

Key to the Trees of Iowa

Definitions of special terms for identification

simple leaf = leaves have one blade

compound leaf = leaves have several individual leaflets

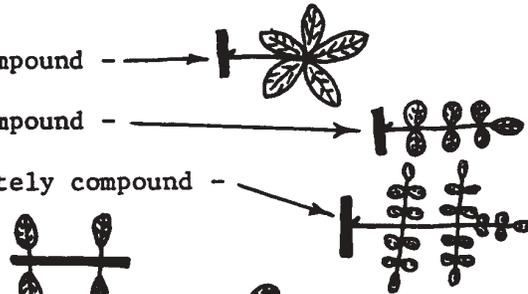
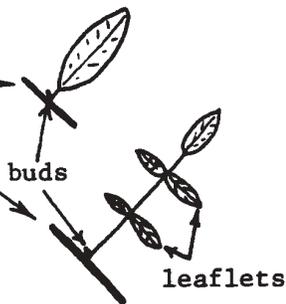
palmately compound -

pinnately compound -

doubly pinnately compound -

opposite leaves =

alternate leaves =



leaf margin types =

smooth

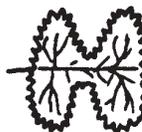
lobed

toothed

doubly toothed



lobed and toothed



leaf petioles =

vein crotches =



lobe sinuses =

sharp

rounded

or



samaras = any kind of small winged seed

pith =

wood
pith
bark



twig cross-section

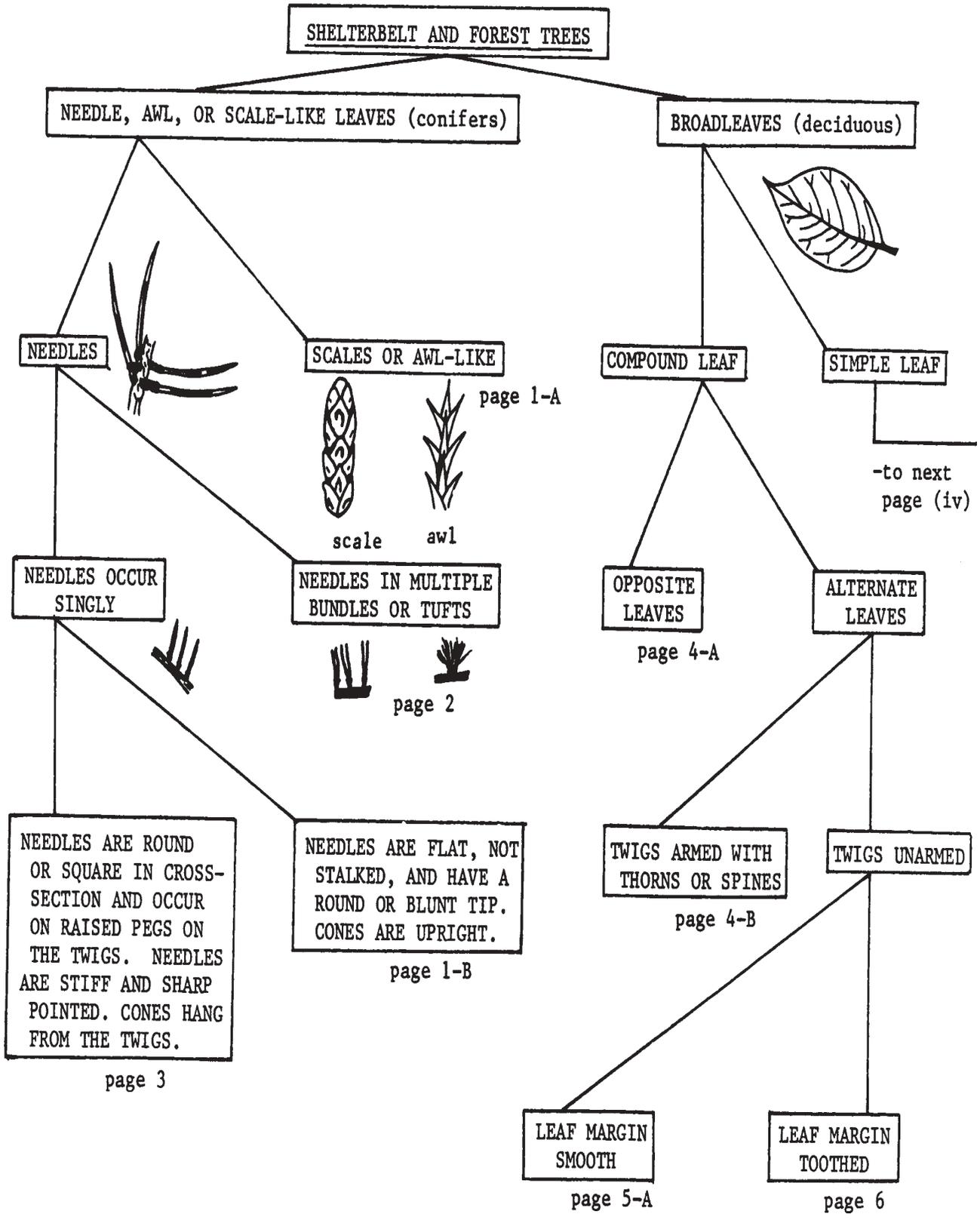


single samaras



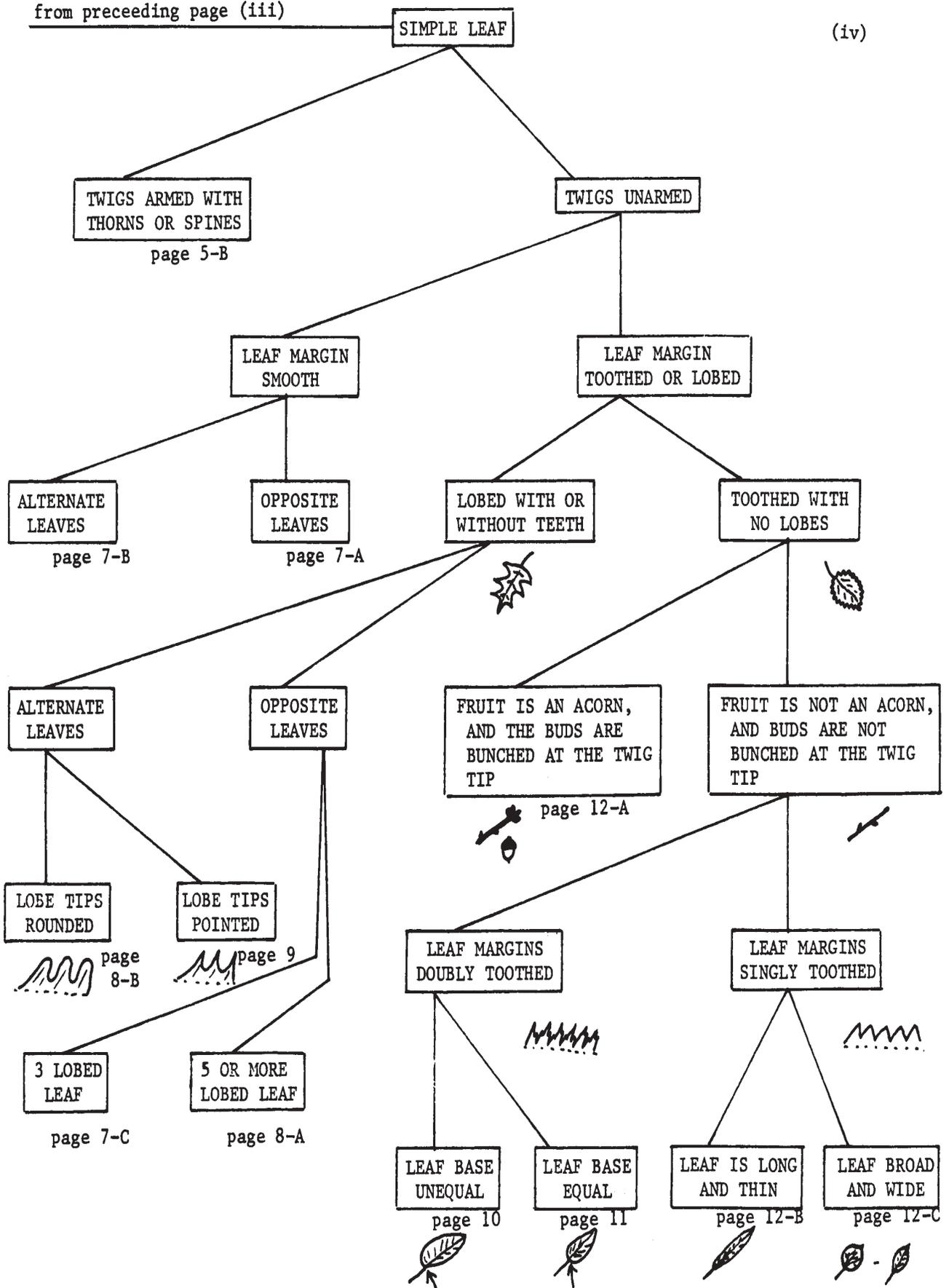
double samaras

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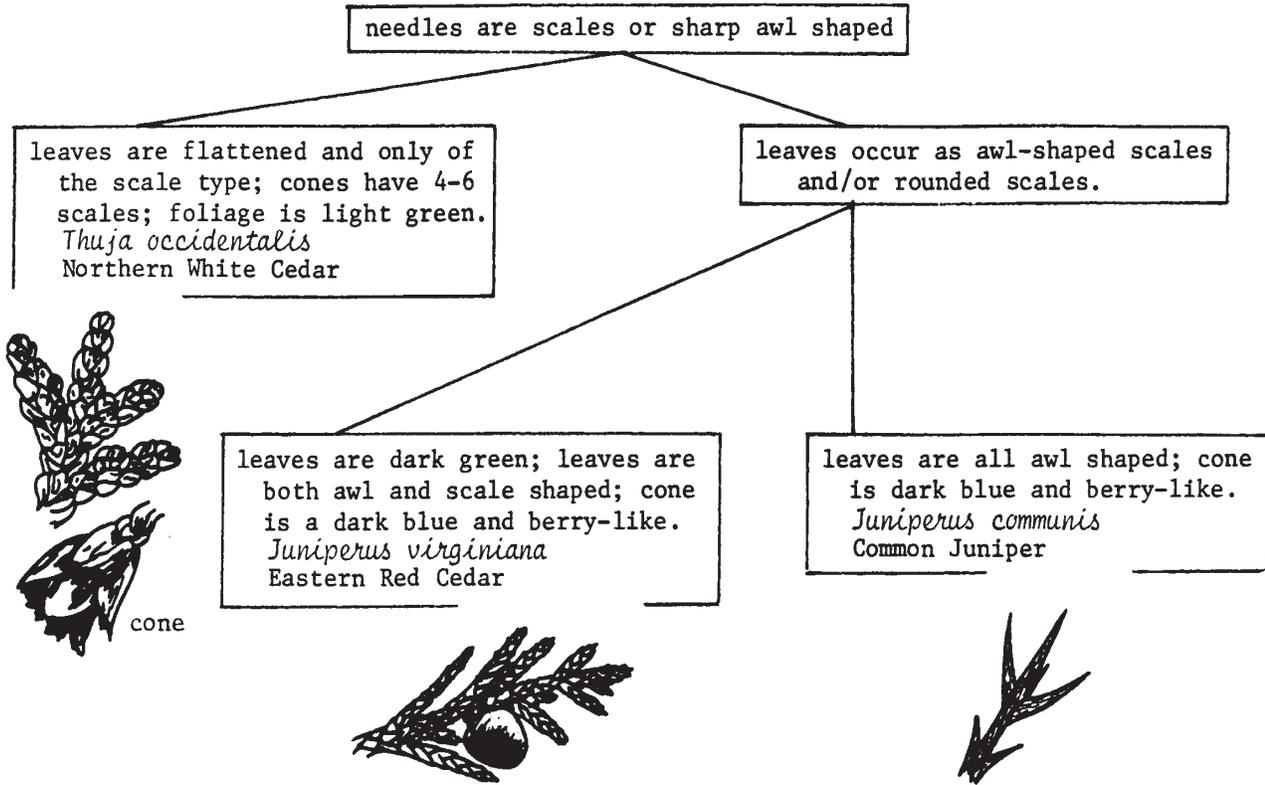


