Early Fall Key to Common North Dakota Trees and Shrubs

A “key” is similar to a road which forks repeatedly and which has signposts indicating what may be found along each branch. This key is based on a system of couplets, 1, 1'; 2, 2'; etc. This gives the reader one of two choices. A number at the right of a description indicates the next step to take. The number in parenthesis after the number at the left indicates where you came from and allows you to backtrack. Numbers 1-16' on the left cover the evergreens; numbers 17-20' the woody vines; and 21-76' the deciduous trees and shrubs. One herb was included because many people confuse it with poison ivy, a small shrub with which everyone should become familiar in order to avoid it.

The key includes a number of species not pictured but is by no means all-inclusive. The relatively rare species and the horticultural cultivars have been left out because their inclusion would necessarily have increased the complexity of the key and the volume of the publication.

A glossary at the end of the publication explains terms that may be unfamiliar.

1. Trees or shrubs whose foliage is needle-like or scale like................................. 2
   1'. Foliage not needle-like or scale-like but with normal leaves ..................... 17

2.(1) Many needles from spur shoots on older twigs; deciduous ...................... Larches
   2'. Not over five needles from one point; evergreen .................................... 3

3.(2') Needles in fascicles (bunches) ................................................. 4
   3'. Needles born singly, not in fascicles ................................................ 7

4.(3) Needles per fascicle, 5........................................................................ 5
   4'. Needles per fascicle, 2 or 3 ................................................................ 6

5.(4') Needles over 4'' long, in both 2's and 3's............................................. Ponderosa Pine
   5'. Needles less than 3'' long, only in 2's ................................................. 6

6.(5') A tree; bark orange and flaky; cone scales not crowded ....................... Scotch Pine
   6'. Usually multi-stemmed and cone scales crowded; shrub-like; bark dark .... Mugo Pine

7.(3') Leaves scale-like or awl-shaped, not over 1/2'' long ............................... 8
   7'. Needles linear or needle-like, about 1'' long ........................................ 13

8.(7) Branchlets flattened; woody cones only 1/2'' long ................................ American Arborvitae
   8'. Branchlets 3 or 4 angled; fruit berrylike 1/4'' in diameter ....................... 9

9.(8') Long trailing native groundcover rarely over 5-10'' high ..................... Creeping Juniper
   9'. Shrub at least 2 feet high when mature ............................................... 10

10.(9') Needles 1/2'' long, strongly boat shaped or awl like, all sharp .............. Common Juniper
   10'. Some or all needles scale-like .............................................................. 11
   11.(10') Low spreading landscape shrubs .................................................. (Ornamental) Junipers
   11'. Tree-like ................................................................................................. 12

12.(11') Foliage turning purple-brown in winter .............................................. Eastern Red-cedar
   12'. Foliage remaining blue green in winter ............................................... Rocky Mt. Juniper

13.(7') Peglike projections supporting needles; no resin blisters on bark ........ 15
   13'. Needles fastened directly to twig, leaving a circular leaf scar when removed; resin blisters on bark ......................................................... 14

14.(13) Needles sessile; cones disintegrating when mature; buds blunt and resinous .... Balsam Fir
   14'. Needles petiolate; cones not disintegrating; papery bracts extending beyond cone scale; buds sharp-pointed, dark purple and not resinous ......................... Douglas-fir

15.(13) Needles somewhat flattened, 2 ranked; woody cones over 3'' long .......... Norway Spruce
   15'. Needles 4 angled, not 2 ranked; cones 3'' long or less ................................ 16

16.(15') Needles very sharp; cones over 2'' long with ragged scales ................ Colorado Spruce
   16'. Needles only moderately sharp; cones less than 2'' long with smooth, rounded edge on cone scales .................................. Black Hills White Spruce

17.(1') Vines .................................................................................................. 18
   17'. Trees, shrubs, or herbs .............................................................. 21

18. Leaves compound .................................................................................. 19
   18'. Leaves simple ......................................................................................... 20

