A SIMPLIFIED KEY
TO
THE COMMON WOODY PLANTS
OF EASTERN KANSAS
Robert J. Boles

Trees and shrubs may be identified by examining their (1) twigs and
buds, (2) bark, (3) flowers and fruits, and (4) leaves. For beginners, leaves
are probably the easiest and most identifiable set of characteristics; but
sometimes you may need to use other features even when the leaves are
available. In this key, the descriptions are concerned mostly with leaves.

It is not always easy to divide woody plants into "trees" and
"shrubs", because all trees are shrub size when they are young. Shrubs,
however, tend to have several stems arising at the base, while small trees
usually have one stem. "Vines" are usually more easily recognized by their
long, slender, woody stems. Certain bushes and briars are also distinctly
not "trees." So, your first problem is to determine if the plant you are ex­
amining is a woody plant. If it is, is it a vine, bush, or a tree? Once you
have decided into what group it should be placed, determine by the
descriptions and sketches which plant you are trying to identify.

I. VINES

A. Leaves Entire
1. Leaves large, deeply notched;
vines with coiled tendrils, no
thorns. Climbs trees, fences, or
bushes. Fruit in "grape"
clusters. *Wild Grape.*
2. Leaves oval, waxy; tendrils on leaf base. Vines green, covered with fine thorns. Usually climbs like Wild Grape. Fruit is small berries, two or three in a cluster. Greenbriar.

3. Leaves pointed; notched, dark green. Stems brown, no thorns, no tendrils. Leaves on wide branches or on the main stem. Bittersweet.

B. Leaves Divided

1. Leaflets three - LET IT BE! Either a climbing vine, holding to a tree by numerous little "roots" all along the stem, or growing along fence rows as a short bush. Always three leaflets; leaflets with variable lateral notches. Poison Ivy.

2. Leaflets five. Usually a climbing vine, holding to trees or rocks by means of short tendrils, with small pads at their tips. Boston Ivy or Virginia Creeper.
II. BUSHES
(May occur as single plants or as clusters.)

A. Stems with Thorns
1. Growing as a bush, may be as wide as high; in prairies often as single stems. Leaflets 3-5; finely notched. Thorns broad based, pointed down the stem. *Wild Rose.*

2. Growing as a bush, often with as many as a hundred red stems from one root stock. Two or three slender thorns at the base of each leaf petiole; usual additional thorns along the stem. *Gooseberry.*

3. Growing as a bramble or separate stalks. Three or five leaflets from one stem. Thorns spaced all along the stem and on under side of leaf stems.
   a. Stalks relatively straight. *Blackberry.*
   b. Stalks bent over with tips touching the ground. *Raspberry.*
B. Stems without Thorns

1. Characteristics and leaves like Gooseberry but without thorns. **Wild Currant.**

2. Usually 3-5 feet high growing on rocky ledges. Berries in a small, upright cluster. Leaves and stems with a spicy odor when crushed. **Aromatic Sumac.**

3. Usually 4-8 feet high, growing in rich bottom land. Plants almost tree-like but growing in clusters. Fruit consisting of three nuts in a woody case, enclosed with a crown of leaves. Leaves rough almost like crepe paper. **Hazelnut.**

4. Usually 1-3 feet high, growing in patches; fruit is red berries growing along the stem. **Buck Brush or Coral Berry.**

5. A small prairie shrub usually less than two feet high with several stems from a common base. Fruit is a terminal cluster of pods on the end of the stem. **New Jersey Tea.**
III. TREES OR TREE LIKE SHRUBS WITH SIMPLE LEAVES

A. Thorns Present
1. A needle-sharp thorn, \( \frac{1}{4} \) - 1 inch long on the stem at the base of each leaf cluster. Leaves dark green, waxy. Fruit is a large green “apple”, 4” - 6” in diameter. Osage Orange.


B. No Thorns. Leaves Undivided.
1. A bush or small tree; twigs branch by threes. Fruit small berries. Leaves arranged opposite; light green, velvety. Dogwood.

2. Leaves are very large; slightly velvety; fruit a long bean. Catalpa.
3. Leaves 2” - 3” across, deep green; slightly rough. Fruit is a berry on a sail. *Linden* or *Basswood*.

4. Leaves 2” - 3” across, almost triangular; glossy. Petiole flat, half as long as the leaf, allowing the leaf to flutter freely in the wind. Young branches distinctly whitish; tree trunk with ridged, rough bark. Seed on a fluffy, cotton sail; released in late May. *Cottonwood*.

5. Leaves heart-shaped with a knob at the end of the petiole. Small trees, with almost black, smooth bark (old trunks are scaly). Fruit is a small bean with three of four seeds. *Red Bud*.

