

Pines - The Important Distinctions

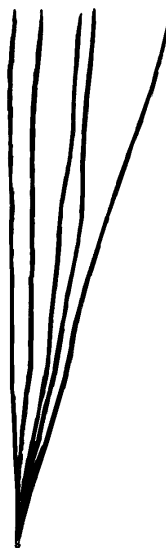
		E. White Pine <i>Pinus strobus</i>	Red Pine <i>Pinus resinosa</i>	Pitch Pine <i>Pinus rigida</i>	Jack Pine <i>Pinus banksiana</i>
N	Number/Cluster	Five.	Two.	Three.	Two.
E	Length	3 - 5 inches.	4 - 6 inches.	3 - 5 inches.	$\frac{3}{4}$ - 1 $\frac{1}{2}$ inches.
E	Description	Slender, flexible.	Flexible, straight.	Stout, not flexible, usually twisted, grow at right angles to the branchlets.	Stout, flat, twisted.
L	Color	Bluish green.	Dark green.	Dark yellow green.	Light yellow green, later becoming dark green.
E	Sheath	Shed in late August.	Persists.	Persists.	Persists.
S	Length	4 - 8 inches.	1 $\frac{1}{2}$ - 2 $\frac{1}{4}$ inches.	1 $\frac{1}{2}$ - 3 $\frac{1}{2}$ inches.	1 $\frac{1}{2}$ - 2 inches.
C	Description	Borne on a long stalk; thin smooth scales without prickles.	Borne on short stalks; scales without prickles. Several basal scales remain on branches when cone drops.	Borne on a short stalk, having prickles on the cone scales, flat based when completely open. Often remain on branches for 10 - 12 years.	Much curved inward, without stalk. Prickles minute. Often remain on branches for many years.

EASTERN WHITE PINE

Pinus strobus L.

The abundance and value of eastern white pine in Maine has caused it to be known as the Pine Tree State. The designation has also resulted from Legislative action. Title 1 MRSA Sec. 211 originated with Resolves 1895 Chap. 3, approved Feb. 1, 1895, which stated "Resolved, That the Pine Cone and Tassel is hereby declared to be the floral emblem for Maine, in the National Garland of Flowers." Title 1 MRSA Sec. 208 originated with Resolves 1945 Chap. 8, effective July 21, 1945, which stated "Resolved: That the white pine tree be, and hereby is, designated the official tree of the State of Maine."

The availability and high quality of white pine lumber played an important part in the development and economy of Maine since 1605, when Captain George Weymouth of the British Royal Navy collected samples here and brought them back to England for display. Shortage of ship masts in Europe led to England's Broad Arrow Policy in 1691, whereby pines 24 inches or more in diameter within 3 miles of water were blazed with the **mark of the broad arrow**; such trees to be reserved for use in the Royal Navy. The term **King's Pine** originated from this policy. Most of the accessible virgin pine was cut by 1850. Lumber production reached its peak in 1909 but white pine is still a principal lumber species and continues to contribute greatly to the economy of the state.



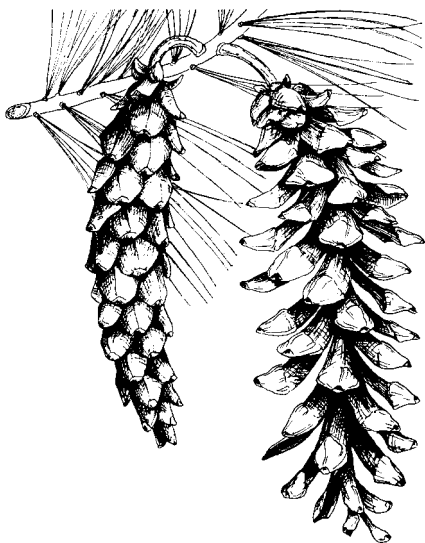
White pine occurs in all localities in the state in moist situations, on uplands, and on sandy soil, but develops best on fertile, well-drained soils. On sandy soil it often becomes established in pure, or nearly pure forests or groves. It is one of the major species planted in the state. The tree grows rapidly both in height and diameter, making an average height growth of one foot or more each year.