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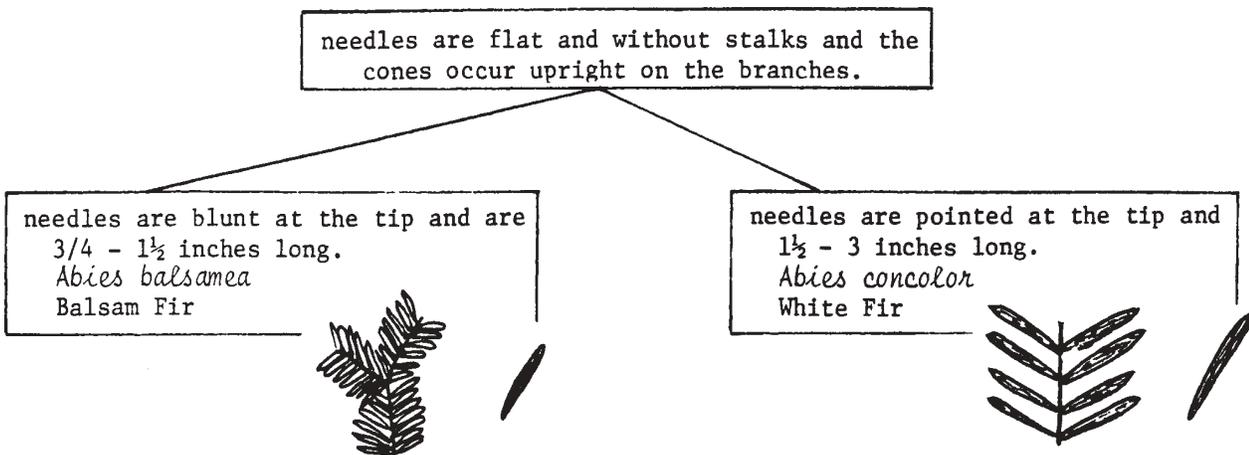
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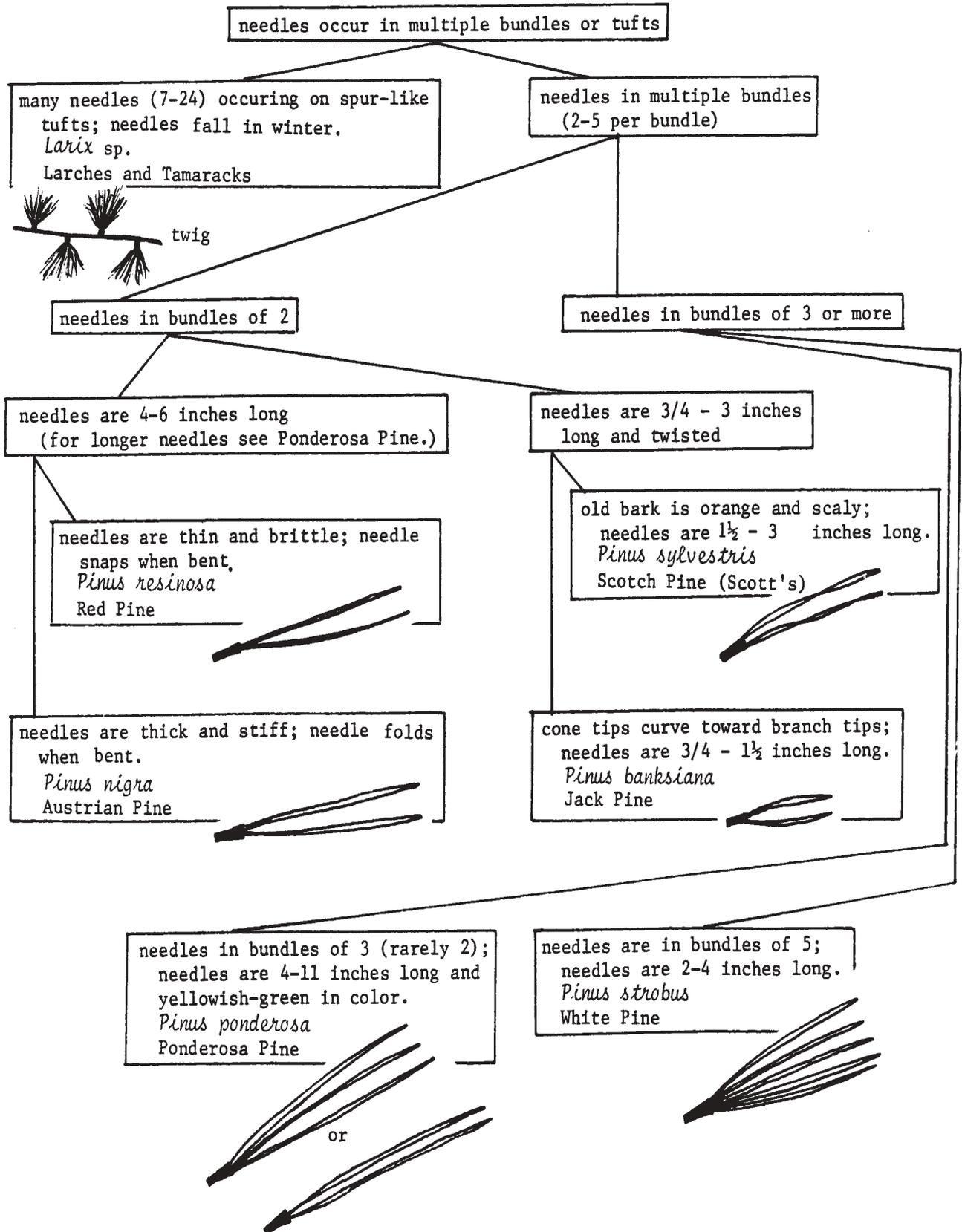


PART A



PART B





Needles are round or square in cross section, occurring on raised pegs on the branches and cones hang from branches.

cones have 3-pointed bracts sticking out between the cone scales; needles are 3/4 - 1 1/4 inches long.
Pseudotsuga menziesii
Douglas Fir

cones have no bracts sticking out.



