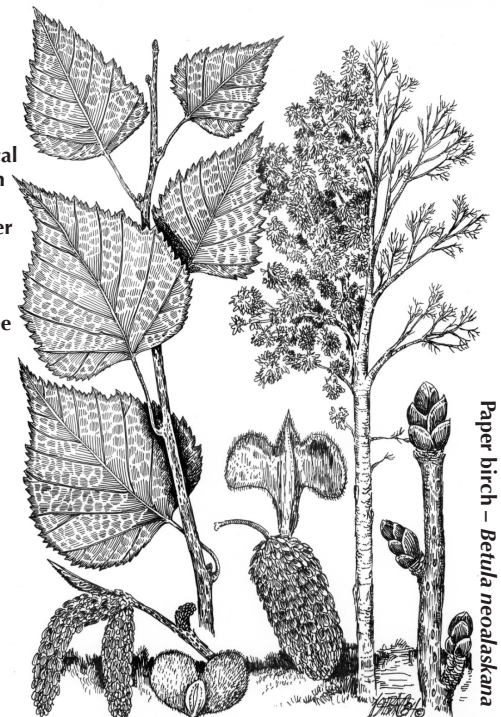
Size at maturity

- To 80 feet tall, 4 to 24 inches in diameter.

Habitat and distribution

- Common in a variety of habitats, often in mixed forests with black and white spruce;
- From interior Alaska across northern North America to the southwest side of Hudson Bay.

Kenai birch (*Betula kenaica*) is nearly identical to paper birch except for slightly smaller size, leaves, and fewer resin dots on twigs. This tree is endemic to Alaska.



Paper birch – *Betula neoalaskana*

Balsam poplar – *Populus balsamifera* subsp. *balsamifera*

Leaves

- 3 to 6 inches long, 2 to 4 inches wide;
- Broad at base, narrowing to a point at the tip;
- Dark shiny green above, rust-colored underneath;
- Swelling leaf buds are sweetly aromatic in the spring.
- Fruit
- 2-parted capsules on 6 inch-long catkins contain numerous tiny cottony seeds.

Bark

- Young stems greenish to reddish brown;
- With age becomes thick and deeply furrowed.

Size at maturity and life span

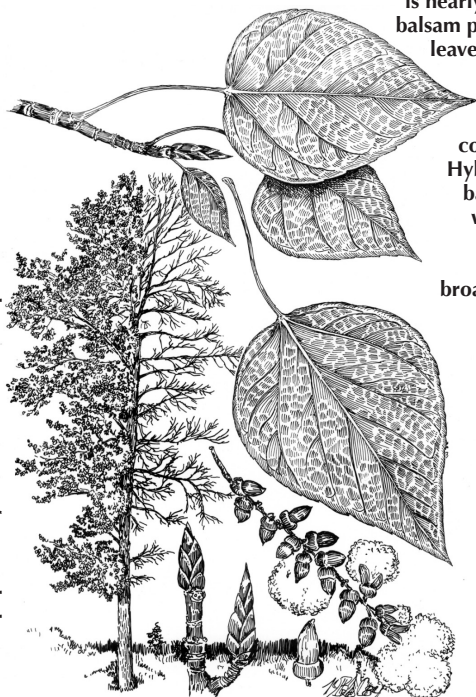
- 80 to 100 feet tall, to 3 feet in diameter;
- 100 to 200 years.

Habitat and distribution

- River valleys and flood plains, alluvial fans, glacial outwash areas, lake shores;
- A shade-intolerant pioneer species;
- From interior Alaska across northern portions of North America.

Black cottonwood (*Populus balsamifera* subsp. *trichocarpa*) is nearly identical to balsam poplar except leaves are whitish underneath and it grows in south-coastal Alaska. Hybridizes with balsam poplar where ranges overlap. This is the largest broadleaf tree in Alaska.

Balsam poplar – *Populus balsamifera* subsp. *balsamifera*



Quaking Aspen – *Populus tremuloides*

Leaves

- 1 to 3 1/2 inches long;
- Nearly round, pointed at tip and rounded at base, edged with many small rounded teeth;
- Shiny green, pale underneath;
- Leaf stalks flat, allowing leaves to tremble in the slightest breeze.

Fruit

- Capsules on 3 to 4 inch-long catkins;
- Capsules contain numerous tiny cottony seeds.