When growing in the open, the young tree is symmetrical and conical in outline except when deformed by white pine weevil. White pine weevil is an insect that kills the topmost shoot and often causes the tree to have multiple stems and a round profile. In the forest, a white pine tree has a narrow head, and the trunk is commonly free of branches for a considerable portion of its length.

pine weevil. White pine weevil is an insect that kills the topmost shoot and often causes the tree to have multiple stems and a round profile. In the forest, a white pine tree has a narrow head, and the trunk is commonly free of branches for a considerable portion of its length. Old forest trees have a broad and somewhat irregular head. The branches are horizontal, and in regular whorls, usually of 5 each. Very old trees often become very irregular and picturesque. The trunk tapers gradually, and the tree often attains a height of 100 feet. Commonly it is from 70-80 feet tall, and has a diameter of 1-3 feet.

The **bark** of young trees is smooth and thin, green with a reddish brown tinge over-all, or brown in spots. On old

trees, it is from 1-2 inches thick, very dark, and divided into broad, flat ridges by shallow fissures.



Leaves are in clusters of 5, flexible, from 3-5 inches long, bluish green but whitish on one side. The papery sheath

at the base of the new needle clusters falls in late August. The **cones** are 4-8 inches long, cylindrical and borne on a long stalk. They take 2 years to mature and open to discharge the seed shortly after ripening in late August through September of the second season.

The **wood** is light in color, and durable except when in contact with the soil. It is soft, not heavy, and is easily worked. The wood is used extensively for interior trim, doors, windows, cabinet making, sash and door manufacture, pattern making, furniture, small building construction, interior and exterior finish, and boat planking.

The sale of pine furniture is always active somewhere in North America. Lumber is sold from Newfoundland to Washington state and south into Mexico. Lower grade boards have clear sections cut to size for sale. These clear short pieces may also be finger-jointed to create longer lengths of clear wood. Pine shingles are also sawed. Any part of a pine not making log grade is used for pulp. Ceiling Tiles as well as paper are made from this pulp.

RED PINE

Pinus resinosa Ait.

Red or Norway pine, though common, is found only locally throughout the state, growing on dry, rocky ridges, or light, sandy soil. Groves are usually scattered through forests of other species. The beautiful "Cathedral Pines" occur near Eustis.

The young trees have the branches extending to the ground and form a conical outline. Later, the head is rounded and picturesque. Branches are generally horizontal. It attains a height of 60-80 feet, and a diameter of 2-3 feet. The trunk is straight and tapers slowly. Red pine is intolerant to shade.

The **bark** is divided into broad, flat ridges by shallow fissures.

The **leaves** are arranged in clusters of 2, and are 4-6 inches long, dark green, soft and flexible. They break cleanly, at a sharp angle, when doubled between the fingers.

The **cones** are much like an egg in shape, about 2 inches long, and borne on short stalks. The base of fallen cones is hollow. They mature in the fall of the second season and usually remain on the branches until the following summer. Cones may be collected for seeds from September throughout the fall and winter, due to their gradual release of seed.

The **wood** is a little heavier and harder than white pine, close grained, hard and fairly strong. It is used for lumber, poles, piles, building construction, and pulp. It treats readily with wood preservatives and therefore is a locally produced alternative to southern yellow pine. An expanding pole market allows for use of shorter stems removed in thinning. Older stands produce large, high-value poles.

Owing to the reddish bark, and the pale red heart wood, the name "red pine" is appropriate. The name "Norway pine" refers to its original finding near Norway, Maine. Since it infers that the tree is foreign in origin, use of this name is not encouraged.



JACK PINE

Pinus banksiana Lamb.

Jack or gray pine grows on sandy, rocky, shallow acid soils. It is known to occur naturally at Alamoosook Lake in Orland, Schoodic Point in Winter Harbor, Great Wass Island in Beals, Matagamon Lake, Cliff Lake, Lobster Lake, and in the areas south and west of Jackman.



The spreading branches are long and flexible and form an open head of symmetrical outline. At maturity the tree is about 50-60 feet tall, and 8-10 inches in diameter. Cones are often produced when the trees are only a few years old.

