

Identifying Common Landscape Tree Species Along Colorado's Front Range

Bud\Leaf Arrangement

A. Alternate- Go to Page 2



Alternate leaf arrangement

Genera: Hackberries (*Celtis*), Hawthorns (*Crataegus*) Walnuts (*Juglans*), Apple (*Malus*), Poplars (*Populus*), Cherries (*Prunus*), Pears (*Pyrus*), Oaks (*Quercus*), Mt. Ashes (*Sorbus*), Lindens (*Tilia*), Elms (*Ulmus*), Legumes (Various genera) and etc

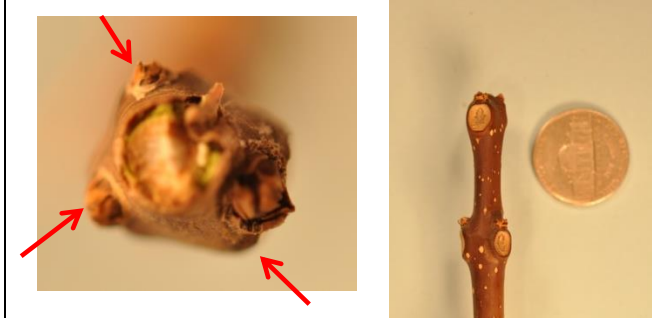
B. Opposite- Go to Page 3



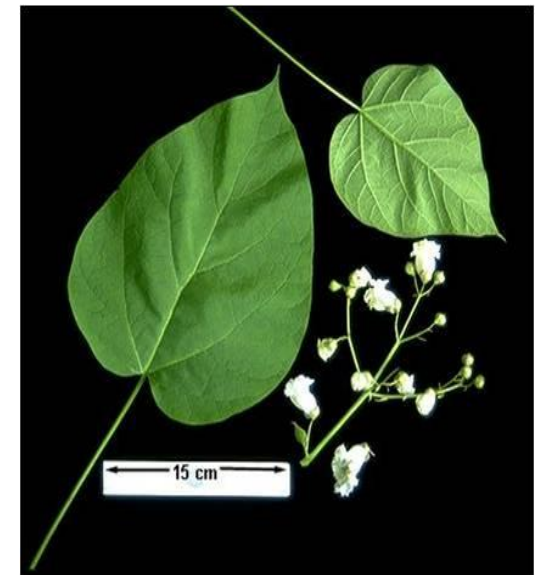
Opposite leaf arrangement

Genera: Maples (*Acer*), Buckeyes (*Aesculus*) and Ash (*Fraxinus*)

C. Whorled- Northern catalpa



Whorled leaf arrangement:
three buds per node



Northern catalpa- Leaves and flowers

Alternate Leaf Arrangement

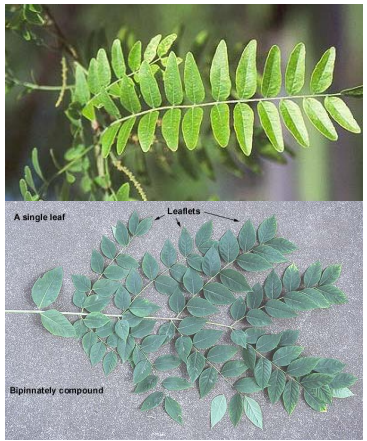
Common Species With Alternate Leaf Arrangement by Leaf Type

A. Simple Leaves- Go to Column 1



Simple leaf- one leaf per bud

B. Compound leaf- Go to Column 2



Compound leaf- multiple leaflets per bud

1. Alternate with simple leaves

1a. Simple leaf which is fan-shaped, short spurs on twigs, pale bark- **ginkgo**

1b. Simple leaf with pinnate lobes, cluster terminal buds and acorns- **oaks**

Common Species: English Oak, Bur Oak, gamble oak and red oak



1c. Simple leaf with unequal base

- i. Unequal base, doubly serrate and circular samara fruit- **elms**
- ii. Unequal base, signally serrate, nipple gall common, purple drupe fruit and "warty" gray bark- **hackberry**

1d. Simple leaf with heart-shape (cordate)

- i. Heart-shaped leaves, zigzag twigs and pod fruit- **redbud**
- ii. Heart-shaped leaves, nutlet fruits, banana-shaped bract and smooth tear drop shaped buds: **lindens**

1d. Simple leaf, drupe fruit and glands at the base of the leaf- **cherries and plums**

1e. Simple leaf, pome fruit

- i. Pome fruit more oblong, buds mostly hairless- **pears**
- ii. Pome fruit more globose buds smooth and glossy often armed with thorns- **hawthorns**
- iii. Pome fruit more globose, buds and midrib of leaf often pubescent- **apples**