needles are sharp to touch

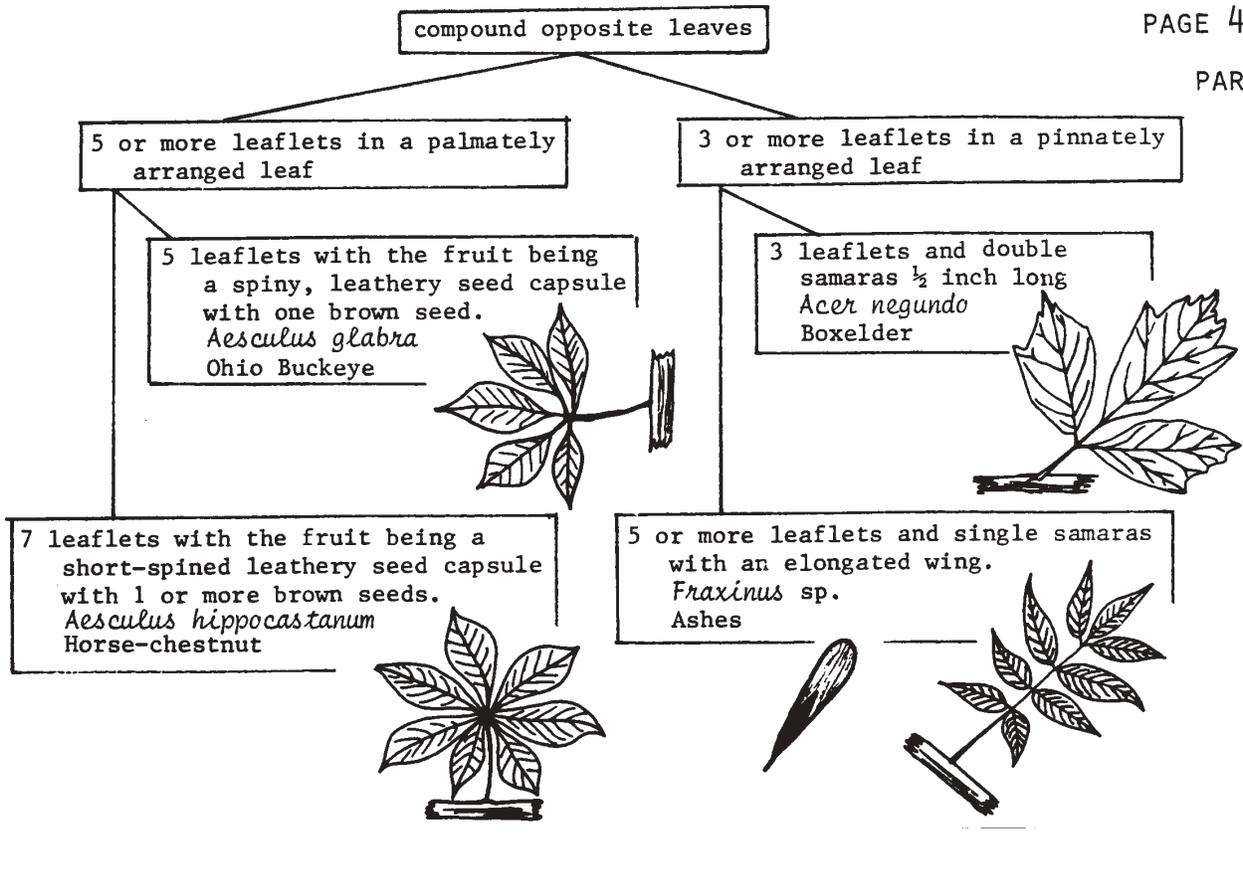
needles are blunt to touch

needles are 1-1 1/4 inches long; blue-green in color; cone is 2 1/2 - 4 1/2 inches long.
Picea pungens
Colorado Blue Spruce

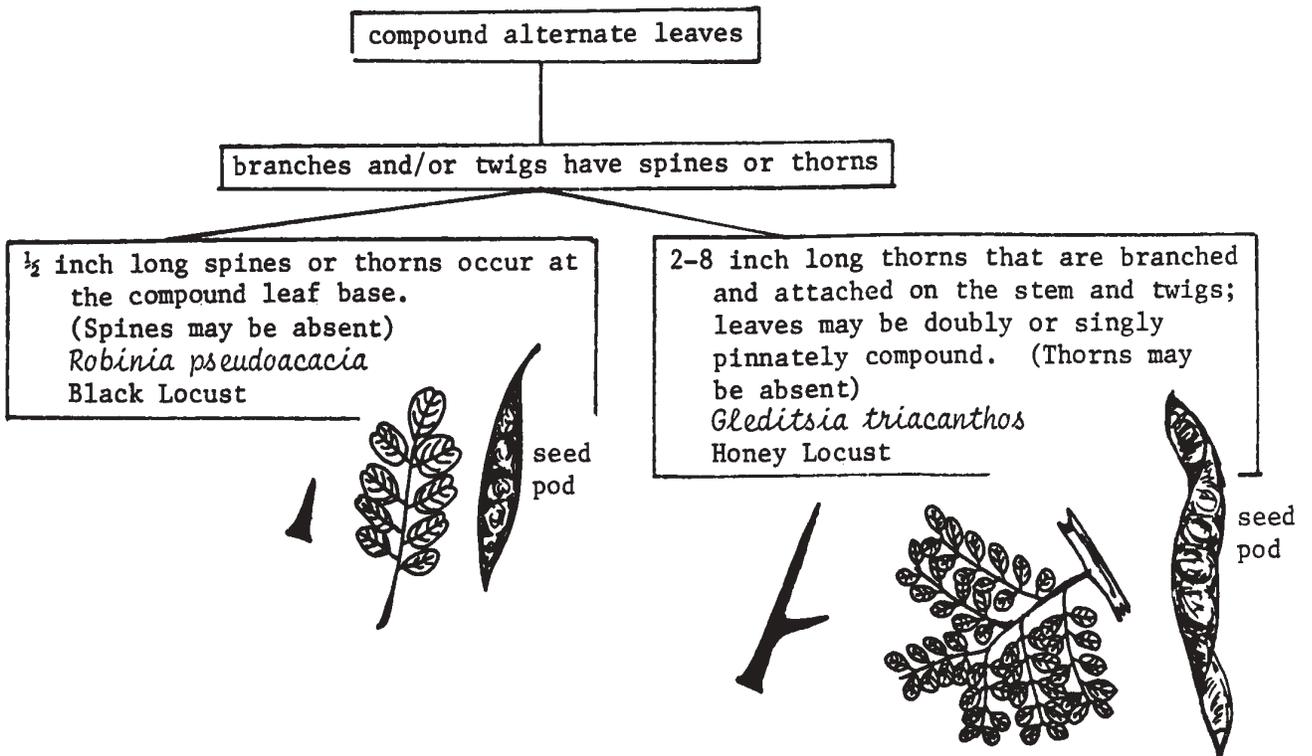
needles are 1/2 - 3/4 inches long; cones are 1/2 - 1 1/2 inches long.
Picea mariana
Black Spruce

needles are 1/2 - 3/4 inches long; needles are dark green with a whitish tint; cone is 1 - 2 1/2 inches long.
Picea glauca
White Spruce

needles are 1/2 - 3/4 inches long; cone is 4-7 inches long; foliage appears to droop.
Picea abies
Norway Spruce