The **bark** is thin with irregular rounded ridges. It is dark brown in color, with a slight tinge of red. The **leaves** are in clusters of 2, and are $\frac{3}{4}$ to $1\frac{1}{2}$ inches long. They are stout, yellow-green at first, dark green later, rather flat, and twisted at the base. The **cones** require 2 years to mature, are rather slender, $1\frac{1}{2}$ - 2 inches long, and without a stalk. They are very much curved. The scales have minute prickles which are often deciduous. The cones usually remain closed for several years (unless exposed to extreme heat), and often do not fall for 12-15 years.

The **wood** is moderately hard, heavy, and close grained. It is used mostly for pulp.

PITCH PINE

Pinus rigida Mill.

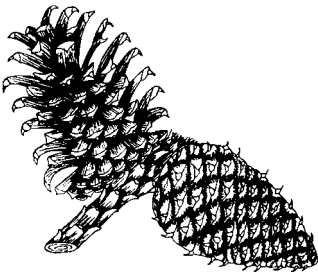
Pitch pine grows on sandy barrens or plains, and on gravely soil of the uplands. It is quite common in the southern part of the state, on the sand plains near Brunswick and Oxford, and on Mt. Desert Island. It is not found in Piscataquis, Aroostook, Somerset and Washington Counties.

Branches are horizontal, rigid, contorted, and form an open crown. Pitch pine attains a diameter of 1-2 feet, and a height of only 30-40 feet. The trunk tapers rapidly and generally is straight. Often the tree produces cones when small. It is the only native pine that will produce "sprout" growth when apparently killed by such factors as fire.

The **bark** is rough, even on young stems and branches. On old trees, it is irregularly divided into continuous broad flat ridges, and is deep gray or reddish brown in color.

The **leaves** are in clusters of 3, and are from 3-5 inches long. They are dark yellow-green, stiff, standing at right angles to the branch.

The **cones** require 2 years to mature, are 1½ - 3½ inches long, borne on short stalks, hardly noticeable, and are often produced in clusters. A sharp, rigid curved prickle is produced on the tip of each scale. The cones open gradually during mid-winter. Seeds are released over a period of several years. Cones often remain on the trees 10-12 years. Fresh cones are used in wreath decorations.



The **wood** is moderately heavy, strong, hard and stiff. It is used for construction lumber and pulp. At one time considerable quantities of tar and turpentine were obtained from this tree.

Introduced Pines

SCOTS (SCOTCH) PINE

Pinus sylvestris L.

Scots pine is a native of northern Europe, and there grows to a tall timber tree in dense stands. It will grow on very poor soils. There are many strains of this species, some producing poor growth habits. This plus its susceptibility to snow, porcupine, and bird injury makes it undesirable to plant for timber production. Some strains are planted for Christmas trees.

The foliage is usually a dull blue - green. Needles are short, stiff, twisted, 1½ - 3 inches long and borne in fascicles of 2.

Cones are 1½ - 2 inches long and numerous, even on comparatively young trees. The bark in the crown region of medium to large trees is of a conspicuous orange - brown coloration.



AUSTRIAN PINE

Pinus nigra Arnold

Austrian or European black pine is a native of Europe, has been planted as a decorative tree. It makes rapid growth even on very poor soils, and will flourish on limestone soils, or in the smoke of cities and factories. It also grows well near the sea because of its tolerance to salt spray.

The foliage is very dense and dark green, almost black in color. The long, sharp - pointed leaves are borne in fascicles of 2 and do not break cleanly when doubled between the fingers.

It closely resembles our native red pine, but the bark is darker brown to black and buds are pitch covered. Cones are 2 - 3½ inches long, armed with sharp prickles.



MUGO PINE

Pinus mugo Turra

Mugo pine is a native of the mountainous regions of Europe. It has a dwarf, spreading form. Leaves are dark yellow - green, usually not twisted, 1 - 3 inches long and in clusters of 2. Cones are 1 - 2 inches long. It is planted for ornament and on dry, gravelly slopes, for roadside beautification.

