



A KEY TO SOUTH DAKOTA TREES

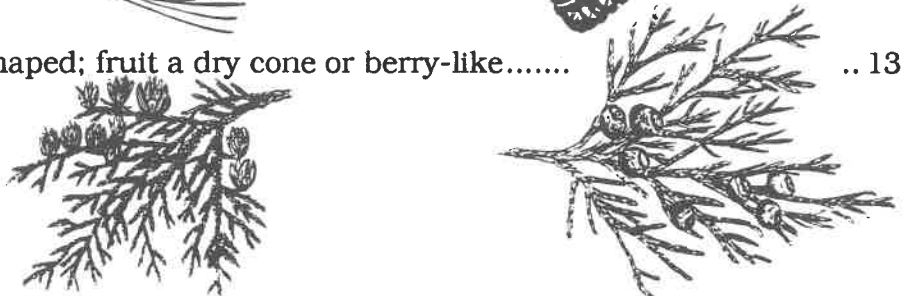
(Modified from the key developed by Collins and Helwig in *The Trees of South Dakota*,
SDSU Extension Circular 566)

- 1a. Leaves green over winter; fruit a dry cone or berry-like..... 2
- b. Leaves turn color and usually shed in the fall; fruit variable 15

- 2a. Leaves needle-like; fruit a dry cone 3



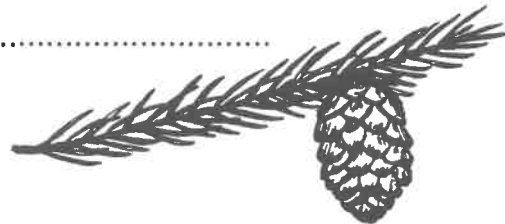
- b. Leaves scale-like or awl-shaped; fruit a dry cone or berry-like..... .. 13



- 3a. Several needles attached to the branch in bunches of 2 or more 4

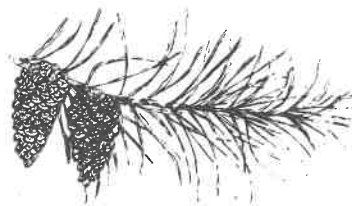


- b. Needles attached to the branch singly 9



- 4a. Needles in bunches of five or more (may be single needles on new shoots) 5
- b. Needles in bunches of two's or two's and three's 6

- 5a. Needles in bunches of five; needles 3" to 5" long, slender, flexible..... **Eastern White Pine**
- b. Needles single on new shoots but in bunches on older stems;
 needles shorter than 2", lost in fall **European Larch**
- 6a. Needles in bunches of two's or three's; needles more than 4 inches long **Ponderosa Pine**
- b. Needles in bunches of two's; needles 4 inches long or shorter 7
- 7a. Needles more than 3 inches long, stiff and sharp-pointed **Austrian Pine**
- b. Needles usually shorter than 3 inches 8
- 8a. Needles flexible; cones point back toward trunk **Scotch Pine**



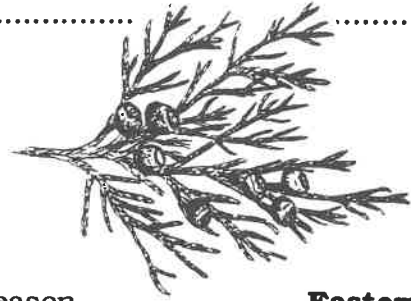
- b. Needles stiff; cones point forward, away from trunk **Jack Pine**
- 9a. Needles 4-sided, pointed and easily rolled between two fingers 10
- b. Needles flattened, not sharp pointed, and will not roll easily between fingers 12
- 10a. Needles yellowish-green; twigs pendulous; cones 3" to 7" long **Norway Spruce**
- b. Needles whitish-green or bluish-green; cones less than 4" 11
- 11a. Needles rigid and sharp-pointed; cones 2 5" to 4" with papery,
 wedge-shaped scales **Blue Spruce**
- b. Needles not as sharp to the touch; cones shorter than 2"
 with rounded scales **White Spruce**
- 12a. Needles with short petioles and not sharp to the touch; cones 2" to 4"
 long with 3-pointed bracts extending beyond the scales **Douglas-fir**