Bark

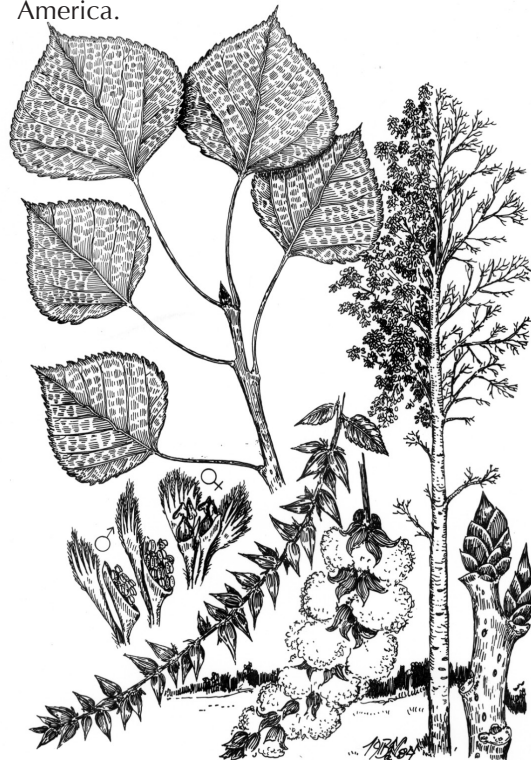
- Smooth, greenish white;
- Important wildlife food.

Size at maturity and life span

- 20 to 40 feet tall, 3 to 12 inches in diameter;
- 80 to 100 years average, 200 years maximum.

Habitat and distribution

- South-facing slopes and well drained benches;
- Propagates from root sprouting after disturbance;
- Throughout interior and southcentral Alaska, across Canada and south to New Mexico;
- Widest distribution of any native tree in North America.



Quaking Aspen – *Populus tremuloides*

Red alder – *Alnus rubra*

Leaves

- 2-6 inches long;
- Elliptic to ovate, shallowly lobed with coarse, rounded teeth;
- Leaf margins rolled under;
- Dark green, minute rust-colored hairs underneath.

Fruit

- Look like tiny pine-cones;
- Seeds, tiny dry nutlets with two narrow wings.

Bark

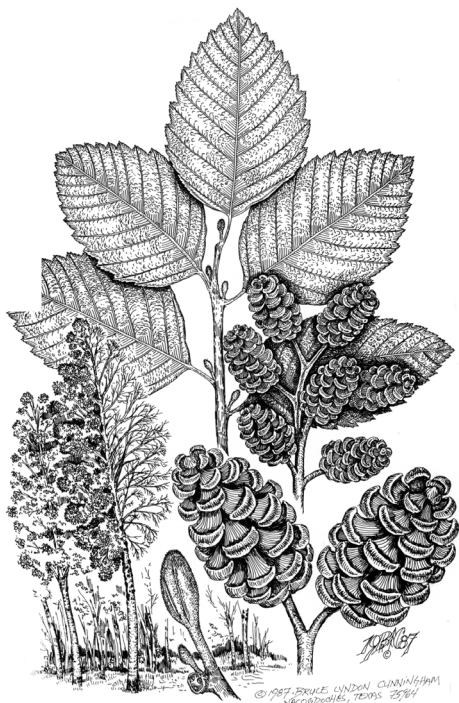
- Thin, smooth, grayish;
- Often appearing white due to incrustation by pale, flat lichens.

Size at maturity and life span

- 20 to 80 feet tall, 4 to 25 inches in diameter;
- 60 to 90 years;
- Rapid growth when young, but short lived.

Habitat and distribution

- Along rivers, floodplains, open gravelly areas, disturbed areas to 1,000 feet in elevation;
- Often quickly colonizes disturbed areas;
- Most common hardwood on the Pacific coast-line;
- From mid-California to Yakutat, Alaska.



Red alder – *Alnus rubra*

Scouler willow – *Salix scouleriana*

Leaves

- 2 to 5 inches long, and 1/2 to 1-1/2 inches wide;
- Wider above middle, short-pointed at tip, edges without teeth;
- Young leaves velvety hairy;
- Older leaves dark green, sparse white to rusty hair underneath;
- Crowded at ends of twigs.

Fruit

- Seed capsules long, slender, gray-wooly.
- Bark
- Smooth gray, becoming dark brown, divided into broad flat ridges.

Size at maturity

- Usually about 15 feet tall, 4 inches in diameter;
- Can grow to be 50 to 60 feet tall, 16 to 20 inches in diameter.

Habitat and distribution

- Colonizes burned-over areas, thrives away from water;
- Forms thickets, often found along forest edges;
- A fast-growing, short-lived pioneer;
- From interior Alaska east to Saskatchewan and south to New Mexico.



Scouler willow – *Salix scouleriana*

Alaska spans a vast array of ecosystems from open, wind-swept tundra bordering the Arctic Ocean, and Bering Sea through expansive boreal forests of the Interior to impressive temperate rain forests along the Pacific Coast.

Tree composition changes with the prevailing climate across the state. In the Interior, principal species include white spruce, birch, and quaking aspen on uplands, black spruce and tamarack in forested wetlands, and balsam poplar within floodplains. Willows are abundant in the Interior as well, however most do not reach tree size.

The coastal temperate rain forests of southcentral and southeastern Alaska are comprised mainly of western hemlock, and Sitka spruce. Mountain hemlock, Alaska yellow-cedar, western redcedar, and shore pine are most often encountered where soils are more poorly drained. Deciduous trees are uncommon in the temperate rain forests of Alaska, and are represented mainly by red alder and black cottonwood.

This brochure was produced by the Alaska Region Ecology and Botany Programs.

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