TAMARACK

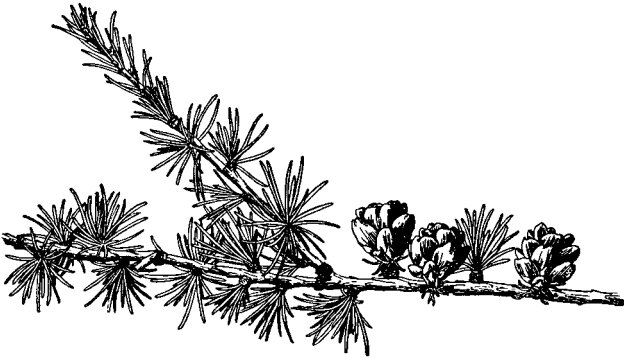
Larix laricina (Du Roi) K. Koch

Tamarack, eastern larch, or hackmatack is most commonly found in cool, swampy places although it also grows on well drained soil. It is found in scattered stands throughout the state.

In the forest, the tree grows to a height of 50 - 60 feet and a diameter of 20 inches. It has a regular, narrow, pyramidal head with small, stiff and horizontal branches.

In northern Maine, the name "juniper" is quite commonly applied to this tree, but since juniper is the true name of another tree, its use for tamarack is discouraged.

The **bark** separates on the surface into small, thin, irregular scales of a reddish brown color.



The **leaves** are linear, about one inch long, triangular in cross section, and borne in clusters of 8 or more on spurs, but leaves on elongating new shoots occur singly. They are bright green and turn yellow in September just before they fall. It is our only conifer that sheds all its leaves every fall.

The **cones** are small, nearly spherical, about $\frac{3}{4}$ inch long, light brown, and borne erect on stout stems. They open in the fall to liberate the small winged seeds and usually remain on the tree until the following year.

The **wood** is rather coarse-grained, hard, heavy, strong, and with a durable heartwood. It is used for planking, timbers, ties, poles, pilings, sign posts and pulp.

Spruces - The Important Distinctions

		Black Spruce <i>Picea mariana</i>	Red Spruce <i>Picea rubens</i>	White Spruce <i>Picea glauca</i>
N E D L E S	Color	Blue - green.	Dark yellow-green.	Blue-green to dark green.
	Length	¼ - ½ inches.	½ - 5/8 inches.	1/3 - ¾ inches.
	Description	Dull with bloom.	Very shiny.	Dull, strong odor when crushed.
C O N E S	Length	½ - 1 ½ inches.	1 ¼ - 2 inches.	2 inches.
	Retention	Remain on tree many years.	Fall first year.	Fall first year.
	Shape	Spherical.	Wide in middle.	Cylindrical.
	Scales	Stiff and rigid when ripe; margin irregularly notched.	Stiff, with margin entire or slightly notched.	Flexible at maturity, margin entire.
T W I G S	Color	Yellow - brown to brown.	Reddish to orange-brown.	Light gray to yellow-brown.
	Hairs	Short rusty to black hairs; some hairs tipped with globose glands.	Short rusty to black hairs; tips lack glands.	Without hairs.

Seed of all spruce is winged; cones are pendent; bare twigs are roughened by persistent leaf bases.

Norway Spruce

Picea abies (L.) Karst.

Norway spruce is a native of Europe and is of great economic importance in its natural range. Here it is commonly planted both in forest plantations and as an ornamental tree. It rarely reproduces in the wild. It is very symmetrical and graceful in its growth habit, open grown trees often carrying branches clear to the ground. The tips of branches on larger trees have an upward sweep and lateral branchlets are long and pendent. Twigs are without hairs. Norway Spruce is a more rapid grower than any of our native species of spruce, and is a species frequently planted for pulpwood. It is occasionally used for lumber and as an ornamental. The leaves are about one inch long, sharp-pointed, glossy and dark green in color. The needles lack the tendency to bend upward on the twigs as in white spruce. Cones are cylindrical, 4-7 inches long with stiff, notched scales. They ripen from September to November but may be collected from September to April.

BLACK SPRUCE

Picea mariana (Mill.) B. S. P.