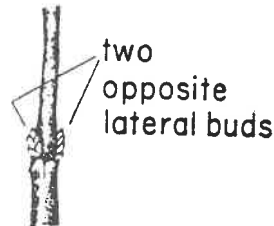
- b. Needles without petioles; bracts on cones shorter than scales **White Fir**
- 13a. Leaves all scale-like; branchlets flat in cross section; fruit a small,
 dry cone **Northern White-cedar**



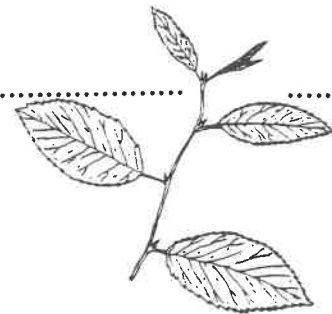
- b. Leaves both scale-like and awl-shaped; branches 4-angled in cross section; fruit berry-like 14



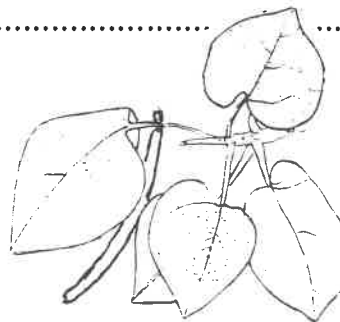
- 14a. Leaves usually dark green; fruit ripens in one season **Eastern Redcedar**
- b. Leaves silvery to pale green; fruit ripens in two seasons **Rocky Mountain Juniper**
- 15a. Needles single on new shoots but in bunches on older stems **European Larch**
- b. Leaves not needle-like but with an expanded blade 16
- 16a. Leaves two or more on opposite side of branch at same spot (opposite or whorled) 17



- b. Leaves only one at a location on a stem (alternate) 25



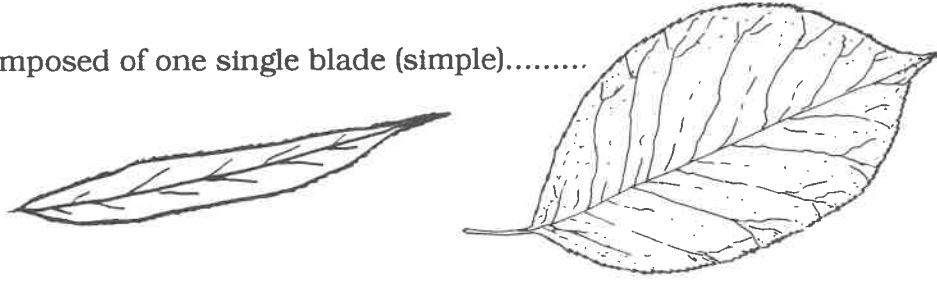
- 17a. Large smooth-edged leaves attached 3 or more around the stem; fruit a long bean pod **Northern Catalpa**



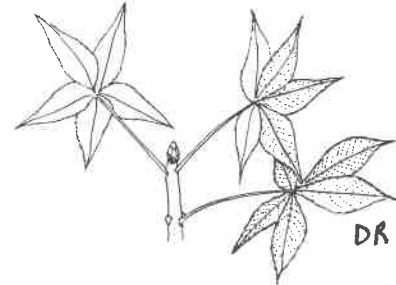
- b. Two leaves attached opposite one another on a stem 18
- 18a. Leaves composed of several small leaflets (compound) 19



b. Leaves composed of one single blade (simple).....21



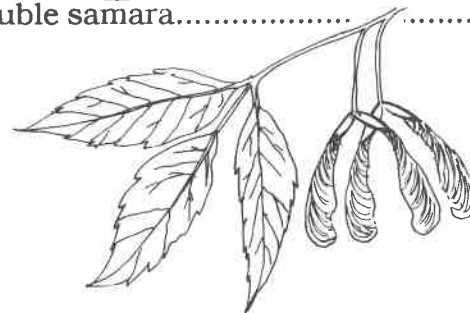
19a. Leaflets arise from a common point of attachment (palmately compound).....**Buckeye**



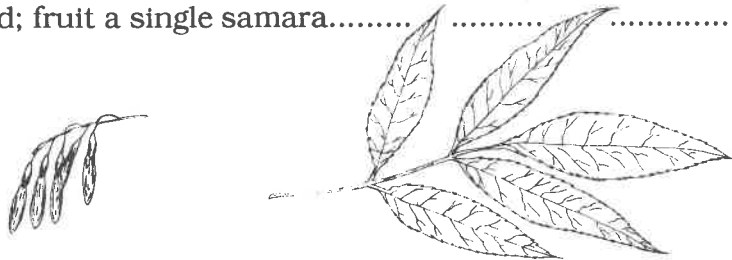
b. Leaflets attached opposite one another along a central stem (pinnately compound).....20



