



Kinds of Assistance



Glossary of Woodland Words

R. Fletcher and B. Udell

Foresters will readily admit that they have a language all their own. If you are to deal effectively with those who work in the forest, and with forestry information, you need to be able to speak and understand that language.

We collected this glossary from a number of different sources. We hope it will get you started learning this new language. As you read it, please feel free to contact either of us if you are aware of mistakes or words that should be added.

Maybe someday we will see you out on your woodland, looking at a nurse tree, part of a shelterwood system, in a riparian zone that has become a monoculture of hardwoods—because the site was overstocked with boomers.

Happy reading! —Rick Fletcher and Bert Udell

A

abney level. A hand surveying instrument designed to measure angles of elevation or depression, expressed in degrees or percent. Similar to clinometer.

acre. A unit of land measurement, 43,560 sq ft or 10 square chains, or a square 208.7 ft on each side.

advance growth. Young trees that have become established naturally in a forest before cutting or regeneration begin. *Syn.* advance reproduction.

afforestation. Establishment of a forest on an area not previously forested.

age class. One of the intervals into which the range of ages of trees in a stand is divided for classification and use.

agro-forestry. The practice of raising trees, forage, and livestock on the same ground, at the same time. Common associations are cattle and trees or sheep and trees.

all-aged. Applies to a stand that contains trees of all ages. *See also* even-aged and uneven-aged.

all-aged management. A system of growing forest trees in groups where the individual trees are not the same age (theoretically, an all-aged forest has trees scattered throughout that range in age from 1 year to the oldest tree, whatever its age may be).

allowable cut. The amount of wood that can be removed from a landowner's property during a given period, without exceeding the net growth during that period on the property.

animal unit (AU). A measure of livestock numbers by which different kinds, classes, sizes, and ages of animals are converted to an equivalent common standard in relation to feed and forage needed by a mature cow (approximately 1,000 lb, live weight). In the western range territory, one animal unit is equal to one head of cattle, one horse, one mule, five sheep, five swine, or five goats.

annual ring. The growth layer of 1 year, as viewed on the cross section of a stem, branch, or root. One year's growth consists of a layer of lighter-colored wood (springwood) and a layer of darker-colored wood (summerwood).

arch. A trailer or structure in the shape of an inverted V or U, which is used in logging and is towed behind (or attached to the back of the skidding machine, lifting one end of the logs off of the ground during the yarding operation.

aspect. The direction toward which a slope faces. *Syn.* exposure.

available water. The amount of moisture in the soil that plants can extract, usually not including water that drains readily and water beyond the "wilting point."

Richard Fletcher, Extension agent, Linn and Benton counties, Oregon State University; and Bert Udell, Lebanon. The American Forest Institute named Bert and Betty Udell "Tree Farmers of the Year" for 1982.



B

back cut. In the process of felling a tree, the final cut, made on the opposite side of the tree from the face cut (or undercut).

backfire. Controlled fire set ahead of a forest fire to create a firebreak by reducing fuel in the path of the main fire.

basal area.

1. The cross-sectional area of the bole of a tree, 4½ ft above the ground. Basal area = diameter of tree squared, times 0.005454.

2. The sum of all the individual tree basal areas for a given land area. Commonly expressed as sq ft of basal area (a well-stocked, 40-year-old Douglas-fir forest may have 200–250 sq ft of basal area).

BGR. Acronym for “Big Game Repellent,” a putrified-egg product originally developed by Weyerhaeuser Company scientists; now sold under various trade names, as a repellent to animal browse.

Biltmore stick. A stick graduated in such a way that the diameter of a standing tree may be estimated when the stick is held out at right angles to the main axis of the tree, and at a distance from the eye for which the stick is graduated (usually 25 in).

biological control. Control of plants, diseases, and animal pests by the use of natural enemies.

biomass. The sum total of biological material that exists on a given land area. For trees and plants, this can include leaves, branches, stems, and roots.

blaze. A mark placed on a standing tree to call special attention to the tree.

blowdown. Trees that have been knocked over by wind.

blue stain. A fungus discoloration, predominantly bluish, but sometimes grayish, blackish, or brownish in appearance; confined almost exclusively to sapwood; common in pines.

B.M. Bench mark, a point of known elevation usually referenced to sea level.

board foot. A volume measure of lumber, being 1 ft wide, 1 ft long, and 1 in thick (12 in x 12 in x 1 in = 144 cu in).

bole. The main trunk of a tree.

bolts (boltwood). Short material to go into turned wood products: furniture parts, shingles, shakes, arrows, etc.

boomer. Slang name for mountain beaver.

borrow pit. In roadbuilding, an area where fill material is “borrowed” and used in road sections where the normal excavation process does not generate adequate fill material.

breast height. 4½ ft above ground level. *See* d.b.h.

broadcast burn. A controlled burn, where the fire is allowed to proceed over an entire area. Sometimes called a slash burn.

broadleaf. *See* hardwood.

browse. Small bushes, sprouts, herbaceous plants, small trees, etc. that wildlife feed on.

brush. Commonly refers to undesirable shrubs and other low-lying vegetation.

bucking. Cutting a felled tree into specified log lengths.

budburst. In woody plants, the time in the spring when flower or leaf buds begin their annual growth. *Syn.* budbreak.

budcap. A piece of paper or other suitable material attached to a young seedling, covering the terminal bud, to prevent animal browse.

buffer. A zone or strip of land that shields one area from another. Commonly used along streams or as visual barriers.

bug kill. Tree or timber stands killed by insects.

bunk.

1. Supports on a railroad car or logging truck on which the logs rest.

2. A bed in a logging camp.

burl. An abnormal growth on a tree stem, with wood tissue growing in an irregular pattern. Usually circular in shape, these growths are widely sought for their interesting grain pattern.

burning, methods of.

1. **burn, controlled.** Any burning that a landowner starts intentionally to accomplish a particular purpose, and over which he or she exercises some surveillance or control.

2. **burn, prescribed.** The application of fire to land under conditions of weather, soil moisture, and time of day, that will accomplish specific silvicultural, wildlife, grazing, or fire-hazard-reduction purposes.

butt. The base of a tree or log.

butt cut. The first log above the stump. *Syn.* butt log.

