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## TREE GLOSSARY AND RESOURCES

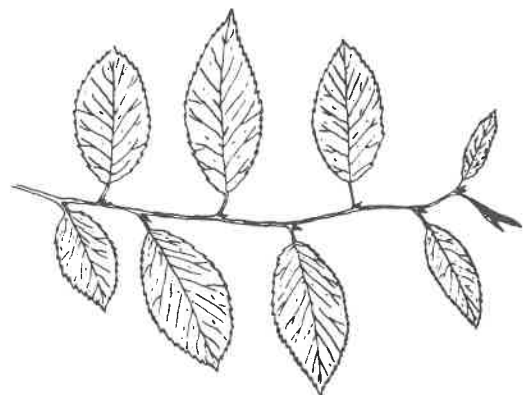
The tree species fact sheets contained in this section are, unless otherwise indicated, written by John Ball of SDSU and Dave Erickson of S.D. Division of Forestry. All illustrations are by Dorean Ball, a student in the Visual Arts Department at SDSU. Craig Brown, South Dakota Urban Forestry Specialist, served as technical reviewer for these fact sheets. To save space, all of the glossary terms, references and resources relevant to the South Dakota tree species are included in the following pages. Many of the definitions are taken from *The Trees of South Dakota*, SDSU Circular 566. Those terms included in the glossary are italicized in the fact sheet text.

### Glossary

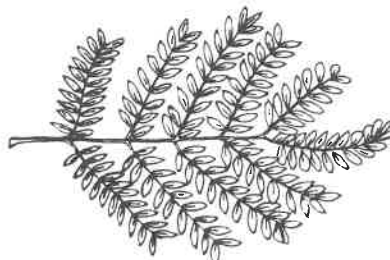
**Alkaline** - having a pH of more than 7 or referring to those soils that have so many mineral salts that plant growth is inhibited.

**Alluvial** - those areas of land formed by mud, silt or sand that settles out of flowing water.

**Alternate** - a pattern in which only one leaf or branch grows from one location on the stem.



**Bipinnately compound** - a compound leaf with compound leaflets attached on both sides of a central stalk as in the one leaf illustrated below:



**Botanical variety** - a plant that differs from others of the same species in some minor, but permanent and genetically transmissible way.

**Board foot** - a unit of measure used in the lumber industry that equals one square foot of wood one inch in thickness.

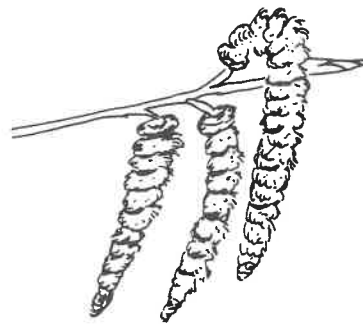
**Bract** - a modified or small leaf located below a flower or fruit.

**Calyx** - the outer leaves that surround the unopened bud of a flower.

**Capsule** - a dry fruit that splits along one or more lines to release its seeds.

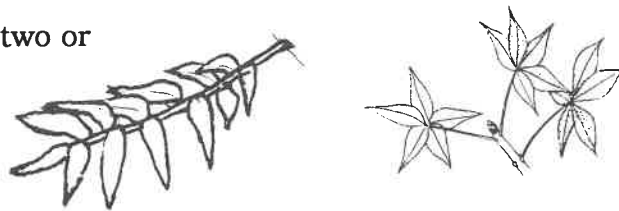
**Canker** - a fungus disease of plants that causes death and decay of plant tissues.

**Catkin** - an elongated cluster of tiny, petal-less flowers attached to a central stem that usually is flexible and drooping.



**Climax species** - the plant species that is part of the stable forest community where a tree species is replaced by itself.

**Compound leaf** - a leaf composed of two or more separate leaflets.



**Cone** - the reproductive structure on evergreen trees such as pines, spruce and firs that produce pollen or seed.



**Conifer** - those trees that reproduce through the production of cones.

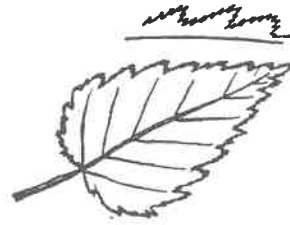
**Cultivar** - a variety of plant produced through selective breeding to develop a desired characteristic such as the thornless locust or seedless cottonwood.

**Deciduous** - those trees that lose their leaves each fall.

**Dioecious** - a Greek word meaning double house that refers to those plants that have the male and female flowers on separate plants of the same species.

**Dog-hair stands** - dense stands of trees that are thin-trunked and very crowded together.

**Doubly serrate** - the edges of the leaves are doubly notched as shown.



**Glaucous** - having a surface covered by a whitish powdery or waxy substance.

**Hardwood** - trees that have broad leaves such as oak, maple or ash in contrast to softwood trees that have needles such as pine, spruce or fir.

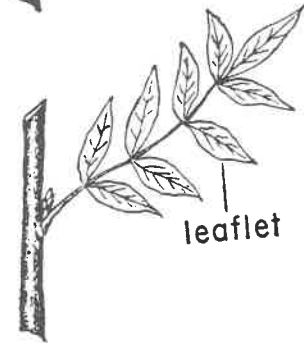
**Lanceolate** - lance shaped.