Black spruce occurs in every county except Sagadahoc. It grows on cool upland soils, but is more commonly found along streams, on the borders of swamps and in sphagnum bogs. It grows to a height of 70-90 feet and a diameter of 6 - 18 inches. On a good site, it will grow rapidly. It is the most commonly planted spruce. In sphagnum bogs, trees 50 - 80 years old may be only 6 - 8 feet tall and about one inch in diameter. The branches are short, pendulous and have a tendency to curve up at the ends. It forms an open, irregular crown. The lower branches often touch the ground and form new trees by the natural layering method. The **bark** on the trunk is grayish brown and the surface is broken into thin scales. The **leaves** are $\frac{1}{4}$ - $1\frac{1}{2}$ inches long, dull blue-green in color,



blunt-pointed, flexible, and soft to the touch.

The **cones** are $\frac{1}{2}$ - $1\frac{1}{2}$ inches long, ovoid, and become nearly spherical when open. The cone scales are stiff, and have toothed margins. The cones usually stay on the trees for many years. The **twigs** have many hairs, some of which are tipped with glands. The inner bark is olive-green.

The **wood** is soft and light, but strong. It is used for the manufacture of pulp, framing and construction lumber, planking and Christmas trees. Spruce beer is made by boiling the branches.

BLUE SPRUCE

Picea pungens Engelm.

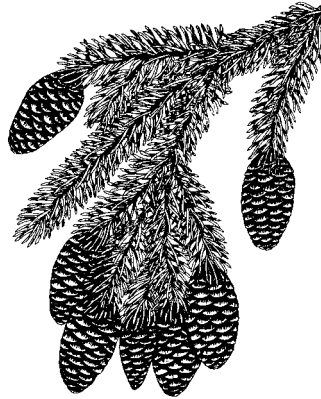
Blue spruce is a native of the Rocky Mountain region, and is frequently planted in the East as a decorative tree. Foliage coloration varies from silvery-blue to blue-green; the intensity of blue varying between individual specimens. The leaves are about one inch long, stiff, very sharp-pointed, and strongly incurved. Cones are oblong, $2\frac{1}{2}$ - $\frac{1}{4}$ inches long, with thin, flexible, notched scales. Selected specimens are usually planted singly, on lawns or in landscape effects, where the color of the foliage and the shape of the tree are of primary importance. Blue spruce will grow on a variety of sites and tolerates a wide range of growing conditions. These factors contribute to its popularity as a favored ornamental species.

RED SPRUCE

Picea rubens Sarg.

Red spruce is commonly found throughout the state. It grows on well-drained, rocky upland soils, and particularly on the north side of mountain slopes where it may be the major species present. The spreading branches form a somewhat conical, narrow head in young trees. The trunk is long, with a slight taper. It grows to considerable size, and is capable of attaining a height of 60 - 80 feet and a diameter of 1 - 2 feet, but occasionally exceeds these measurements. Red spruce is shade tolerant and will become established in the understory of mixed stands.

The **bark** on mature trees is thick and is broken into thin, reddish brown scales of irregular shape. The **leaves** are dark green often with a yellow tinge and are very shiny. They are about $\frac{1}{2}$ inch long, sharp-pointed, stiff, and prickly to the touch. The **cones** are oblong in shape and usually from $\frac{1}{2}$ - 2 inches long. When ripe, they have a reddish brown color and are quite shiny. The cone scales are stiff like the black spruce, but the margins are generally without conspicuous notches. The cones begin to drop in the autumn or early winter and are all gone from the branches by the next summer.



The **twigs** have hairs none of which have a gland at the tip as in black spruce. The inner bark is reddish brown. The **wood** is fairly soft, light, close-grained, and strong, but is not as durable as pine when exposed to the weather.

Red spruce is one of our most valuable trees for the production of building lumber. It is used for joists, sills, rafters and heavy construction timbers, and is a principal wood used in the manufacture of paper pulp. It is also used for weir poles, piling, and Christmas trees, and is valuable for the sounding boards of musical instruments. Spruce gum is obtained largely from this tree.

WHITE SPRUCE

Picea glauca (Moench) Voss

White or cat spruce occurs statewide except in Sagadahoc and York counties. It is widely distributed, but not as abundant as the red spruce. It grows on shallow, rocky sites from the coast to the tree line in the mountains and is also commonly found in old pastures or cleared land. It does not tolerate shade and does not grow as an understory tree. The long and rather thick branches, densely clothed with stout, rigid lateral branches, are curved upward and form a somewhat open, irregular head having a broad base. It commonly grows to a height of 60-90 feet and to a diameter of two feet.