19.(18) Leaves alternate; 5 leaflets; fruit a berry ........................................... Virginia Creeper
   19'. Leaves opposite; 3 leaflets; fruit an achene ............................................ Virgin’s Bower
20.(18') Margin coarsely serrate; leaves sometimes lobed, fruit a black berry .......................... Wild Grape
20' Margin fine serrate, leaves never lobed; fruit orange, splitting to show red interior ............................ American Bittersweet
21.(17) Shrubs or herbs less than 2' high when mature .......................................................... 22
21'. Shrubs or trees over 2' high when mature ...... 23
22.(21) Small shrub, herb-like; always 3 leaflets, not serrate but sometimes irregularly toothed ...................................... Poison Ivy
22'. Perennial herb with 3-forked stem, each with 3 or 5 serrate leaflets .......................... Wild Sarsaparilla
23.(21') Leaves compound ........................................ 24
23'. Leaves simple ................................................ 25
24.(23) Compact branchy shrubs with compound leaves; each leaflet 1/4" wide or less ........ 25
24'. Coarser shrubs or trees with pinnately compound leaves; each leaflet over 1/4" wide .................. 26
25.(24) Stipular prickles present; fruit a pod ...................................... Pygmy Peashrub
25'. No stipular spines; fruit globose; achene .................................. Shrubby Cinquefoil
26.(24') Leaves nearly as broad as long .............................. 27
26.(23') Leaves over twice as long as broad .................. 28
26. Branches without spines ........................................ 29
27.(26) Spines stipular; fruit a pod; bark greenish ......................................... Siberian Peashrub
27'. Spines cortical; fruit a fleshy hip, about 1/2" in diameter; bark reddish or brownish .......... Rose
28.(26') Leaves opposite ........................................... 29
28'. Leaves alternate .............................................. 30
29.(28) Palmate five-leaflet leaves; fruit a nutlike capsule ........................................ Ohio Buckeye
29'. Leaves not palmate; fruit not a nutlike capsule .................................................. 31
30.(29') Leaves regularly serrate; twigs gray; buds brown; fruit (samara) ............... Green Ash
30'. Leaves irregularly toothed; twigs green or reddish brown with a bloom; buds silvery; fruit (schizocarp) ............. Boxelder Maple
31.(28') Petiole ½" long; leaves ovate, wavy-curved; fruit globose; shrubby .............................. Silverberry
31'. Petiole ⅛" long; leaves obovate; fruit a small capsule ... Vanhoutte Spirea
32.(31) Twigs hairy ........................................ Staghorn Sumac
32'. Twigs glabrous ........................................ Smooth Sumac
33.(31') Base of petiole encasing bud ................... 32
33'. Base of petiole below bud ................................ 33
34.(33') Margin finely serrate, creased .......................... Russian-olive
34'. Margin coarsely serrate .................................... Common Buckthorn
35.(34') Leaves opposite ........................................... 36
35'. Leaves alternate ............................................. 37
36.(35) Some leaves not lobed, when lobed always 3, a coarse shrub; fruit a drupe ........................................ American Cranberrybush
36'. All leaves lobed, 3 or 5, trees or shrubby trees; fruit a paired samara, called a schizocarp ...... 37
37.(36') Leaves silvery beneath; lobes of nearly equal length; a large tree ................ Silver Maple
37'. Leaves not silvery beneath; terminal lobe longer than others; small tree or shrublike .......... Amur Maple
38.(35') Trees ..................................................... 39
38'. Shrubs .......................................................... 40
39.(38) Palmettely lobed, white hairy below; bark greenish or gray ....................... White Poplar
39'. Pinnately lobed, not white hairy below ................ 41
40.(39') Bark white and papery ..... Cutleaf Weeping Birch
40'. Bark dark and ridged ............................... Bur Oak
41. Leaves 1" long, rhombic ovate to rhombic obovate; fruit a small capsule ... Vanhoutte Spirea
41'. Leaves 2" or 3" long, variably orbicular, fruit a berry ................................. 42
42.(41') Stems spiny .................................. Gooseberry
42'. Stems not spiny ............................................. Currant
43.(34') Leaves silvery both sides ............................ 44
43'. Upper leaf surface not silvery .......................... 45
44.(43) Leaves opposite; fruit red when ripe ................ Silver Buffaloberry
44'. Leaves alternate, fruit silvery when ripe ........ 45
45.(44') Petiole 1/8" long; leaves ovate, wavy-curved; fruit globose; shrubby ................ Silverberry
45'. Petiole ½" long; leaves lanceolate, flat; fruit ellipsoidal; treelike .......... Russian-olive
46.(43') Leaves opposite or sub-opposite ............... 47
46'. Leaves alternate ............................................. 48
47.(46) Leaves sub-opposite; end of twig modified into a thorn ........................................ 49
47'. Leaves opposite; twigs not thorny .................. 50