PART B



compound alternate leaves

leaflet margins are smooth for almost the entire length

leaves are doubly pinnately compound with 40 or more leaflets; leaf is 1-3 feet long.
Gymnocladus dioica
Kentucky Coffee Tree

leaves are singly pinnately compound with 13 to 39 leaflets; the leaflet margin is smooth except for 1-2 gland teeth at the base.
Ailanthus altissima
Tree of Heaven

seed pod



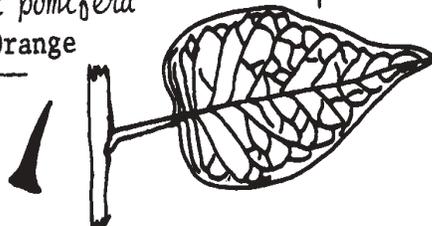
simple leaves

branches and or twigs have spines or thorns that are sharply pointed

leaf margin is smooth

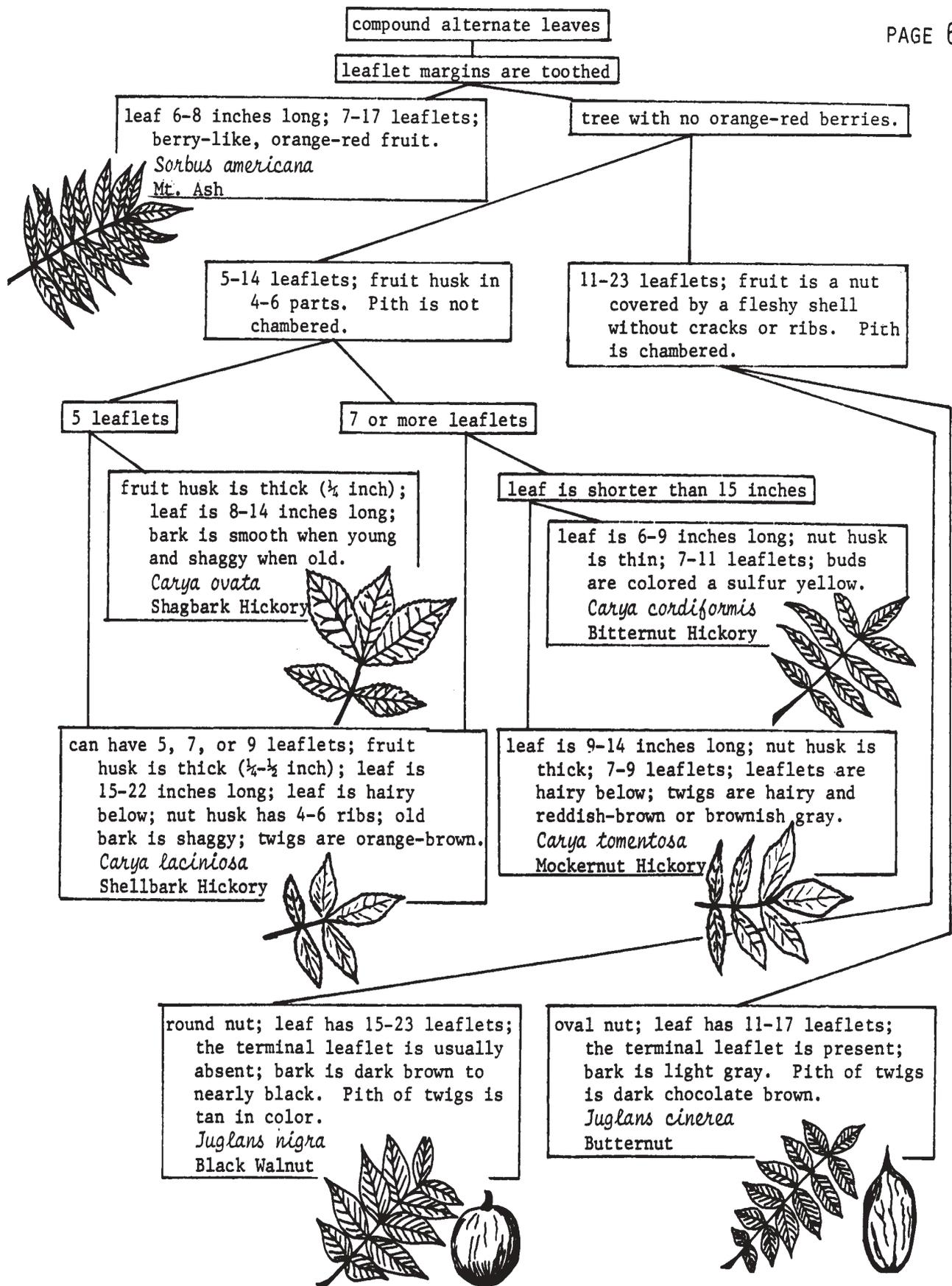
Leaf is 3-5 inches long with a long pointed tip; thorns are straight and 1/2 inch long.
Maclura pomifera
Osage Orange

leaf margin is coarsely doubly toothed; stiff, sharp unbranched thorns.
Crataegus sp.
Hawthorns



long spines or thorns; leaf is long and narrow; leaf is silvery colored and scurfy or scaley.
Elaeagnus angustifolia
Russian Olive



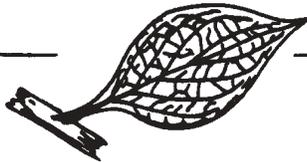


simple opposite leaves

smooth leaf margins

leaves are 3-6 inches long; veins run parallel to the leaf margin; midvein contains fine white strands of fibers when leaf is pulled apart.

Cornus sp.
Dogwood



leaves are 8-12 inches long; leaf is heart shaped; fruit is long pod 8-20 inches long.

Catalpa speciosa
Catalpa



PART B

simple alternate leaves

smooth leaf margins

heart shaped leaf; tip is pointed; fruit is a legume seed pod 2-3½ inches long and thin.

Cercis occidentalis
Redbud



seed pod

fruit is an acorn; buds are bunched at the end of the twigs; leaves are oval and 4-6 inches long.

Quercus imbricaria
Shingle Oak



PART C

simple opposite leaves

leaves have 3 main lobes

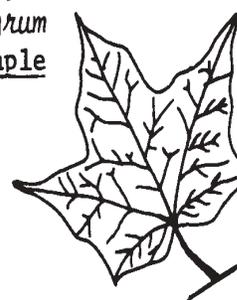
lobe sinuses are sharp angled; lobe margins are toothed; samara is V-shaped.