C

- caliper (or calipers).** An instrument used to measure diameters of trees or logs. It consists of two parallel arms at right angles to a graduated rule, with one arm that slides along the rule.
- cambium.** A layer of cells between the woody part of the tree and the bark. Division of these cells results in diameter growth of the tree through formation of wood cells (xylem) and inner bark (phloem).
- canopy.** A collective term for the layer formed by the crowns of the taller trees in a forest.
- carriage.** In skyline logging, a load-carrying device from which logs are suspended and which rides up and down a stationary mainline for yarding or loading.
- Cat.** Tractor/bulldozer (trademark of the Caterpillar Tractor Company).
- catface.** A scar on the surface of a log, generally elliptical in shape, resulting from wounds that have not healed over; also a scar near the base of a tree.
- caulks** (also called “corks”). Steel pegs in soles of heavy boots to give loggers secure footing (often applied to the boots themselves).
- cellulose.** A complex carbohydrate occurring in the cell walls of woody plants and all other vegetable matter.
- chain.** A measurement of distance: one chain equals 66 ft, or 4 rods; 80 chains equal 1 mile; 10 sq chains equal 1 acre. Once used extensively in land surveys.
- charcoal.** One of the principal products of the destructive distillation of woods.
- check.** A lengthwise separation of the wood, which usually extends across the rings of annual growth, commonly resulting from stresses set up in wood during drying.
- chips.** Small pieces of wood used for pulp, fuel, or pressed board manufacture.
- chlorophyll.** The green material in plants necessary for photosynthesis.
- choker.** A noose of wire rope used for moving logs.
- clearcut.** An area on which the entire timber stand has been harvested. *See* reproduction methods.
- climax vegetation.** The final stage of natural plant succession, in which the plant composition remains relatively stable.
- clinometer.** Like an abney level, an instrument for measuring vertical angles or slopes.
- codominant trees.** Trees with crowns forming the general level of the crown cover and receiving full light from above, but comparatively little from the sides; usually with medium-sized crowns. *See* crown class.
- cold deck.** Pile of logs left for later transportation.
- compass.** An instrument used to measure direction. Called a “staff compass” if placed on a pointed pole, a “hand compass” if handheld.
- commercial thinning.** Removing trees from a developing young stand, so that remaining trees will have more growing space; dead and dying trees will be salvaged; and the operation will make a net profit.
- cone.** The female reproductive part of conifers. These structures have overlapping scales that cover several seeds.
- conifer.** A tree belonging to the order Coniferae, usually evergreen with cones, needle-shaped leaves, and producing wood known commercially as “softwood.”
- conk.** A hard, spore-bearing structure of a wood destroying fungus, which projects beyond the bark of a tree.
- conservation.** In forestry, the wise use of natural renewable resources. A key idea for understanding “conservation” is “use” by people.
- coppice forest.** A forest originating from sprouts or suckers. *Syn.* low forest.
- cord.** A volume measure of stacked wood. A standard cord is 4 x 4 x 8 ft or 128 cu ft of space. Since roundwood cannot be stacked to give solid volume, actual wood volume varies between 70 and 90 cu ft per cord.
- crook.** A defect in logs and poles or piling, consisting of an abrupt bend. Also refers to edgewise warp in a piece of lumber.
- crop tree.** A tree selected in a young stand, to be retained until final harvest.
- cross-drain.** A pipe placed under the road surface between major drainages, to collect water from the ditch line and deposit it on the lower side of the road.
- cross section.** A section of a stem or leaf taken at right angles to its longitudinal axis.
- cross tie.** A square timber used for supporting railroad rails.
- crotch.** The fork of a tree or branch.
- crown.** The branches and foliage of a tree.
- crown class.** A designation of trees in a forest with crowns of similar development and occupying similar positions in the crown cover. Differentiation into crown classes applies to even-aged stands and within small even-aged groups in which trees in an uneven-aged stand often are arranged. Five crown classes are commonly recognized: dominant, codominant, intermediate, overtopped (suppressed), and wolf trees.

crown cover. The canopy of green leaves and branches formed by the crowns of all trees in a forest. Generally expressed as a percent of total area.

crown density. The compactness of the crown cover of the forest; depends on the distance apart and the compactness of the individual crowns. A loose term combining the meanings of “crown closure” and “shade density.”

crown fire. A fire that runs through the tops of living trees, brush, or chaparral.

cruising. Measuring standing trees to determine the volume of wood on a given tract of land. Used for harvesting, purchasing, and general management.

crummy. Crew bus that transports loggers or other woodworkers to and from the woods.

cubic foot. A cube 12 in on a side. One cu ft of wood in a log usually produces from 3 to 10 board ft of lumber because of the cylindrical log shape and sawing losses.

cull. A tree or log of merchantable size rendered unmerchantable because of poor form, large limbs, rot, or other defects.

cull tree. A live tree of merchantable size but unmerchantable because of defects or decay.

cunit. A measurement equal to 100 cu ft of solid wood; often used for pulpwood measurement.

cutting area. A portion of woodland on which timber is being cut or will be cut.

cutting cycle. The planned interval between major harvesting operations in the same stand. A 10-year cutting cycle indicates thinnings done once every 10 years.

D

debarker. Machinery that removes bark from a log.

d.b.h. (or dbh). The diameter of a tree outside of the bark at roughly breast height. Normally measured 4½ ft off the ground on the uphill side of the tree. It is easier to measure at this height, and many trees have large swells in the stem below this point that could increase errors in computing tree volumes.

deciduous. Term applied to trees (commonly broadleaf) that drop all their leaves sometime during the year.

deck. Sometimes applied to stacks of logs. *Syn.* log deck. *See* cold deck, hot deck.

defect. Any irregularity or imperfection in a tree, log, piece, product, or lumber that reduces the volume of sound wood or lowers its durability, strength, or utility value.

dendrology. The identification and systematic classification of trees and shrubs.

diameter. The longest distance at right angles, across any circle or cylinder. In standing trees, estimate diameter by dividing the circumference (length of a line taken completely around the outside of a tree) by 3.1416.

diameter breast high: *See* d.b.h.

diameter class. One of the intervals into which the range of diameters of trees in a forest is divided for purposes of classification and use. Generally this is done in 2-in, even increments (12-in class would contain trees from 11 to 13 in).

diameter limit. The smallest (occasionally *the largest*), size to which trees or logs are to be measured, cut, or used. The points to which the limit usually refers are stump, breast height, or top.

diameter-limit cutting. A system of selection harvest based on cutting all trees in the stand over a specified diameter. This eliminates marking individual trees.

diameter tape. A graduated tape based on the relationship of circumference to diameter, which provides a direct measure of tree diameter when stretched around the outside of the tree.

d.i.b. Abbreviation for “diameter inside bark.”

dibble. A flat or round metal tool used to make a hole for planting containerized seedlings.

direct seeding. Sowing tree seed to regenerate a forest.

d.o.b. Abbreviation for “diameter outside bark.”

dominant trees. Trees with crowns extending above the general level of the crown cover and receiving full light from above and partly from the side; larger than the average trees in the stand, with crowns well developed, possibly somewhat crowded on the sides. *See* crown class.