1f. Simple leaf, catkin flowers, often longer petiole-

- i. Buds resinous - **cottonwoods**
- ii. Buds non-resinous, bark white even on mature trees- **aspen**

2. Alternate with compound leaves

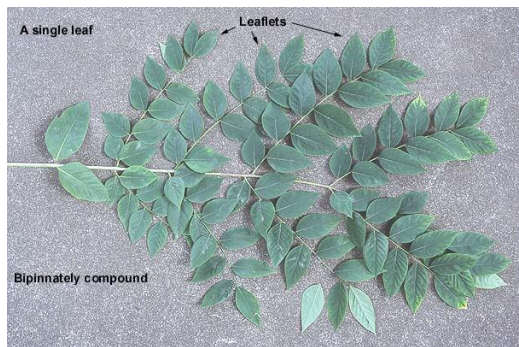
2a. Pinnately Compound Leaf



Pinnately Compound Leaf- Leaflets arranged like a feather

- i. Terminal bud present, chambered pith, leaflets larger and leaves longer- **black walnut**
- ii. Large pubescent terminal bud, solid pith, small serrated leaflets orange to red pome fruits in clusters: **mountain ash**
- ii. No terminal bud, small glossy leaflets, twigs zigzag and are swollen at nodes- **thornless honeylocust**
- iii. No terminal bud, small dull leaflets, short thorns in pairs, pod fruit- **black locust**
- iv. No terminal bud, leaflets serrated, 'paper lantern' fruits, smaller tree- **panicle golden rain tree**

2b. Bipinnately Compound Leaf- **Kentucky coffee tree**



Opposite Leaf Arrangement

Common Species With Opposite Leaf Arrangement by Leaf Type

A. Simple Leaves- Go to Column 1



Simple leaf-
one leaf per
bud

2. Compound leaf- Go to Column 2



Compound
leaf- multiple
leaflets per
bud



1. Opposite with simple leaves- maples (excluding boxelder- *Acer negundo*)

- 1a. Common maples with clustered buds
 - i. Large clusters of brown buds, deeply lobed leaves silver exfoliating bark – silver maple
 - ii. Clusters more red (not always true) leaves less deeply lobed- autumn blaze (Freeman) maple



Autumn blaze maple,
leaf and buds

Silver maple leaf and
buds

- 1b. Common maples without clustered buds
 - i. Smaller tree (~20ft or less), leaves nearly unlobed- tatarian maple
 - ii. Stout branches, larger terminal bud, bleeds milky sap when leaves are removed- Norway maple
 - iii. Buds scaly and pointed- sugar maple



Plump terminal bud of
Norway maple



Pointy buds of sugar
maple

2. Opposite with compound leaves

2a. Palmately Compound Leaf- Ohio buckeye or horse-chestnut



Palmately Compound Leaf- Leaflets arranged like fingers on a hand (horse-chestnut pictured)

2b. Pinnately Compound Leaf



Pinnately
Compound Leaf-
Leaflets arranged
like a feather

- i. Leaves have 3-5 leaflets, twigs waxy, double samara fruit born in pendulous chains - boxelder
- ii. Leaves have 5 or more leaflets, bud covered with short hairs, single samara fruit- ash



Waxy twig of boxelder
(more green in summer)



White ash twig

Identifying Common Landscape Conifer Species Along Colorado's Front Range

Conifers by Needle Type

A. Leaves scale or awl-like-
junipers and arborvitae

B. Leaves needle-like
- *go to column 1*

1. Needle-like needles bundles in groups, woody cones- **pines (Pinus sp.)**
 - 1a. Needles in groups of 2
 - i. Needles curve, cone resinous and **pinyon pine**
 - ii. Needles straight or nearly straight cone small and dark brown- **mugo pine**
 - iii. Needles twisted, bark orange and exfoliating- **Scots pine**
 - 1b. Needles in groups of 2 and 3- **ponderosa pine**
 - 1c. Needles in groups of 3- **Austrian pine**
 - 1d. Needles in groups of 5
 - i. Needles dotted with resin- **bristlecone pine**
 - ii. Needles soft and flexible, cone much longer than wide- **eastern white pine**
 - ii. Needles stiffer, twigs very flexible- **limber pine**

2. Needle-like and singular
 - 2a. Needles singular, square in cross section, born on woody pegs, cones papery and pendulous- **spruces (Picea sp.)**
 - 2a. Needles singular, flat, flexible, and sessile (no petiole). Leaf scar circular, buds often more rounded, cones erect and deciduous (fall apart in the fall)- **true firs (Abies sp.)**
 - 3a. Needles singular, flat, and attached by petiole to twig. Leaf scar oval, buds pointed, cones pendulous with 'rat tail' like bracts. **Douglas-fir (Pseudotsuga menziesii)**