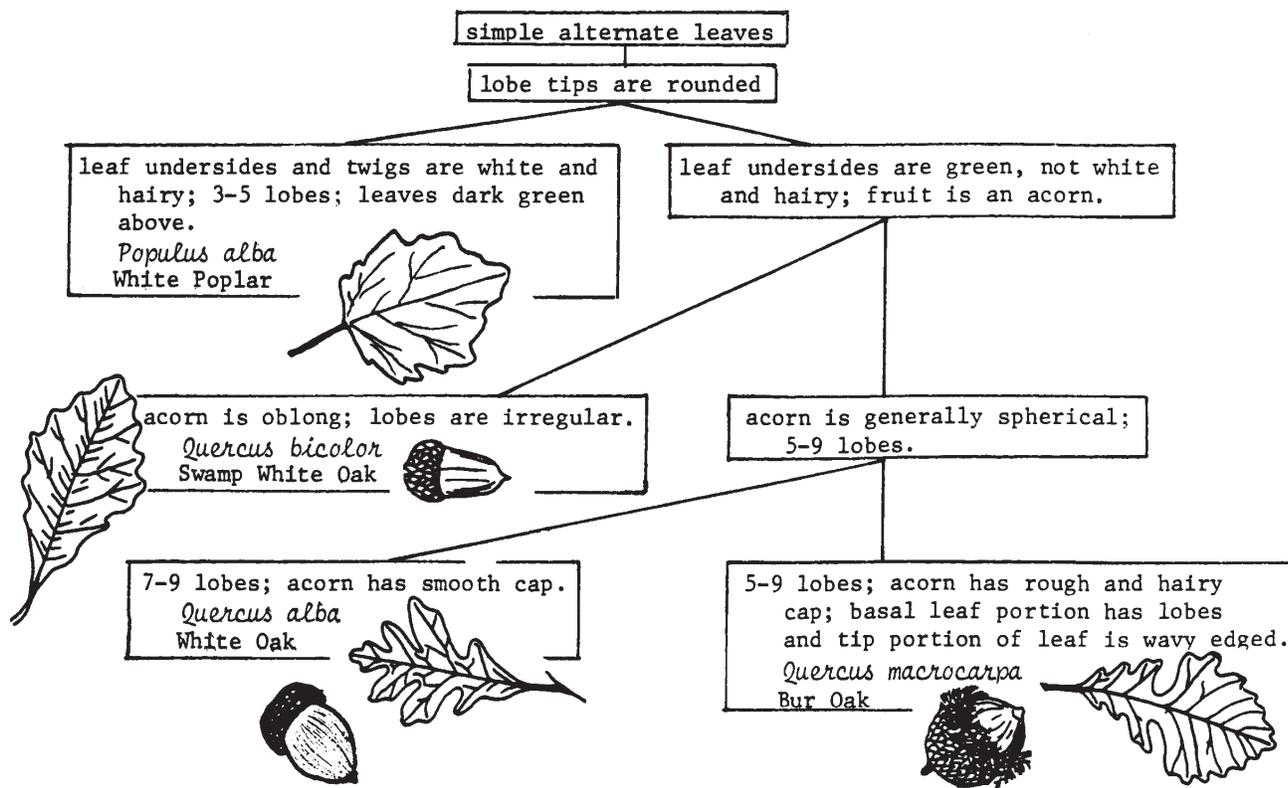
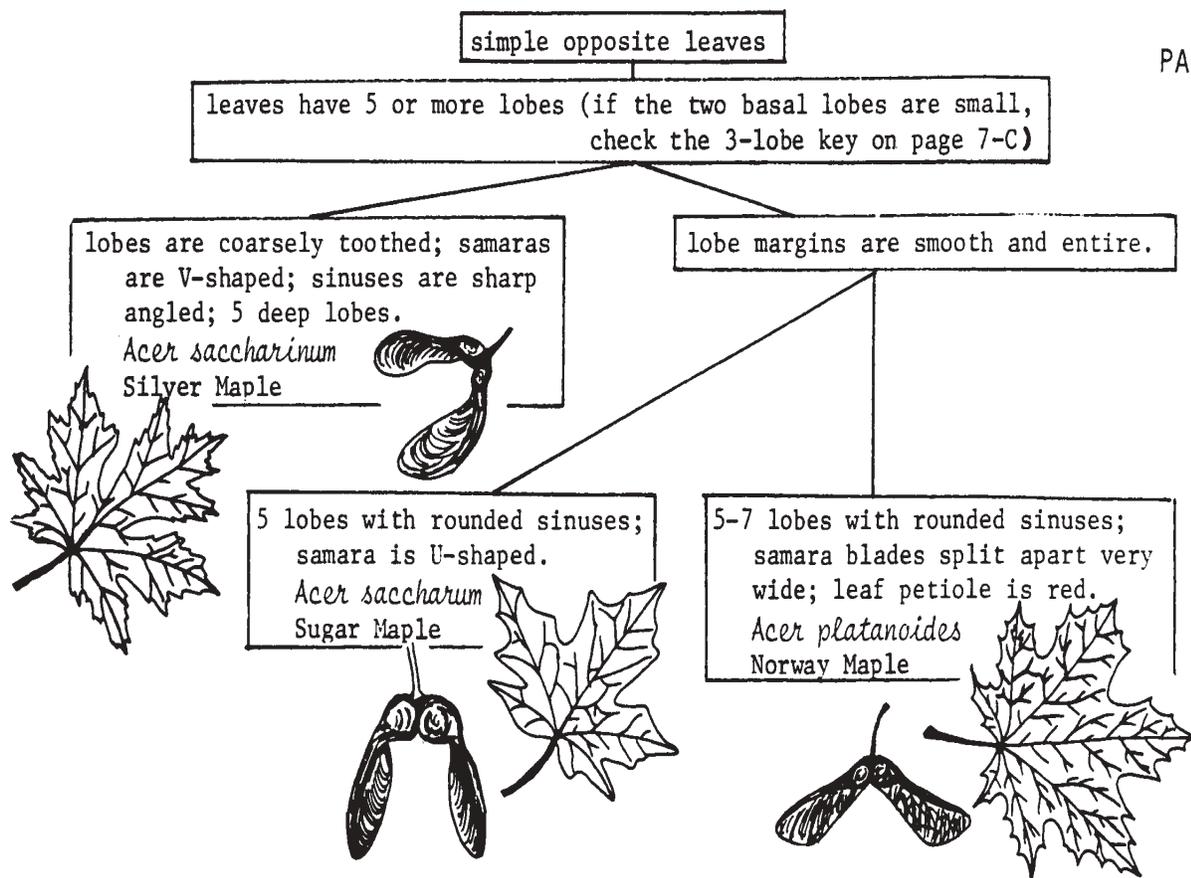
Acer rubrum
Red Maple



lobe sinuses are rounded; bark is blackish; samaras are U-shaped.