D-plus (D+) rule. A rule of thumb in thinning; estimate desired spacing by adding a given number to the d.b.h. of the crop tree: a “D + 4” rule would mean that a 16-in d.b.h. tree would need 16 + 4 or 20 ft of growing space.

dormancy. A biological process in which a plant ceases most growth activities and simply maintains existing tissue. Caused by periods of moisture and/or temperature stress.

Douglas-fir region. An area from northern California to southern British Columbia, west of the Cascades crest. The western portions of Oregon and Washington, where Douglas-fir grows in even-aged stands and is the predominant timber species.

dry rot. A decay of the “brown rot” type, caused by specialized fungi capable of conducting moisture from an available source and extending their attack to wood previously too dry to decay. Found chiefly in buildings. The term is open to the misinterpretation that wood will rot when dry, which is *not* true.

duff. Forest litter and other organic debris in various stages of decomposition on top of the mineral soil; typical of coniferous forests in cool climates, where rate of decomposition is slow and where litter accumulation exceeds decay.

E

easement. An interest or right to limited use of land, granted by the owner to another party. Commonly used for access.

ecology. The science that deals with the interaction of plants and animals with their environment.

entomology, forest. The science that deals with insects and their relation to forests and forest products.

environment. All elements, living and inanimate, that affect a living organism.

epidemic. Widespread insect or disease incidence beyond normal proportions; usually accompanied by excessive damage.

even-aged. Applied to a stand in which relatively small age differences exist between individual trees.

exotic. Not native; foreign.

even-flow harvest. A harvesting scheme designed to extract exactly the same volume of wood fiber each period.

F

faller. A logger who specializes in felling trees. Also called “cutters” or “sawyers” in some parts of the West, “choppers” in the redwoods.

firebreak. An existing barrier, or one constructed before a fire occurs, from which all or most of the inflammable materials have been removed.

fire control. All activities concerned with the suppression of a forest fire.

fire danger. The result of both constant and variable factors that determine whether fires will start, spread, and do damage, and the estimated difficulty of control.

fire line. A trail around a fire, dug down to mineral soil and clear of all debris. One type of firebreak.

fire prevention. Those fire-control activities concerned with the attempt to reduce the number of fires through education, hazard reduction, and law enforcement.

fire scar. An injury or wound in the bole of a tree caused or accentuated by fire.

fire season. The period or periods of the year during which fires are likely to occur, spread, do sufficient damage, and otherwise warrant organized fire control. In Oregon, this period is set by order of the state forester.

fire suppression. All the work of extinguishing a fire, after its detection.

1. direct. A method where the edge of the fire is extinguished directly.

2. indirect. A method where the control line is located along a favorable firebreak, and the intervening strip between the fire and the firebreak is backfired.

3. one-lick. A system of managing personnel on a fire, where the entire crew constructing the line moves forward without changing relative positions in the line. As they move forward, they do “one lick of work,” then advance one or more steps. The number of steps is controlled primarily by the number engaged and the consequent proper spacing of licks, in order that the control line may be completed and the fire extinguished when the last person has passed over the line.

flash point. The temperature at which a material will burst into flame.

forage. In range management, unharvested plant material of any kind available for animal consumption. When cut, it becomes feed.

forage value. The relative importance for grazing purposes of a range plant or plants as a whole on a range.

forb. A small herbaceous plant, unlike grass.

forestation. The establishment of forest naturally or artificially on areas where it has been absent or insufficient. *Syn.* afforestation.

forester. A person who has been professionally educated in forestry at a college or university.

forest management. The application of business methods and technical forest principles to the management of forest property.

forest nursery. An area in which young trees are grown for forest planting.

Forest Practices Act. Several states have legislation regulating private forest harvest to reasonably assure adequate regeneration and protection of soil and water values. Abbreviated in Oregon to OFPA (Oregon Forest Practices Act).

forest protection. The activities connected with the prevention and control of damage to forests from fire, insects, disease, and other injurious and destructive sources.

forest site. A land unit characterized by climatic, soil, and topographic features that control forest type and growth.

forest survey. An inventory of forest land to determine acreage, condition, timber volume, and species, for specific purposes (such as timber purchase and forest management) or as a basis for forest policies and programs. Also refers to carefully measuring and marking property boundaries.

forest type. A descriptive term used to group stands of similar character in composition and development, to differentiate them from other groups of stands. *See* stand, type of.

forest utilization. That branch of forestry concerned with the operation of harvesting, processing, and marketing the forest crop and other forest resources.

form. The shape of a log or tree.

form class. A measure of bole taper derived by dividing diameter inside bark at a given height (usually 16 or 32 ft) by d.b.h. These values often are required to use tree-volume tables.

forty. A land tract of 40 acres or a ¼-mile square.

frill. V-shaped cut in the cambial tissue of the tree made with a machete or other sharp tool, used as a place to apply herbicides.

frost crack. Longitudinal crack on the outside of a tree, caused by extreme cold. Especially common on thin-barked species, such as hemlock and true fir.

fungicides. Chemicals used to kill and/or prevent the growth of fungi.

fungus. A plant without chlorophyll that derives its nourishment from the organic matter of other plants.

G

gall. A pronounced localized swelling of greatly modified structure that occurs on plants from irritation by a disease or insect.

gallery. A passage or burrow, excavated by an insect under bark or in wood for feeding or egg-laying purposes.

genus. A botanical grouping of plants with similar characteristics. Species within a genus may be cross-bred, but resulting offspring usually will be sterile. Genus *Pinus* contains ponderosa pine, lodgepole pine, and hundreds of other pines around the world. Each species within the genus is identified as *Pinus* + *species name* (in ponderosa's case, *Pinus ponderosa*). Hence, each tree has both a genus name and a species name.

germination. The initial growth of a seed or spore.

girdle. To encircle the stem of a living tree with cuts that completely sever bark and cambium and often are carried well into the outer sapwood, done to kill the tree by preventing the passage of carbohydrates to the roots. Also refers to same process caused by animals, such as mice or beaver.

grade.

1. A system of classifying lumber or logs according to quality.
2. The steepness of a forest road.

grain. The direction, size, arrangement, appearance, or quality of the fibers in wood.

grazing capacity. In range management, the ability of a range unit, in years of normal rainfall, to give adequate support to a constant number of livestock for a stated period each year without deteriorating. Expressed in number of livestock per acre of given kind or kinds, or in number of acres per specified animals.

green lumber.