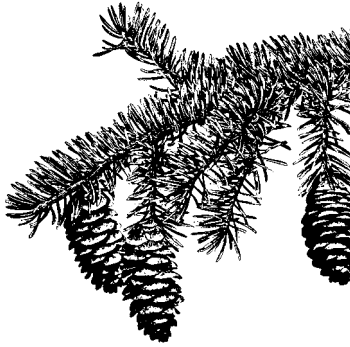
The **bark** on old trees has light gray, plate-like scales which are thin, irregular, and with a somewhat brownish surface, light gray and smooth on younger trees.

The **leaves** on the lower side of the branches are often bent upward in such a manner as to bring them all on the upper side.

They are pale blue-green at first,

later becoming a dark blue-green. The foliage emits a peculiar and characteristic odor which offers a ready means of distinguishing it from the other species and is the reason for the alternate name. The **cones** are slender, cylindrical in shape, pale brown and shiny when ripe, and usually about two inches long. They ripen in August and September, and may be collected for seed until October. Cones usually fall off the first year. The cone scales are thin and flexible so that they give easily when the cone is clasped in the hand. The **twigs** are without hairs. The inner bark is silvery and glistens.

The **wood** is fairly light, soft, finishes well, and is moderately strong. It is used for pulp, paddles, oars, piano sounding boards, dimension lumber, and in limited amounts for Christmas trees. White and black spruce produce long, tough, pliable roots which were used by the Indians for tying together pieces of birch bark for canoes, and for various other purposes.

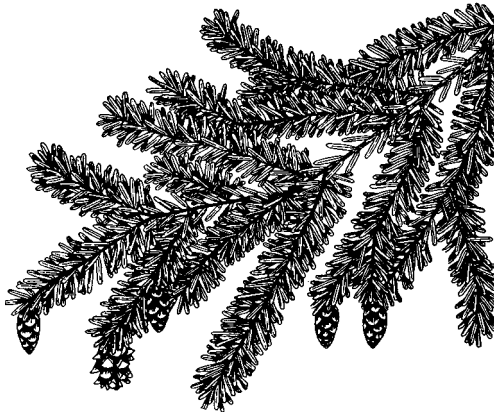


EASTERN HEMLOCK

Tsuga canadensis (L.) Carr.

Eastern hemlock is found in scattered stands in nearly every part of the state. Best growth is attained on moist, cool sites. It generally attains a height of 60 - 70 feet, and a diameter of 2 - 3 feet. The terminal shoot is pendulous and bends away from the prevailing winds, quite often toward the east. The trunk usually tapers rapidly from the base. This species can withstand considerable shading.

The **bark** is divided into narrow, rounded ridges covered with thick scales, and varies in color from cinnamon-red to gray. Bark exposed by cuts or bruises shows a purplish tinge



The **leaves** are flat, tapering, generally rounded at the apex, from 1/3 - 2/3 inch long, with a distinct short petiole and so arranged that the twig appears flat. Leaves become progressively shorter towards the tip of the twig. They are dark yellow - green in color with a lustrous upper surface, and a whitish under surface.

The **cones** are about 3/4 inch in length, oblong in shape, light brown, pendant, and suspended on short, slender stalks. Cones mature during the first autumn and generally remain on the branches until the next spring. Seeds are winged and fall during the winter. The **twigs** are very fine, limber, and are not pitchy.

The **wood** is coarse, brittle when very dry, light, strong, difficult to work (as it is likely to separate at one or more of the annual growth rings). It is used for framing, sheathing, roof boards, timbers, and pulp. The bark once was valuable for tanning but has been replaced by chemicals.

BALSAM FIR

Abies balsamea (L.) Mill.

Balsam fir occurs statewide and is the most abundant conifer in the state. It is frequent in damp woods, and on well drained hillsides, often occurring in thickets. The tree normally forms a sharp spire to a height of 60 - 70 feet and grows to 12 - 20 inches in diameter. On young trees the branches are horizontal, slender, and produced in regular whorls to form a strikingly symmetrical crown. In old age, the top is often slim, regular and spire-like.