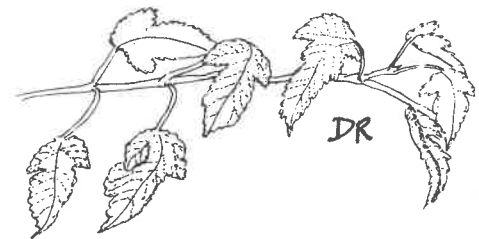
20a. Leaflets 3 to 5 arranged as shown; fruit a double samara.....**Boxelder**



b. Leaflets 7 to 9 and toothed; fruit a single samara.....**Green Ash**



21a. Small, shrubby tree; leaves 3-lobed with central lobe longer than side ones; leaf edges doubly serrate.....**Amur Maple**



- b. Large tree, leaves with 3 to 5 lobes that are either smooth or toothed.....22
- 22a. Leaves silvery underneath with edges toothed; fruit ripens in spring.... **Silver Maple**

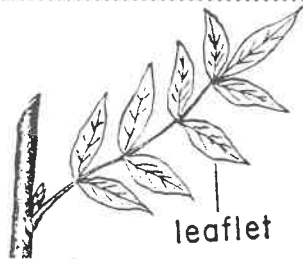


- b. Edges of leaves smooth; fruit ripens in fall.....23
- 23a. Sap milky; samara wings widely divergent.....**Norway Maple**
- b. Sap not milky; samara wings form horse-shoe shaped fruit.....24

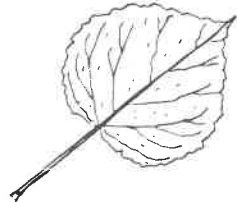
- 24a. Leaves usually 3-lobed, green and hairy along veins below; petioles hairy.....**Black Maple**
- b. Leaves usually 5-lobed, whitish-green and hairless below; petioles hairless.....**Sugar Maple**



- 25a. Leaves pinnately compound.....26

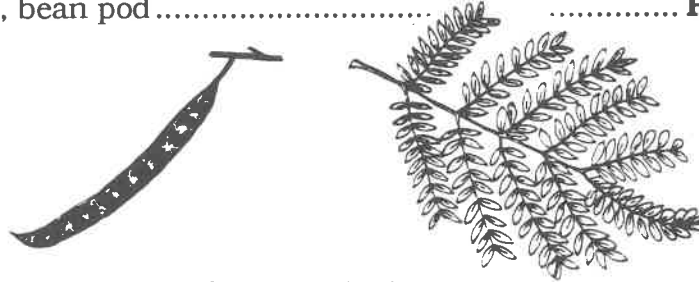


- b. Leaves are single blades.....33

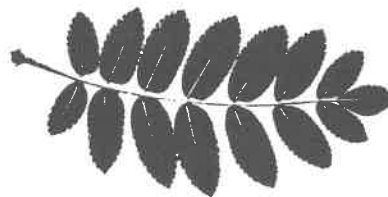


- 26a. Stems with spines or thorns.....27
- b. Stems without spines or thorns.....28

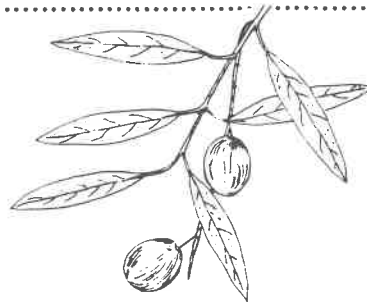
- 27a. Stems with paired spines at the base of each leaf;
fruit small bean pod **Black Locust**
- b. Stems with stout, often branched thorns arising above leaf attachment point;
fruit a long, often twisted, bean pod **Honeylocust**



- 28a. Fruit a bean-like pod; leaflets smooth or finely toothed 29
- b. Fruit not bean-like; leaflets sharply toothed 30
- 29a. Leaves bipinnately compound; leaflets smooth edged **Kentucky Coffeetree**
- b. Leaves can be either pinnately or bipinnately compound;
leaflet finely toothed..... **Thornless Honeylocust**
- 30a. Fruit a nut; bark ridged 31
- b. Fruit small and apple-like, occurring in clusters; bark smooth..... 32
- 31a. Nut spherical; bark with deep, narrow furrows and ridges **Black Walnut**
- b. Nut oval; bark with shallow furrows and broad ridges **Butternut**
- 32a. Leaf stem and lower surface of leaflets can have dense, white hairs, leaflets rounded;
winter buds densely covered with white hairs **European Mountain-ash**