Acer nigrum
Black Maple





simple alternate leaves

lobe tips are pointed

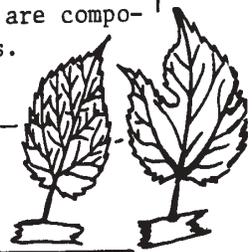
cream or white-colored branches, twigs, and leaves; tree bark may have a mottled appearance.

leaf undersides and twigs are white and hairy; leaves are 3-5 lobed;
Populus alba
White Poplar

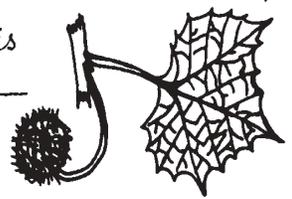


leaf, twig and branches do not show white colored bark or hair.

lobe margins are coarsely toothed and may or may not be lobed; fruits are composite fleshy seeds.
Morus sp.
Mulberry



leaves are 3-5 lobed with lobe margins coarsely toothed; fruit is hairy ball of seeds 1-1½ inches in diameter; bark is scaly with the inner-bark light colored to almost white; trunk appears mottled.
Platanus occidentalis
Sycamore



lobe margins are generally smooth

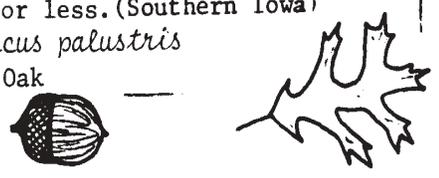
leaf has 4 lobes; leaf is 4-6 inches long; leaf tip is flat or notched; fruit is a cone-like group of samaras.
Liriodendron tulipifera
Yellow Poplar



fruit is an acorn; more than 4 lobes present

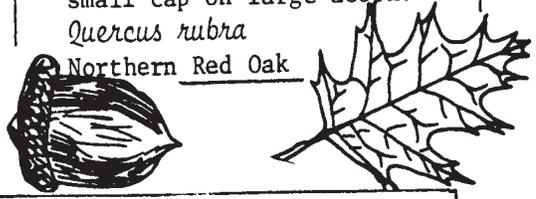
lobe sinuses stretch almost to the leaf mid-vein; vein crotches have hair on the leaf underside.

acorn is round with the cap covering 1/3 or less. (Southern Iowa)
Quercus palustris
Pin Oak



lobe sinuses stretch ½ way to the midvein.

7-11 lobes; leaf is green below; small cap on large acorn.
Quercus rubra
Northern Red Oak