The **bark** on young trees is pale gray, smooth, thin, and has prominent blisters which are filled with a resinous liquid known as "Canada balsam". On old trees the bark gets slightly rougher.

The aromatic **leaves** are about one inch long, prone to pitch, dark green and shiny above, silvery white below, and with the tips occasionally notched. On top branches leaves turn up, but on lower branches they spread out at right angles to the branch,



giving it a flattened appearance. The **cones** are 2 - 4 inches long, erect and dark purple in color before maturity. Cones ripen in August and September of the first year, disintegrate shortly thereafter, leaving only the central spike-like stalks. The **twigs** are smooth after the leaves have shed. Winter buds are covered with clear resin.

The **wood** is soft, light, and moderately limber. It is sawed into dimension lumber chiefly for light and medium building construction and is used in a large degree for pulp. Balsam fir is favored for Christmas trees and greens. Small trees are cut in great numbers primarily for the northeastern Christmas tree market. The branches can be steamed in a retort to produce oil of balsam. In the past, the clear pitch formed in the blisters of relatively young bark was used to mount microscope slides and to attach theatrical costumes to bare skin.

ATLANTIC WHITE-CEDAR

Chamaecyparis thyoides (L.) B. S. P.

Atlantic or coast white-cedar is found in bogs or low areas along ponds or streams at Newbert Pond in Appleton, Knight Pond in Northport, and from Cape Elizabeth south through York County. In Maine it rarely reaches a height of over 40 feet. The short branches come out from a gradually tapering trunk, giving the tree a conical appearance. The twigs are only slightly flattened.

The **bark** is fibrous, grayish to reddish brown, often with twisted spirals, and on young trees is easily pulled off in strips.



The **leaves** are bluish-green, scale-like, and arranged in somewhat fan-shaped clusters. When crushed, they give off an aromatic odor.

The **cones** are small, round, smooth and purplish in color before maturity, about $\frac{1}{4}$ inch in diameter with tack-like scales. They persist through the winter, but are very inconspicuous.

The **wood** is light, close-grained, strongly fragrant, and light brown in color tinged with red. It is brittle and therefore of limited use. The shavings are used for dog-bedding.

NORTHERN WHITE-CEDAR

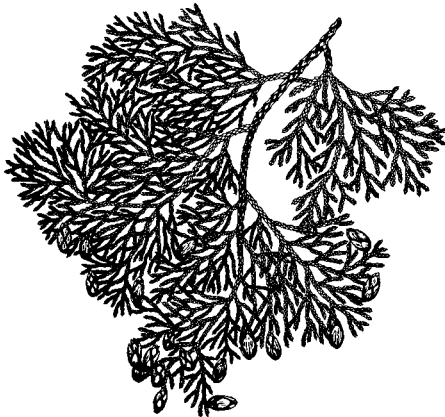
Thuja occidentalis L.

Northern white-cedar or eastern arborvitae is generally found in swamps, along streams, mountain slopes and old pastures where the soil is moist. Dense stands are widely distributed statewide. It is most abundant in the northern and eastern sections, and grows best on alkaline soils. It is widely used as an ornamental.

The head is compact, narrow and pyramidal in shape. The branches are horizontal, short and turned upward. Trees grow to 60 feet in height and to 3 feet in diameter. The trunk is often very strongly buttressed.

The **bark** has shallow fissures, which divide it into flat narrow ridges. It is reddish brown in color, tinged very often with orange.

The **leaves** are opposite or two-ranked, usually only about



1/8 inch long, scale-like, blunt, and so arranged as to make the small branches flat in shape. They have a pleasant, aromatic odor, and a rather pleasing taste.

The **cones** are erect, small, about 1/2 inch long, with only a few pairs of scales. They mature in one season. The seed is small and winged.

The **wood** is soft and light, coarse-grained, brittle, has very durable heartwood and a fragrant odor. It is used primarily for shingles, slack cooperage, poles, posts, rustic fencing, and is sawed into lumber for boxes, crates, siding, and boats. More recently, cedar has emerged as a viable alternative to pressure-treated wood. Cedar, naturally weather-resistant, is used for decks and outdoor furniture.