1. Lumber with the moisture content greater than that of air-dried lumber.
2. Unseasoned lumber, boards from logs processed through mill before drying.

growth rate. With reference to wood, the rate at which wood has been added to the tree at any particular point, usually expressed in the number of annual rings per inch. Also may be stated as "annual leader growth."

gyppo logger. A self-employed, independent timber harvesting contractor who is not an employee of the log purchaser. A more descriptive term is "contract logger."

H

habitat. The environment in which the plant or animal lives. *Syn.* site.

hand planting. A reforestation method of planting seedlings by hand, usually with spacing to minimize competition and maximize growth. Seedlings often are 2 years old, giving the new forest a head start over seeding methods.

hardwood.

1. Generally, one of the botanical group of trees that have broad leaves, in contrast to the needle-bearing conifers.
2. Wood produced by broad-leaved trees, regardless of texture or density.

harvest. Extraction of some type of product from the forest. Generally associated with a cutting.

haulback line. In cable logging, the line used to pull chokers or the carriage from the landing out to the felling area.

heart rot. A decay characteristically confined to the heartwood. It usually originates in the living tree.

heartwood. The inner core of a woody stem, wholly composed of nonliving cells and usually differentiated from the outer enveloping layer (sapwood) by its darker color.

heel-in. To store young trees before planting by placing them in a trench and covering the roots with soil.

herbicides. A broad class of chemicals used to kill weeds, grass, brush, or competing trees.

high grading. The removal from the stand of only the best trees, often resulting in a poor-quality residual stand.

high-lead logging. Logging system that uses cables rigged to a spar high above the ground so that one end of the logs can be lifted during yarding.

hinge wood. In felling, the portion of the tree that remains uncut. The width and location of this wood helps determine which way the tree will fall.

hog. A machine used to reduce waste pieces of lumber and slabs, or small tree stems, to chip form.

hot deck. A log pile where both yarding and haul-truck loading take place in rapid succession.

humus. The plant and animal residues of the soil (litter excluded) that have decomposed to the point where their origin no longer is recognizable.

hybrid. A cross between two species that results in a sterile (but often more desirable) offspring.

hypometer. An instrument used to measure the heights of trees, employing geometric or trigonometric principles.

I

ice damage. Breakage of tops and branches and stripping of branches and needles by an ice storm.

ignite. To set fire to, cause to burn.

increment. An increase in the diameter, basal area, height, volume, quality, or value of individual trees or stands over time.

increment borer. A tool used to extract a core of wood from a tree, allowing study of the radial growth of a tree without felling it.

increment core. That part of the cross section of a tree extracted by an increment borer. Used to determine tree age and growth.

insecticides. Chemicals used to kill insects.

intermediate trees. Trees shorter than those in the dominant or codominant classes, but with crowns either below or extending into the crown cover formed by codominant and dominant trees; receiving a little direct light from above, but none from the sides; usually with small crowns, considerably crowded on the sides. *See* crown class.

interplant. To plant seedlings among existing trees, planted or natural.

K

kerf, saw. Width of a cut made by a saw.

kiln, dry. A structure heated by gas, steam, or electricity, in which lumber is dried under controlled conditions to a desired moisture content.

knot. That part of a branch that has been incorporated into the main stem.

L

landing. The area where logs are collected for loading.

leader. The growing top (terminal shoot) of a tree. The distance up the main stem of the tree between each whorl of branches generally represents 1 year of height growth.

leave trees. Trees left in or just outside a harvest zone (often otherwise a clearcut) to reseed the area. This is nature's method of reforestation; but it often is slower, and it does not have the more assured results of direct seeding or planting. Also may refer to trees left after a thinning.

litter. The uppermost layer of the soil, made up of freshly fallen or slightly decomposed organic materials. *See* duff.

log.

1. To cut and deliver logs.
2. A tree segment suitable for lumber and other products, typically 8 or more ft long.

logger. A person who is engaged in a logging operation; locally, one who moves logs to landings or skidways.

log rule. A table showing the estimated or calculated amount of lumber (in board feet) that can be sawn from logs of given length and diameter.

1. Doyle rule. A simple formula used in the eastern and southern U.S. It underestimates the yield from small logs and overestimates with logs over 28 inches in diameter.

2. Doyle-Scribner rule. A combination rule, derived by using Doyle rule values for logs up to 28 inches in diameter and Scribner rule for logs larger than 28 inches.

3. International rule. A formula allowing ½-inch taper for each 4 feet of length and ⅛-inch shrinkage for 1-inch board. In one form, it assumes a ⅛-inch kerf; in modified form, it assumes a ¼-inch kerf.

4. Scribner rule. A diagram rule, one of the oldest in existence. It assumes 1-inch boards and ¼-inch kerf, makes a liberal allowance for slabs, and disregards taper. Official rule in many parts of the U.S., including the Pacific Northwest.

5. Scribner decimal C rule. The Scribner rule modified by rounding off the last digit to the nearest 10 and dropping the zero. Zeroes are added to total of volumes. Used in Oregon and Washington.

log scale. The lumber content of a log as determined by a log rule.

lookout.

1. Fire spotter.
2. A station or post used primarily in the detection of fires, often an observation tower located on a high point of ground.

lop.

1. To chop branches, tops, or small trees after felling, so that the slash lies close to the ground.
2. To cut the limbs from a felled tree.

M

mainline.

1. In cable logging, the line used to retrieve turns of logs.
2. The main access road to a forest tract.

management plan. A written plan for the organized handling and operation of a forest property. It usually includes data and prescribes measures designed to provide optimum use of forest resources according to the landowner's objectives.

marking timber. Selecting and indicating, usually by an axe mark (blaze) or paint mark, trees to be cut or retained in a harvesting operation.

maturity. For a given species or stand, the approximate age or condition beyond which the growth rate declines or decay begins to assume economic importance.

MBF. Abbreviation for 1,000 board ft.

mensuration, forest. The science dealing with the measurement of the volume, growth, and development of individual trees and stands, and the determination of the various products obtainable from them.

merchantable. That part of a tree that can be manufactured into a salable product.

merchantable height. The length of the tree stem from the top of the stump to the top of the last merchantable section. Usually expressed in ft or number of logs.

merchantable timber. A tree or stand of trees that may be converted into salable products.

merchantable volume. The amount of wood in a single tree or forest stand that is considered salable.

monoculture. The practice of growing a single species of tree or plant on a given land area.

mountain beaver. A small nocturnal rodent, found throughout the Coast Range in Oregon and Washington. This burrowing animal has a voracious appetite for Douglas-fir seedlings. *Syn.* boomer.

mortality. Death of forest trees as a result of competition, disease, insect damage, drought, wind, fire, and other factors.

multiple-use management. Management and use of forest land for more than one purpose (timber, wildlife, watershed, etc.). Uses may be shared on the same acreage or allocated to different portions of a forest tract.