48.(47) Leaves nearly as broad as long .................... Common Buckthorn
48'. Leaves over twice as long as broad ................... Dahurian Buckthorn
49.(47') Leaves finely serrate, creased ............... Nannyberry Viburnum
49'. Leaves entire, not creased .............................. 50
50.(49') Pith hollow; petioles less than \( \frac{1}{2} \)" long ............ 51
50'. Pith solid; petioles \( \frac{1}{2} \)" long or more ............... 52
51.(50) Small native shrub; fruit white, twig reddish brown .................. Snowberry
51'. Large shrub; fruit orange or red; twigs tan, hollow pith .......... Tatarian Honeysuckle
52.(50') Twigs bright red; venation arcuate; fruit a white drupe .................. Redosier Dogwood
52'. Twigs a greenish or brownish; venation netted; fruit a capsule .......... Lilac
53.(46') Trees .......................................................... 54
53'. Shrubs ........................................................................ 69
54.(53) Leaves conspicuously heart shaped; fruit a nutlet suspended from a bract ........................................................................ American Linden (Basswood)
54'. Leaves not so; fruit not so ........................................... 55
55.(54') Bark white; peeling horizontally, marked by horizontal lenticels .......................................................... 56
55'. Bark not so .................................................................. 57
56.(55) Non-native tree; branches pendulous ......................................... Cutleaf Weeping Birch
56'. Native tree; branches not pendulous ........................................ 59
57.(55') Petioles flattened, about as long as a leaf blade ....................... 58
57'. Petioles round, less than \( \frac{3}{4} \) as long as leaf blade .................................................. 59
58.(57) Leaves deltoid; bark dark and rough ........................................ 60
58'. Leaves oval orbicular, bark light and smooth .................................. 61
59.(57') Leaves lanceolate; buds with single caplike scale .................... Willow
59'. Leaves broader; buds with several imbricate scales ......................... 62
60.(59') Twigs usually with definite thorns; leaves prominently doubly serrate .... Hawthorn
60'. Twigs without definite thorns; if tree somewhat thorny, leaves singly serrate .......... 63
61.(60') Leaf apex rounded; leaf shape oval; leaf base entire .................. Juneberry
61'. Leaf apex pointed; leaf shape ovate, obovate, elliptical; serrat to base of leaf .................. 64
62.(61') Leaves 2 ranked ..................................................... 65
62'. Leaves not 2 ranked .................................................................. 66
63.(61) Pith chambered at nodes; fruit a drupe ...................................... Common Hackberry
63'. Pith not chambered; fruit a spring ripening samara ......................... 67
64.(63') Leaves over 2" long, dull above; twigs coarse ......................... American Elm
64'. Leaves 2" long or less; shiny above; twigs fine .................................. Siberian Elm
65.(62') Buds large and gummy; leaves gray or rusty below .................. Balsam Poplar
65'. Buds not so; leaves not so .............................................. 66
66.(65) Bark and twigs light brown; twigs coarse; fruit a pome ................ Crabapple
66'. Bark and twigs a reddish or gray; twigs fine; fruit a drupe ............... 67
67.(66') Serrations glandular tipped; bark reddish; central stem noticeable .................. Pin Cherry
67'. Serrations without glands; bark gray; branchy crown ...................... 68
68.(67) Petiole hairy; veins prominent; some short twigs thornlike .......... American Plum
68'. Petiole glabrous; veins not prominent; not thornlike ..................... Chokecherry
69.(53') Buds with several imbricate scales .......................................... 70
70.(69') Dark glossy green leaves without serrations; insignificant pinkish-white flowers; black pea-sized pomes .................. Hedge Cotoneaster
70'. Leaves at least partially serrat ........................................... 71
71. Leaves usually double serrat ............................................... 72
71'. Leaves usually singly serrat .............................................. 73
72.(71) Petiole hairy; fruit husk without beak ........................................ American Hazelnut
72'. Petiole glabrous; fruit husk with a long beak ....................... Beaked Hazelnut
73.(71') Leaf apex rounded; leaf shape oval; leaf base entire .................. Juneberry
73'. Leaf apex pointed; leaf shape ovate, obovate or elliptical; serrat to base of leaf .................. 74
74.(73) Serrations glandular tipped; bark reddish; central stem noticable .................. Pin Cherry
74'. Serrations without glands; bark gray; branchy crown ...................... 75
75.(74') Petiole hairy; veins prominent; some short twigs thornlike .......... American Plum
75'. Petiole glabrous; veins not prominent; not thornlike ..................... 76
76.(75) Leaves narrowly elliptical; leaf base acute .......................... Sand Cherry
76'. Leaves ovate or obovate; leaf base rounded or obtuse ..................... Chokecherry