- b. Leaf stem and lower surface of leaflets lack hairs; leaflets pointed tipped;
winter buds are hairless or, almost hairless **American Mountain-ash**
- 33a. Leaves variously lobed or smooth without being toothed 34
- b. Leaves variously toothed..... 43
- 34a. Leaves long, slender and smooth edged with silvery scales on top and bottom;
fruit small, yellow and olive-like..... **Russian-olive**



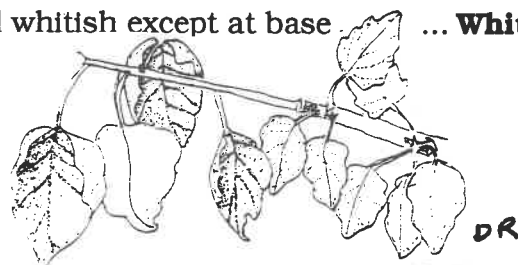
- b. Leaves lobed, not silvery above and below 35

- 35a. Leaves palmately 3 to 5 lobed; leaf edges coarsely toothed; bark mottled on trunk; fruit rough, dry sphere..... **Sycamore**
- b. Leaves not palmately lobed; fruit not as described above 36
- 36a. Sap milky; lobed and non-lobed leaves on same tree; multiple, fleshy, blackberry-like fruit 37
- b. Sap watery; fruit single or cone-like..... 39
- 37a. Leaves rough above, hairy below; fruit reddish-black when ripe **Red Mulberry**
- b. Leaves smooth above nearly hairless below; fruit variable in color 38
- 38a. Leaves 2" to 5" long; fruits up to 1 " long, white, pink or purplish violet **White Mulberry**
- b. Leaves up to 3" long; fruit 1/2" long, dark red **Russian Mulberry**
- 39a. Leaf lobes smooth and rounded; fruit an acorn **Bur Oak**



- b. Leaf lobed with edges variously indented; fruit not an acorn 40
- 40a. Young twigs, buds and underside of leaves covered by dense cottony felt; leaves shiny and dark green above, variously lobed to coarsely toothed, and palmately veined..... 41
- b. Twigs and leaves not as above; leaves pinnately veined 42

- 41a. Tree with a broad crown; bark smooth and whitish except at base ... **White Poplar**

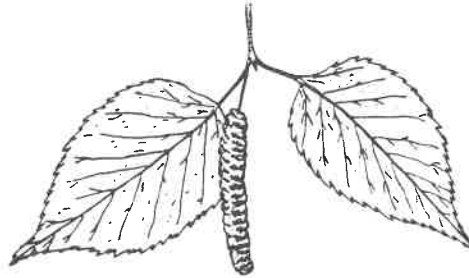


- b. Tree branches pointing upward forming a narrow columnar crown **Bolleana Poplar**

- 42a. Bark white and papery; leaves deeply and sharply cut; fruit small, cone-like **Cutleaf Weeping Birch**



- b. Bark reddish to grayish-brown; leaves not as sharply cut; fruit apple-like.... **Crab Apple**
- 43a. Bark of main limbs and trunk white or greenish-white to light green..... 44
 - b. Bark usually variously shades of gray or reddish-brown51
- 44a. Bark white and papery; fruit cone-like and ripens in fall45
 - b. Bark greenish-white to green but not papery; fruit on a drooping catkin that ripens in spring46