N

national forest. Federally owned land managed to provide wood, water, and other uses for the benefit of the people of the United States. National forests are under the administration of the Forest Service of the U.S. Department of Agriculture.

national park. Federally owned land managed to maintain areas of outstanding and unique scenery and geographic features for public enjoyment. National parks are under the administration of the National Park Service of the U.S. Department of the Interior.

natural thinning. Death of trees in a stand as a result of competition.

needle cast. Premature browning and dropping of needles caused by a fungus. (Douglas-fir Christmas trees are particularly susceptible to Swiss needle cast.)

nurse tree or crop. A tree or crop of trees, shrubs, or other plants that foster another, generally more important, tree or crop. *Syn.* trainer.

nutritive value. A term usually prefixed by “high,” “low,” etc., to indicate relative quality of a given forage or feed to furnish elements valuable for animal nutrition.

O

old growth. A forest that has never been changed by management or harvesting. This term is misapplied by many to describe any forest that appears to be old. Individual trees in this type of forest usually are more than 200 years old, and there are large standing and fallen dead trees throughout the stand.

operation. Used interchangeably for logging jobs, harvesting, cutting, milling, etc. An all-inclusive term for harvesting and hauling out the forest products.

outplant. Planting nursery-grown tree seedlings on a freshly prepared area. *See* transplant.

overgrazing. Grazing so heavy that it impairs future forage production and causes range deterioration through damage to plants, soil, or both.

overmaturity. That period in the life cycle of trees and stands when growth or value is declining. *See* maturity.

overrun. The excess lumber sawn from logs over the estimated volume or log scale, usually expressed in percent of log scale.

overstocked. A condition of the stand or forest, indicating more trees than desired, normal, or full stocking would require.

overstory. That portion of the trees in a stand forming the upper crown cover.

overtopped tree. Trees with crowns entirely below the general level of the overstory cover, receiving no direct light either from above or from the sides. *Syn.* suppressed. *See* crown class.

P

palatability. The relative desirability of certain plants as forage for domestic and wild animals. Varies with composition of the plant cover or the season of grazing.

partial cut. A silvicultural cutting scheme that removes at any one time less than the total tree stand (selective cut, seed tree cut, shelterwood cut).

particle-board. A type of board made by compressing chips or particles of wood under heat and pressure, in the presence of glue or resin. Flakeboard is a new product made by a similar process.

pathology, forest. The science that pertains to diseases of forest trees or stands, and to the deterioration of forest products by organisms.

peavey. A long-handled tool with a spike point and hinged arm; used to roll logs.

peeler core. A piece of roundwood that is a byproduct of the veneer-peeling process; usually 8 feet long and about 4 inches in diameter.

percent grade.

1. The vertical rise of land in 100 horizontal feet. 16% grade means that in 100 ft horizontal, the elevation has changed 16 ft. Measured with an abney level or clinometer.

2. Amount of forest volume found to be in a given log grade.

percolation. The downward movement of water through the soil, primarily because of gravity.

pesticides. A general term for chemicals used to kill any of the pests of a desired crop.

phloem. An outer layer of tree tissue that conducts food from the leaves to the stem and roots.

photosynthesis. The conversion by green plants of light, water, and air into food energy.

pile and burn. A controlled burn where the material to be disposed of is concentrated, usually with machinery, before burning.

piling. Round timbers driven into the ground to support other structures.

pistol butt. Applied to trees with bases curving away from the slope and then upwards. This may indicate unstable or moving soil.

pitch. A term applied to the resin occurring in the wood of certain conifers.

pitch pocket. A well-defined, lens-shaped opening between or within annual growth rings of coniferous wood, containing pitch and possibly bark.

planer. A machine used to put a smooth surface or shape on lumber.

plant.

1. To place young trees or cuttings in the soil on forest land; to establish a forest crop. Sometimes used loosely to include direct seeding. Trees may be placed as bare-root stock, or with roots within a ball of earth, or in earth within a container.

2. A processing facility for wood products.

plantation. An artificially reforested area established by planting or by direct seeding.

planting bar. A hand tool used in making a slit-hole in the soil in which trees are planted.

plot. A carefully measured area laid out for experimentation or mensuration; may be permanent or temporary. *Syn.* study plot.

plug seedling. A seedling grown in a small container, under carefully controlled environmental conditions. Seedlings are removed from containers for planting.

plywood. A wood product constructed of three or more layers of veneer joined with glue and (usually) laid with the grain of adjoining plies at right angles to one another.

pole.

1. A young tree between 5 and 12 in d.b.h. *See* sapling.
2. A log cut for the manufacture of power or telephone poles (involves trees larger than 12 in d.b.h.).

portable mill. A small sawmill that can be readily moved from one place to another. The usual daily capacity ranges from 3,000 to 10,000 board ft.

prebunch. In logging, to collect logs or other material at intermediate staging areas, in preparation for the main yarding operation.

precipitation. Deposits of atmospheric moisture in liquid or solid form, including rain, sleet, snow, hail, dew, or mist (also refers to quantity of water deposited).

precommercial thinning. Removal of some of the trees in a young stand to reduce competition for water and nutrients, and to accelerate commercial growth of remaining trees. Trees thinned from these stands have no commercial value.

preservation.

1. To maintain in a natural state; human impact on the biological system is minimized. Commonly refers to wilderness area management.
2. Wood preservation involves the protection of timber and wood products against the action of destructive living organisms, especially fungi, insects, and marine borers.

preservative. A substance that, when properly applied to wood, makes it resistant to attack by fungi, insects, or marine borers.

primitive area. An area of forest land that is left unaffected by human activities. These areas are in essence wilderness, but they are created by administrative regulation rather than by act of Congress.

prism. A wedge-shaped piece of clear or amber-colored glass that is used to select trees for timber sampling.

pruning. The removal of live or dead branches from standing trees, whether done artificially or naturally. Natural pruning results from such causes as deficiency of light, decay, snow, ice, etc. *Syn.* self-pruning.

pulp, wood. Mechanically ground or chemically digested wood fibers used in the manufacture of paper and allied products. Bleached and purified wood pulp also is widely used in the manufacture of rayon and other chemicals.

pulpwood. Wood cut or prepared primarily for manufacture into wood pulp, for later manufacture into paper, fiberboard, or other products. (The products depend largely on the species and the pulping process.)