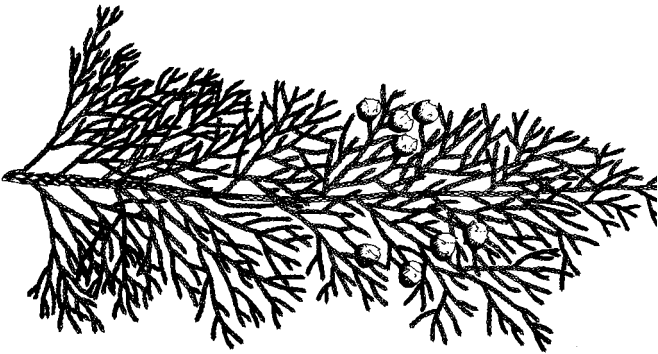
EASTERN REDCEDAR

Juniperus virginiana L.

Eastern redcedar is not a common species in this state. It grows on poor soils, gravely slopes, rocky ridges, and on moist, sandy ground. It is found intermittently in southern Maine and locally in Bridgton, Porter, Denmark, and West Gardiner. It gets the name "redcedar" from the red color of the heartwood.

It is very variable in its habit. Young trees have slender horizontal branches, and a narrow, compact, conical head. The crown of old trees becomes broad and much rounded. In this state, trees attain a diameter of 8 - 12 inches, and a height of 30 feet.

The **bark** on the trunk is light brown, tinged with red, and separating into long, narrow shreds on old trees.



The **leaves** are scale-like, overlapping, about 1/16 inch long, dark green, and remain on the tree 5 - 6 years, growing hard and woody the third season. Branchlets appear square in cross section. Current growth and vigorous shoots contain sharp-pointed, awl-shaped leaves; the so-called "juvenile" growth.

The **fruit** is berry-like, globose, 1 - 2 seeded, pale green at first, dark blue when ripe, and is about the size of a pea.

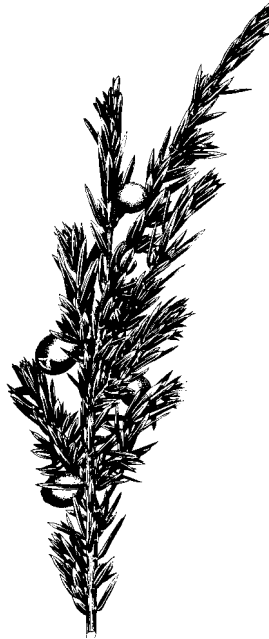
The **wood** is brittle, fine-grained, light, easily worked, durable, and very aromatic. The heartwood has a dull red color. It is valuable for fence posts and cabinet making, but in Maine it is not sufficiently plentiful to be of commercial importance. The shavings of this species are used as bedding for pets.

COMMON JUNIPER

Juniperus communis L.

Common juniper is found primarily as a shrub in pastures and open spaces on shallow, rocky soil. It occurs infrequently and locally in Penobscot, Somerset, Franklin, Oxford, Cumberland and York counties. It is occasionally found as a tree. Specimens up to 25 feet in height have been recorded, but are extremely rare.

The **bark** is grayish brown in color and occurs in thin, longitudinal, shredded layers. The inner portion has a reddish tinge. The **leaves** occur in whorls of three. They are sharp, stiff, dagger-like, and persist for several seasons. They are from $\frac{1}{4}$ - $\frac{3}{4}$ inch in length. The upper surface is concave and marked with a broad, white line. The underside, which due to the bending of the twigs usually appears uppermost, is dark green. The leaves persist for several seasons. The **fruit** is dark blue, covered with a thin bloom, slightly smaller than a pea, remains on the trees during the winter, and has a strong resinous taste. The fruit is usually found only on select trees since male and female flowers are generally produced on separate trees. This trait is common to most junipers.



The **wood** is hard, close-grained, and very durable. The heartwood is light brown. Large stems make long-lasting fence posts if the bark is removed.

GROUND JUNIPER

Juniperus communis var. *depressa* Pursh

Ground, common or Otisfield juniper is the flat-lying form common in pastures and poor sandy, gravely, rocky soils throughout Maine.