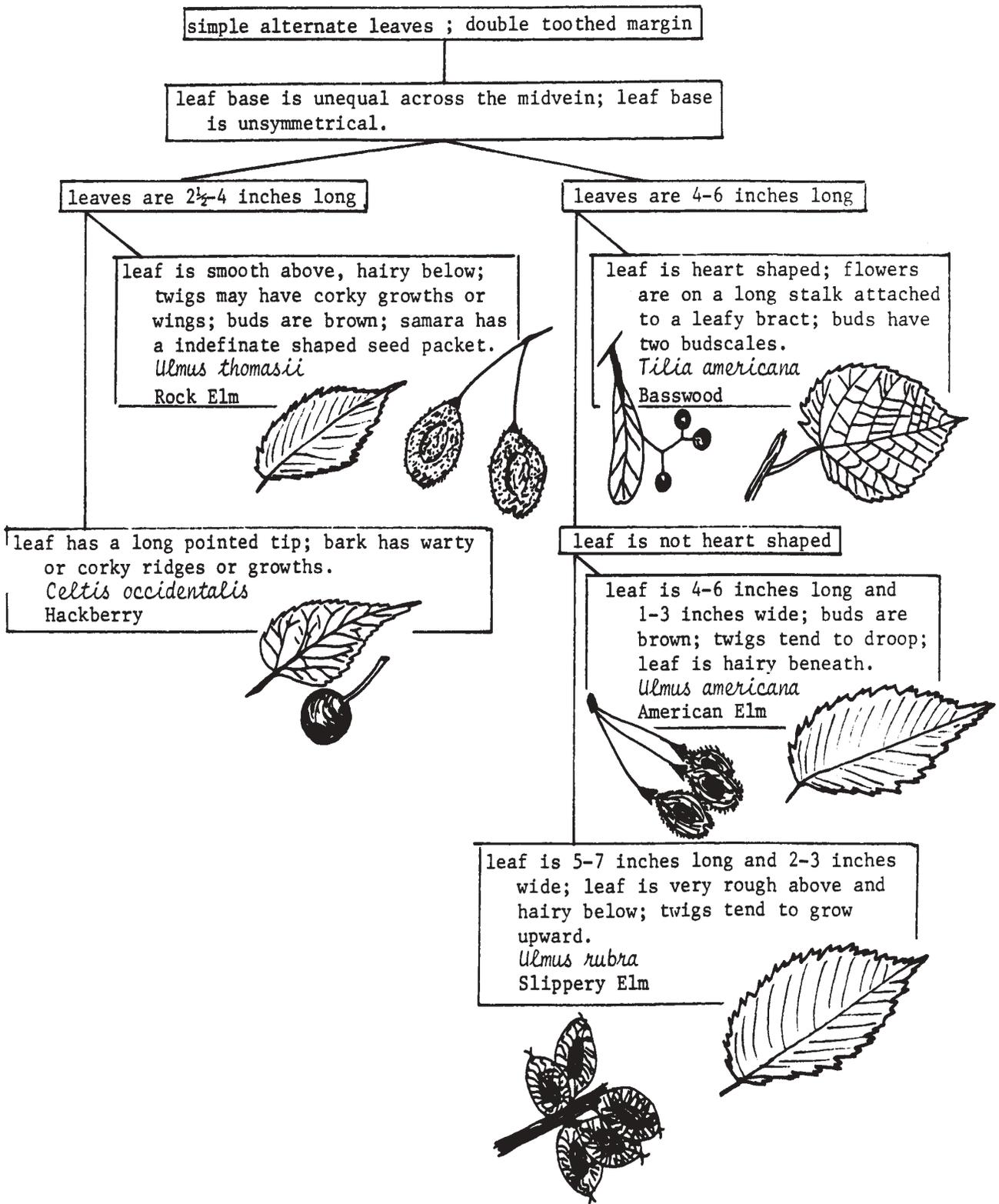


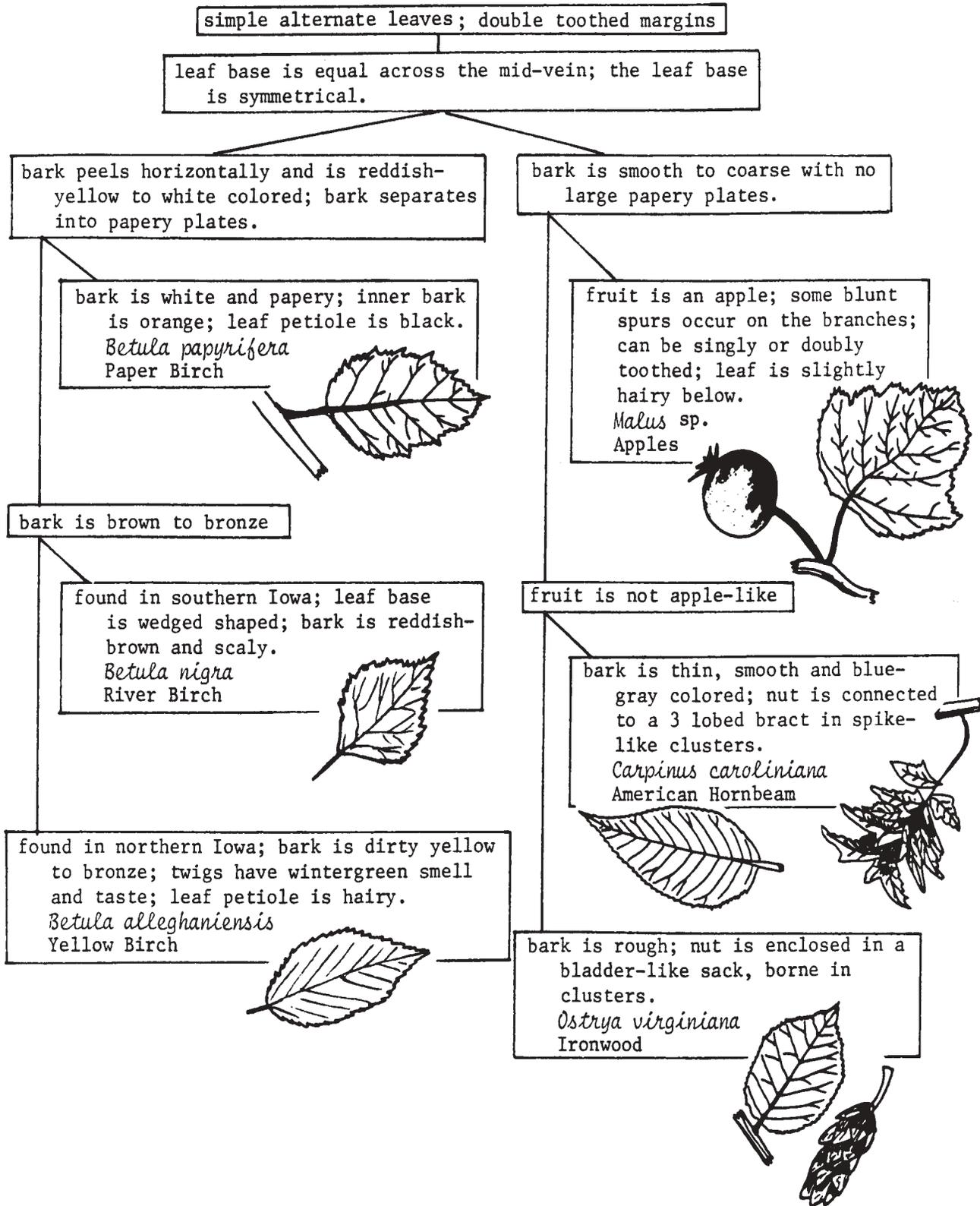
acorn is oval with cap covering almost ½ the acorn. (Northern Iowa)
Quercus ellipsoidalis
Northern Pin Oak



5-7 lobes; leaf is coppery colored below; sinuses are broad; small acorn with a small cap.
Quercus velutina
Black Oak

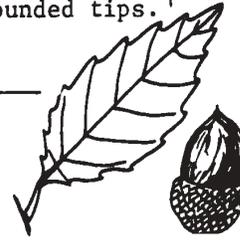






simple alternate leaves ; toothed margin

fruit is an acorn; buds are bunched at the twig tips
leaf margins are coarsely toothed with rounded tips.
Quercus muehlenbergii
Chinkapin Oak



PAGE 12

PART A

PART B

simple alternate leaves; toothed margins

leaves are long and thin; length is more than 4 times the width.

buds have a single bud scale or covering;
leaf has widely spaced marginal teeth;
leaf is very narrow ($\frac{1}{4}$ - $\frac{3}{8}$ inches wide);
shrubby species.
Salix interior
Sandbar Willow



buds have a single bud scale or covering;
leaf has finely toothed margins;
leaf is narrow ($\frac{3}{8}$ - $\frac{3}{4}$ inches wide).
Salix nigra
Black Willow



PART C

simple alternate leaves ; singly toothed margin

leaf is broad triangle shaped or oval with the length not more than $2\frac{1}{2}$ times the width.

leaves are triangle shaped or as broad as wide (circular shape)

top portions of the tree has whitish or yellowish bark while the bottom portion has brown furrowed bark.

1 2 3

leaves are generally oval or oblong shaped.

fruit is $\frac{1}{2}$ inch in diameter or larger.

4 5 6

GO TO PAGE 13

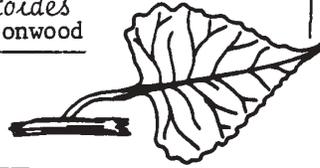
1

2

3

FROM PAGE 12 - C

buds are resinous; leaves triangle shaped; leaf is coarsely toothed.
Populus deltoides
Eastern Cottonwood

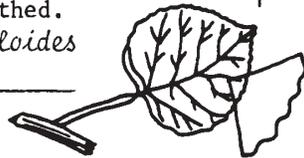


buds are not resinous

leaf is 2-5 inches long with a flattened petiole; buds stick out from the twig and are dusty-gray colored; leaf is coarsely toothed.
Populus grandidentata
Bigtooth Aspen



leaf is 1½-3 inches long; buds are incurved against the twig; leaf is finely toothed.
Populus tremuloides
Quaking Aspen



top of the tree is not whitish; leaves may have lobes; broad leaf with a compound fleshy fruit.
Morus sp.
Mulberry



leaf is finely toothed with teeth that incurve toward the leaf; red-brown hairs are along the basal area of the mid-vein; fruit is black when ripe; old bark is black and has platy scales; leaves are thick and waxy.
Prunus serotina
Black Cherry



4

5

6

PAGE 13

shrubby tree with apple-like fruit; spur-like stubs may exist on branches; leaf is slightly hairy below.
Malus sp.
Apples



shrubby tree with 1 inch diameter, green to purple fruit; fruit has a crease down one side; twigs are stubby, spur-like and sometimes spiny tipped; leaf has long pointed tip; leaf is 3-4 inches long.
Prunus americana
Plum



fruit is less than ½ inch in diameter

leaves are hairy when young; 2-4 inches long; bark is smooth gray with dark lines in it; shrubby tree.
Amelanchier arborea
Juneberry



tree has spikes of fleshy fruit; bark is dark colored

leaf is finely toothed with outward curved teeth; fruit is red when ripe; bark is brownish and smooth; leaves are thin.
Prunus virginiana
Chokecherry