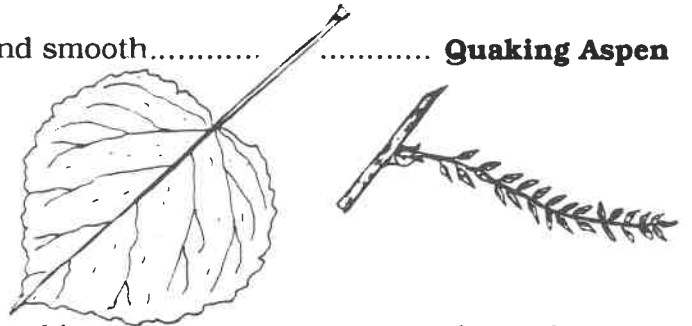
- 45a. Bark dark-furrowed at base of trunk; leaves ovate to triangular . **European White Birch**
 - b. Bark remains papery on older trunks; leaves ovate **Paper Birch**
- 46a. Young twigs, buds and underside of leaves covered by dense cottony felt; leaves shiny and dark green above, usually some of leaves lobed 41
 - b. Twigs and leaves not as above47
- 47a. Leaves with rounded petioles; bark greenish-brown that become gray-furrowed **Balsam Poplar**
 - b. Leaves with flattened petioles especially where it attaches to leaf blade 48
- 48a. Tree branches pointing sharply upward forming a columnar crown; leaves diamond shaped and finely toothed **Lombardy Poplar**
 - b. Trees not columnar; leaves triangular, ovate or round..... 49

- 49a. Leaves broadly triangular and coarsely toothed; bark of trunk becoming deeply furrowed and dark gray **Eastern Cottonwood**



- b. Leaves not broadly triangular; twigs mostly brown to reddish-brown..... 50

50a. Leaves finely toothed; bud scales shiny and smooth..... **Quaking Aspen**

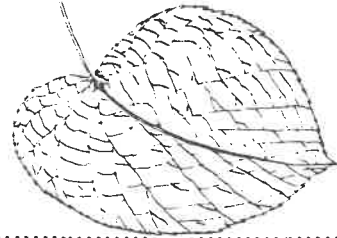


b. Leaves coarsely toothed; bud scales dull and hairy **Bigtooth Aspen**

51a. Sap milky; some leaves with lobes..... 37
 b. Sap watery; leaves not lobed..... 52

52a. Leaves 2-ranked; young branches will lie flat on table with all leaves touching table .. 53
 b. Leaves in more than 2 ranks; when young branches are on table, leaves will project up, away from the table 60

53a. Leaves round or heart-shaped; fruit a cluster of small spheres under a long, slender leaf-like bract **American Basswood**



b. Leaves twice as long as wide..... 54

54a. Bark of trunk with narrow, crowded, steep-sided corky ridges or warts; fruit a small, green, single sphere that is purple when ripe, and with one pit..... **Hackberry**



b. Bark of trunk may be furrowed but lacks corky ridges; winged, dry fruit or nutlet 55

55a. Leaves usually unequal at base; fruit a samara..... 56



b. Leaves usually equal at base 59

56a. Leaves 2" or shorter, usually toothed **Siberian Elm**

- b. Leaves over 4" long; doubly toothed57
- 57a. Small twigs warty or corky-ridged; leaf upper surface smooth or nearly so **Rock Elm**
- b. Twigs not as above; upper surface of leaves usually rough (this characteristic is variable so check several leaves)..... 58
- 58a. Leaves folded along midrib; buds and twigs densely hairy**Slippery Elm**
- b. Leaves more or less flat; buds not hairy**American Elm**



- 59a. Leaves about 2" long, usually toothed; fruit a samara **Siberian Elm**



- b. Leaves about 4" long, sharply doubly toothed; fruit a nutlet inside a papery sac with the sacs attached to a central stem in dense clusters **Eastern Hophornbeam**
- 60a. Buds covered by a single cap-like scale; leaves lance-shaped61
- b. Buds covered by several overlapping scales; leaves broader than above 62
- 61a. Twigs greenish-gray to olive-brown; leaf stem with small glands **White Willow**
- b. Twigs reddish-brown to orange, shiny and hairless; leaf stem without glands **Peachleaf Willow**
- 62a. Fruit on drooping catkins that ripen in late spring63
- b. Fruit apple-like or a sphere with one pit 64
- 63a. Leaves triangular and coarsely toothed **Eastern Cottonwood**
- b. Leaves usually ovate and finely toothed**Balsam Poplar**
- 64a. Leaf stems with small glands; fruit a sphere with one pit.....65
- b. Leaf stems without glands; fruit apple-like.....66
- 65a. Fruit yellowish and peach-like**Apricot**
- b. Fruit small spheres attached in clusters and black when ripe **Black Cherry**
- 66a. Fruit pear-shaped and yellowish; teeth of leaf edges ending in bristle-tips... **Harbin Pear**
- b. Fruit apple-like; teeth of leaf edges not bristle-tipped **Crab Apple**

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