PUM yarding. Acronym for “pile unmerchantable material,” referring to a U.S. Forest Service contract regulation that requires loggers to concentrate all tops, chunks, and other unmerchantable material generated by harvesting. *See* YUM.

punky. A soft, weak, often spongy condition in wood; caused by decay.

R

radial (surface). A horizontal surface or plane extending wholly or in part from the pith to the bark of a tree bole.

range. Land not under cultivation that produces forage suitable for grazing by domestic animals and wildlife. Includes forest that produces forage. “Open range” is an extensive grazing area on which the movement of livestock is permitted. In Oregon, these areas are established by law.

ranger. An administrative officer in charge of a unit of forest or other land, usually a subdivision of a public forest or park. Various classifications are recognized: forest ranger, district ranger, park ranger, county ranger.

ray. In wood anatomy, a ribbon-shaped strand of tissue formed by the cambium and extending in a radial direction across the grain in hardwoods.

reforestation. The natural or artificial restocking of an area with forest trees.

relative humidity. The amount of water vapor present in the air, compared to the amount in fully saturated air of that temperature and pressure.

reproduction.

1. The process by which a forest is renewed. **a. artificial.** Renewal by direct sowing or planting (*syn.* reforestation). **b. natural.** Renewal by self-sown seeds, sprouts, rhizomes, etc. (*syn.* regeneration).
2. Seedlings or saplings of any origin (*syn.* young-growth).

reproduction methods.

1. clearcutting. Removal of the entire forest in one cut. This method perpetuates even-aged stands.

2. seed-tree. Removal of the mature timber in one cut, except for a small number of seed trees (1–7 trees/acre); called a “group cutting” when the seed trees are left in groups, a “reserve cutting” when specifically selected seed trees are left for growth, as well as to furnish seed.

3. selection. Removal of mature timber, usually the oldest or largest trees, either as single scattered trees or in small groups at relatively short intervals, commonly 5 to 20 years, repeated indefinitely. This encourages a continuous establishment of natural reproduction, and an uneven-aged stand is maintained. Also called “thinning from above.”

4. shelterwood. Removal of the mature timber in a series of cuttings, which extend over a period of years. Usually equal to not more than one-quarter (often not more than one-tenth) of the time required to grow the crop. The establishment of natural reproduction under the partial shelter of seed trees is encouraged, but sometimes these areas must be artificially regenerated.

5. coppice. Forest regeneration by sprouting (vegetative reproduction) from stumps or roots.

residual stand. Trees, often of saw log size, left in a stand after thinning to grow until the next harvest. Also called “reserve stand” or “leave trees.”

resins. A class of inflammable vegetable substances that have no definite shape, secreted by certain plants or trees; characterizes the wood of many coniferous species.

riparian zone. That area adjacent to rivers and streams identified by vegetation, wildlife, and other qualities unique to these locations.

riprap. Stones or other energy-absorbing material used to stabilize a roadbank, streambank, or stream channel.

root collar. The transition zone between stem and root. Usually recognizable in trees and seedlings by the presence of a slight swelling.

roots. The below-ground tree or plant parts that provide physical support, absorb water and nutrients from the soil, and store food produced by photosynthesis.

rotation. The period of years required to establish and grow a timber crop to a specified condition of maturity, when it may be harvested and a new tree crop started.

rotation age. The age at which a stand is considered ready for harvesting under an adopted plan of management.

rot. Wood in a state of decay.

roundwood. Wood products that are round (pulpwood, posts, poles, piling, firewood, sawlogs).

S

salvage. To harvest trees that are dead or in poor condition but still can yield a forest product.

sample. A small collection from some larger population, about which a woodland owner wishes information.

sample tree. A representative or average-sized tree, chosen for detailed measurement of condition, size, growth, or quality.

sapling. A young tree of small diameter, typically 2 to 5 in d.b.h.

sapwood. The light-colored wood that appears on the outer portion of a cross section of a tree. Composed of dead cells; serves to conduct water and minerals to the crown. A minimum of 1 in of sapwood is required on all poles to ensure proper absorption of preservatives. Also termed “xylem.”

saw log. A log large enough to be sawn into lumber.

sawmill. A plant at which logs are sawed into salable products, including all the machinery and buildings necessary for the operation of the plant.

sawtimber. Trees that yield logs suitable in size and quality for the production of lumber.

scale. The estimated sound volume of a log or group of logs in terms of a given log rule or formula; used to estimate the sound volume of a log or group of logs. *See log rule.*

scale stick. A graduated stick for measuring the diameters and contents of logs; both measures are stamped on the stick.

scalp. To physically remove the sod or surface layer of debris, to expose mineral soil for tree planting.

scarify. To disturb the forest floor and topsoil in preparation for natural regeneration or direct seeding or planting.

schoolmarm. Logger’s slang for a tree with one or more trunks.

season. To dry lumber, either in the open or in a dry kiln.

seasoning. The process of drying (curing) lumber or other forms of wood to improve its properties: natural (air or underground drying) or artificial (kiln drying, electrical drying, oil drying, etc.).

second growth. A second forest that develops after harvest of the original, natural forest. In the Pacific Northwest, these forests also are often called young growth stands.

section. A unit of land area equal to 640 acres, 6,400 sq chains, 1 sq mile, or 80 chains on each side.

seedbed. In natural plant reproduction, the soil or forest floor on which seed falls; in nursery practice, a prepared area in which seed is sown.

seeding. A reforestation method by sowing seeds, aerially or by hand. Often done immediately after harvest so that a new forest is started the next growing season.

seedling. A small tree grown from seed. Usually the term is restricted to trees less than 2 in d.b.h.

seed tree.

1. A tree that produces seed.
2. Trees reserved in a harvest operation to supply seed. *See* reproduction methods.

seed year. A year in which a given species produces (over a considerable area) a seed crop greatly in excess of the normal. Usually applied to trees of irregular or infrequent seed production.

seed zone. Areas of similar climatic and elevational conditions, used to specify where tree seed was collected and where trees from such seed are most likely to be grown successfully.

selection cut. *See* reproduction methods.

severance tax. A tax paid on forest products after they are cut.

shade tolerance. The capacity of a tree or plant species to develop and grow in the shade of and in competition with other trees or plants. *See* tolerance.

shake.

1. A lengthwise separation of wood (usually caused by wind) that usually occurs between and parallel to the growth layers.
2. A thin section split from a bolt of wood and used for roofing or siding.

shear.