6. Leaves elongated, pointed, edges toothed; large veins parallel. Twigs to which leaves are attached are very fine. Fruit is a small, flat, whitish seed that falls in May. *Elm*.
7. Leaves much like Elm but veins form a network. Fruit is a berry, green through the summer, black after frost. Bark is rough and "warty". 
*Hackberry.*

8. Leaves slender; twigs long and flexible. *Willow.*

## IV. LEAVES DEEPLY NOTCHED OR "CUT"

### A. Veins of Leaf Radiating from the Base (No Thorns).

1. Leaf divided into five or seven pointed star; deep green. Bark almost black. Leaves and branches are not opposite each other as in the maples. *Sweet Gum.*

2. Leaves deeply cut into five notched lobes; almost white below. Bark smooth gray on younger branches, but scaly on the tree trunk. Fruit with a "sail". *Silver Maple.*

3. Leaves not so deeply cut as in -2, dark green on both sides. Bark is almost black. Seeds are like the seed of the Silver Maple, but smaller. *Sugar Maple.*
4. Leaves 3-lobed, not deeply cut. Light green above, silvery below. Young branches have white bark, and the old bark scales off the trunk and older branches every few years, leaving white patches between the scales. Fruit a small ball about 1" - 2" in diameter, appearing something like a Christmas Tree decoration. *Sycamore.*

B. Several Sets of Large Veins along the Mid-Vein (no thorns). *Oaks.*

1. Leaf with two deep notches on each side making five large lobes, broadest at the ends. Young twigs covered with a light-colored fuzz. *Post Oak.*

2. Leaves elongated with four notches in each side making four rounded lobes on each side of the leaf. Bark is light gray. Fruit is a sweet acorn. *White Oak.*

3. Like -2 above but with five or six notches and the middle notch so deep as to almost divide the leaf. The cap almost encloses the acorn. *Bur Oak.*
4. Leaves cut angular like Maple leaves with four or five notches, and each point with a spine. Conspicuous rusty-brown hairs at the forks of the veins. Bark almost black even on small twigs. Fruit is a bitter acorn half enclosed in a cap. *Black Oak*.

5. Much like -4 above, but notches cut uniformly almost halfway from tip to midrib. Lacks the fuzz on the under surface found in the Black Oak. *Red Oak*.

6. Much like -5 above, but even more deeply cut and each lobe is tipped with a slender “pin”. The older branches on this tree regularly droop, angling downward from the trunk. *Pin Oak*.
V. TREES OR TREE-LIKE SHRUBS WITH COMPOUND LEAVES

A. Leaves radiating from a common stem, 5-7 leaflets on each petiole. *Horse Chestnut* or *Buckeye*.

B. Leaflets linearly arranged on a common petiole. Stems with thorns.


2. Thorns like rose thorns, occurring at the base of the petioles on the smaller branches. Seven to thirteen oblong leaflets on each stem. *Black Locust*. 
C. Stems without Thorns.

1. Like Honey Locust but no thorns. *Moraine Locust.*

2. Three or five leaflets on each stem. Trees appear yellow-green at a distance. *Box Elder.*

3. Leaflets 5-9, dark green, glossy, *Ash.*


5. Leaflets 11-21; rough; each 2” -3” long. Crushed leaves and twigs have a strong walnut odor. *Black Walnut.*

7. Leaflets 15-40; velvety; edges smooth. Petioles pale green or red; up to three feet long. Twigs at least as large as lead pencils; very brittle. *Tree of Heaven*.

8. All leaves double-compound. Central stems possibly three feet long, with 5-10 pairs of secondary petioles, each up to one foot long with 11-20 leaflets on each secondary. *Kentucky Coffeebean Tree*.

9. A swamp "tree", seldom more than ten feet tall. Stem with a very large pith. Leaflets 5-13; some leaflets may be double. Petioles succulent. Flower and fruit in a terminal umbrella. *Elderberry*. 
VI. EVERGREENS: TREES WITH NEEDLES OR SCALES

A. "Leaves" tiny, scale-like, clasp­ing the stem closely or on older stems, extending out at an angle like little thorns. Bark is brown, peeling off in long strips. Red Cedar.

B. "Leaves" are short needles one to three inches long, arranged singly along new stems. None of the trees mentioned below are native to Kansas, but have been transplanted in from other areas.

1. Needles flattened. Fir.

C. "Leaves" are long needles with two to five in a cluster.

1. Two needles, 4-7 inches long; heavy, straight. Bark scaly, distinctly red between scales. Norway or Red Pine.
2. Two needles, 4-6 inches long; curled. Bark gray, scaly. Austrian Pine.
3. Two or three needles in a cluster, 3-5 inches long; slender, twisted, dark-bluish green. Bark is yellowish between scales. Short-Leaf Pine.
4. Three needles in most clusters, two in some of the same tree; 6-10 inches long. Heavy branching plus the close mat of the needles on each tip makes a beautiful, massive tree, even more dense than the Norway Pine. *Ponderosa Pine* or *Western Yellow Pine*.

5. Five fine needles, 3-6 inches long in each cluster. Bark gray, and smooth until it is several years old. *White Pine*.

6. Needles 1½ - 2 inches long, borne in sheathed clusters of two, or rarely three; dull blue-green flattened, rigid, sharp-pointed, and usually twisted. The bark of the upper trunk and larger limbs is orange-red, thin, and peels off in papery flakes. *Scotch Pine*.

**BOOK REVIEW**

Elinor Lander Horwitz's interesting new non-fiction book, *On The Land*, traces the history of agriculture in this country from earliest Colonial days to the present. In her book she traces the complex and interwoven issues that have come about through centuries of ever-increasing agricultural production. Our readers should enjoy the special insight to the past and present of American agriculture, with her discussion of the alternatives for its future, as found in her thoughtful, well illustrated, and timely book.