**Lateral bud** - bud on the side of a stem.



**Leaflets** - the small, separate parts that make up a compound leaf.



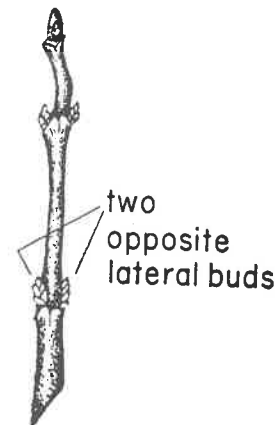
**Legumes** - plants having a fruit that is a bean-like pod.

**Margin** - the outer edge of a leaf.

**Nut** - a hard, dry fruit that does not naturally split open and contains one seed.

**Ornamental** - a plant cultivated for decorative purposes.

**Opposite** - the growth pattern in which two leaves or branches arise across from one another at the same place on the stem.



**Ovate** - egg-shaped.

**Palmately compound** - a leaf with many leaflets arising from a common point of attachment.

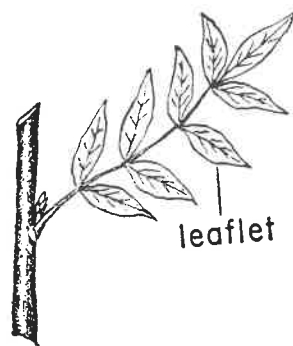


**Petiole** - the stem or stalk of a leaf that attaches the leaf to the branch.

**Pioneer species** - the first species to colonize a disturbed area.

**Pistil** - the female part of the flower that contains the eggs that will form the seeds and the ovary that will develop into the fruit.

**Pinnately compound** - a leaf with many leaflets arising along both sides of a common central stalk.

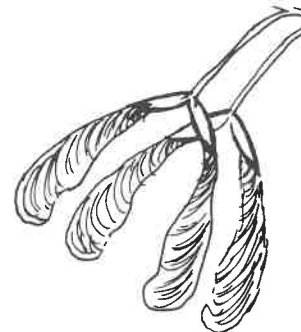
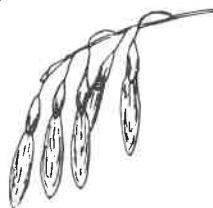


**Pod** - a dry fruit that splits open along 2 lines such as a bean or pea.

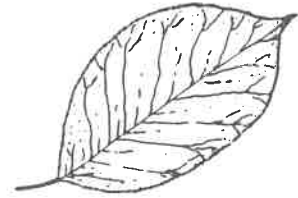


**Raceme** - a cluster of flowers in which the simple flowers arise on equal stalks along a central stem such as in lily of the valley or chokecherry.

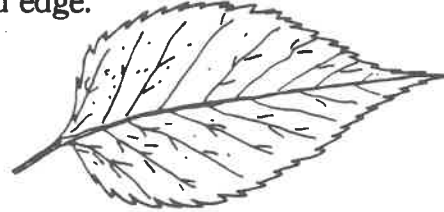
**Samara** - a dry fruit that has wing-like projections to help it be carried by the wind.



**Simple leaf** - a leaf that has a single blade arising from the leaf stalk.



**Serrated** - having a toothed or notched edge.



**Softwood** - those needle-bearing trees such as pine, spruce or fir that have less dense or compact wood than the hardwood, broadleaf trees such as oak or maple.

**Stamen** - the male part of a flower that produces the pollen.

**Suckering shrub** - a bushy plant that produces above ground shoots from underground stems or roots.

**Steppes** - the vast, treeless plains of southeast Europe and Asia.

**Taproot** - the main root of a plant that grows deep downward from the stem.

**Transitional species** - those species that occur in a community during the succession toward a stable climax community.

### Tree Fact Sheet References

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## Tree Resources for Teachers

*A Guide to Field Identification of Trees of North America* by Frank Brockman, 1979. Golden Press, Racine, WI.

Arboretum Trails. There are several labeled tree trails in South Dakota. Information concerning these can be found in the Natural Source Directory.

*Edible, Medicinal, Useful, and Poisonous Wild Plants of the Northern Great Plains - South Dakota Region* by Dilwyn Rogers, 1980. Buechel Memorial Lakota Museum, St. Francis, SD 57572,

*Eyewitness Books: Trees* by David Burnie, 1988. Knopf Publishing, New York.

*Manual of Woody Landscape Plants* by Michael Dirr, 1983. Stipes Publishing Co. Champaign, IL 61820.

*Project Learning Tree*, S.D. Division of Forestry, Anderson Building, 445 East Capitol Ave. Pierre, SD 57501. Numerous resources are available including activity guides, posters, and videos.

South Dakota Department of Agriculture, Division of Forestry District Forester's offices have many resources and personnel who can identify trees and are trained in the Project Learning Tree curriculum. Addresses and phone numbers are in the Natural Source Directory.

*South Dakota's Forests*, a video by the S.D. Society of American Foresters, grades 4-12.

*Trees are Terrific*, a Naturescope book from the National Wildlife Federation, Washington, D.C. 20036, grades K-6.

U.S. Forest Service South Dakota Offices have many resources including "Tree Trunks", a box of tree related materials that can be borrowed. The addresses and phone numbers are in the Natural Source Directory.

*What Tree is That? A Guide to Common Trees of Eastern and Central U.S.* by the National Arbor Day Foundation, Nebraska City, NE 68410.

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Illustrations on page 3 and the compound leaves on page 4 were taken from *The Trees of South Dakota*, SDSU Extension Circular 566.

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