1. In Christmas tree culture, to shape and trim back the branches to make dense foliage and give tree a conical shape.
2. In felling, a mechanical device that pinches trees off at the stump.

shelterbelt. A wind barrier of living trees and/or shrubs, maintained to protect farm fields or homesteads. *Syn.* belt, windbreak.

shelterwood. *See* reproduction methods.

shrinkage. The contraction of wood caused by drying the material below the point at which the wood fibers are saturated. Shrinkage values usually are expressed as a percentage of specific dimensions (or the volume) of the wood when green.

shrub. A woody perennial plant (lives more than 1 year) that differs from a perennial herb by its woody, persistent stems, and from a tree by its low stature and branches that start from the base.

sidecast. Earth and other material generated by roadbuilding and deposited on the downhill side of the road.

silver thaw. A weather phenomenon in which great quantities of ice collect on trees and other vegetation, often causing much breakage.

silviculture. The art and science of producing and tending a forest; the theory and practice of controlling forest establishment, composition, growth, and quality of forests to achieve the objectives of management.

site. An area of land, especially with reference to its capacity to produce vegetation as a function of environmental factors (climate, soil, biology, etc.).

site class. A grouping of similar site indexes that indicates relative productivity. The common system for the Douglas-fir region includes five site classes, with 1 (I) the most productive and 5 (V) the least.

site index. A measure of forest site quality, based on the height (in ft) that dominant trees will reach at a given age. For Douglas-fir, this commonly is expressed as either a 50- or 100-year site index.

site preparation. Any treatment of a forest site to prepare it for establishment of a plantation or for natural regeneration.

skidding. The process of dragging logs from the woods to a landing, usually applied to ground-based operations. A similar term, used especially with cable or aerial logging systems, is “yarding.”

skid road, skid trail. A pathway over which logs are skidded.

skyline logging. A type of cable logging in which the mainline is stationary and a carriage moves up and down it, collecting turns of logs.

slab. The exterior portion of a log removed in sawing timber.

slash.

1. Tree tops, branches, bark, and other debris, left after a forest operation.
2. The process of cutting down undesirable vegetation.

snag. A standing, dead tree or a standing section of the stem of a tree broken off at the height of 20 ft or more. If less than 20 ft, it is properly termed a stub.

softwood. One of the botanical group of trees that generally have needle or scalelike leaves—the conifers. Also the wood produced by such trees, regardless of texture or density.

- soil horizon.** A layer of soil with distinct characteristics that separate it from other soil layers. Commonly, a forest soil will have O, A, B, and C horizons.
- soil moisture.** The relative amount of water in the soil; usually applied to upper levels of soil, occasionally to humus layer.
- soil profile.** A vertical section of soil showing the nature and thickness of the various horizons, often used in soil classification.
- soil series.** Groupings of soils with similar profile characteristics.
- spar.** A pole, tower, or tree used in cable logging to raise the mainline off the ground.
- sprout.** A young tree developed directly from the base, stump, or root of another tree. Relatively common among hardwoods; with conifers, typical only of redwoods. *Syn.* sucker.
- species (of trees).** Trees having very similar genetic makeup, so that they freely interbreed and have common characteristics. In common language, a “kind” or “variety.” Each species is identified by a scientific name that consists of a genus portion and then a species portion (*Tsuga heterophylla*, western hemlock).
- spike top.** A tree with a dead top, usually a mark of declining vigor.
- springwood.** The less dense, larger-celled, first-formed wood of an annual growth ring.
- spud.** A hand tool used in stripping bark from felled trees.
- staff compass.** *See* compass.
- stand.** An aggregation of trees occupying a specific area and uniform enough in composition (species), age, and arrangement to be distinguishable from the forest on adjoining areas.
- stand density.** A relative measure of amount of stocking on a forest area, compared with other areas.
- stand table.** A summary table showing the number of trees by species and diameter class of any given area.
- stand, type of.**
- 1. mixed.** A stand in which more than 25 percent of the trees in the main crown canopy are of a species other than the major species
 - 2. pure.** A stand in which at least 80–90 percent of the trees in the dominant and codominant crown classes are of a single species.
- stem.** The trunk of a tree.
- stocking.** The number of trees in a forest. Usually expressed as trees per acre or some relative measure (well stocked/fully stocked, overstocked, under stocked).
- stratification.** The technique of placing seeds in a cool, moist medium (such as sand or peat) to imitate winter conditions and aid germination when planted.
- stumpage.** The value of timber as it stands uncut in the woods; in a general sense, the standing timber itself. Also can denote price paid for this timber.
- stump sprout.** *See* sprout.
- succession.** The replacement of one plant community by another in progressive development toward climax vegetation.
- succession, types of.**
- 1. primary.** Plant succession on newly formed soils or surfaces, exposed for the first time, that have never borne vegetation.
 - 2. secondary.** Plant succession following the destruction of a part or all of the original vegetation.
- sucker.** A sprout from the lower portion of a stem, especially from the root.
- sucker knot.** A knot associated with a limb growing nearly parallel to the main stem. Sucker knots are not permitted on poles because they funnel water into the pole, promoting decay even if treated.
- summerwood.** The denser, later-formed wood of an annual growth ring. The cells are smaller, with thick cell walls, so they usually give the layer a darker color than that of the springwood.
- sunscaud.** Death of cambial tissue on one side of a tree, caused by exposure to direct sunlight.
- suppressed tree.** *See* overtopped.
- surface runoff.** Water that moves over the ground surface. With the exception of established drainage channels, uncommon on undisturbed forest land.
- sustained yield.** A policy, method, or plan of forest management that calls for continuous production, to achieve, at the earliest practicable time, an approximate balance between net growth and amount harvested.
- swamp.** To clear the ground of underbrush, fallen trees, and other obstructions, to facilitate such later operations as logging or surveying.
- sweep.** A gradual (but pronounced) bend in a log, pole, or piling; considered a defect.
- swell-butted.** Describes a tree greatly enlarged at the base. *Syn.* bottle-butted, churn-butted.

T

tail tree. In skyline logging, a tree used to anchor the mainline away from the landing.

tally. The count of trees, logs, or other products; to count trees, logs, or other products; to record products, distances, etc., as measured.

taper. The gradual reduction of diameter in a stem of a tree or a log from the base to the top.

taproot. The major tree root with the greatest tendency to grow downward. Depending on the species and soil conditions, the taproot may or may not be pronounced or show heavy branching.

tarif table. A tree-volume table based on d.b.h. and total height.

terminal bud. The uppermost bud on the main stem of a tree. *See* leader.

thinning. Cutting in an immature stand to increase the growth rate of the leave trees. The goal is to foster quality growth, improve composition, promote sanitation, and recover and use material that otherwise would be lost to mortality. Thinning generally does not increase per-acre cubic-volume growth, but it can increase board-foot yield.

thinning shock. A condition of very slow growth in a thinned stand, usually from a heavy thinning that exposes residual trees to conditions much different from those present before thinning.

thinning, types of. *See also* commercial thinning, precommercial thinning.

1. low thinning. The removal of trees from the lower crown classes in a stand. *Syn.* thinning from below.

2. crown thinning. The removal of trees from the middle and upper crown classes in a stand, to favor the most promising trees of these classes. *Syn.* thinning from above.

3. selection thinning. Removal of dominant trees to benefit trees in lower crown classes.

4. free thinning. Removal of trees to benefit best trees, regardless of crown class.

5. mechanical thinning. Removal of trees based totally on their spacing or arrangement.

timber. A term loosely applied to forest stands or their products; often applied to wood in forms suitable for heavy construction (houses, ships, bridges).

timber stand improvement (T.S.I.). Any treatment intended to improve the quality of a forest stand, including pruning, thinning, salvaging, and fertilization.

timber type. *See* forest type.

tolerance. The capacity of a tree or plant to develop and grow in the shade of (and in competition with) other trees or plants; a general term for the relative ability of a species to survive a deficiency of an essential growth requirement (light, moisture, nutrient supply).

transpiration. The process by which water vapor leaves a living plant and enters the atmosphere.

transplant.

1. To replant a nursery seedling in another part of the nursery for further development. A “2-1” tree seedling is one that was grown from seed for 2 years in the nursery, then replanted and left for a year in another nursery bed.

2. To move a wild seedling to another location for regenerating a forest.

3. Any seedling that is removed from one location and planted elsewhere.

tree. A woody plant having one well-defined stem and a more or less definitely formed crown, usually attaining a height of at least 8 ft.

tree age. The number of years since the germination of the seed, or the budding of the sprout or root sucker.

tree farm. An area of privately owned forest land dedicated by its owner to the growing and harvesting of repeated forest crops. The name has been copyrighted by the American Forest Institute for its exclusive use.

tree length. Entire length of tree, or with the top lopped off at small diameter, as in skidding tree length to a landing for bucking into logs.

turn. The logs brought to the landing during a single yarding or skidding cycle.

turnup. In Christmas tree culture, the practice of leaving a green branch when harvesting a Christmas tree; this branch, turned upwards, becomes the next tree. *Syn.* stump culture.

U

underbrush. The brush growing in a forest.

undercut. In felling a tree, the initial cut that removes a wedge-shaped piece of wood and determines the direction of fall. *Syn.* face cut.

undergrowth. Small trees and shrubs and other plants growing under a forest canopy.

understory. That portion of the trees or other vegetation in a forest stand below the canopy.

uneven-aged. Applied to a stand in which there are considerable differences in the age of the trees and in which three or more age classes are represented. *See also* all-aged.

V

veneer. A thin sheet of wood cut on a lathe or slicing machine. There are three kinds: sawed, sliced, and rotary cut.

Vexar tube. A rigid, plastic-net tube made from Vexar (a trademark of the DuPont Corporation). Used to protect tree seedlings from animal damage.

virgin forest. A mature or overmature forest essentially uninfluenced by human activity.

volume table. A table showing gross volume of trees, based on given tree measurements (usually d.b.h. and height).

W

water bar. V-shaped trench cut into the surface of a road, which collects water and channels it off the road surface, to avoid erosion.

watershed. Any sloping area that sheds water; an area of land that collects and discharges water into a single stream or other outlet.

wedge.

1. In logging, to drive a solid V-shaped object (the wedge) into the saw cut to prevent the saw from binding and to direct the fall of the tree.

2. Slang for a prism used in cruising timber.

weed tree. A tree of a species with relatively little or no value.

whorl. A group of branches originating at or near the base of the terminal bud. Generally, one whorl is produced each growing season.

widowmaker. Any limb, top, leaning tree, or other material in the forest that is in danger of falling to the ground without warning, creating a safety hazard. Often applied to limbs that get lodged in the crowns of other trees during a logging operation.

wilderness area. An area of public land (usually over 5,000 acres) designated by Congress as wilderness according to the definition in the Wilderness Act. Ecosystems present are preserved in their natural states, with minimum human influence (no timber harvesting, roads, or developed areas are allowed).

wildfire. A fire burning out of control, regardless of how or why it started.

wildling. A seedling naturally reproduced outside of a nursery, used in forest planting.

windbreak. A wind barrier of living trees and shrubs maintained to protect the farm home, other buildings, garden, orchard, or feedlots. *Syn.* shelterbelt.

windfall. A tree uprooted or broken off by wind; an area on which the trees have been thrown by wind. *Syn.* blowdown, wind-thrown.

windfirm. Describes trees capable of withstanding heavy wind.

wolf tree. A vigorous tree that has merchantable value but occupies more space than its value warrants. Usually very limby.

wood. The lignified water-conducting, supporting, and storage tissue of branches, stems, and roots. *Syn.* xylem.

woodland. The wooded portion of a farm or ranch, or the wooded land operated in connection with a farm or ranch.

wood-processing industry. That segment of the forest industry that manufactures lumber, paper, plywood, and other primary forest products.

wood technology. The study of wood and all its aspects, including anatomy, chemistry, properties, and treatment.

X

xylem. *See* sapwood.

Y

yard. A place where logs, pulpwood, or other timber is collected; to collect logs in a yard, landing, or skidway.

yield table. A table that projects the wood yield of a forest stand, given certain stocking, age, and site-productivity conditions.

young growth. Any forest of relatively young age and condition.

YUM. Acronym for “yard unmerchantable material,” referring to a U.S. Forest Service contract regulation that requires loggers to move to landings any tops, chunks, or other unmerchantable material generated by harvesting. *See* PUM.

The Woodland Workbook is a collection of publications prepared by the Oregon State University Extension Service specifically for owners and managers of private, nonindustrial woodlands. The Workbook is organized into separate sections, containing information of long-range and day-to-day value for anyone interested in wise management, conservation, and use of woodland properties. It's available in a 3-ring binder with tabbed dividers for each section.

For information about how to order, and for a current list of titles and prices, inquire at the office of the OSU Extension Service that serves your county.

This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties.

Oregon State University Extension Service offers educational programs, activities, and materials—*without regard to race, color, religion, sex, sexual orientation, national origin, age, marital status, disability, and disabled veteran or Vietnam-era veteran status*—as required by Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. Oregon State University Extension Service is an Equal Opportunity Employer.

